Stanford University

AY21-22 Stanford Bulletin

Admission and Financial Aid

Nondiscrimination Policy

Stanford University admits qualified students of any race, color, national or ethnic origin, sex, age, disability, religion, sexual orientation, gender identity, veteran status, or marital status to all the rights, privileges, programs, and activities generally accorded or made available to students at the University. Consistent with its obligations under the law, in the administration of the University's programs and activities, Stanford prohibits unlawful discrimination on the basis of race, color, national or ethnic origin, sex, age, disability, religion, sexual orientation, gender identity or expression, veteran status, marital status or any other characteristic protected by applicable law; Stanford also prohibits unlawful harassment including sexual harassment and sexual violence. This policy applies to Stanford programs and activities both on and off-campus, including overseas programs.

The following person has been designated to handle inquiries regarding this nondiscrimination policy: Stanford's Director of the Diversity and Access Office, Rosa Gonzalez, Kingscote Gardens, 419 Lagunita Drive, Suite 130, Stanford, CA 94305-8550; (650) 723-0755 (voice), (650) 723-1791 (fax), equal.opportunity@stanford.edu (email). Stanford's Title IX Coordinator, Stephen Chen, has been designated to handle inquiries regarding sexual harassment and sexual violence: Kingscote Gardens (2nd floor), 419 Lagunita Drive, Stanford, CA 94305, (650) 497-4955 (voice), (650) 497-9257 (fax), titleix@stanford.edu (email). Individuals may also file complaints directly with the Office for Civil Rights, within the United States Department of Education, by following the information on this website: https://www2.ed.gov/about/offices/list/ocr/complaintintro.html.

Visas

In order to register as students, Stanford University requires that all those who are not U.S. citizens or U.S. permanent residents obtain and maintain an appropriate visa status for their stay in the United States. The types of student visas sponsored by Stanford include the following:

1. Student Visa (F-1): The F-1 visa is obtained with an I-20 Certificate of Eligibility issued by Stanford University. The graduate student on an F-1 visa must enroll in a full course of study. The accompanying spouse or child enters on an F-2 visa. F-2 visa holders may not hold employment or engage in business under any circumstances. The F-2 spouse of an F-1 student may not engage in full-time study, and the F-2 child may only engage if the study is in an elementary or secondary school (kindergarten through twelfth grade). The F-2 spouse and child may, however, engage in study that is avocational or recreational in nature.

2. Exchange Visitor Visa (J-1): The J-1 visa is obtained with a DS-2019 Certificate of Eligibility issued by Stanford University or a sponsoring agency. This visa is often required for graduate students sponsored by certain agencies, foundations, and governments. In some cases, exchange visitors must leave the United States at the conclusion of their programs, and may not change to non-student visa status, and/or may not apply for permanent residency in the United States until they have returned to their home countries for at least two years. The accompanying spouse or child of an exchange visitor may obtain a J-2 visa and may, in some cases, obtain authorization to work by applying for an Employment Authorization Document from U.S. Citizenship and Immigration Services in order to be employed in the U.S. There is no regulatory restriction on study for J-2 dependents.

The Certificates of Eligibility (I-20 or DS-2019) are issued to admitted students after receipt of certifications of adequate financial support. An F-1 student transferring from another U.S. school must obtain a new I-20 from Stanford and complete a transfer process at the Bechtel International Center no later than 15 days after the effective date of the transfer. A J-1 student or scholar transferring from another U.S. school must obtain a new DS-2019 from Stanford and complete a transfer process at the Bechtel International Center no later than 15 days after the effective date of the transfer.

Rescission

By applying for admission to Stanford University academic programs, applicants certify that the information they provide in their applications is complete, accurate, and their own work. As also noted in the application materials, Stanford reserves the right to withdraw an offer of admission under certain circumstances, including (but not limited to):

1. if there is a significant drop in academic performance, a failure to graduate (in the applicant's current program), or a failure to satisfy a prerequisite or condition of admission;
2. if there has been a misrepresentation in the application process or a breach of any of the terms of the application process; or
3. if the University learns that an individual has engaged in behavior prior to the first day of enrolled Stanford attendance that indicates a serious lack of judgment or integrity.

Indeed (and for example), Stanford may rescind an individual's admission at any time, including after attendance and after degree conferral, if it determines, for example, that an individual has been admitted to Stanford on the basis of having provided false information; has withheld requested information; or has engaged in behavior prior to the first day of enrolled Stanford attendance that indicates a serious lack of judgment or integrity.

The University reserves the right to require individuals to provide additional information (and/or authorization for the release of information) about any such matter, and to place a hold on registration and/or the conferral of a degree during the investigation into any such matter. Stanford also reserves the right in perpetuity to investigate the authenticity, accuracy, and authorship of materials submitted, information provided, and assertions made in connection with the application.

Similarly, Stanford University awards degrees on the basis of successful completion of all program requirements in accordance with Stanford's policies and procedures. The University reserves the right to rescind any degree or honors designation (even after conferral) if the program requirements have not been so completed, and to place a hold on issuing a degree during the investigation into any such matter.

For academic programs that require work authorization in the United States (such as to serve as a teaching assistant or research assistant), Stanford University reserves the right to rescind the admission and terminate the student status of any student who fails to timely obtain and maintain that work authorization status.

Holds

A hold can be placed on the registration of any student with unmet financial or other University obligations; in addition to being unable to register for and take classes, among other limitations, such a student cannot receive a transcript, statement of completion, degree certificate, or diploma until the hold is released. As a condition of attending Stanford, students accept this provision.

Undergraduate

Undergraduate Admission

Stanford's undergraduate community is drawn from throughout the United States and the world. It includes students whose abilities, intellectual interests, and personal qualities allow them to benefit from and contribute to the University's wide range of teaching and research programs in the humanities, natural sciences, social sciences, and engineering. The University admits students who love learning for its own sake; who exhibit energy, creativity, and curiosity; and who have distinguished themselves in and out of the classroom.

Stanford welcomes a diverse community that cuts across many dimensions. The University does not use quotas of any kind in its admission process: it does not favor particular schools or types of schools, nor any geographic region, nor does it have any racial, religious, ethnic, or gender-related quotas. The University believes that a student body that is both

highly qualified and diverse in terms of factors including (but not limited to) culture, socioeconomic status, race, ethnicity, gender, work and life experiences, skills, and interests is essential to the educational process. Having a student body that is diverse in many ways (specifically including race and ethnicity) furthers Stanford's educational mission in that it promotes understanding among those from different backgrounds, contributes to the destruction of stereotypes, prepares students to be positive members of a diverse workforce and national and international communities, and shapes the next generation's leaders. Applications are encouraged from those take initiative and responsibility for their education and who would provide additional dimensions to the University and its programs.

Citizenship and immigration status are not a condition of admission to Stanford. The University welcomes applications from all students who are ready to make the most of the extraordinary academic opportunities available at Stanford. Undocumented undergraduate applicants with questions about admission or financial aid should visit the University's Undocumented at Stanford website.

In order to preserve the residential character of the University and to maintain a favorable student-faculty ratio, Stanford has a limited undergraduate enrollment. The anticipated size of the entering class is approximately 1,700+ students who are admitted for Autumn Quarter enrollment. Approximately 20-40 transfer students, entering either the sophomore or junior class, are also typically admitted for Autumn enrollment if space allows. Each year, the University receives many more applications from qualified students than there are places available.

Stanford is committed to meeting the University-computed financial need of each admitted student, and admission decisions are made without regard to the applicant's financial status, except in the case of international students who are neither U.S. citizens nor U.S. registered permanent residents.

Application procedures, requirements, and deadlines vary from year to year. See the Undergraduate Admission website for the most recent information; or call the Office of Undergraduate Admission at (650) 723-2091.

Nonmatriculated Study (Undergraduate)

Permission to enroll at Stanford as a nonmatriculated student during Autumn, Winter, and Spring quarters is not routinely approved except under extenuating circumstances. Nonmatriculated students authorized to enroll at Stanford University are not admitted to any Stanford degree program and are permitted to register for a specific period, usually one, two, or three quarters. Financial assistance from Stanford University is not available. Permission to enroll as a nonmatriculated student does not imply subsequent admission as a matriculated student.

Nonmatriculated status is a privilege and not a right. The University reserves the right, at its discretion, to withhold registration from, or require withdrawal for the program by, any student or applicant. In addition, nonmatriculated status may be revoked at the University's discretion (and after consideration of such factors as the University considers relevant in the particular case) at the end of any quarter of enrollment.

Students interested in nonmatriculated status during the Autumn, Winter, and Spring quarters should contact the Office of the University Registrar, not the Office of Undergraduate Admission. Note: newly admitted Stanford students (that is, those admitted to a Stanford degree program) are not eligible to enroll for nonmatriculated study for any quarter, except with the permission of the Vice Provost for Undergraduate Education (or his or her designee) under extenuating circumstances.

High School Nonmatriculated Students

Local high school students are eligible to be considered to attend Stanford as nonmatriculated students on a limited basis when they have exhausted all of the courses in a given discipline offered by their high school. Nonmatriculated high school students are permitted to enroll in one course per quarter and are required to pay the applicable tuition. Permission from the academic department and the University Registrar is required. The Language Center does not allow high school students to enroll in language courses during the academic year. High school students who are accepted to participate in High School Summer College may enroll in language courses as part of Summer Session, space permitting.

Summer Session

Students wishing to enroll as nonmatriculated students during Summer Quarter should contact the Summer Session Office for more information about the Summer Visitor Program. Admission to the Summer Visitor Program does not imply regular admission to Stanford for subsequent quarters or to one of Stanford's regular degree programs.

Graduate

Graduate Admission

Matriculated Study (Graduate Students)

Applicants from colleges and universities of recognized standing who hold a U.S. bachelor's degree or its equivalent are eligible to be considered for admission for graduate study. Details regarding degrees offered in specific departments are given on the Graduate Admissions web site. The number of applicants who can be admitted for work in a particular field of study at any time is limited by the facilities and programs of the school or department and by the number of matriculated students who continue their work in that field.

As with its undergraduate program (see the Undergraduate Admissions tab in this section of this bulletin), Stanford believes that a graduate student body that is both highly qualified and diverse in terms of factors such as culture, socioeconomic status, race, ethnicity, gender, work and life experience, skills, and interests is essential to the graduate educational process. It particularly welcomes applications from African Americans, Latinos, and Native Americans, as well as from others whose backgrounds and experiences would add additional dimensions to the University's educational programs.

Graduate admissions at Stanford are managed by individual schools; different graduate programs have different work and training requirements. Undocumented students should visit the University's Undocumented at Stanford web site and refer to the web site of the school they are interested in for admission information.

Honors Cooperative Program

The Honors Cooperative Program (HCP) is a part-time graduate program offered by Stanford University. It allows working professionals, who may be eligible for tuition support through their employer, an opportunity to earn a graduate degree in any of the engineering programs, applied physics, statistics, or biomedical informatics, on a part-time basis.

Prospective HCP students apply to the department in which they would like to pursue a graduate degree through the normal graduate admissions process, and compete with all other applicants for admission to the program. Once admitted, HCP students arrange their part-time status and tuition payment options through the Stanford Center for Professional Development (SCPD). Courses are delivered online and broadcast locally. HCP students are also welcome to attend certain classes on campus, and some on-campus attendance may be required depending on the degree track.

To participate, HCP students must have the support of their employer as a participating company of the Stanford Center for Professional Development. For more information, see the Stanford Center for Professional Development (SCPD) web site, or phone (650) 725-3000.

The Coterminal Degree Program

This program permits matriculated Stanford undergraduates to study for a Master of Arts (M.A.) or Master of Science (M.S.) degree while completing their bachelor's degree(s) in the same or a different department. Application policies and procedures are established by each master's department or program. Interested Stanford undergraduates should directly contact the department or program in which they wish to pursue a master's degree and must adhere to

the application deadlines. Stanford undergraduates may also choose to apply to Stanford graduate degree programs through the standard graduate admissions process. Such applicants are not coterminal students and coterminal policies do not apply. For more information, see the Coterminal Degrees section of this bulletin.

Application Process

Specific information regarding test requirements, other application procedures and requirements, and closing dates for filing applications and supporting credentials for admission and financial aid are listed on the Graduate Admissions web site.

Graduate fellowship funds and assistantships are generally committed in March for the entire period comprising Autumn, Winter, and Spring quarters of the next academic year. Awards are seldom made to students who enter the University in Winter, Spring, and Summer quarters; such applicants must meet the same financial aid application requirements as those entering in Autumn Quarter.

Applications are to be submitted electronically for graduate programs in the schools of Business, Earth Sciences, Education, Engineering, Humanities and Sciences, and the Biosciences (non-M.D. programs in Medicine). Application instructions may be found at the Graduate Admissions web site.

For admission to the following programs, apply directly via the web sites below.

Business

Admission information is available for the M.B.A., MSx Program, and Ph.D. programs at the Stanford Graduate School of Business Admissions web site. All applications must be submitted electronically.

Law

Applicants for the J.D. degree should see the Law School J.D. Admissions web site. Applicants for LLM, JSM, JSD, and MLS degrees can find instructions at the Advanced Degree Programs web site. These applications are submitted to the Director of Admissions, School of Law, Stanford University, Stanford, CA 94305-8610. The Law School Admissions Test is required.

M.D. Program

Applicants should see the M.D. admissions web site or, for additional information about the M.D. program, write to Stanford University School of Medicine, Office of M.D. Admissions, 251 Campus Drive, MSOB X3C01, Stanford, CA 94305-5404. The American Medical College Application Service (AMCAS) application is available at the AMCAS web site. Deadlines for receipt of applications and transcripts are available there.. The Medical College Admissions Test (MCAT) is required.

Rescission

By applying for admission to Stanford University academic programs, applicants certify that the information they provide in their applications is complete, accurate, and their own work. As also noted in the application materials, Stanford reserves the right to withdraw an offer of admission under certain circumstances, including (but not limited to):

1. if there is a significant drop in academic performance, a failure to graduate (in the applicant's current program), or a failure to satisfy a prerequisite or condition of admission;
2. if there has been a misrepresentation in the application process or a breach of any of the terms of the application process; or
3. if the University learns that an individual has engaged in behavior prior to the first day of enrolled Stanford attendance that indicates a serious lack of judgment or integrity.

Indeed (and for example), Stanford may rescind an individual's admission at any time, including after attendance and after degree conferral, if it determines, for example, that an individual has been admitted to Stanford on the basis of having provided false information; has withheld requested information; or has engaged in behavior prior to the first day of enrolled Stanford attendance that indicates a serious lack of judgment or integrity.

The University reserves the right to require individuals to provide additional information (and/or authorization for the release of information) about any such matter, and to place a hold on registration and/or the conferral of a degree during the investigation into any such matter. Stanford also reserves the right in perpetuity to investigate the authenticity, accuracy, and authorship of materials submitted, information provided, and assertions made in connection with the application.

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For academic programs that require work authorization in the United States (such as to serve as a teaching assistant or research assistant), Stanford University reserves the right to rescind the admission and terminate the student status of any student who fails to timely obtain and maintain that work authorization status.

Holds

A hold can be placed on the registration of any student with unmet financial or other University obligations; in addition to being unable to register for and take classes, among other limitations, such a student cannot receive a transcript, statement of completion, degree certificate, or diploma until the hold is released. As a condition of attending Stanford, students accept this provision.

Nonmatriculated

Nonmatriculated Study (Graduate Students)

Eligibility for consideration for nonmatriculated enrollment is restricted to two groups of applicants:

1. Stanford alumni who wish to return to Stanford to take courses that are prerequisites for Medical School admission, such as undergraduate Biology or Chemistry courses, are eligible to apply for nonmatriculated status. An application form, application fee, statement of purpose, and three letters of recommendation are required. The decision to admit or deny is made by the Graduate Admissions Office on the basis of relevant factors, including at least a 3.0 GPA and positive letters of recommendation.
    1. Applicants who graduated from other universities are not eligible to take the prerequisites for Medical School at Stanford.
2. Individuals who hold a bachelor’s degree or equivalent and wish to take courses in a specific department that allows non-degree students are eligible to apply for nonmatriculated status. An application form, application fee, statement of purpose, original transcripts, and three letters of recommendation are required. The decision to admit or deny is made by the chair of the department in which they wish to take courses and conveyed in writing to the Graduate Admissions Office. Applicants are notified of the decision by Graduate Admissions in Student and Academic Services.

Students who are granted nonmatriculated status are charged the 8-10 unit rate for each quarter in which they are enrolled, and may enroll for a maximum of a total of one academic year. Nonmatriculated status is a privilege and not a right; the nonmatriculated status may be revoked at the University’s discretion (and after consideration of such factors as the University considers relevant in the particular case) at the end of any quarter of enrollment.

Nonmatriculated students are not permitted to enroll in certain courses, such as those in the following departments or programs: film and broadcasting courses in Art; introductory courses in Mathematics (i.e., numbered below 100); all courses in Computer Science, Electrical Engineering, International Policy Studies, and the School of Medicine. Nonmatriculated students in the School of Medicine may enroll in courses only with written approval by either the Senior Associate Dean of Graduate Education and Postdoctoral Affairs or the Senior Associate Dean for Medical Education. Nonmatriculated students must limit their enrollment to classes in the department in which they have been admitted. Nonmatriculated students receive academic credit for courses satisfactorily completed and may obtain an official transcript. As a general proposition, they may use University facilities and services. In classes of limited enrollment, students in degree programs have priority. Nonmatriculated students may apply for housing but have a low priority for assignment and are not guaranteed housing. No fellowships, assistantships, or Stanford loans are available for nonmatriculated students. Nonmatriculated students are not eligible for a leave of absence.

Nonmatriculated students who later apply for admission to a degree program must meet the standard admission requirements and should not anticipate special priority because of work completed as a nonmatriculated student. Students who are admitted to a degree program may apply a maximum of 15 units of nonmatriculated study toward the residency requirement for a master's degree and 30 units for the Engineer or Ph.D. degree, subject to the approval of the degree granting department.

Application forms for nonmatriculated status during the regular academic year are available from Graduate Admissions, Student and Academic Services. Deadlines for applying are included with the forms and are generally required two months before the start of the quarter.

Applicants interested in nonmatriculated student status for the Summer Quarter only should explore the Summer Session web site.

Non-Degree-Granting Programs

Stanford University has established a limited number of formal non-degree-granting programs within individual departments. These include the Knight Fellowship Program for mid-career journalists (Communication Department), and the Stegner Fellows Program for selected authors (Creative Writing Program, within the English Department).

Individuals may apply to these programs directly. Application requirements, admissions decisions, tuition requirements and financial support are all handled by the specific program. Individuals who are admitted to these programs will be registered at Stanford as nonmatriculated graduate students in the appropriate program. Upon completion of their program, they will receive a transcript and certificate of program completion.

Individuals who commit violations of University policy, the Honor Code, or the Fundamental Standard are subject to termination. Individuals in non-degree granting programs are subject to removal or discipline according to the program's policies or practices, not through the Office of Community Standards.

Stanford Center for Professional Development

Qualified individuals may pursue graduate and professional certificates or take individual graduate and professional courses through the Stanford Center for Professional Development. Nonmatriculated students taking individual graduate courses for credit, or towards earning a graduate certificate, are charged tuition on a per-unit basis. For more information on available courses, applications, and deadlines visit http://scpd.stanford.edu or phone (650) 725-3000.

Postdoctoral Scholars

Postdoctoral scholars are trainees in residence at Stanford University pursuing advanced studies beyond the doctoral level in preparation for an independent career. Postdoctoral scholars are appointed for a limited period of time and may participate in Stanford research projects and/or may be supported by external awards or fellowships. In all cases, their

appointment at Stanford is for the purpose of advanced studies and training under the sponsorship of a Stanford faculty member.

Postdoctoral appointments require initial full-time engagement in the designated research or study and are generally restricted to those who have earned a terminal degree such as Ph.D. or J.D. within the last three years or a medical degree such as M.D., M.B.B.S., or D.D.S. within the last six years. Requests for exceptions for individuals who are beyond these limits, or have not been actively engaged in research as their primary effort, must include a written statement from the sponsoring faculty member indicating what additional training outside the primary area of effort the individual plans to receive, and the reasons for which the exception is requested. Postdoctoral scholars are appointed at Stanford for fixed terms, typically one year but that may eventually total up to four years, and are subject to a strict five-year rule (that is, that the total postdoctoral appointment period is not to exceed a total of five years of postdoctoral research experience at all institutions combined). In cases of combined training, only the years of active research at the postdoctoral level are counted for salary and other purposes. Postdoctoral scholars who begin a second postdoctoral appointment in a new field may have training extended to a maximum total of up to six years. Postdoctoral scholars may request temporary reductions in effort and pay due to temporary family or other conditions.

All postdoctoral scholars appointed at Stanford must be supported by Stanford grants and contracts, training grants, departmental or school fellowship funds, or external fellowships, or by a combination of these sources. Scholars may not be self-supporting. In addition, all postdoctoral scholars are eligible for a benefits package including medical, dental, life, and disability insurance. Postdoctoral scholars are normally appointed for 100% time.

Postdoctoral scholars must be registered at Stanford during every academic quarter of their appointment. Registration entails payment of a quarterly postdoctoral fee by the academic department or school appointing the scholar.

Prospective postdoctoral scholars should write directly to the department in which they wish to study or check for postdoctoral openings at http://postdocs.stanford.edu/prospects/index.html. For more information, see http://postdocs.stanford.edu.

Visiting Student Researchers

There are a limited number of instances when it would be to the benefit of Stanford faculty to permit graduate students currently enrolled at other universities to engage in research at Stanford using Stanford research facilities. These might include students at other universities who are engaged in research in a field of interest to a Stanford faculty member or a student who is doing a laboratory rotation as part of a larger research study or grant. Such students are known as Visiting Student Researchers (VSRs) and are appointed as nonmatriculated graduate students.

When agreeing to sponsor a VSR, faculty must be mindful of the need to place primary emphasis on providing research opportunities to regularly matriculated Stanford students. In addition, students sponsored as VSRs must be qualified to conduct research at a level comparable to that of other Stanford graduate students and the research must be of benefit to Stanford as well as the visitor.

Any Stanford faculty member in any department at Stanford may sponsor a VSR. The sponsoring faculty member and the department chair must sign the letter of invitation and thus assume responsibility for the VSR. The faculty director of an interdisciplinary program or research center or institute that is sponsoring a VSR may sign instead of a department chair. In most instances, faculty members in a department who also have an appointment in a research center or institute should sponsor a VSR within their department, since department staff have experience with student enrollments and financial policies.

The full Visiting Student Researcher policy is in the Research Policy Guide (RPH 10.7 Visiting Student Researchers). The Registrar Office's website outlines the procedures for sponsoring and appointing a VSR.

Undergraduate Visiting Researcher Interns (Nonmatriculated Study)

During the summer term, students from other universities who have not yet obtained a bachelor's degree (or its foreign equivalent) may be invited by Stanford faculty to conduct research on the Stanford campus. Participants must be a degree-seeking student for at least two years at the bachelor's level in a U.S. college or university accredited by a regional accrediting association or international college or university of recognized standing. Participation is contingent upon the approval of Graduate Admissions, Student and Academic Services.

These students are registered as Undergraduate Visiting Research Interns. Appointments are limited to the Summer term. Invited persons must be qualified to conduct research at a level comparable to that of other Stanford undergraduates, and the research must be of benefit to Stanford as well as to the visitor. Forms for the appointment of Undergraduate Visiting Research Interns are submitted to Graduate Admissions, Student and Academic Services by the department issuing the invitation.

Undergraduate Visiting Researcher Interns are charged a quarterly fee. They may waive the University's student medical insurance plan only if they have comparable coverage with another carrier and submit proof of the comparable coverage prior to the term start date. Visiting Research Interns are not entitled to any financial support from Stanford University. Funds intended for the support of matriculated Stanford students may not be used to support Visiting Researcher Interns. Stanford cannot certify visiting researchers for deferment of U.S. educational loans.

Students of New Faculty

Faculty who are being hired by Stanford University, and who are currently advising doctoral students in advanced stages of degree completion at their home university, may appoint one or more of these students as Students of New Faculty, a nonmatriculated graduate status, for the purpose of facilitating the completion of the student's doctoral research with their faculty adviser. To be eligible for this status, the student must:

- have completed at their home institution all degree requirements equivalent to those required for Stanford's TGR status (i.e., completed all curricular requirements, candidacy, and residency), and
- be in good academic standing at their home institution, and remain so while at Stanford, and
- demonstrate agreement to the terms and conditions for this appointment by signing the Students of New Faculty Representations.

Appointment of these students into nonmatriculated Stanford graduate status requires the approval of the incoming faculty member, that faculty member's Stanford department chair and school dean, and Stanford's office of the Vice Provost for Graduate Education, as well as of the appropriate office at the student's home institution.

Approval for these appointments is documented by means of an Affiliation Agreement between Stanford and the student's home institution, identifying the student(s) and describing the arrangements for their appointment at Stanford. Attachments to this agreement specify the timing of the appointment and the sources of financial support, if any, for each student.

Students are appointed into this status for one year at a time, up to a limit of three years. The Stanford department may request extensions beyond the third year. Approval for extensions requires the concurrence of the Stanford school dean's office and the Vice Provost for Graduate Education, along with the appropriate office(s) at the student's home institution.

Students of New Faculty must enroll in the appropriate TGR course during each quarter of the academic year while they are at Stanford, and will be charged TGR tuition during each enrolled quarter. Summer enrollment is optional subject to the relevant policies of Stanford and of the home institution. Students of New Faculty may be appointed and paid as Research Assistants. For more information, see GAP 2.4.1.

Financial Aid

Undergraduate Financial Aid

The University has a comprehensive need-based financial aid program for its undergraduates. Stanford is committed to meeting the University-computed financial need of each admitted student, and admission decisions are made without regard to the applicant's financial status, except in the case of international students who are neither U.S. citizens nor U.S. registered permanent residents.

Before awarding institutional funds, the University assumes that students and their parents accept the first and primary responsibility for meeting educational costs. Stanford's policy generally is to exclude undergraduates from being considered financially independent of their parents for University-administered scholarship aid unless a student is an orphan, a ward of the court, or at least 25 years of age. Spouses of married undergraduate students share in the responsibility to meet educational costs.

Stanford expects financial aid applicants to apply for and use resources from state, federal, and private funding sources, contribute from their earnings during nonenrollment periods (for example, summer), and use earnings from part-time employment during the academic year to meet educational expenses. If Stanford determines that an applicant and his or her family cannot meet standard educational expenses remaining after these resources are applied, the University offers scholarship funds to help meet remaining costs.

The amount of scholarship or grant funds offered to students is determined by the difference between the comprehensive cost of attendance (including tuition, fees, room, board and allowances for books, supplies, personal expenses, and travel) and the amount the student and parents can reasonably be expected to contribute toward educational costs based on family financial circumstances. Scholarships from outside sources may change the University's financial aid award. When a student receives outside scholarships, these funds reduce or eliminate the student's responsibility to contribute from job earnings. If the total in outside scholarships exceeds the student's responsibility, the University then reduces institutional scholarship, dollar for dollar, by any additional amount.

Students are considered for University scholarship eligibility during their first four years of undergraduate enrollment. The Financial Aid Office (FAO) considers applicants for University scholarship eligibility beyond the twelfth quarter only if enrollment is essential in order to complete the minimum requirements for the first baccalaureate degree or major. Students who enroll for a fifth year in pursuit of a coterminal program, a minor, a second major, a second degree, or the B.A.S. degree are not eligible for University scholarship consideration but may apply for student loans and federal grants. Eligibility for federal student aid is limited to the equivalent of 18 quarters of full-time undergraduate enrollment, including course work taken at other colleges and universities. Students must also maintain satisfactory academic progress to retain financial aid eligibility.

For additional detailed information, refer to the FAO web site.

Graduate Financial Aid

Graduate students at Stanford receive funding from a variety of sources. University fellowships, research assistantships, and teaching assistantships are offered primarily to doctoral students. In some cases, master's students also may receive fellowships and assistantships. In addition, outside agencies provide fellowships to many graduate students at Stanford. Students without fellowships or assistantships, and those whose funding does not cover all of their costs, may need to use student loans, savings, other personal assets, a spouse's earnings, or parental support to meet their educational expenses.

Veterans Education Benefits

The Office of the University Registrar serves as the liaison between the University, its students, and the various federal, state, and local agencies concerned with Veterans education benefits. Stanford certifies enrollment for students in degree seeking programs and VA approved certificate programs offered through the Stanford Center for Professional Development and Graduate School of Business. Other non-matriculated and certificate programs are not eligible. All students eligible to receive Veterans education benefits while attending the University are urged to complete arrangements with the appropriate agency in advance of enrollment.

Stanford University is required to certify only those courses that meet minimum graduation requirements. Courses not directly related to a student's degree program or courses beyond those required for a specific degree program are not certified. Undergraduates should meet with an advisor to develop a course enrollment plan. Graduate students should have their departments approve their study lists as meeting graduation requirements on a quarterly basis.

To comply with federal regulations concerning credit for previous training (38 CFR 21.4253), Stanford University is required to evaluate all previous education and training completed elsewhere to determine what credit, if any, should be granted to students eligible to receive Veterans educational benefits. Stanford is required to complete an evaluation; credit is granted when appropriate. Credit is evaluated toward the degree program registered with Veterans Affairs as determined by the Office of the University Registrar in conjunction with the relevant academic department(s) or program(s). All relevant policies regarding transfer credit apply. In addition, this evaluation occurs each time a student's degree program is changed.

Subject to current federal and University guidelines, students eligible for receipt of VA educational benefits have their prior education and training evaluated up to the credit limits outlined in the "Residency Policy for Graduate Students" section of this bulletin. As an exception to that policy, students in master's programs in the schools of Earth Sciences, Education, Engineering, Humanities and Sciences, Law, Medicine, and Graduate Business are allowed a maximum of 6 transfer (quarter) units. Students should consult with the VA Certifying Officer for consideration of optimal use of VA education benefits.

Stanford participates in the Yellow Ribbon provision of the Post 9/11 GI Bill (Ch. 33). If a matriculated student qualifies for Chapter 33 benefits at the 100% level, the student may be eligible to receive additional funding through the Yellow Ribbon Program. Under this program, Stanford provides an institutional award to supplement the Chapter 33 base tuition benefit. The VA also matches Stanford's Yellow Ribbon contribution. The amount of institutional contribution varies by school and program. See the U.S. Department of Veteran's Affairs Yellow Ribbon web site for additional information.

See the Office for Military Affiliated Communities (OMAC) website for additional information about Veterans education benefits.

Tuition, Fees, and Housing

University Communication with Students

Stanford University uses electronic means (such as email, texts, and the Internet) as a method of communication and of providing billing, payment, and enrollment services. For many University communications, email to a student's Stanford email account is the official form of notification to the student, and emails sent by University officials to such email addresses will be presumed to have been received and read by the student. Signatures or acknowledgements provided by a student electronically to the University via Stanford systems and/or @stanford.edu email are valid and legally binding.

Notification/Obligation to Read Email

For many University communications, email to a student's Stanford email account is the official form of notification to the student, and emails sent by University officials to such email addresses will be presumed to have been received and read by the student. Emails and forms delivered through a SUNet account by a student to the University may likewise constitute a formal communication, with the use of this password-protected account constituting the student's electronic signature.

Obligation to Pay Charges

By accepting Stanford's offer of admission and enrolling in classes, each student accepts responsibility for paying all debts to the University, including tuition and fees, for which he or she is liable. An individual's registration as a Stanford student constitutes his or her agreement to make timely payment of all amounts due. Stanford students have access to financial literacy resources through the Mind Over Money program including the Haven Money tool and 1:1 financial coaching for personal finance education.

Tuition

Tuition

For complete tuition information, see the Registrar's tuition web site.

Quarterly tuition for the academic year 2021-22, for Autumn, Winter, and Spring quarters.

TUITION CATEGORY	TUITION
UNDERGRADUATE	$18,491
GRADUATE 11-18 UNITS	$18,105
GRADUATE 8,9,10-UNIT RATE	$11,770
EACH GRADUATE UNIT ABOVE 18	$1,207
GRADUATE ENGINEERING 11-18 UNITS	$19,287
GRADUATE ENGINEERING 8,9,10-UNIT RATE	$12,540
EACH GRADUATE ENGINEERING UNIT ABOVE 18	$1,286
GRADUATE SCHOOL OF BUSINESS (M.B.A. PROGRAM—FIRST YEAR)*	$24,902
GRADUATE SCHOOL OF BUSINESS (M.B.A. PROGRAM—SECOND YEAR)*	$24,902
SCHOOL OF MEDICINE (M.D. PROGRAM)*	$21,249
LAW SCHOOL	$21,450
GSB & LAW JOINT PROGRAM**	$22,712
PERMIT FOR SERVICES ONLY (PSO)	$5,668
PERMIT TO ATTEND (PTA)***	$5,668
TGR (TERMINAL GRADUATE REGISTRATION)	$3,531
MEDICAL SCHOOL RESEARCH RATE	$3,531

*Ph.D. students in the Biomedical Sciences and in the Graduate School of Business are assessed the standard graduate tuition rate.
**Law/GSB joint program tuition rate
***Policies concerning auditing are available in the Stanford Bulletin.

- MSx: M.S. in Management for Experienced Leaders (GSB): $32,425 (annual, 4 quarters, Summer 2021 through Spring 2022)
- TGR students who carry 1, 2, or 3 units are assessed the TGR rate of $3,531.
- PostDoc Fee: $125
- Graduation Quarter: $150
- Campus Health Services Fee: $232
- VSR monthly fee: $1,177

Regular tuition fees apply to the undergraduate Overseas Studies and Stanford in Washington programs.

Eligibility for registration at reduced tuition rates is described below. Tuition exceptions may also be made for illness, disability, pregnancy, new-parent relief, or other instances at the discretion of the University. No reduction in tuition charges is made after the first two weeks of the quarter.

All students are advised, before registering at less than the regular full-tuition rate, to consider the effects of that registration on their degree progress and on their eligibility for financial aid and awards, visas, deferment of student loans, and residency requirements.

The University reserves the right to change at any time, without prior notice, tuition, room fees, board fees, or other charges.

Document Fee

A Document Fee of $250 is assessed once upon the first admission to Stanford as an undergraduate or graduate student, including Law, GSB, and Medicine students. Non-degree option (NDO) students, such as summer session and non-degree seeking SCPD students, are assessed a $125 Document Fee.

Undergraduate Student Tuition

During Autumn, Winter, and Spring quarters, undergraduates are expected to register at the regular full-tuition rate.

During Summer Quarter, Stanford undergraduates may register on a unit-basis. For Summer Quarter tuition rates and policies, see the Registrar's Summer tuition web site.

The following reduced-tuition categories can be requested by matriculated undergraduate students in the final stages of their degree program:

1. Permit to Attend for Services Only (PSO)

Undergraduates completing honors theses, clearing incompletes, or requiring a registration status, and who meet the PSO conditions listed in the "Special Registration Statuses (Undergraduate)" section of this Bulletin, may petition for PSO status one time only in their terminal quarter.

2. 13th Quarter

Undergraduates who meet the 13th Quarter conditions listed in the "Special Registration Statuses (Undergraduate)" section of this Bulletin may petition one time only to register for a minimum of eight units. For per-unit tuition rates, see the Registrar's tuition web site.

3. Graduation Quarter

Undergraduates may petition to register for Graduation Quarter registration status in the quarter in which they are receiving a degree if they are not using any University resources (including housing), have completed all University requirements, and meet the Graduation Quarter conditions listed in the "Special Registration Statuses (Undergraduate)" section of this bulletin. Graduation Quarter may be permitted one time only. The tuition for the Graduation Quarter is $150.

Coterminal students are only eligible for the Graduation Quarter special registration status if they are applying to confer both the undergraduate and graduate degree in the same quarter.

Coterminal Student Tuition

Coterminal students are assigned to either the undergraduate coterminal tuition group or the graduate coterminal tuition group, which dictates whether the student is charged undergraduate or graduate tuition. A coterminal student is subject to graduate tuition assessment and adjustment policies once placed in the coterminal graduate tuition group. Coterminal students are not eligible for undergraduate special registration statuses (with the exception of Graduation Quarter if the student is applying to confer both their undergraduate and graduate degrees in the same quarter). Coterminal students may only be eligible to apply for graduate special registration statuses once their undergraduate degrees have been conferred. Coterminal students should see the student policies and procedures for tuition assessment, as described in the "Coterminal Degrees" section of this bulletin.

Graduate Student Tuition

Matriculated graduate students are expected to enroll for at least eight units during the Autumn, Winter, and Spring quarters. Schools and departments may set a higher minimum. During the Autumn, Winter, and Spring quarters, matriculated graduate students in most departments may register at the reduced 8-, 9-, or 10-unit tuition rate if their enrollment plans are accepted by their departments. Students in the Stanford Law School, the MBA program in the Graduate School of Business, or the M.D. program in the School of Medicine, should consult appropriate school officers about tuition reduction eligibility.

Graduate students who are enrolled in more than one graduate degree at Stanford, where each program charges different tuition, are charged:

1. the tuition associated with a degree in the doctoral/professional category, if the other degree is in the master's category. Those degrees in the doctoral or professional category for tuition purposes are the Ph.D., D.M.A., J.S.D., M.D., and J.D. degrees. Those degrees in the master's category for tuition purposes are the Engineer, M.A., M.S., M.P.P., M.B.A., M.F.A., L.L.M., M.L.S., and J.S.M. degrees.
2. the higher tuition rate, if both degrees are in the same category.
3. a University-approved tuition rate if the student is in a special program for which specific tuition agreements have been approved by the Faculty Senate (e.g., all joint degree programs (JDPs) or the Master of Science in Medicine program).

As a general proposition, during the Summer Quarter registration is not required by Stanford University and does not substitute for registration during the academic year. Students are required to be enrolled Summer Quarter if, during that quarter, they will meet any of the criteria listed in the "Enrollment Requirements" section of the "Graduate Degrees" section of this bulletin. Graduate students who do enroll Summer Quarter may reduce their enrollment to a minimum of one unit (charged on a per-unit basis) unless the terms of a fellowship or other financial support, or of their particular degree program, require a higher level of enrollment. TGR students who enroll in summer pay the TGR rate and must enroll in the required zero-unit course. Students in the schools of Law, Business, or the M.D. program should consult appropriate school officers regarding summer enrollment requirements. Students possessing an F1 or J1 student visa may be subject to additional course enrollment requirements in order to retain their student visas.

Honors Cooperative students register at the per-unit rate. Graduate students who are faculty spouses, regular Stanford employees, or full-time educators in the Bay Area may also register at the per-unit rate.

Non-matriculated graduate students pay the same tuition rates as matriculated students but must register for at least 8 units. Visiting Student Researchers pay a monthly fee; they may not enroll in or audit courses. Within certain restrictions, postdoctoral scholars may enroll in courses if the appropriate unit rate for tuition is paid.

The following reduced-tuition categories can be requested by matriculated graduate students in the final stages of their degree programs:

1. Terminal Graduate Registration (TGR)

Doctoral students, master's students, and students pursuing Engineer degrees who have completed all degree requirements other than the University oral exam and dissertation (doctoral students) or a required project or thesis (Engineer or master's students) and meet the conditions listed in the "TGR" section of this bulletin may request Terminal Graduate Registration tuition status.

Each quarter, TGR students must enroll in the 801 (for master's and Engineer students) or 802 (for doctoral students) course in their department for zero units, in the appropriate section for their adviser. TGR students register at a special tuition rate as outlined above. TGR students may enroll in up to 3 units of course work per quarter at this tuition rate. Within certain restrictions, TGR students may enroll in additional courses at the applicable unit rate. The additional courses cannot be applied toward degree requirements since all degree requirements must be complete in order to earn TGR status.

2. Graduate Petition for Part-time Enrollment (formerly Graduate Tuition Adjustment)

Graduate students who need only 3 to 7 remaining units to complete degree requirements or to qualify for TGR status may apply to register for one quarter only on a unit basis (3 to 7 units) to cover the deficiency. Students with disabilities covered under the Americans with Disabilities Act that have an approved reduced course load recommended by the Office of Accessible Education (OAE) may also request a tuition adjustment for *each* quarter in which they take a reduced course load. For per-unit tuition rates, see the Registrar's tuition web site.

3. Graduation Quarter

Registration is required for the term in which a student submits a dissertation or has a degree conferred. Students who meet the conditions listed in the "Graduation Quarter" section of this bulletin are eligible to be assessed a special tuition rate of $150 for the quarter in which they are receiving a degree.

International Students

F-1 or J-1 visas are required by the U.S. Department of Homeland Security. International students must be registered as full-time students during the academic year. Summer Quarter registration is not required unless the I-20/DS-2019 notes the Summer Quarter as the start date. International graduate students comply with immigration regulations while enrolled for partial tuition if their Stanford fellowships or assistantships require part-time enrollment, if they are in TGR status, or if they are in the final quarter of a degree program. Nonmatriculated graduate students who are international students must register for at least 8 units.

Fees

Application Fee

Contact the Undergraduate Admission Office for information about the undergraduate application fee and the Graduate Admission section of the Office of the University Registrar for the current graduate application fee. Application fees for the School of Law, the School of Medicine, and the Graduate School of Business vary by program. Fees are payable at the time of application and are not refundable.

ASSU Fees*

The Associated Students of Stanford University (ASSU) fees are established by student vote in Spring Quarter. Fees directly fund activities of student organizations and not operations of ASSU. The 2021-22 fees are:

- Undergraduates—$174 per quarter

- Graduate Students—$45 per quarter

ASSU fees are assessed in Autumn, Winter, and Spring quarters and can be waived subject to certain conditions. Waivers can be requested during the first three weeks of each quarter. The window for requesting waivers begins on the first Monday of each quarter and remains open for three calendar weeks. Contact the ASSU for details. Waivers granted result in a credit to the student's University bill.

Document Fee

Stanford charges a one-time Document Fee to all students admitted to a new degree or non-degree program. The fee is paid once only, regardless of the number of degrees a student may ultimately pursue. It covers the cost of a variety of University administrative services such as enrollment and degree certification, course drops, and adds done in Axess before published deadlines, diplomas, and official transcripts and their production.

The document fee for students admitted to a new degree or non-degree programs in 2021-22 is $250.

Campus Health Service Fee

All students enrolled on the main Stanford campus are required to pay the Campus Health Service Fee. The Campus Health Service Fee covers most of the services provided by Vaden Health Center, including primary care medical visits, psychological evaluation and short-term therapy at Counseling and Psychological Services (CAPS), and health and wellness programs. The services provided by Vaden Health Center are not covered by Cardinal Care or a student's private health insurance. More information and answers to questions about the fee can be found at the Campus Health Service Fee web site. The fee for 2021-22 is $232 per quarter.

Health Insurance

The University requires all registered students to carry medical insurance to provide coverage for services not provided by Vaden Health Center. Those who carry medical insurance through an alternate carrier are generally eligible for a waiver of the Stanford Cardinal Care health insurance plan. Students are automatically enrolled in and charged for the Stanford student health insurance plan, Cardinal Care, unless they have completed waiver procedures by the waiver deadline.

For complete information on health insurance, see the Vaden Health Center Insurance web site.

Special Fees

New Student Orientation Fee

A fee is charged to all entering undergraduates for the costs of orientation, including room and board, and for the cost of class dues to provide funds for later activities of the class.

Law Student Services Fee

A fee is charged each quarter to School of Law students for supplementary course materials.

Graduate School of Business M.B.A. Course Reader Fee

A fee is charged each quarter to M.B.A. students in the Graduate School of Business to cover the cost of in-class handouts and licensing fees.

Late Study List Fees

Charges are imposed for late submission of study lists. The amount is $200.

Laboratory Fee

Students in chemistry laboratory courses are charged a nonrefundable fee.

Course Fees

Courses for which special fees are charged, such as in Music Practice; Athletics, Physical Education, Recreation; and Dance, are indicated in the notes of the scheduled class on Axess or ExploreCourses.

Dissertation Fee

Each Ph.D. and D.M.A. candidate has the option to either submit electronically or on paper. Electronic submission is free. Students who choose to submit on paper are charged a fee to cover the cost of microfilming and binding the dissertation and the cost of publishing the abstract.

International Scholar Service Fee

A one-time fee for visa authorization documents is charged to international postdoctoral and visiting scholars.

Housing

Housing

University housing is available to enrolled Stanford degree-seeking undergraduates and graduate students and non-matriculated graduate students as space permits and according to policies described on the R&DE Student Housing web site. Residential and Dining Enterprises (R&DE) Student Housing is responsible for managing and maintaining student residences, assigning students to housing, and operating the regional housing front desks. Information on university housing assignments, options, policies, application procedures, and deadlines may be obtained on the R&DE Student Housing web site, by telephone at (650) 725-2810, or by email at studenthousing@stanford.edu. Current and prospective students may also contact R&DE Student Housing by filing a ServiceNow request. Information regarding off-campus housing may be obtained from the Community Housing section of the R&DE Student Housing web site, by telephone at (650) 723-3906, or by email at communityhousing@stanford.edu. Due to COVID-19 our office at 408 Panama Mall, Suite 101, Stanford University, Stanford, CA 94305 is closed to in-person assistance.

Residential Education (650-725-2800) and the Graduate Life Office (650-736-7078) are responsible for residential education staff, educational programs, counseling, and crisis intervention in undergraduate and graduate housing respectively.

Housing Rates

Complete information on housing is available on the R&DE Student Housing web site. Campus housing rates are generally below local area market rents.

- See Assignments and Contracts to learn how to apply for upperclass undergraduate, single graduate, couple without children, or student with children housing.

  - Undergraduate Housing: The R&DE Autumn Housing Allocation Website includes information about undergraduate housing and the 2020-21 Autumn Housing Allocation process, including rates.
  - Graduate Housing: Application information, descriptions of the graduate housing options, including rates are available at thelottery.stanford.edu.

- Rates for 2021-22 are posted online:
  - Undergraduate residence rates
  - Graduate residence rates

All on-campus rates are per student and include utilities and coinless laundry. Off-campus, subsidized housing rates include utilities, but not laundry. Room rates are charged quarterly on the university bill. Information on payment options and procedures is discussed in assignment information sent out by R&DE Student Housing and in the "Payments" section of the Stanford Bulletin.

House Dues

A quarterly house dues fee for students is generally determined by the local residence staff and/or residents of each house and may be included with room and board charges on the university bill.

Technology Fee

Students who live in housing are automatically assessed a technology fee on their university bill that covers in-room network connections and a landline phone with telephone service (service provided on campus only).

Undergraduate Residences

Approximately 97 percent of undergraduates live in university housing, excepting students studying abroad during the academic year. All freshmen are required to live in on campus residences their first year and are automatically assigned housing following admission. Information on the housing assignment process is included in the R&DE Student Housing section of Approaching Stanford. Because freshmen must live in campus housing, losing eligibility for University housing also leads to a loss of student status until the student has returned to university housing unless an extraordinary exemption is granted from the Office of the Vice Provost for Undergraduate Education.

Residence assignments for continuing undergraduates are made on the basis of an annual lottery, called the Draw, and quarterly assignment rounds. Undergraduates are guaranteed four years of University housing (three years for transfer students) if:

1. they are in compliance with the university housing agreement and university policies,
2. they apply by the appropriate deadlines, and
3. they are willing to live anywhere on campus.

Undergraduate residences include traditional residence halls, language and culture theme houses, cross-cultural theme houses, student-managed and cooperative houses, apartments, suites, fraternities, and sororities.

Graduate Residences

Approximately 66 percent of matriculated graduate students live in housing provided by R&DE Student Housing, both on campus and off campus. Residence assignments are made on the basis of an annual lottery and quarterly assignment rounds. New matriculated students are guaranteed university housing for their first year of study if:

1. they are in compliance with the university housing agreement and university policies,
2. they apply by the first round application deadline for the autumn term, and
3. they are willing to live in any residence for which they are eligible

At Stanford University, new matriculated students are students who are in a graduate program for the first time. Students starting a second graduate degree are not considered new students and therefore are not guaranteed housing.

Coterminal students who opt to live on campus are required to live in undergraduate housing for the duration of their four years of guaranteed undergraduate housing regardless of their student status. Once these four years have been used, students can apply in the annual spring Lottery for graduate housing, where they apply with a low priority. Coterminal students are not guaranteed housing and are assigned after new first-year graduate students who are guaranteed housing and continuing students with remaining priority years.

Academic-year assignment priorities for graduate students are detailed on the Assignment Guarantee and Priorities page of the R&DE Student Housing web site. Priorities are dependent upon degree level and number of years each student has already lived in housing.

Single graduate students may request assignment to furnished graduate apartments in a variety of configurations.

- Studios (private living/bedroom area, bath and kitchen)
- Shared premium two- and four-bedroom apartments (private bedroom and bath, shared kitchen and living/dining room)
- Shared standard two-, three- and four-bedroom apartments (private bedroom, shared bath, kitchen and living/dining room)
- Shared junior two-bedroom, two bath apartments (private bedroom and bath, shared eat-in kitchen, no living room)
- Shared junior two-bedroom, one bath apartments (private bedroom, shared bath, eat-in kitchen, no living room)

Couples housing is available to students who are married and to students who have a same-sex or opposite-sex domestic partner who is living with them at least 50% of each week. At Stanford University, a domestic partnership is defined as an established, long-term romantic partnership with an exclusive mutual commitment in which the partners share the necessities of life and ongoing responsibility for their common welfare. Couples without children may request assignment to a variety of furnished configurations.

- One-bedroom apartments (private bedroom, small den, kitchen and living/dining room)
- One-bedroom apartments with den (private bedroom and bath, small den, kitchen and living/dining room) - only a limited number available for two-student couples
- Two-bedroom apartments (private bedroom and bath, study room, kitchen and living /dining room) - only a limited number available for two-student couples
- Premium two bedroom, two bath apartments (private bedroom, two-baths, study room, kitchen and living /dining room)
- Premium studios (private living/bedroom area, bath and kitchen)
- Standard studios (smaller private living/bedroom area, bath and kitchen)

Housing for students with children is available to married couples, domestic partners, and single parents who have dependent children living with them at least 50% of each week. Housing is not provided for extended families. Parents/siblings of students and live-in day care staff are not permitted to live in university housing. Furnished apartments are available for students with children, based on the number of dependents.

- Two-bedroom apartments (two bedrooms, one bath, kitchen and living /dining room)
- Three-bedroom apartments (three bedrooms, one bath, kitchen and living /dining room)
- Four-bedroom apartments (four bedrooms, one bath, kitchen and living /dining room)

Community Housing

Community Housing provides resources to assist students in locating private rooms, houses, and apartments available for rent in surrounding communities. Students must make rental arrangements directly with landlords. An online listing service facilitates the process of making connections. Information on community housing may be obtained from the Community Housing web site, by telephone at (650) 723-3906, or by email at communityhousing@stanford.edu. Due to COVID-19 our office at 408 Panama Mall, Suite 101, Stanford University, Stanford, CA 94305 is closed to in-person assistance.

Note that Stanford University does not investigate, endorse, or guarantee the accuracy of the information provided by any listing, or the condition of the accommodation. Furthermore, the University assumes no responsibility for housing arrangements made by persons using any of these services.

Meal Plans

Meal Plans

For information on meal plans, see the meal plan rate page on the R&DE Stanford Dining website.

Stanford University's Residential Education program promotes the philosophy that living and learning are integrated and that formal teaching, informal learning, and personal support in residences are integral to a Stanford education. Meals play a key role in this mission of community building, leading, and learning. Therefore, residents of designated university residence halls (Branner, Crothers/Crothers Memorial, Florence Moore, Gerhard Casper, Lakeside, Ricker, Stern, Toyon, Wilbur, Yost, Murray, and EAST) are required to participate in an R&DE Stanford Dining Meal Plan. R&DE Stanford Dining is "Committed to Excellence" by providing meal plans that offer significant value, the highest quality, and most flexibility of dining across campus, along with a daily variety of delicious, nutritious options including vegetarian, vegan, nut-free, kosher, and halal. The Food Allergies @Stanford program offers support and dining accommodations to students with food allergies or other dietary concerns. During Spring Break, to accommodate those staying on campus, Arrillaga Family Dining Commons is open for student meals.

All freshmen and upperclass students living in the above houses can choose an R&DE voluntary meal plan which offers expanded flexibility and numerous options for on campus use. Residents of Yost, Murray, and EAST have a dedicated row meal plan. Students assigned to the Governor's Corner Suites and the remaining row houses are required to purchase either a Dining Societies meal plan (Suites), or a house meal plan (managed through their self-operated or co-op row house staff).

Students are allowed to switch meal plans up until the last two weeks of the quarter. Meal plans are billed on a quarterly basis, and the cost is determined by the number of service days in each quarter. Cardinal Dollars do not expire and carry over from year to year as long as you are enrolled as a student. The remaining Meal Plan Dollar balance carries over at the end of each quarter and can be used throughout the academic year as long as the student is enrolled in a meal plan. All Meal Plan Dollars expire at the end of Summer Quarter. Meal Plan Dollars provided per quarter as part of the Ultimate Flex, Premier Flex, Cardinal Select and Cardinal Light plans vary depending on the number of days in each quarter.

Meal Plans

Undergraduate students living in Branner, Crothers/Crothers Memorial, Florence Moore, Gerhard Casper, Lakeside, Ricker, Stern, Toyon, and Wilbur are required to be at a minimum on one of the Cardinal mandatory meal plans (Classic, Select and Light), but can choose to switch meal plans at any time, until the last two weeks of each quarter.

Cardinal Classic

- 19 meals per week served only in the dining halls
- 5 guest meals per quarter
- During home football games, a meal swipe can be used at the Stanford Stadium

Cardinal Select

- 14 meals per week plus 420 Meal Plan Dollars and 5 guest meals per quarter
- All 14 meals are served in the dining halls
- Meal Plan Dollars can be used in the dining halls, most R&DE cafés, Munger Market and late night venues
- During home football games, a meal swipe can be used at the Stanford Stadium
- The default meal plan for freshmen and upperclass students not living in Yost, Murray or EAST

Cardinal Light

- 10 meals per week plus 750 Meal Plan Dollars and 5 guest meals per quarter
- All 10 meals are served in the dining halls and the Meal Plan Dollars can be used in the dining halls, most R&DE cafés and late night venues
- During home football games, a meal swipe can be used at the Stanford Stadium
- This meal plan is only available for upperclass students.

Row House

Students living in Yost, Murray, or EAST are required to be on the Row House mandatory undergrad meal plan: 12 meals per week plus 345 meal plan and open kitchen dollars.

- 10 meals are served at the row house
- 2 meals can be eaten at any dining hall
- Meal Plan Dollars can be used in the dining halls, most R&DE cafés and late night venues
- Open kitchen funds are available for additional meals in the row house when meals are not being served
- During home football games, a meal swipe can be used at the Stanford Stadium

Payments

Payments

By accepting Stanford's offer of admission and enrolling in classes, each student accepts responsibility for paying all debts to the University, including tuition and fees, for which he/she/they is/are liable. An individual's registration as a Stanford student constitutes his or her agreement to make timely payment of all amounts due.

University Bill

Charges and credits from offices within the University are aggregated in a student's individual account and presented on the Stanford Student Account. Student Financial Services notifies students about payment due dates electronically via email on a monthly basis.

Authorized Payers

Students may designate 'Authorized Payers' via Stanford ePay to allow others to view the student account and make payment. Students and Authorized Payers may view the student account online 24 hours a day, seven days a week, via the Stanford Student Account. Payments should be made online through the same Stanford Student Account or Authorized User portals. If necessary, the student or Authorized Payer may print a statement from the same portal as well.

Due Dates and Unit Adjustments

A list of payment due dates throughout the academic year is available on the Student Financial Services website. To avoid late payment penalties, online payments via the Stanford Stanford Student Account can be made up to 11:59 p.m. PST on the published due date; mailed payments must be received by 5:00 p.m. on the *business day before* the published due date.

After the start of the term, adding units may result in additional tuition charges. Other fees, such as room damage repair charges, petition fees, late fees, lab fees, library fees, and other miscellaneous fees or charges are due on the 15th of the month after which they are billed (unless otherwise noted).

Forms of Payment

Stanford's standard method of payment is the online service, via the Stanford Student Account, which includes electronic check (eCheck) and foreign currency payment options. Stanford ePay foreign currency payment options offer students favorable exchange rates and eliminate bank fees typically charged for wire transfer. No fee is associated with eCheck payments.

Alternatively, payers may use their personal online banking portal with any U.S. bank to pay the University bill. Stanford does not accept cash, credit cards or postdated checks for payments to the University bill.

Stanford offers an installment payment plan for undergraduates.

See Prepayment Installment Plan for information.

See University Bill Payment Methods for information.

Credit Balances

Stanford uses Direct Deposit to refund credit balances to students. See the Direct Deposit enrollment instructions web site. Students are expected to enroll in Direct Deposit at the beginning of their Stanford career or as soon as possible thereafter. Direct Deposits reach the bank within 24-48 hours of processing. Receipt of funds will not be delayed by mail time, lost checks, or the need to go to the bank as is the case with paper checks.

Generally credit balances resulting from financial aid are refunded multiple times weekly. Credit balances resulting from an overpayment of cash (e.g. ePayment, check) remain on the student account to be applied to future charges. A refund of a cash overpayment may be provided at any time upon student request. Annually, in August, Student Financial Services will refund any remaining overpayment of cash to students who have graduated or otherwise discontinued their career at Stanford.

Account Fees and Actions

Late Payment Fees

The University must receive the full amount due on or before the due date indicated on the bill. If full payment is not received by the due date, a late fee of 1% of the amount past due may be assessed. Anticipated aid (aid that has been accepted but not disbursed and is shown on the student account) reduces the total amount due prior to late fees being applied.

Holds

Accounts that become past due more than 30 days are subject to financial holds. Among other things, a financial hold blocks transcripts, diplomas, and enrollment eligibility.

Insufficient Funds

A non-refundable $25.00 administrative fee may be assessed for checks or eCheck payments returned due to insufficient funds. In addition, student accounts are subject to holds, and late payment penalties may apply.

Delinquent Accounts

Delinquent accounts may be reported to one or more of the national credit reporting agencies. Severely delinquent accounts may be referred to a collection agency and/or placed in litigation in accordance with state and federal laws. Students with delinquent accounts may be held responsible for collection costs, attorney fees, and court costs. Stanford may consider past delinquent accounts in determining whether to provide Stanford loans.

Refunds

Refunds

Students who withdraw from the University before the end of a term may be eligible to receive refunds of portions of their tuition under certain limited circumstances.

See the Registrar's Tuition Refunds page for a schedule of refunds.

Annulled Registration

Students who take a leave of absence or summer annulment from the University voluntarily before the first day of instruction may have their registrations annulled. Tuition is refunded in full if the student never attended. Such students are not included in University records as having registered for the term and new students do not secure any privileges for admission for any subsequent quarter as returning students. A leave of absence or summer annulment does not automatically cancel health coverage (both Cardinal Care and the Campus Health Services Fee) unless the leave of absence or summer annulment is granted before the first day of instruction. Financial aid recipients should be aware that a proportion of any refund is returned to the various sources of aid.

Cancellation of Registration or Suspension

Students who have their registrations canceled or are suspended from the University generally receive refunds on the same basis as those receiving leaves of absence unless otherwise specified. A student whose registration is canceled less than one week after the first day of instruction for an offense committed during a preceding quarter receives a full refund of tuition fees.

Institutional Interruption of Instruction

It is the University's intention to avoid the necessity of taking the actions described in this paragraph. However, should the University determine that continuation of some or all academic and other campus activities is illegal, impracticable, and/or in the reasonable judgment of the University, their continuation involves a significant threat of

harm to persons or property, activities may be curtailed and students and others requested or required to leave the campus. In such an event, arrangements are made as soon as practical to offer students the opportunity to complete their courses, or substantially equivalent work, so that appropriate credit may be given. Alternatively, the University in its discretion may determine that students receive refunds on the same basis as those receiving leaves of absence, or on some other appropriate basis.

Leaves of Absence

A student in good standing who desires or is required to take a leave of absence from the University after the first day of instruction, but before the end of the first 60 percent of the quarter (term withdrawal deadline), may file a petition for a leave of absence and tuition refund. Graduate students submit the completed leave of absence form to the Student Services Center. Undergraduates who wish to withdraw from the current quarter, or from a quarter for which they have registered in advance and do not wish to attend, must file a Leave of Absence Petition with and receive approval from the office of the Vice Provost for Undergraduate Education, via the office of Undergraduate Advising and Research (UAR), Sweet Hall. A voluntary leave of absence after the first 60 percent of the quarter (term withdrawal deadline) is only granted for approved health and emergency reasons. For more information on leaves of absence, undergraduates should see the "Leaves of Absence and Reinstatement (Undergraduate)" section of this bulletin, and graduate students should see the "Leaves of Absence (Graduate)" section of this bulletin.

Room and Meal Plan Refunds

Students assigned to a University residence are subject to the terms of the University Residence Agreement, and are required to live in University Housing for the full duration of their signed contract. The text of the University Residence Agreement is available at the Residence Agreement web site.

Room refunds are made only when students move out of the residence system and graduate from or cease to be enrolled at the University. Eligibility for refunds is listed in the Residence Agreement. Termination of Occupancy is filed in Axess. Filing a termination of occupancy form and moving out of Student Housing does not necessarily entitle a student to a refund. Students in greek letter houses are billed directly by the fraternity or sorority, and refunds are arranged between the student and the fraternity or sorority.

A meal plan refund is based on the date when a student moves out of University residence and is approved under conditions as specified in the Residence Agreement. If a student uses the meal plan after that date, an additional daily charge incurs.

Any decision to refund prepaid room and meal plan charges or to waive liability for deferred charges is made at the sole discretion of the University. Students with questions about refunds should contact Housing Assignments for room refunds or the central office of Stanford Dining for residential meal plan refunds.

Undergraduate Degrees and Programs

Degree Requirements

A Liberal Education

As do all major universities, Stanford provides the means for its undergraduates to acquire a liberal education, an education that broadens the student's knowledge and awareness in each of the major areas of human knowledge, that significantly deepens understanding of one or two of these areas, and that prepares him or her for a lifetime of continual learning and application of knowledge to career and personal life.

The undergraduate curriculum at Stanford allows considerable flexibility. It permits each student to plan an individual program of study that takes into account personal educational goals consistent with particular interests, prior experience, and future aims. All programs of study should achieve some balance between depth of knowledge acquired in specialization and breadth of knowledge acquired through exploration. Guidance as to the limits within which that balance ought to be struck is provided by the University's General Education Requirements and by the requirements set for major fields of study.

These educational goals are achieved through study in individual courses that bring together groups of students examining a topic or subject under the supervision of scholars. Courses are assigned credit units. To earn a bachelor's degree, the student must complete at least 180 allowable units and, in so doing, also complete the Writing Requirement, the Ways of Thinking, Ways of Doing (Ways) Requirement, the Language Requirement, and the requirements of a major.

The purpose of the Writing Requirement is to promote effective communication by ensuring that every undergraduate can write clear and effective English prose. Words are the vehicles for thought, and clear thinking requires facility in writing and speech.

The Language Requirement ensures that every student gains a basic familiarity with a foreign language. Foreign language study extends the student's range of knowledge and expression in significant ways, providing access to materials and cultures that otherwise would be out of reach.

The Ways Requirement provides guidance toward the attainment of breadth and stipulates that a significant share of a student's work must lie outside an area of specialization. These requirements ensure that every student is exposed to different ideas and different ways of thinking. They enable the student to approach and to understand the important ways of knowing how to assess their strengths and limitations, their uniqueness, and, no less important, what they have in common with others.

Depth, the intensive study of one subject or area, is provided through specialization in a major field. The major relates more specifically to a student's personal goals and interests than do the general requirements outlined above. Stanford's curriculum provides a wide range of standard majors through its discipline-oriented departments, a number of interdisciplinary majors in addition to department offerings, and the opportunity for students to design their own major programs.

Elective courses, which are not taken to satisfy requirements, play a special role in tailoring the student's program to individual needs. For most students, such courses form a large portion of the work offered for a degree. Within the limitations of requirements, students may freely choose any course for which previous studies have prepared them.

This section provides more detailed descriptions of these various requirements and the rationales upon which they are based.

Bachelor's

Bachelor of Arts (B.A.), Bachelor of Science (B.S.)

Stanford University confers the degree of Bachelor of Arts (B.A.) or the degree of Bachelor of Science (B.S.) on those candidates who have been recommended by the Committee on Undergraduate Standards and Policy (C-USP), who have applied in advance for conferral of the degree, and who have fulfilled the following requirements:

1. A minimum of 180 units of allowable University work. (Units above the allowable limits for activity courses and for courses taken on a satisfactory/no credit and credit/no credit basis cannot be counted towards the 180-unit minimum.)
2. The Writing, General Education, and Language Requirements.
3. Curricular requirements of at least one major department or program and the recommendation of the department(s). (Descriptions of curricular and special degree requirements are included in each department's section of this bulletin.)
4. Students admitted as freshmen—A minimum of 135 units (including the last quarter in residence) at Stanford. In special cases, students who have earned at least 135 units in resident work may petition for a waiver of the last quarter-in-residence requirement for up to 15 units through the Last Units Out of Residence petition.
5. Students admitted as transfers—A minimum of 90 units (including the last quarter in residence) at Stanford. In special cases, students who have earned at least 90 units in resident work may petition for a waiver of the last quarter-in-residence requirement for up to 15 units through the Last Units Out of Residence petition.

Stanford confers the Bachelor of Science degree on candidates who fulfill these requirements in the School of Earth, Energy & Environmental Sciences, in the School of Engineering, or in the departments of Applied Physics, Biology, Chemistry, Human Biology, Mathematics, or Physics in the School of Humanities and Sciences. The University also awards B.S. degrees to candidates in the Program in Science, Technology, and Society; in the Program in Mathematical and Computational Science; in the Program in Symbolic Systems; and, when appropriate, in the Program for Individually Designed Majors. Candidates who fulfill these requirements in other schools or departments receive the Bachelor of Arts degree. For degree programs that offer both the B.A. and B.S. degrees in the same discipline, students cannot pursue both degree options and must select either the B.A. or B.S. degree.

Students who complete the requirements for two or more majors, which ordinarily would lead to the same degree (B.A. or B.S.), should review "The Major" section of this bulletin to ensure that they have an understanding of the requirements for multiple or secondary majors.

Bachelor of Arts and Science (B.A.S.)

The University confers the degree of Bachelor of Arts and Science (B.A.S.) on candidates who have completed the following:

1. with no overlapping courses, the curricular requirements of two majors which ordinarily would lead to different bachelor's degrees (that is, a Bachelor of Arts degree and a Bachelor of Science).
2. These students must have applied in advance for graduation with the B.A.S. degree instead of the B.A. or B.S. degree, as recommended by the Committee on Undergraduate Standards and Policy (C-USP),
3. Fulfilled a minimum of 180 units of University work described in point 1 of the "Bachelor of Arts (B.A.), Bachelor of Science (B.S.)" section.
4. The requirements of each major without applying any course towards the requirements of more than one major, according to "Multiple Majors" section of this bulletin. The Major-Minor and Multiple Major Course Approval Form is required for graduation for students with the B.A.S degree.
5. The Writing, General Education, and Language requirements.

6. Students admitted as freshmen—A minimum of 180 units (including the last quarter in residence) at Stanford. In special cases, students who have earned at least 180 units in resident work may petition for a waiver of the last quarter-in-residence requirement for up to 15 units.
7. Students admitted as transfers—A minimum of 135 units (including the last quarter in residence) at Stanford. In special cases, students who have earned at least 135 units in resident work may petition for a waiver of the last quarter-in-residence requirement.

Students who cannot meet the requirements for both majors without overlapping courses are not eligible for the B.A.S., but may apply to have a secondary major recorded on their transcripts. (See "The Major" in the "Undergraduate Degrees and Programs" section of this bulletin.)

Dual Bachelor's Degrees (Concurrent B.A. and B.S.)

A Stanford undergraduate may work concurrently toward both a B.A. and a B.S. degree. To qualify for both degrees, a student must complete:

1. A minimum of 225 units of University work. Units above the allowable limits for activity courses and for courses taken on a satisfactory/no credit and credit/no credit basis cannot be counted towards the 225 unit minimum.
2. The requirements of each major without applying any course towards the requirements of more than one major, according to "Multiple Majors" section of this bulletin. The Major-Minor and Multiple Major Course Approval Form is required for graduation for students with dual degrees.
3. The Writing, General Education, and Language requirements.
4. The curricular requirements of two majors (one of which leads to a Bachelor of Arts degree and the other to a Bachelor of Science degree).
5. Students admitted as freshmen—A minimum of 180 units (including the last quarter in residence) at Stanford. In special cases, students who have earned at least 180 units in resident work may petition for a waiver of the last quarter-in-residence requirement for up to 15 units.
6. Students admitted as transfers—A minimum of 135 units (including the last quarter in residence) at Stanford. In special cases, students who have earned at least 135 units in resident work may petition for a waiver of the last quarter-in-residence requirement.

A student interested in dual bachelor's degrees should declare them in Axess no later than two quarters in advance of completing the program.

Students who do not meet the higher unit and residence requirements of the dual degree option may be eligible instead for the B.A.S. degree as described above.

Second Bachelor's Degree

Stanford does not award a second Bachelor of Arts (B.A.) degree to an individual who already holds a Bachelor of Arts, nor a Bachelor of Science (B.S.) degree to an individual who already holds a Bachelor of Science degree. Nor does Stanford award a Bachelor of Arts and Sciences degree to the holder of either a B.A. or B.S.

However, the holder of a Bachelor of Arts degree from Stanford may apply to the C-USP Subcommittee on Academic Progress for admission to candidacy for a Bachelor of Science degree, and the holder of a Bachelor of Science degree from Stanford may apply for candidacy for a Bachelor of Arts degree. A recommendation of the major department for the second bachelor's degree must accompany the application. Generally, a holder of a B.A. or B.S. degree from Stanford may not apply for the Bachelor of Arts and Sciences degree, although a student may submit a petition for exception. The C-USP Subcommittee on Academic Progress determines whether the application for a second degree may be approved

and/or the conditions a student must meet in order to be allowed to earn a second degree. The office of the Vice Provost for Undergraduate Education, via the office of Academic Advising, Sweet Hall, reviews these petitions. A student approved for this program may register as an undergraduate and is subject to the current rules and regulations affecting undergraduates. Requirements for a second Stanford bachelor's degree are the same as those described above for dual bachelor's degrees.

Approvals or denials of applications under this section are in the discretion of the University.

Finally, Second Bachelor's Degree pertains only to students who earned their bachelor's degree from Stanford, and does not apply to those who have earned their bachelor's degree elsewhere. Requests by such individuals for a second bachelor's degree at Stanford are not accepted.

Coterminal Bachelor's and Master's Degrees

See the "Coterminal Degrees" section of this Bulletin.

The Major

The Major

The primary purpose of the major is to encourage each student to explore a subject area in considerable depth. This in-depth study complements the breadth of study promoted by the General Education Requirements and, in many cases, by a student's choice of electives. Work in depth permits practice in critical analysis and the solving of problems. Because of its depth, such study also provides a sense of how knowledge grows and is shaped by time and circumstances.

The structure of a major should be a coherent reflection of the logic of the discipline it represents. Ideally, the student should be introduced to the subject area through a course providing a general overview, and upper-division courses should build upon lower-division courses. The course of study should, if feasible, give the student the opportunity and responsibility of doing original, creative work in the major subject. Benefits of the major program are greatest when it includes a culminating and synthesizing experience such as a senior seminar, an undergraduate thesis, or a senior project.

Degree Requirements

Undergraduates must select a major by the end of their sophomore year. All undergraduate major programs listed in this bulletin, except for certain honors degree programs that require application and admission in advance, are open to all students. Students may use Axess to declare, drop, or change a major. In some departments or programs, though, a late change could easily result in extending the period of undergraduate study. Students who have applied to graduate or who wish to declare an individually designed major must use the Declaration or Change of Undergraduate Major, Minor, Honors, or Degree Program to select or change a major. Students requiring assistance should contact the Student Services Center. For academic advising regarding majors, students should consult Academic Advising.

Check individual department or program listings in this bulletin for the undergraduate degrees offered and for specific major requirements. If an area of study has no baccalaureate degree, that discipline is not available as a regular undergraduate major.

Faculty set the minimum requirements for the major in each department. These requirements usually allow latitude for tailoring a major program to a student's specific educational goals. The responsibility for developing a major program within department or program requirements lies ultimately with the individual student working in consultation with the major adviser.

Limits of the Major

In order to achieve the values of study in depth, a well-structured major should constitute at least one-third of a student's program (55-65 units). To ensure the values of breadth, a major should comprise no more than two-thirds of a student's program (115-125 units); and, to avoid intellectual parochialism, a major program should not require a student to take more than about one-third of his or her courses from within a single department.

Major requirements in cognate subjects essential to the structure of a given major should be counted as part of the major program in applying these guidelines. Department or school requirements designed to provide extra disciplinary breadth should not be counted.

For a limited number of qualified students, many departments and programs offer special programs leading to degrees with honors. A student may apply to the major department or program for acceptance into the honors program. Demands on the student may vary, but all honors programs encourage creative, independent work at an advanced level in addition to the major requirements.

The guidelines set forth here are deliberately general; implementation must take into account the specific needs of a student's program and the nature of the discipline or disciplines involved. The exercise of responsibility in achieving the desired educational balance belongs first with the student, who, after all, has the strongest interest in the value of his or her education. It belongs secondarily to departments and major programs, which must set the requirements of competence in the many majors offered.

Multiple Majors

Although most students declare only one major, a student may formally declare more than one major within a single bachelor's degree (B.A., B.S., or B.A.S.) program. The student may do that either at the time of initial major declaration or, as may be more advisable given the planning required to complete more than one major, by amending the original declaration. The student's major departments or programs have access routinely to all information pertinent to that student's academic record (for example, course and grade information), and each is expected to provide advising and other assistance. To be awarded a bachelor's degree with multiple majors, the student must fulfill the following requirements:

1. Formally declare all majors through Axess to the Office of the University Registrar.
2. Satisfy the requirements of each major without applying any course towards the requirements of more than one major or any minor unless:
    1. overlapping courses constitute introductory skill requirements (for example, introductory math or a foreign language);
    2. overlapping courses enable the student to meet school requirements (for example, for two majors within the School of Engineering). Currently, only the School of Engineering has school requirements for its undergraduate majors.
3. Submit the Major-Minor and Multiple Major Course Approval Form by the Final Study List deadline of the quarter of intended graduation. The form is required for graduation for students with multiple majors or a minor and should be submitted to the Student Services Center.

Students pursuing multiple majors must complete a multiple major program form indicating which courses they plan to apply toward each major and any minor(s). Departments must certify that the plan of study meets all requirements for the majors and any minor(s) without unallowable overlaps in course work; the School of Engineering Dean's office certifies this information in any case involving an Engineering major or minor. To facilitate advance planning, multiple major program forms are available at any time from the Registrar's forms web site.

If the pursuit of multiple majors (or joint majors or secondary majors, or minors) unduly delays an undergraduate's progress through Stanford, the University reserves the right to limit a student to a single major, and/or to confer a degree on a student who has completed all of the requirements for a degree even though the student has not applied to graduate; such an individual would then be subject to the University's usual rules and restrictions regarding future enrollment or registration.

When students cannot meet the requirements of multiple majors without overlaps, the secondary major, may be relevant.

Secondary Major

In some cases, students may complete course requirements for more than one major, but they may not meet the requirements outlined for the multiple major option. For example, the student may develop a course plan in which courses requisite for one major overlap with requirements for another. In these cases, the student may declare a secondary major which results in the transcript bearing an annotation that the course requirements for that major have also been met. Secondary majors are not listed on the diploma. Students declare secondary majors through Axess.

Foreign Language Proficiency

The notation "proficiency in (language)" appears on the official transcripts of those students whose levels of achievement are found by procedures established by the Language Center to be roughly equivalent to knowledge an excellent student can be expected to demonstrate late in the third quarter of the third year of study in that language.

Joint Major

The Joint Major Program (JMP)

The University previously offered a joint major program (JMP) aimed at integrating the Humanities and Computer Science while providing students with unique educational experiences. This experimental program was approved by the Academic Senate for a six-year pilot, which began in Autumn Quarter 2014-15. Based upon continuing assessment, including feedback from students and faculty, the pilot was discontinued at the end of the academic year 2018-19.

All students with declared joint majors will be permitted to complete their degree; faculty and departments are committed to providing the necessary advising support. Students wishing to declare a joint major may do so until June 18, 2019. After that date, no new joint major declarations will be approved.

Joint major programs leads to conferral of a B.A.S. (Bachelor of Arts and Sciences), and are distinct from multiple degrees in which a student may formally declare more than one major within a single bachelor's degree (B.A., B.S., or B.A.S.) program.

The following 14 programs were approved (each major is linked to the department's bulletin site with specific information for that major):

- Computer Science and Art Practice
- Computer Science and Classics
- Computer Science and Comparative Literature
- Computer Science and English
- Computer Science and French
- Computer Science and German Studies

- Computer Science and History
- Computer Science and Iberian and Latin American Cultures
- Computer Science and Italian
- Computer Science and Linguistics
- Computer Science and Music
- Computer Science and Philosophy
- Computer Science and Slavic Languages and Literatures
- Computer Science and Spanish

Only a limited number of joint majors were approved by the Academic Senate. Assessment of the joint major program continued throughout the duration of the six-year pilot; based upon that assessment, the decision was made to terminate the program at the end of 2018-19. As above, students in the program will be permitted to complete the program, and students were permitted to declare the program through June 18, 2019. The School of Humanities and Sciences limited participation in the pilot to Humanities departments that wished to propose a joint major with Computer Science. Only approved joint majors as listed in this bulletin are available. Other combinations of majors may be taken as a multiple major, but are not part of the joint major program with its special rules and requirements.

Requirements for Joint Majors

Typically a student in a joint major program will have an adviser in each major.

Graduation with a joint major requires the completion of a minimum of 180 units, of which at least 135 must be completed at Stanford. The specific number of units required for each major is specific to that major. It is not possible to give a single absolute number of units that a student might require in order to graduate with a joint major.

A student who declares a joint major completes the degree requirements for each of the majors. However, each of the majors in a joint major program typically requires 1-2 fewer optional courses; see the "Joint Major" sections of the respective departments for details. This course reduction in the joint major program differs from a multiple major in which all courses in both majors must be completed.

Because the joint major programs are designed to allow a student to pursue a course of study leading to mastery in two fields by blending the intellectual traditions of two Stanford departments, students in a joint major program take a senior capstone experience such as a course or project that is integrative in nature. Although the integrative capstone experience may fulfill the requirement for a capstone experience for both majors, the units may only be counted toward the required total units in one of the majors.

It is possible, with approval of both departments, to use one course to fulfill a requirement for each major in a joint major program. University policy prohibits double counting of courses in multiple programs except in specific cases such as introductory skill requirements or overlapping courses that enable a student to meet University requirements such as GERs. Therefore, when a single course fulfills requirements in both majors, a student may apply the units associated with the course to the total units requirement of only one of the majors and then must work with the other major to identify another course that would benefit the academic plan and whose associated units may be applied to that major's total units requirement.

Dropping a Joint Major Program

To drop the joint major, students must submit the Declaration or Change of Undergraduate Major, Minor, Honors, or Degree Program. Students may also consult the Student Services Center with questions concerning dropping the joint major.

Transcript and Diploma

Students completing a joint major graduate with a B.A.S. degree. The two majors are identified on one diploma separated by a hyphen. There will be a notation indicating that the student has completed a "Joint Major." The two majors are identified on the transcript with a notation indicating that the student has completed a "Joint Major."

Minor

Undergraduate Minor

Students completing a bachelor's degree may elect to complete one or more minors in addition to the major. Minors must be officially declared by students no later than the deadline for their application(s) to graduate, according to declaration procedures developed and monitored by the Registrar. Earlier deadlines for declaration of the minor may be set by the offering school or department. Satisfactory completion of declared minors is noted on the student's transcript after degree conferral.

A minor is a coherent program of study defined by the department or degree program. It may be a limited version of a major concentration or a specialized subset of a field. A minor consists of no fewer than six courses of 3 or more units to a maximum of 36 units of letter-graded work, except where letter grades are not offered. Departments and degree programs establish the structure and requirements of each minor in accordance with the policy above and within specific guidelines developed by the deans of schools. Programs which do not offer undergraduate degrees may also make proposals to their cognizant deans to establish a minor. Requirements for each minor are described in the individual department or program listings in this bulletin.

Students may not overlap (double-count) courses for completing major and minor requirements, unless:

1. Overlapping courses constitute introductory skill requirements (for example, introductory math or a foreign language), such that the introductory course acts a prerequisite for further mastery in the subject, the introductory course is broadly accessible and does not require a prerequisite for enrollment; or
2. Overlapping courses enable the student to meet school requirements. However, courses used for the major and/or the minor depth/core must not be duplicated within any other of the student's degree programs (for example, for a major within the School of Engineering and a minor within or outside of the School of Engineering). Currently, only the School of Engineering has school requirements for its undergraduate majors.

Undergraduates use Axess to declare or drop a minor. The Major-Minor and Multiple Major Course Approval eForm (available in the eForms portal in the Student tab in Axess) is required for graduation for students with a minor. The form should be submitted electronically to the Student Services Center by the final study list deadline of the quarter of intended graduation.

Students with questions about declaring minors or double-counting courses towards combinations of majors and/or minors should consult with the departments or programs involved or the Student Services Center. For academic advising regarding minors, students should consult undergraduate Academic Advising).

Honors

Baccalaureate Honors

With Distinction

In recognition of high scholastic attainment, the University, upon recommendation of a major department or program, awards the Bachelor's Degree with Distinction. Distinction is awarded to 15% of the graduating class based on cumulative grade point averages. GPA for Distinction purposes is calculated through Winter Quarter for each graduating class. Distinction is awarded at the end of the Spring Quarter for graduates of the Spring Quarter and prior Summer, Autumn, Winter quarters. Students are notified of Distinction on their diploma. Students who are granted Distinction, and have already received their diploma in a prior quarter, will be mailed an updated diploma. The Distinction notation will show on official transcripts after Spring Commencement.

Students are also urged to consider the departmental honors programs that may give depth to their major study and to consider, as well, how the interdisciplinary honors programs might contribute to the quality of their undergraduate education.

Departmental Honors Programs

In recognition of successful completion of special advanced work, departments may recommend their students for honors in the major. Departmental honors programs demand independent creative work at an advanced level in addition to major requirements. If approved for departmental honors, the student should declare the Honors degree through Axess.

Interdisciplinary Honors Programs

In recognition of successful completion of honors program requirements, the following interdisciplinary programs can recommend students majoring in any field for honors in their program:

- Arts
- Comparative Studies in Race and Ethnicity
- Democracy, Development, and the Rule of Law (CDDRL)
- Education
- Ethics in Society
- Feminist, Gender, and Sexuality Studies
- International Security Studies (CISAC)
- Science, Technology, and Society

The interdisciplinary honors programs are designed to complement study in a department major. The requirements for these honors programs are described in the department sections of this bulletin. If approved for interdisciplinary honors, the student should then declare the Interdisciplinary Honors Program in Axess.

General Education Requirements

General Education Requirements

In order to graduate, undergraduates must complete the following General Education Requirements:

- Civic, Liberal, and Global Education Requirement (COLLEGE, new AY21-22, replacing the Thinking Matters requirement)
- Ways of Thinking, Ways of Doing (Ways)

- Writing and Rhetoric Requirement
  - Program in Writing and Rhetoric (2 courses required, PWR 1 and PWR 2)
  - Writing in the Major
- Language Requirement

Purpose

The General Education Requirements are an integral part of undergraduate education at Stanford. Their purpose is to introduce students to the intellectual life of the University, to foreground important questions, and to illustrate how they may be approached from multiple perspectives. They are intended to develop a broad set of essential intellectual and social competencies of enduring value no matter what field a student eventually pursues. Students have flexibility to select topics that appeal to them while building critical skills, exploring interests, forming relationships with faculty and peers, and forging connections between educational experiences in many spheres. Together with the major, the requirements serve as the nucleus around which students build their four years at Stanford.

General Education Requirement courses must be taken for a letter grade and a minimum of 3 units of credit, with the exception of courses taken to fulfill the Language requirement, which may be taken for credit/no credit. Additionally, a course taken to satisfy the Creative Expression Way (Way-CE) may be taken for a minimum of 2 units and must be taken for a letter grade (unless a letter grade is not offered, and the course is only offered for a Satisfactory/No Credit grade).

Civic, Liberal, and Global Education Requirement (COLLEGE)

Students are required to take one Civic, Liberal, and Global Education (COLLEGE) course or one Thinking Matters (THINK) course during their first year (starting for students who've matriculated in AY 21-22). The requirement aims to:

- Provide a unifying intellectual experience that respects the diversity of the Stanford student body through inclusive curriculum and teaching.
- Establish a foundation and capacity for exploration of the full range of academic disciplines and opportunities offered to Stanford undergraduates.
- Develop the critical and ethical thinking skills and knowledge base for responsible local, national and global citizenship.

Most students take one stand-alone course selected from approximately eight courses offered each quarter for THINK or they can select one course from the six COLLEGE courses being offered this year.

Alternatively, students may take one of two residence-based, year-long programs:

- Immersion in the Arts (ITALIC)
- Structured Liberal Education (SLE)
  - Each of these also satisfies at least part of the Writing and Rhetoric Requirement as well as several Ways requirements.

Another option, in Autumn Quarter only, allows students to enroll in Education as Self-Fashioning (ESF) that satisfies the Civic, Liberal, and Global Education requirement as well as PWR 1.

Ways of Thinking/Ways of Doing (Ways)

Students must fulfill the Ways requirement which is a skills capacity-based approach to fostering breadth rather than a discipline-based approach.

These courses provide students with educational breadth by giving instruction in essential skills and capacities in the areas of:

- Way-A-II: Aesthetic and Interpretive Inquiry (2 courses)
- Way-AQR: Applied Quantitative Reasoning
- Way-CE: Creative Expression (2 units)*
- Way-ED: Engaging Diversity
- Way-ER: Ethical Reasoning
- Way-FR: Formal Reasoning
- Way-SI: Social Inquiry (2 courses)
- Way-SMA: Scientific Method and Analysis (2 courses)

Students are required to take eleven certified Ways courses, with two courses in Way-AII, Way-SI, and Way-SMA, and one course in each of the remaining five Ways. Transfer students fulfill the Ways requirement as outlined in the "Transfer Credit for Ways" section below.

Although courses may be certified to fulfill two Ways, a student may only count a course toward one Way in a program of study. COLLEGE or THINK courses will typically fulfill a Way. Courses may also count for both major and Ways requirements.

Courses taken prior to matriculation, independent study courses, graduate courses, and online transfer courses are not eligible for Ways credit. Courses must be a minimum of 3 units and taken for a letter grade except Way-CE which may be taken for fewer units.

* A minimum of 2 units is required to complete the Creative Expression (CE) Ways requirement. This may be fulfilled by taking one 2-unit minimum CE course, taking a 1-unit CE course twice, or taking two 1-unit CE courses in the same program such as Dance, Music, or TAPS.

Transfer Credit for Ways

Incoming transfer students who matriculate with the following number of transfer units must complete the defined number of Stanford Ways courses as part of their undergraduate education.

	WAYs/GERs
NUMBER OF TRANSFER UNITS	**WAYS COURSE REQUIREMENT**
90	5 courses certified in 5 different Ways
75-89	6 courses certified in 6 different Ways
60-74	7 courses certified in 7 different Ways
45-59	8 courses certified in 8 different Ways
44 or fewer	10 courses certified in 8 different Ways

- Excludes Advanced Placement (AP) or other external test units, independent study, online courses, or additional transfer courses from other institutions.

Matriculated students may fulfill a maximum of five Ways courses out of the 11 course requirement from another accredited college or university; these courses may be certified in any of the eight Ways categories but no more than one course in any one Way (i.e., up to one course in Way-A-II, Way-SI, Way-SMA, which have a two-course requirement; one course in Way-AQR, Way-ED, Way-ER, Way-FR; and 2 units in Way-CE). No more than 45 units in total transfer credit may count toward the undergraduate degree. The five course transfer limit is cumulative over a student's undergraduate career at Stanford.

Pre-Approval of Courses for Transfer Credit for Ways

Courses taken at another accredited college or university must be pre-approved for Ways certification prior to enrollment in the course. Courses that have not been pre-approved prior to enrollment at another accredited college or university are not eligible for Ways credit. Matriculated students must submit their Ways pre-approval request(s) by the quarterly deadline as defined on the Ways transfer credit page. The student is subject to a three-course limit for Ways pre-approval evaluation requests per term.

To request a Ways requirement through transfer work, the pre-approved course must be taken for a minimum of 3 quarter units and be taken for a letter grade, except for Creative Expression which is a minimum of 2 units.

Once Ways transfer credit has been posted to the student's record by the Office of the University Registrar, it is final and may not be changed.

Students seeking transfer credit should consult the Ways transfer credit page and the Transfer Credit procedures page on the Office of the Registrar web site.

Language Requirement

To fulfill the Language Requirement, undergraduates are required to complete one year of college-level study or the equivalent in a foreign language. Students may fulfill the requirement in any one of the following ways:

1. Complete three quarters of a first-year, 4-5 units language course at Stanford or the equivalent at another recognized post-secondary institution subject to current University transfer credit policies. Language courses at Stanford may be taken with the Credit/No Credit grading basis, if so offered, to fulfill the requirement.
2. Score 4 or 5 on the Language Advanced Placement (AP) test in one of the following languages: Chinese, French, German, Japanese, Latin, or Spanish. Advanced Placement (AP) tests in foreign literature do not fulfill the requirement.
3. Achieve a satisfactory score on the SAT II Subject Tests in the following languages taken prior to college matriculation:

	Satisfactory Scores for the SAT II Subject Tests
TEST SUBJECT	**SCORE**
Chinese	630
French	640
German	630
Latin	630
Spanish	630
Italian	630
Japanese	620
Korean	630
Hebrew	540

4. Take a diagnostic test in a particular language which either:
    1. Places them out of the requirement, or
    2. Diagnoses them as needing one, two, or three additional quarters of college-level study. In this case, the requirement can then be fulfilled either by passing the required number of quarters of college-level language study at Stanford or the equivalent elsewhere, or by retaking the diagnostic test at a later date and placing out of the requirement.

Written placements are offered online throughout the summer in Chinese, French, German, Italian, Japanese, Russian, Spanish, and Spanish for home background speakers.

For a full description of Language Center offerings, see the "Language Center" section of this bulletin under the school of Humanities and Sciences.

Writing and Rhetoric Requirement

All instructors at Stanford University expect students to express themselves effectively in writing and speech. The Writing and Rhetoric requirement helps students meet those high expectations.

All candidates for the bachelor's degree, regardless of the date of matriculation, must satisfy the Writing and Rhetoric requirement. Transfer students are individually reviewed at the time of matriculation by the Office of the University Registrar's Degree Progress section and, if necessary, the Program in Writing and Rhetoric (PWR) as to their status with regard to the requirement.

The Writing and Rhetoric requirement includes courses at three levels. The first two levels are described in more detail below. Writing-intensive courses that fulfill the third level, the Writing in the Major (WIM) requirement, are designated under individual department listings.

All undergraduates must satisfy the first-level Writing and Rhetoric requirement (WR 1) in one of five ways:

1. PWR 1: a course emphasizing writing and research-based argument.
2. SLE: writing instruction in connection with the Structured Liberal Education program.

3. ESF: writing instruction in connection with the Education as Self-Fashioning Thinking Matters course.
4. ITALIC: writing instruction in connection with the ITALIC Integrated Learning Environment.
5. Transfer credit approved by the Office of the University Registrar for this purpose.

All undergraduates must satisfy the second-level Writing and Rhetoric Requirement (WR 2) in one of four ways:

1. PWR 2, a course emphasizing writing, research, and oral presentation of research.
2. SLE: writing and oral presentation instruction in connection with the Structured Liberal Education program.
3. A course offered through a department or program certified as meeting the WR 2 requirement by the Writing and Rhetoric Governance Board. These courses are designated as WRITE 2.
4. Transfer credit approved by the Office of the University Registrar for this purpose.

A complete listing of PWR 1 courses is available each quarter on the PWR web site and in the PWR office in Sweet Hall, Third Floor. Complete listings of PWR 2 and WRITE 2 courses are available to students on the PWR web site the quarter before they are scheduled to complete the WR 2 requirement.

For a full description of the Program in Writing and Rhetoric (PWR), see the Writing and Rhetoric section of this bulletin under the Vice Provost of Undergraduate Education.

Credit

Unit Credit

Activity Courses

For undergraduates, a maximum of 8 units of credit earned in activity courses, regardless of the offering department or if accepted as transfer units, count towards the 180 units (225 if dual degrees are being pursued) required for the bachelor's degree. All activity courses are offered on a satisfactory/no credit basis.

Courses Taken on Satisfactory/No Credit or Credit/No Credit Basis

A maximum of 36 units of credit (including activity courses) taken at Stanford or its overseas campuses for a "CR" or "S" grade may be applied towards the 180 units (225 if dual degrees are being pursued) required for the bachelor's degree. The maximum for transfer students is 27 units.

Departments may also limit the number of satisfactory or credit courses accepted towards the requirements for a major. Satisfactory/Credit courses applied towards a minor may be similarly limited. Courses not letter-graded are not accepted in fulfillment of the General Education Requirements, except for Ways-CE (see the "General Education Requirements/Ways" section of this bulletin for further information). Writing in the Major courses are usually offered letter grade only. In those instances where the course is offered for a letter grade or CR/NC, the course must be taken for a letter grade to fulfill Ways of Thinking/Ways of Doing requirement and Writing in the Major requirement.

Internship Credit Guidelines

Undergraduate internships should not by themselves carry any credit. However, an individual student may arrange with a faculty member for a research or other academic project to be based on the internship. Arrangements between students and faculty regarding credit are expected to be made well in advance of the internship. Credit should be arranged within departmental rules for directed reading or independent study and should meet the usual department standards. No transfer credit is awarded for internships.

Concurrent Enrollment (Undergraduate)

Undergraduates may enroll concurrently at Stanford and at another college or university. The following policies apply to concurrent enrollment:

1. Students may not exceed 20 quarter units between both schools. This is the same unit maximum for undergraduates at Stanford. (One semester credit or hour generally equals 1.5 quarter units.)
2. Satisfactory academic progress is determined only by Stanford courses and units. Transfer work completed at other institutions is not considered in this calculation.
3. Students are expected to submit a Request for Transfer Credit Evaluation eForm (available in the eForms portal in the Student tab in Axess) for pre-approval of transfer credit prior to enrolling in the transfer institution.

AP

Advanced Placement

Stanford University allows up to 45 units of external credit (90 units for transfer students) toward graduation including work completed in high school as part of the College Board Advanced Placement curriculum. The awarding of such credit is based on Advanced Placement test scores and is subject to University and department approval.

The faculty of a given department determine whether any credit toward the 180-unit requirement can be based on achievement in the College Board Advanced Placement Program in their discipline. Stanford departments electing to accept the Advanced Placement (AP) credit are bound by these University policies:

1. Credit is usually granted for an AP score of 4 or 5. Usually, 10 quarter units are awarded (but occasionally fewer than 10). No more than 10 quarter units may be given for performance in a single examination.
2. Whether credit is to be given for an AP score of 3 is a matter for departmental discretion; up to 10 units may be awarded.
3. No credit may be authorized for an AP score lower than 3.

Performance on an AP exam can indicate the appropriate placement for continuing course work in that subject at Stanford. If students enroll in courses at Stanford for which they received equivalent AP credit, the duplicating AP credit will be removed. The chart below shows the current AP credit and placement policies.

A maximum of 45 quarter units of Advanced Placement (AP), transfer credit, and/or other external credit (such as International Baccalaureate) may be applied toward the undergraduate degree. More than 45 units of AP, transfer, and other external credit may appear on the Stanford University transcript; however, only 45 units can be applied to the minimum units required for the undergraduate degree. Once credit has been posted it cannot be removed from the student record. However, if Stanford courses are taken below the level of the placement course, the duplicating AP units are removed. Students may not receive duplicate unit credit for AP and IB exams in the same discipline, and the duplicating unit credit may be removed from the student's record. Stanford University policies on AP and other external credit are subject to review and change on an annual basis. Subjects not listed on this chart are not eligible for AP credit at Stanford University. Students may only receive AP credit for the AP policies that were effective during their matriculation year at Stanford.

Further information is available from the Student Services Center or on the Registrar's website.

AP Scores and Placement

SUBJECT	SCORE	PLACEMENT	QUARTER UNITS	DUPLICATING COURSES
CALCULUS AB (OR AB SUBSCORE)1	5	Take placement diagnostic, see the **Math Placement web site**	6	MATH 19, 20
CALCULUS BC1	5	Take placement diagnostic, see the **Math Placement web site**	10	MATH 19, 20, 21
	4	Take placement diagnostic, see the **Math Placement web site**	6	MATH 19, 20
CHEMISTRY	4	CHEM 31M, see the **Chem Placement website**	5	CHEM 31A
CHEMISTRY	5	CHEM 33, see the **Chem Placement website**	102	CHEM 31A, 31B, 31M
CHINESE LANGUAGE & CULTURE3	5	Take placement exam if continuing in this language	10	CHINLANG 1, 2, 3, 1A. 2A
COMPUTER SCIENCE A	4,5	CS 106B or CS 106X	5	CS 101, 105, 106A
COMPUTER SCIENCE PRINCIPLES	4,5	CS 106A	5	CS 101, 105
FRENCH LANGUAGE3	5	Take placement exam if continuing in this language	10	FRENLANG 1, 2, 3, 1A, 2A
ITALIAN LANGUAGE & CULTURE3	5	Take placement exam if continuing in this language	10	ITALLANG 1, 2, 3, 1A, 2A
GERMAN LANGUAGE3	5	Take placement exam if continuing in this language	10	GERLANG 1, 2, 3, 1A, 2A
JAPANESE LANGUAGE & CULTURE3	5	Take placement exam if continuing in this language	10	JAPANLNG 1, 2, 3, 1A, 2A
LATIN (LITERATURE OR VERGIL)3	5	Take placement exam if continuing in this language	10	CLASSICS 1L, 2L, 3L
PHYSICS C - MECHANICS4	5	Placement diagnostic required. Contact the Physics Department for **additional placement information**	4	PHYSICS 21, 41

	4	Placement diagnostic required. Contact the Physics Department for **additional placement information**	4	PHYSICS 21
PHYSICS C - ELECTRICITY AND MAGNETISM4	5	Placement diagnostic required. Contact the Physics Department for **additional placement information**	4	PHYSICS 23, 43
	4	Placement diagnostic required. Contact the Physics Department for **additional placement information**	4	PHYSICS 23
PHYSICS 1 & 2 - BOTH4,5	9,10	Placement diagnostic required. Contact the Physics Department for **additional placement information**	8	PHYSICS 21, 23
	8	Placement diagnostic required. Contact the Physics Department for **additional placement information**	4	PHYSICS 21
SPANISH (LANGUAGE)3	5	Take placement exam if continuing in this language	10	SPANLANG 1, 2, 3, 1A, 2A

1. Students are eligible for Calculus AB, BC, or subscore AB, however not a combination of the three. Students can only earn credit for one of the listed math exams.
2. Some students may prefer CHEM 31M and will be awarded only 5 units
3. A score of 4 or 5 on this test fulfills the Language Requirement. A score of 5 is required to receive 10 quarter units of credit.
4. Students are eligible for Physics B, Physics C (both), or Physics 1 & 2, however not a combination of the three. For more information on these exams, see the Physics Department's Physics Advanced Placement web site.
5. Students must have taken both Physics 1 & 2 to receive credit along with scoring a minimum of 4 on each exam. The standard rules apply such that students cannot receive credit for multiple exams taken within the same subject. The best score and or unit rate is applied to the transcript for Physics. If a student wants to have a certain Physics exam reflected on the transcript, the student should contact the **Student Services Center**.

International Baccalaureate (IB) Transfer Credit

SUBJECT	SCORE	PLACEMENT	QUARTER UNITS	DUPLICATING COURSES

CHEMISTRY	5 or higher	CHEM 33 or higher. Placement above Chem 33 requires department-administered placement test. Email chemistry-studentservices@stanford.edu	10	CHEM 31A & 31B
COMPUTER SCIENCE	5 or higher	CS 106B or CS 106X	5	CS 101, CS 105, 106A
CHINESE (A OR B)*	5 or higher	Take placement exam if continuing in this language	10	CHINLANG 1, 2, 3, 1A, 2A
CLASSICAL GREEK (HL)	5 or higher	Take placement exam if continuing in this language	10	CLASSICS 1L, 2L, 3L
FRENCH (A OR B)*	5 or higher	Take placement exam if continuing in this language	10	FRENLANG 1, 2, 3, 1A, 2A
GERMAN (A OR B)*	5 or higher	Take placement exam if continuing in this language	10	GERLANG 1, 2, 3, 1A, 2A
JAPANESE (A OR B)*	5 or higher	Take placement exam if continuing in this language	10	JAPANLNG 1, 2, 3, 1A, 2A
KOREAN (A OR B)*	5 or higher	Take placement exam if continuing in this language	10	KORLANG 1, 2, 3, 1A, 2A
LATIN (A OR B)*	5 or higher	Take placement exam if continuing in this language	10	CLASSICS 1L, 2L, 3L
MATHEMATICS	6 or higher. HL exam taken November 2020 or earlier	Take placement diagnostic, see the **Math Placement web site**	10	MATH 19, 20, 21
MATHEMATICS: ANALYSIS & APPROACHES*	6 or higher. HL exam taken from May 2021 and later	Take placement diagnostic, see the **Math Placement web site**	6	Math 19, 20
PHYSICS	6 or higher	Placement diagnostic required. Contact the Physics Department for **additional placement information**	8	PHYSICS 21, 23

	5	Placement diagnostic required. Contact the Physics Department for **additional placement information**	4	PHYSICS 21
PORTUGUESE (A OR B)*	5 or higher	Take placement exam if continuing in this language	10	PORTLANG 1, 2, 3, 1A, 2A
RUSSIAN (A OR B)*	5 or higher	Take placement exam if continuing in this language	10	SLAVLANG 1, 2, 3, 1A, 2A
SPANISH (A OR B)*	5 or higher	Take placement exam if continuing in this language	10	SPANLANG 1, 2, 3, 1A, 2A
* A score of 5 or higher on this test fulfills the Language Requirement. *Mathematics: applications and interpretations HL exam taken from May 2021 and later does not receive credit				

Chemistry Advanced Placement for Incoming Frosh

				Placement Chart
CHEMISTRY ADVANCED PLACEMENT SCORES	**CHEM 31A**	**CHEM 31M**	**CHEM 33**	**CHEM 121 WITH CHEM 100**
Chem AP 5	permission of instructor only	YES	YES	NO
Chem AP 4	permission of instructor only	YES	NO	NO
Chem AP 3 or lower	take placement exam to determine appropriate placement	take placement exam to determine appropriate placement	After passing grade in 31M or 31A/B	NO
No AP or IB background	YES	Okay with passing placement exam score	After passing grade in 31M or 31A/B	NO
IB, A-level, French Baccalaureate, German Arbitur	permission of instructor only	YES	YES	YES

Transfer Work

Undergraduate Transfer Work

Academic credit for work done elsewhere may be allowed toward a Stanford bachelor's degree under the following rules and conditions:

1. Credit may be granted for work completed at institutions in the U.S. only if the institutions are regionally accredited.
2. Study in institutions outside the U.S., when validated by examination results, tutorial reports, or other official evidence of satisfactory work, may be credited toward a Stanford bachelor's degree, subject to the approval of the credit evaluator and the appropriate departments. See the Registrar's web site for additional information regarding transfer credit requests for course work completed abroad.
3. Credit is officially allowed only after the student has been unconditionally admitted to Stanford.
4. Credit is allowed for work completed at institutions in the U.S. only on the basis of an official transcript received by the Registrar at Stanford directly from the institution where the credit was earned. In order for transfer credit to be awarded, students must submit an official transcript that clearly indicates all of the below information for each course:
    - Course codes/numbers
    - Course titles or descriptions
    - Final grades earned
    - Course credits earned
5. Credit from another institution may be transferred for courses which are substantially equivalent to those offered at Stanford University on the undergraduate level, subject to the approval of the credit evaluator. A maximum of 20 quarter units may represent courses which do not parallel specific undergraduate courses at Stanford, again, subject to the approval of the credit evaluator as to quality and suitability.
6. Course work cannot duplicate, overlap, or regress previous work.
7. Transfer course work cannot count towards secondary school diploma and/or graduation requirements.
8. For students interested in fulfilling a Ways of Thinking/Doing (Ways) breadth requirement through transfer work, a transfer course evaluation must be submitted to confirm if the course will meet the Ways criteria. Requests for fulfilling Ways requirements in transfer require pre-approval prior to course enrollment and the pre-approval requests must be submitted prior to the term in which students intend to enroll in the transfer course and as defined on the Ways web site. Courses must be taken for a minimum of 3 quarter units (2 units in the case of Creative Expression only) and must be taken for a letter grade.
   For incoming transfer students, a proportion of their Ways requirement must be fulfilled at Stanford based on the number of qualified transfer units awarded at matriculation. Students must complete a number of Ways courses to fulfill the Ways requirement as outlined in the "Transfer Credit for Ways" section of this bulletin.
9. Transfer work can be used to satisfy a department major or minor requirement. The transfer work must first be officially accepted into the University through the Office of the University Registrar. After the transfer credit has been approved and posted by the Office of the University Registrar, the departments determine if the approved transfer work can be used to satisfy a department major or minor requirement. Students should consult with their departments about a program's transfer credit policies/procedures.
10. The credit allowed at Stanford for one quarter's work may not exceed the number of units that would have been permissible for one quarter if the work had been done at Stanford; for work done under a system other than the quarter system, the permissible maximum units are calculated at an appropriate ratio of equivalence (i.e. is converted into quarter units).

11. Credit is allowed at Stanford for work graded 'C-' (or better) or 'Pass' (where 'Pass' is equivalent to a letter grade of 'C-' or above), but not for work graded 'D' or below.
12. No more than 45 (90 for transfer students) quarter units of credit for work done elsewhere (including external test credit) may be counted toward a bachelor's degree at Stanford.
13. Credit earned in extension, correspondence, and online courses is transferable only if the university offering the courses allows that credit toward its own bachelor's degree. Such credit is limited to a maximum of 45 quarter units for extension courses, a maximum of 15 quarter units for correspondence and online study, and a maximum of 45 quarter units for the combination of extension, correspondence, and online courses. Online and independent study courses are not eligible for Ways credit.
14. Credit earned in military training and service is not transferable to Stanford, unless offered by an accredited college or university in the U.S. and evaluated as above by the credit evaluator.

See the Registrar's web site for additional information regarding transfer credit policies and procedures.

COVID-19 Policies on Undergraduate Transfer Work for Academic Year 2020-21

- The 15-quarter unit cap on online work was eliminated, students were able to apply for transfer credit for work that was or will be completed via an online/hybrid/correspondence instruction mode. The coursework must still meet all other conditions for transfer credit.
- Students may reach out to their departments for review/approval of transfer credit without having to first secure a review/approval from the Registrar's Office. Please note: students will want to confirm with departments what their transfer credit process is, if seeking a review of transfer credit for application towards major/minor requirements.
- Credit earned in U.S. military training and service may be eligible for transfer to Stanford if the work was completed at an accredited U.S. college or University or if the work appears on an official Joint Services Transcript (JST) and meets all other conditions for transfer credit. Joint Services Transcripts can be requested via the JST website.

Special Registration Statuses

Special Registration Statuses (Undergraduate)

The following reduced-tuition categories can be requested by undergraduates in the final stages of their degree program:

Permit to Attend for Services Only (PSO)

Undergraduates in their terminal quarter who are completing honors theses, clearing incomplete grades, or have completed all requirements and are requiring a registration status to utilize university resources, may petition one time only for PSO status. PSO does not permit any course enrollment. Students must apply to graduate through Axess if applying for the PSO special registration status. The deadline for the completed PSO petition is the Preliminary Study List deadline of the applicable quarter.

13th Quarter

Undergraduates who have completed at least twelve full-time quarters may petition to register for 13th Quarter registration status at a reduced tuition rate for their final quarter, but must register for at least eight units. Undergraduate dual degree students must complete at least fifteen full-time quarters before petitioning for reduced

tuition in their final quarter. Students receiving financial aid should check with the Financial Aid Office for eligibility if they are seeking aid beyond 12 quarters of enrollment. Undergraduates must apply to graduate through Axess if applying for the 13th-quarter special registration status.

Last Units out of Residence

Students may petition to complete their final 15 units out of residence to complete their degree requirements. The final 15 units of transfer credit must meet the criteria in the undergraduate "Transfer Work" section of this bulletin. Students must submit the Request for Last Units Out of Residence Petition to determine eligibility and to request pre-approval of the transfer work. A registration status is required to graduate. Students should select either the Graduation Quarter or the Permit for Services Only special registration status on the Last Units Out of Residence petition. Refer to the Special Registration Status section of the bulletin for a description of theses statuses. An application to graduate should be submitted through Axess.

Graduation Quarter

Undergraduates may petition one time only for Graduation Quarter in their terminal quarter only if:

1. filing a Request for Last Units Out of Residence in order to complete up to 15 final units at another institution; or
2. returning from a discontinued status and filing a Request to Return and Register in Undergraduate Study in order to confer their degree; or
3. if all degree requirements, including honors theses, have been completed and student requires a registration status to graduate, but will not be using University resources or housing.

Coterminal students are only eligible for the Graduation Quarter special registration status if they are applying to confer both the undergraduate and graduate degree in the same quarter. Undergraduates may be eligible for Graduation Quarter status in these three situations only if the student has completed all graduation requirements and will not be utilizing University resources, including housing. The deadline for the completed Graduation Quarter petition is the Preliminary Study List deadline of the applicable quarter. Undergraduates must apply to graduate through Axess if applying for the Graduation Quarter special registration status.

Minimum Progress

Minimum Progress for Undergraduates

Undergraduates are expected to finish their degree requirements in a timely fashion. In addition to maintaining academic progress obligations, students are expected to take courses to progress towards a Bachelor of Arts or a Bachelor of Science degree. If after 12 quarters, an undergraduate is not on track to complete degree requirements and graduate within the next two quarters, the University may impose requirements with deadlines on a student's course of study. Further, if a student fails to meet those imposed requirements and/or has not after 18 quarters completed all degree requirements, the University may discontinue the student for failure to progress.

Leaves/Reinstatement

Leaves of Absence and Reinstatement (Undergraduate)

A Leave of Absence allows a student to take a break from enrollment either before or after a quarter begins. There may also be conditions associated with a Leave, which are outlined in greater detail below. Undergraduates are admitted to Stanford University with the expectation that they complete their degree programs in a reasonable amount of time,

usually within four years.

Leaves of absence for undergraduates may not exceed a cumulative total of two years (eight quarters including Summer Quarters).

Students on leave of absence are not registered at Stanford and, therefore, do not have the rights and privileges of registered students. They cannot fulfill any official department or University requirements during the leave period. Students on leave may complete course work for which an 'Incomplete' grade was awarded in a prior term (unless doing so places an undue burden on the part of an instructor, department, staff, or other university resource) and are expected to comply with the maximum one-year time limit for resolving incompletes; a leave of absence does not stop the clock on the time limit for resolving incompletes.

New freshmen and transfers are required to register in Autumn Quarter and may not take a leave of absence prior to their first quarter. However, new undergraduate students may request a deferment from the Office of Undergraduate Admission before the first day of Autumn Quarter. Under rare and exceptional circumstances, new freshmen and transfers may take a leave of absence during their first quarter with the permission of the Vice Provost for Undergraduate Education (or his or her designee). When circumstances arise which make it advisable or necessary for freshmen to take a leave of absence during any of their first three quarters, the student is required to wait until Autumn Quarter of the following academic year to return.

When a student is granted or placed on a leave of absence after the beginning of the term, courses in which the student was enrolled after the final study list deadline appear on the student's transcript and show the symbol 'W' (withdraw). For additional information regarding satisfactory academic progress, refer to the "Academic Progress" section of this bulletin. Information on tuition refunds is available in the "Refunds" section of this bulletin.

Voluntary Leave of Absence

Students have the option of taking a voluntary leave of absence for up to one year, or four quarters, upon filing a Leave of Absence form with the Office of the University Registrar and receiving approval. Students may revoke their request to take a voluntary leave of absence via Axess, within two business days of submitting a Leave of Absence eForm. Except where unexpected circumstances necessitate an immediate leave, students are expected to file for a voluntary leave of absence 30 days prior to the quarter in which the leave will begin. The leave may be extended for up to one additional year, or four quarters, provided the student files (before the end of the initial one-year leave) a Leave of Absence form for the leave extension with the Office of the University Registrar and receives approval. Leaves requested for a longer period than one year, or four quarters, are approved only in exceptional circumstances (for example, mandatory military service). Leaves of absence for undergraduate students may not exceed a cumulative total of two years (eight quarters including summer quarters).

Undergraduates who take an approved leave of absence while in good standing from a quarter for which they have registered in advance and do not wish to attend may enroll in the University for the subsequent quarter with the privileges of a continuing student. For undergraduates who wish to withdraw from the current quarter after the beginning of the term, courses in which the student was enrolled after the final study list deadline appear on the student's transcript and show the symbol 'W' (withdraw). For additional information regarding satisfactory academic progress, refer to the "Academic Progress" section of this bulletin. In either situation, the University may condition its approval of a petition for leave of absence on the student's meeting such requirements as the University deems appropriate in the individual case for the student to be eligible to return (such as, in the case of a leave for medical reasons, proof of treatment and/or an interview with a provider at Vaden Health Center or Counseling and Psychological Services or its designee). Undergraduates who wish to withdraw from the current quarter, or from a quarter for which they have registered in advance and do not wish to attend, must file a Leave of Absence form with and receive approval from the office of the Vice Provost for Undergraduate Education, via Academic Advising, Sweet Hall.

Information on tuition refunds is available in the "Refunds" section of this bulletin. For a full refund, petitions must be received by the Office of the University Registrar no later than the first day of classes for the quarter.

Discontinuation and Reinstatement

A student's active status in their academic degree program may be discontinued if the student:

- fails to be enrolled by the study list deadline; or
- fails to be approved for a leave of absence by the start of the term; or
- voluntarily terminates undergraduate studies; or
- is dismissed for academic reasons; or
- is expelled from the University.

Students who fail to be either enrolled by the final study list deadline, or have exceeded their eight quarters of approved leave, or who fail to submit a Leave of Absence petition by the published deadline, must apply for reinstatement through the Request to Return and Register in Undergraduate Study.

The University is not obliged to approve reinstatements of students. Applications for reinstatement are reviewed by the Vice Provost for Undergraduate Education and are subject to the approval of the Faculty Senate Committee on Undergraduate Standards and Policy or its designees. The Committee or its designees may determine whether the application for reinstatement will be approved or not, and/or the conditions a student must meet in order to be reinstated. Reinstatement decisions are in the discretion of the University and may be based on the applicant's status when last enrolled, activities while away from campus, the length of the absence, the perceived potential for successful completion of the program, as well as any other factors or considerations regarded as relevant to the Vice Provost for Undergraduate Education, the Committee, or their designees.

Applications for reinstatement through the Request to Return and Register in Undergraduate Study, must be submitted eight weeks prior to the start of the term in which the student seeks to enroll in classes. Information and instructions may be obtained by contacting the office of the Vice Provost for Undergraduate Education, via Academic Advising, Sweet Hall.

Students who have been expelled from Stanford University are not permitted to apply for reinstatement.

Students who wish to terminate their study as undergraduates (e.g., for transfer to another institution) should submit a properly endorsed Request to Permanently Withdraw from Degree Program form to the office of the Vice Provost for Undergraduate Education, via Academic Advising, Sweet Hall. In this instance, applications for reinstatement through the Request to Return and Register in Undergraduate Study are not appropriate. Any student wishing then to return to undergraduate study at Stanford is required to apply as a transfer student through the Office of Undergraduate Admission, and such re-admission is not guaranteed.

Leaves of absence and reinstatement of graduate students are addressed in the Graduate Degrees section of this bulletin.

Involuntary Leave of Absence and Return Policy

In effect as of January 4, 2020

Stanford University is committed to the safety, health and well-being of the campus community. The University recognizes that students may experience situations that significantly limit their ability to function successfully or safely in their role as students. In such circumstances, students should consider requesting a leave of absence. A leave of absence permits students to take a break from the University and their studies, so that they may address the issues that led to the need for the leave and later return to the University with an enhanced opportunity to achieve their educational goals. Students will be given the option to take a voluntary leave of absence before a decision is made with respect to an involuntary leave.

1. **Involuntary Leave of Absence**

   Requiring a student to take a leave of absence is rare and, subject to Section III, only happens when current medical knowledge and/or the best available objective evidence indicates to the Senior Associate Vice Provost and Dean of Students or their designee (hereinafter, Dean of Students) that there is a significant risk to the student's health or safety or the health or safety of others, or the student's behavior severely disrupts the University environment, and no reasonable accommodations can adequately reduce that risk or disruption.

   Consistent with Stanford's Nondiscrimination Policy, Stanford prohibits unlawful discrimination on the basis of any type of disability or any other characteristic protected by applicable law in the administration of the University's programs and activities. Stanford offers a range of resources, support services and accommodations to address the physical and mental health needs of students. However, on rare occasion, a student's needs may require a level of care that exceeds the care the University can appropriately provide. Where current knowledge about the individual's medical condition and/or the best available objective evidence indicates that a student poses a significant risk to the health or safety of a member of the University community, where a student is unable or unwilling to carry out substantial self-care obligations and poses a significant risk to their own safety not based on mere speculation, stereotypes, or generalizations, or where a student's behavior severely disrupts the University environment and the student does not want to take a voluntary leave, the Dean of Students has the authority to place a student on an involuntary leave of absence. Before placing any student on an involuntary leave of absence, Stanford will conduct an individualized assessment, consulting with the Office of Accessible Education (OAE) to determine if there are reasonable accommodations that would permit the student to continue to participate in the University community without taking a leave of absence.

   The Dean of Students may be notified about a student who may meet the criteria of an involuntary leave of absence from a variety of sources including, but not limited to, the student, the student's academic advisor, Residential Education staff, Graduate Life Office staff, an academic department, or a member of the University's threat assessment team. If the Dean of Students deems it appropriate, these procedures will be initiated.

   1. **Procedures for Placing a Student on an Involuntary Leave of Absence**

      1. The Dean of Students will consult with the Office of Accessible Education (OAE) prior to making a decision to impose an involuntary leave of absence.

      2. The Dean of Students will issue a notice to the student in writing that an involuntary leave of absence is under consideration. The written notice will include the reason(s) why the student is being considered for an involuntary leave, contact information for OAE, which can provide information about accommodations, and a copy of this policy. In addition, the notice will provide contact information for the Process Resource, an administrator outside of the decision-making process with knowledge of Stanford's involuntary leave of absence process who will serve as a neutral process resource to answer any student questions about the process from referral through return to Stanford. In the written notice, the student will be encouraged to respond before a decision regarding a leave of absence is made and will be given a specified time period within which to do so.

      3. The Dean of Students will consider potential accommodations and/or modifications that could obviate the need for an involuntary leave of absence, such as the option to take a voluntary leave of absence, academic accommodations, housing and dining accommodations, and modifications to University policies, rules, and regulations. Examples of academic, administrative, and housing accommodations that may be facilitated through the Office of Accessible Education (OAE) can be found on the OAE website.

      4. The student may be asked to execute an Exchange of Confidential Information Consent Form providing Stanford personnel temporary authority to get information from the student's healthcare provider(s) regarding issues relevant and appropriate to the consideration of an involuntary leave of absence when there is a need for the University to have access to that information as part of the interactive process and

individualized assessment. If a student refuses to execute an Exchange of Confidential Information Consent Form or to respond within the timeframe set by the Dean of Students, the Dean may proceed with the assessment based on information in the Dean's possession at the time.

5. The Dean of Students will also confer, as feasible and when appropriate in a particular matter, with individuals regarding the need for an involuntary leave of absence. Although each case will vary, conferring individuals could include:

   - Residence Deans, or Graduate Life Office Deans;
   - Faculty members;
   - Academic advisors;
   - With appropriate authorization, representatives from Stanford's Vaden Health Center (Vaden);
   - With appropriate authorization, the student's treatment provider(s) or other health care professionals;
   - Member(s) of the University's threat assessment team; and/or
   - Such other individuals as may be appropriate in an individual matter.

   In each case, the Dean of Students will confer with a representative from the Office of Accessible Education (OAE) with expertise in mental health disabilities.

6. Particular attention will be paid to the criteria for imposing an involuntary leave of absence, specifically:

   - whether current knowledge about the individual's medical condition and/or the best available objective evidence indicates that a student poses a significant risk to the health or safety of a member of the University community;
   - whether a student is unable or unwilling to carry out substantial self-care obligations and poses a significant risk to their own safety not based on mere speculation, stereotypes, or generalizations; and/or
   - whether a student's behavior severely disrupts the University environment.

   The individualized assessment as to each factor, based on reasonable judgment that relies on current medical knowledge or on the best available objective evidence, should ascertain: the nature, duration, and severity of the risk or disruption; the probability that the risk or disruption will actually occur; and whether reasonable modifications of policies, practices, or procedures will adequately mitigate the risk or disruption so as to eliminate the need for an involuntary leave of absence.

7. The Dean of Students will give significant weight to the opinion of the student's treatment provider(s), including those identified by the student, regarding the student's ability to function academically and safely at the University with or without reasonable accommodations. If the Dean of Students determines that the information provided by the treatment provider(s) is incomplete, requires further explanation or clarification, or is inconsistent with other information in the student's record, the Dean of Students, with proper authorization, will contact the treatment provider(s) to obtain additional information. In certain circumstances, the University may require the student to undergo an additional evaluation by an independent and objective professional designated by Stanford, if the Dean of Students believes it will facilitate a more informed decision.

8. Following these consultations and based on a review of the relevant documentation and information available, the Dean of Students will make a decision as to whether the student should be placed on an involuntary leave of absence, and will provide written notice of this decision to the student. The written notice of decision will include information about the student's right to appeal and to reasonable

accommodations during the appeal process. The review and notice of decision under this policy should be done in a reasonably timely manner. Where students have been asked to remain away from the University while the review is underway, every effort will be made by the Dean of Students to reach a decision within one week, provided the student responds in a timely manner to requests for information and, if appropriate, evaluation.

- If an involuntary leave of absence is imposed. The written notice of decision to the student will set forth the basis for the decision and a time-frame for when the student must leave the University and when they may be eligible to return to the University and the conditions and/or requirements the student will need to satisfy to be eligible for return. The written notice will also inform the student of their right to reasonable accommodations in the return process and will provide contact information for OAE and the Process Resource. The length of the leave will be determined on an individual basis.
- If an involuntary leave of absence is not imposed. The Dean of Students may impose conditions and/or requirements under which the student is allowed to remain at the University.

9. Within one week of receiving the decision of the Dean of Students, the student may submit an appeal of the decision in writing to the Vice Provost for Student Affairs or the Vice Provost's designee, who may not be the Dean of Students. The written request for appeal must specify the particular substantive and/or procedural basis for the appeal, and must be made on grounds other than general dissatisfaction with the decision of the Dean of Students. The review by the Vice Provost for Student Affairs or the Vice Provost's designee will be limited to the following considerations:
   - Were the proper facts and criteria brought to bear on the decision?
   - Is there any new information not previously available to the student that may change the outcome of the decision-making process?
   - Were there any procedural irregularities that materially affected the outcome of the matter to the detriment of the appellant?
   - Given the proper facts, criteria, and procedures, was the decision a reasonable one?

After reviewing the matter fully, the Vice Provost for Student Affairs or the Vice Provost's designee will issue a written decision affirming, modifying, or reversing the decision to place the student on an involuntary leave of absence. The Vice Provost's decision shall be final, and no other appeals or grievance procedures are available.

2. **Implications of an Involuntary Leave of Absence**

   1. Student status. Students on a leave of absence generally retain their admitted student status; however, they are not registered and therefore do not have the rights and privileges of registered students.

   2. Housing. Consistent with Stanford's policies and procedures, students assigned to a University residence are subject to the terms of the University Residence Agreement. However, as set forth on the Registrar's Office Leave of Absence website, students with medical disabilities (including mental health disabilities) that require University medical services may petition to remain in campus housing for one term while on leave. Students who leave the University before the end of a term may be eligible to receive refunds of portions of their housing charges. Eligibility criteria for refunds are set forth in the Residence Agreement which is found on the Residence Agreement website.

   3. Effective date(s) of leave. A student must leave the University within the timeframe set forth by the Dean of Students. The leave will remain in effect until (1) it is determined after an individualized assessment that the student is able to return to the University with or without reasonable accommodations and (2) the student has complied with any University requirements applicable to all students returning from a leave and all of the conditions mandated by the Dean of Students and/or the Vice Provost.

4. Notification. At any time during the leave process, the Dean of Students may notify a

   student's parent, guardian, emergency contact, or other individual, consistent with the law, if notification is deemed appropriate.

5. Association with the University while on leave. Unless expressly permitted by the Dean of Students in writing, students on an involuntary leave of absence are not permitted to be present at the University and are not permitted to engage in any University-related activities, including on-campus employment.

6. Coursework taken while on leave. Consistent with Stanford's policies and procedures, academic credit for work done elsewhere may be allowed towards a Stanford degree. Students should refer to the **Transfer Work** section of the Stanford Bulletin and consult with the Registrar's Office and their department prior to taking any coursework while on an involuntary leave of absence.

7. SUnet ID privileges. Unless expressly prohibited by the Dean of Students in writing, students on leave generally may retain their SUnet ID privileges, including their Stanford email account.

8. Transcript notation. Students on a leave of absence will have a notation on their transcript that reads "Leave of Absence."

9. Tuition and fees. Consistent with Stanford's policies and procedures, students who leave the University before the end of a term may be eligible to receive refunds of portions of their tuition. See the Registrar's Tuition Refunds page for a schedule of refunds.

10. Meal Plan. Consistent with Stanford's policies and procedures, a meal plan refund is based on the date when a student moves out of University residence and is approved under conditions as specified in the Residence Agreement. Students with questions about residential meal plan refunds should contact the central office of Stanford Dining.

11. Visa Status. International students (F-1 and J-1 Visa holders) placed on an involuntary leave of absence must speak with a Bechtel International Center advisor regarding their visa status.

2. **Request for Return**

1. For general requirements applicable to all students returning to Stanford after a leave of absence, undergraduate students should refer to the Returning to Stanford website. Graduate students should consult with their academic department and a Graduate Life Office Dean. In addition to the general requirements all students must meet when returning to Stanford after a leave of absence, as well as any conditions mandated by the Dean of Students and/or the Vice Provost for return from an involuntary leave of absence as outlined below in section II.C, students seeking to return from an involuntary leave of absence for reasons of personal or community health and safety may be required to submit additional documentation related to the factors set forth in section I.A.6 as part of an individualized assessment. OAE will work with the students to provide reasonable accommodations in the return process as necessary.

2. A student must make a written request to the Dean of Students to return to the University. Generally, a student will not be allowed to return until one full quarter has elapsed or until the leave period in the involuntary leave of absence notification has elapsed, and all conditions and/or requirements are met.

3. The Dean of Students may require the student to provide evidence that the student, with or without reasonable accommodations, has sufficiently addressed the issues that previously established the criteria for imposing an involuntary leave of absence as set forth in section I.A.6, above. The Dean of Students may also ask, confer with, or seek information from others to assist in making the determination. The information sought may include:

   - At the student's discretion, documentation of efforts by the student to address the issues that led to the leave

- With appropriate authorization, release of academic records to inform treating clinicians
- With appropriate authorization, release of treatment information to the extent necessary to determine if the student has sufficiently reduced the risk or disruption that led to the need for the involuntary leave
- With appropriate authorization, consultation with Vaden to the extent necessary to determine if the student has sufficiently reduced the risk or disruption that led to the need for the involuntary leave
- Consultation with OAE

4. All returning students must meet the essential eligibility requirements and any technical standards of the University and, if applicable, the relevant school or department, with or without reasonable accommodations. If the Dean of Students is not satisfied that the student is ready to return to the University, the student will be notified in writing of the decision, including the reason for the decision, within a reasonable time after the student has submitted a request for return and required documentation.

5. A student not permitted to return may appeal the decision to the Vice Provost for Student Affairs following the procedure in section I.A.9.

3. **Scope of the Policy and Relationship to Other University Policies**

A leave of absence is an administrative process; it is not a disciplinary process. This policy and these procedures are not intended to be punitive and do not take the place of disciplinary actions that are in response to violations of Stanford's Fundamental Standard or other policies or directives, nor do they preclude the removal or dismissal of students from the University or University-related programs as a result of violations of other University policies or school or departmental protocols. This policy does not limit the University's ability to place enrollment holds on students for reasons beyond the scope of this policy and nothing in this policy relieves a student of any financial obligations to the University that were in place at the time the involuntary leave of absence was imposed.

Nothing in this policy limits the power of the University to take administrative action to ensure the safety of the Stanford community. In exceptional circumstances, where the health or well-being of any person may be seriously affected, or where physical safety is seriously threatened, or where the ability of the University to carry out its essential operations is seriously threatened or impaired, the President or the President's designee, may summarily suspend, dismiss, or bar any person from the University or University-related programs. In all such cases, actions taken will be reviewed promptly, typically within one week, by the appropriate University authority.

In situations involving an imminent or ongoing threat of harm to the student or any other member of the University community, the Dean of Students, in the exercise of his or her reasonable judgment, may require a student to be immediately prohibited from entering Stanford's campus or facilities utilized for University programs or activities while the individualized assessment and review described in section I.A. are taking place. Such students will receive the written notice described in section I.A.2 as quickly as possible.

4. **Requests for Reasonable Accommodation**

Stanford is committed to providing equal access to all participants in University processes, including students with disabilities. Students with disabilities should contact the Office of Accessible Education (OAE) to request accommodations. Information about the support services OAE provides, types of accommodations offered, and appropriate documentation for accommodations, can be found on the OAE website: https://oae.stanford.edu/.

5. **Related Resources**

As noted herein, students placed on an involuntary leave of absence may have additional conditions and/or requirements they must meet prior to returning to the University, in addition to any University requirements applicable to all students returning from a leave.

- Undergraduate Students should consult the Returning to Stanford web page for generally applicable deadlines, information and resources.

- Graduate Students should consult with a Graduate Life Office Dean and their department for generally applicable deadlines, information and resources.

Students who are placed on an involuntary leave of absence may want to consult with the following offices, where appropriate:

- Office of Accessible Education (OAE)
- Financial Aid
- Student Financial Services
- University Housing
- Vaden Health Center (Vaden)
- Academic Advising
- Graduate Life Office
- Bechtel International Center

The Process Resource will be available to assist all students who are placed on an involuntary leave of absence with their questions about the process to return and resume their studies and life at Stanford.

Degree Conferral

Conferral of Degrees

Upon recommendation to the Senate of the Academic Council by the faculty of the relevant departments or schools and the Committee on Undergraduate Standards and Policy, degrees are awarded four times each year, at the conclusion of Autumn, Winter, Spring, and Summer quarters. All diplomas, however, are prepared and distributed after degree conferral in accordance to the distribution dates listed on the Registrar's Office web site.

Students must apply for conferral of an undergraduate or graduate degree by filing an Application to Graduate through Axess by the deadline for each term. The deadlines are published in the Academic Calendar. A separate application must be filed for each degree program and for each conferral term.

Requests for conferral are reviewed by the Office of the University Registrar and the student's department, to verify completion of degree requirements. Registration is required in the conferral term. Students with unmet financial or other University obligations resulting in the placement of a hold on their registration cannot receive a transcript, statement of completion, degree certificate, or diploma until the hold is released. An academic record where no other degree objective is being pursued is permanently frozen after the final degree conferral, and all subsequent grade change requests or changes to the student record are not permitted.

Students are typically expected to apply to graduate when they have completed their degree requirements. The University, however, reserves the right to confer a degree on a student who has completed all of the requirements for a degree even though the student has not applied to graduate; such an individual would then be subject to the University's usual rules and restrictions regarding future enrollment or registration.

Students who wish to withdraw a request for conferral or make changes to their Application(s) to Graduate can do electronically in Axess by the late application to graduate deadline on the academic calendar. Students who withdraw their graduation applications or fail to meet degree requirements must reapply to graduate in a subsequent term.

Stanford University awards no honorary degrees.

Undergraduate Major Unit Requirements

School of Earth, Energy and Environmental Sciences

MAJOR DEPARTMENT	UNITS REQUIRED OUTSIDE THE DEPT./PROGRAM	UNITS REQUIRED WITHIN THE DEPT./PROGRAM	TOTAL # OF UNITS	NOTES/SPECIAL REQUIREMENTS
Earth Systems	62-111	21	83-132	internship, senior capstone and project
Energy Resources Engineering	min. 76	min. 18	min. 112	Senior Project and Seminar (2082351-2013-08-01 - Missing course)
Geological Sciences	6-8	52-66	58-74	Geoscience research, field training/capstone experience
Engineering Geology & Hydrogeology	55-81	19-31	85-101	-
Geophysics	27-45	24-42	69	Senior Seminar (1294442-2020-08-01 - Missing course)

School of Engineering

MAJOR DEPARTMENT	UNITS REQUIRED OUTSIDE THE DEPT./PROGRAM	UNITS REQUIRED WITHIN THE DEPT./PROGRAM	TOTAL # OF UNITS	NOTES/SPECIAL REQUIREMENTS
Aeronautics and Astronautics	50	65	112	
Architectural Design	40	58	97	-
Atmosphere/Energy	48-50	49-51	97-101	-
Bioengineering	68	39	107	-

Biomechanical Engineering	48-50	40	90-94	
Biomedical Computation	51-65	47-56	109-114	Two quarters guided research
Chemical Engineering	57-67	51	108-118	
Civil Engineering	52-75	41-64	116	Capstone project
Computer Science	min. 30	min. 43	96-106	senior project
Electrical Engineering	40	60	100	EE191W only applies for Honors Thesis. EE191W may satisfy WIM only if it is a follow-up to an REU or independent study project, where a faculty agrees to provide supervision of writing a technical paper and with suitable support from the Writing Center.
Engineering Physics	min. 48	min. 45	min. 93	at least 45 units in Engineering Fundamentals, Depth and elective courses must be engineering units
Environmental Systems Engineering	44-78	52-20	96	Capstone course
Individually Designed Major	41	40	90-107	See advisor
Management Science and Engineering	57	53	110	Senior Project
Materials Science and Engineering	min. 43	min. 60	min 103	-
Mechanical Engineering	48-50	68	116	-

Product Design (Mechnical Engineering)	40	61	101	

School of Humanities and Sciences

MAJOR DEPARTMENT	UNITS REQUIRED OUTSIDE THE DEPT./PROGRAM	UNITS REQUIRED WITHIN THE DEPT./PROGRAM	TOTAL # OF UNITS	NOTES/SPECIAL REQUIREMENTS
African and African American Studies	50	10	60	AAAS thesis seminar
American Studies			60	
Anthropology	-	65	65	2159411-2020-08-01 - Missing course. Senior Capstone 1096931-2020-08-01 - Missing course. Method and Evidence Foreign Language requirement
Archaeology	45	20	65	foreign language 1st qtr. at 2nd-year level
Art History	-	65	65	library orientation, junior seminar
Art Practice (Studio)	-	65	65	Interdisciplinary art survey, advanced undergraduate seminar, library orientation
Asian American Studies	40	20	60	Comparative and Major-Core Curriculum, Methodology/Research, Interdisciplinary Breadth Requirement
Biology	33-47	55	88-102	
Chemistry	20-39	47-68	82-101	The Biological Chemistry Concentration requires more units.
Chicana/o Studies	40	20	60	Comparative and Major-Core Curriculum, Methodology/Research Course, Senior Research, Interdisciplinary Breadth Requirement

Classics	-	-	60-65	majors seminar (1127951-2020-08-01 - Missing course)
Communication	5	60	65	-
Comparative Literature	-	40	65	C o r e 1137611-2020-08-01 - Missing course,2078101-2018-08-01 - Missing course,2078111-2019-12-16 - Missing course,2074181-2020-08-01 - Missing course, 1261111-2018-08-01 - Missing course; and 15 units of electives in COMPLIT
Comparative Studies in Race & Ethnicity	45	15	60	Comparative-Core Curriculum, Methodology/Research Course, Senior Research, Subplan Requirements, Interdisciplinary Breadth Requirement
East Asian Studies	~ 70 units minimum	~ 8 units minimum	78 units minimum	Capstone Course (2099151-2017-08-01 - Missing course); overseas studies in an East Asian country for 1 qtr; Senior Essay or Honors Thesis
East Asian Studies, China Subplan	~ 45 units minimum	~ 25 units minimum	70 units mininum	3rd-yr language proficiency; capstone/honors
East Asian Studies, Japan Subplan	~ 45 units minimum	~ 20 units minimum	65 units minimum	3rd-yr language proficiency; capstone/honors
East Asian Studies, Korea Subplan	~ 33 units minimum	~ 26 units minimum	59 units minimum	3rd-yr language proficiency; capstone/honors
Economics	-	80	80	-
English	-	64	68-70	-
English w/ Creative Writing	-	73-75	73-75	dept. approval
English w/ Interdisciplinary Emphasis	15	58-60	73-75	dept. approval and interdisciplinary paper

English w/ Interdepartmental Emphasis	16-20	53-55	69-75	16-20 units in foreign lang. lit.; dept. approval
English w/ Philosophy	20-25	57-59	77-84	-
Feminist, Gender, and Sexuality Studies	45	18 core	63	Practicum
Film and Media Studies	-	60	60	library orientation, senior seminar
French	-	32	56	Capstone: any FRENCH 200 level. Oral Proficiency Interview OPI.
French and Philosophy	21-25	40-44	65	
German		30-60	60	Gateway course: GERMAN 88; capstone; Oral Proficiency Interview (OPI)
German and Philosophy	21-25	40-44	65	16 courses minimum; gateway course; capstone; Oral Proficiency Interview (OPI)
History	-	63	63 units minimum for the major; 11-15 additional units for Honors.	2 from 2067481-2018-08-01 - Missing course-298 plus 1 from HISTORY 200-series
Human Biology (B.A.)	min. 6	min. 40	min. 81	Capstone
Human Biology (B.S.)	min. 6	min. 40	min. 81	Capstone

Iberian and Latin American Cultures	0	40	60	Gateway course (2 of 3): 2077371-2018-08-01 - Missing course, 2077381-2021-04-22 - Missing course, 2173201-2020-08-01 - Missing course. Senior Seminar: 2080561-2020-08-01 - Missing course. Oral Proficiency Interview (OPI)
International Relations	55-70	0-15	70	2 yr. foreign lang; Overseas studies 1 qtr.
Italian		32	56	Gateway course; 2064911-2019-01-30 - Missing course or equiv.; Oral Proficiency Interview (OPI)
Italian and Philosophy	21-25	32	72	Gateway course; Capstone: ITALIAN 2 3 6 E ; 2064911-2019-01-30 - Missing course or equiv.; Oral Proficiency Interview (OPI)
Jewish Studies (Individually Designed)	45	15	60	Comparative and Major-Core Curriculum, Methodology/Research Course, Senior Research, Interdisciplinary Breadth Requirement, Language Requirement
Linguistics	-	28	55	Additional courses counting toward the 55 unit requirement should form a coherent program of study, and specific courses must be approved by the Undergraduate Adviser.
Mathematical & Computational Science	-	-	76-89	Capstone course 1254161-2020-12-10 - Missing course
Mathematics	up to 15	49	min. 64	
Math, CS Theory/Discrete Math Subplan	min. 18	min. 33	min. 64	
Music	-	62	62	Core curriculum plus 20-unit concentration

Native American Studies	40	20	60	Comparative and Major-Core Curriculum, Methodology/Research Course, Senior Research, Interdisciplinary Breadth Requirement
Philosophy	-	55	55	course in 194 series
Philosophy, History and Philosophy of Science subplan	12	49	61	Gateway course; 194
Philosophy and Literature	min. 15	min. 47	65	Gateway course; 194
Philosophy and Religious Studies	-	60	60	3 seminars; 20 units in each dept. + 20 advanced units from both depts.
Physics	21-24	56-60	77-84	-
Political Science	0-25	45-70	70	Introductory course 2171981-2020-08-01 - Missing course, and advanced seminar (200 or 300 level)
Psychology	-	60	70	-
Public Policy	25-54	25-68	min. 77	
Religious Studies	-	60	60	introductory course, majors' seminar, senior essay or honors thesis, senior colloquium
Russian Language & Literature	0-10	46-56	56	1st- and 2nd- year Russian; Gateway course; capstone; language assessment
Russian Language, Culture, & History	12-20	36-39	56	1st- and 2nd- year Russian; Gateway course; capstone; language assessment
Russian Literature & Philosophy	21-25	40-44	67	1st- and 2nd- year Russian; Gateway course; capstone; language assessment
Science, Technology, & Society (B.A.)	68	8	min. 76	Gateway course; capstone

Science, Technology, & Society (B.S.)	68	8	min. 76	Gateway course: capstone
Slavic Languages and Literatures	-	-	56	Capstone: any SLAVIC 300-level course
Sociology	5-15	45-55	60	
Spanish	0	35	60	Gateway course: 2077371-2018-08-01 - Missing course, 2077381-2021-04-22 - Missing course; Senior Seminar: 2133691-2020-08-21 - Missing course; Oral Proficiency Interview (OPI)
Studio Art: See Art Practice (Studio)				
Symbolic Systems	66-81	4	70-85	-
Theater and Performance Studies	-	60	60	Gateway course(s); capstone
Urban Studies	33	37	70	20 units in concentration; capstone courses

WIM Courses

Writing in the Major (WIM) Courses

You can consult the applicable department section of the Bulletin, or VPUE's WIM courses website for additional information regarding WIM courses. Please note, you should always consult your department to ensure the course you intend to take will satisfy the WIM requirement.

SCHOOL	MAJOR	2019-20 WIM COURSES	2020-21 WIM COURSES	2021-2022 WIM COURSES

Earth Sciences	Earth Systems	EARTHSYS 149, EARTHSYS 177C (COMM 177C), EARTHSYS 191, ENVRES 245	EARTHSYS 149, EARTHSYS 177C, COMM 177C, EARTHSYS 191, ENVRES 245	EARTHSYS 149, EARTHSYS 177C, COMM 177C, EARTHSYS 191, ENVRES 245, BIOHOPK 47
Earth Sciences	Energy Resources Engineering	ENERGY 199	ENERGY199	ENERGY199
Earth Sciences	Geological and Environmental Sciences	GEOLSCI 150	GEOPHYS 199, GEOLSCI 150	GEOPHYS 199, GEOLSCI 150
Earth Sciences	Geophysics	--	GEOPHYS 199 GEOLSCI 150	GEOPHYS 199
Engineering	Aeronautics and Astronautics	AA 190	AA 190	AA 190
Engineering	Architectural Design	CEE 32B, CEE 32D, CEE 100, CEE 102W, CEE 136	CEE 100, CEE 32B, CEE 102W, CEE 136	CEE 100, CEE 32B, CEE 136
Engineering	Atmosphere/Energy	HUMBIO 3B, BIOE 131, COMM 120W, CEE 100, CEE 102W	CEE 100, CEE 32B, CEE 102W, CEE 136	CEE 100, CEE 102W, CEE 136
Engineering	Bioengineering	BIOE 131, ETHICSOC 131X	BIOE 212, BIOMEDIN 212, CS 272, GENE 212, BIOE 131	BIOE 212, BIOMEDIN 212, CS 272, GENE 212, BIOE 131
Engineering	Biomechanical Engineering	ENGR 199W, ME 112	BIOE 131, ENGR 199W	BIOE 131, ENGR 199W
Engineering	Biomedical Computation	BIOE 212, BIOMEDIN 212, CS 272, GENE 212 BIOE 131, ENGR 199W	BIOE 212, BIOMEDIN 212, CS 272, GENE 212 BIOE 131, ENGR 199W	BIOE 212, BIOMEDIN 212, CS 272, GENE 212 BIOE 131, ENGR 199W, CS 191W
Engineering	Chemical Engineering	CHEMENG 185A	CHEMENG 185A	CHEMENG 185A

Engineering	Civil Engineering	CEE 100, CEE 136 (CEE 236, PUBLPOL 130, PUBLPOL 230, URBANST 130)	CEE 100, CEE 32B, CEE 102W, CEE 136	CEE 100
Engineering	Computer Science	CS 181W, CS 182W, CS 191W, CS 194W, CS 210B, CS 294W	CS 181W, CS 182W, CS 191W, CS 194W, CS 210B, CS 294W	CS 181W, CS 182W, CS 191W, CS 194W, CS 210B, CS 294W
Engineering	Electrical Engineering	EE 109, EE 133, EE 153, EE 168, EE 191W, EE 264W, EE 267W, CS 194W	EE 109, EE 134, EE153, EE 168, EE191W, EE264W, EE267W, CS 194W	EE 109, EE 134, EE 153, EE 168, EE 191W, EE 264W, EE 267W, CS 194W
Engineering	Engineering Physics	AA 190, BIOE 131 (ETHICSOC 131X), CS 181W, CS 182W, EE 134, EE 155, ENGR 199W, MATSCI 161, MATSCI 164, PHYSICS 107	AA 190, BIO 131 (ETHICSOC 131X), CS 181W, CS 182W, EE 134, EE 155, ENGR 199W, MATSCI 161, MATSCI 164, PHYSICS 191, ENGR 102W (CEE 102W)	AA 190, BIO 131 (ETHICSOC 131X), CS 181W, CS 182W, EE 134, EE 153, EE 155, ENGR 199W, MATSCI 161, MATSCI 164, PHYSICS 191, ENGR 102W (CEE 102W)
Engineering	Environmental Systems Engineering	CEE 100, CEE 136 (CEE 236, PUBLPOL 130, PUBLPOL 230, URBANST 130)	CEE 100, CEE 32B, CEE 102W, CEE 136	CEE 100, CEE 102W, CEE 136, BIOE 131, COMM 120W, EARTHSYS 191M
Engineering	Management Science and Engineering	MS&E 108	MS&E 108	MS&E 108
Engineering	Material Science and Engineering	MATSCI 161, MATSCI 164	MATSCI 161, MATSCI 164	MATSCI 160, MATSCI 161, MATSCI 164
Engineering	Mechanical Engineering	ME 170A, ME 170B	ME 170A, ME 170B	ME 170A, ME 170B
Engineering	Product Design	ME 216B ME 216C	ME 115C, ME 216B, ME 216C	ME 115C, ME 216B, ME 216C
Humanities & Sciences	African and African American Studies	AFRICAAM 200X	AAAS 153P, AFRICAAM 200X	AAAS 153P, AFRICAAM 200X

Humanities & Sciences	American Studies	AMSTUD 160	AMSTUD 160	AMSTUD 160
Humanities & Sciences	Anthropology	ANTHRO 90B	ANTHRO 90B	ANTHRO 90B
Humanities & Sciences	Archaeology	ARCHLGY 103	ARCHLGY 103	ARCHLGY 103
Humanities & Sciences	Art History	ARTHIST 294	ARTHIST 294, FILMSTUDI 101/302	ARTHIST 294, FILMSTUDI 101/302
Humanities & Sciences	Art Practice (Studio)	ARTHIST 294	ARTHIST 294, FILMSTUDI 101/302	ARTSTUDI 201
Humanities & Sciences	Asian American Studies	CSRE 200X, CSRE 201X	CSRE 200X	CSRE 200X
Humanities & Sciences	Biology	BIO 46, BIO 47, BIO 107 (HUMBIO 136), BIO 168, BIO 196A, BIO 197WA, BIO 199W, BIOHOPK 172H	BIO46, BIO199W, BIO197WA, BIO168, BIO47, BIOHOPK 175H	BIO 46, BIO 47, BIO 168, BIO 196A, BIO199W, BIO197WA, BIOHOPK 47, BIOHOPK 175H
Humanities & Sciences	Chemistry	CHEM 134	CHEM 131	CHEM 131
Humanities & Sciences	Chicana/o-Latina/o Studies	CSRE 200X, CSRE 201X	CSRE 200X	CSRE 200X
Humanities & Sciences	Chinese	CHINA 111	CHINA 111	CHINA 111
Humanities & Sciences	Classics	CLASSICS 150 (Formerly CLASSGEN 176)	CLASSICS 150, ARCHLGY 103	CLASSICS 84, CLASSICS 150
Humanities & Sciences	Communication	COMM 104W, COMM 120W (COMM 220, AMSTUD 120), COMM 177SW (COMM 277S), COMM 186W	COMM 104W, COMM 120W, COMM 137W, COMM 177SW, COMM 186W	COMM 104W, COMM 137W, COMM 177SW, COMM 186W
Humanities & Sciences	Comparative Literature	COMPLIT 101	COMPLIT 101	COMPLIT 101

Humanities & Sciences	Comparative Studies in Race and Ethnicity	CSRE 200X, CSRE 201X, EDUC 199A	CSRE 200X	CSRE 200X
Humanities & Sciences	East Asian Studies	CHINA 111, JAPAN 138, KOREA 120	CHINA 111, JAPAN 138, KOREA 121	CHINA 111, JAPAN 138, KOREA 121
Humanities & Sciences	Economics	ECON 101	ECON 101	ECON 101
Humanities & Sciences	English	ENGLISH 162W	ENG 5A, ENG 5B, ENG 5C, ENG 5D, ENG 5E, ENG 5F, ENG 5G, ENG 5H	ENG 5I, ENG 5J, ENG 5K, ENG 5L, ENG 5M, ENG 5N, ENG 5O, ENG 5P, ENG 5Q
Humanities & Sciences	Feminist, Gender, and Sexuality Studies	FEMGEN 157, AMSTUD 160, ANTHRO 90B	FEMGEN 151, AMSTUD 160, ANTHRO 90B	FEMGEN 105, FEMGEN 157, AMSTUD 160, ANTHRO 90B, LINGUIST 150
Humanities & Sciences	Film and Media Studies	FILMSTUD 101	FILMSTUD 101, FILMSTUD 302	FILMMEDIA 101, FILMMEDIA 301
Humanities & Sciences	French	FRENCH 129, FRENCH 130, FRENCH 133	FRENCH 129, FRENCH 131, FRENCH 133	FRENCH 129, FRENCH 131
Humanities & Sciences	German Studies	GERMAN 116	GERMAN 116	GERMAN 116
Humanities & Sciences	History	HISTORY 209S	HISTORY 209S	HISTORY 209S
Humanities & Sciences	Human Biology	HUMBIO 2B, HUMBIO 3B, HUMBIO 4B	HUMBIO 2B, HUMBIO 3B, HUMBIO 4B	HUMBIO 2B, HUMBIO 3B, HUMBIO 4B (all 3 courses 2B, 3B and 4B must be taken to satisfy WIM)
Humanities & Sciences	Iberian and Latin American Cultures	ILAC 277, ILAC 278A	ILAC 136, ILAC 157, ILAC 161	ILAC 136, ILAC 157, ILAC 161

Humanities & Sciences	International Relations	INTNLREL 110C, *INTNLREL 110D* (Note: POLISCI 110X and POLISCI 110Y do not satisfy the WIM Requirement), INTNLREL 140A, INTNLREL 140C* (Note: INTNLREL 140C must be taken for 5 units) INTNLREL 174, INTNLREL 200B, INTNLREL 103F	INTNLREL 103F, INTNLREL 110C, INTNLREL 110D, INTNLREL 140C, INTNLREL 168W, INTNLREL 174, INTNLREL 200B, HIST 103F, HIST 201C, POLISCI 110C, POLISCI 110D, INTNLREL 158/POLISCI 148	INTNLREL 103F, INTNLREL 110C, INTNLREL 140A, INTNLREL 140C, INTNLREL 168W, INTNLREL 174, INTNLREL 200B, HIST 103F, HIST 201C, POLISCI 110C, INTNLREL 158/POLISCI 148
Humanities & Sciences	Italian	ITALIAN 128	ITALIAN 128	ITALIAN 128
Humanities & Sciences	Japanese	JAPAN 138	JAPAN 138	JAPAN 138
Humanities & Sciences	Jewish Studies	CSRE 200X, CSRE 201X	CSRE 200X	CSRE 200X
Humanities & Sciences	Linguistics	LINGUIST 121B, LINGUIST 130A	LINGUIST 121B, LINGUIST 130A	LINGUIST 121B, LINGUIST 130A
Humanities & Sciences	Mathematical and Computational Science	CS 181W, MATH 109, MATH 110, MATH 120, MATH 171, STATS 155	MATH 109, MATH 110, MATH 120, MATH 171, CS 181W, CS 182W, STATS 155	MCS 120, MATH 109, MATH 110, MATH 120, MATH 171, CS 181W, CS 182W, STATS 155
Humanities & Sciences	Mathematics	MATH 101, MATH 109, MATH 110, MATH 120, MATH 171	MATH 109, MATH 110, MATH 120, MATH 171, MATH 101	MATH 109, MATH 110, MATH 120, MATH 171, MATH 101

Humanities & Sciences	Music	3 from the following: MUSIC 144M, MUSIC 146N (MUSIC 246N, FRENCH 260A), MUSIC 147J, MUSIC 251	MUSIC 251, MUSIC 147J, MUSIC 146N, MUSIC 143J	MUSIC 141J, MUSIC 146N, MUSIC 147J,
Humanities & Sciences	Native American Studies	CSRE 200X, CSRE 201X	CSRE 200X	CSRE 200X
Humanities & Sciences	Philosophy	PHIL 80	PHIL 80	PHIL 80
Humanities & Sciences	Philosophy and Religious Studies	PHIL 80 or RELIGST 290	PHIL 80 or RELIGST 290	PHIL 80 or RELIGST 290
Humanities & Sciences	Physics	PHYSICS 107	PHYSICS 191	PHYSICS 191
Humanities & Sciences	Political Science	POLISCI 103, POLISCI 120C, POLISCI 121, POLISCI 236S, POLISCI 299A	POLISCI 103, POLISCI 110C, POLISCI 110D, POLISCI 120C, POLISCI 121, POLISCI 148, POLISCI 236S, POLISCI 299A	POLISCI 103/ETHICSOC 171/POLISCI 336S, POLISCI 110C/INTNLREL 110C, POLISCI 120C, POLISCI 148, POLISCI 236S, POLISCI 299A
Humanities & Sciences	Psychology	PSYCH 164, PSYCH 175, PSYCH 180	PSYCH 150, PSYCH 164, PSYCH 175, PSYCH 180	PSYCH 138, PSYCH 150, PSYCH 164, PSYCH 175, PSYCH 180

Humanities & Sciences	Public Policy	PUBLPOL 106 (ECON 154), CEE 136 (CEE 236, PUBLPOL 130, PUBLPOL 230, URBANST 130), PUBLPOL 154, PUBLPOL 156, PUBLPOL 200H	PUBLPOL 106, ECON 154, PUBLPOL 154, PUBLPOL 156	PUBLPOL 106, ECON 154, PUBLPOL 154, PUBLPOL 156, PUBLPOL 200H
Humanities & Sciences	Religious Studies	RELIGST 290	RELIGST 290	RELIGST 290
Humanities & Sciences	Science, Technology, and Society	STS 191W, COMM 104W, COMM 120W, HISTORY 140A, EARTHSYS 177C	STS 191W, BIOE 131, COMM 120W, COMM 137W, COMM 177SW, COMM 186W, CS 181W, CS 182W, EARTHSYS 177C, HISTORY 140A	STS 191W, BIOE 131, COMM 137W, COMM 177SW, COMM 186W, CS 181W, CS 182W, EARTHSYS 177C, HISTORY 140A
Humanities & Sciences	Slavic Languages and Literatures	SLAVIC 146	SLAVIC 145	SLAVIC 148
Humanities & Sciences	Sociology	SOC 202, SOC 204	SOC 202, SOC 204	SOC 202, SOC 204
Humanities & Sciences	Spanish	ILAC 277	ILAC 277	ILAC 277
Humanities & Sciences	Symbolic Systems	PHIL 80	PHIL 80	PHIL 80
Humanities & Sciences	Theater and Performance Studies	TAPS 11, TAPS 154G	DANCE 11, TAPS 153P, TAPS 264S	TAPS 11/DANCE 11, TAPS 151T, TAPS 153H, TAPS 153P, TAPS 154G, TAPS 167H, TAPS 264S, AAAS 153P
Humanities & Sciences	Urban Studies	URBANST 202A, URBA	URBANST 202A, URBANST 203	URBANST 202A, URBANST 203

Coterminal Master's Degrees

Coterminal Master's Degrees

The coterminal degree program allows undergraduates to study for a Master of Arts (M.A.) or Master of Science (M.S.) degree while completing their bachelor's degree(s) in the same or a different department. To qualify for both degrees, a student must complete requirements for both the bachelor's degree and the master's degree as described under their respective sections of this bulletin.

Application and Admission

Application and Admission to a Coterminal Master's Program

Undergraduates with strong academic records may apply for admission to a Stanford Master of Arts (M.A.) or Master of Science (M.S.) program that offers coterminal admission via the process outlined below. Any master's degree granting program may elect not to offer coterminal admission.

Eligibility Requirements

An undergraduate is eligible to apply for admission to a coterminal program once all of the following conditions have been met:

- An admitted coterminal student must have a minimum of one quarter overlap between the undergraduate and graduate degree programs. If this is not possible, students should consider applying as an external candidate via the Graduate Admissions process. Such applicants are not coterminal students and coterminal policies do not apply.
- Completion of 120 units towards graduation as shown on the undergraduate transcript, including credit earned from transfer credit, Advanced Placement exams, and other external test credit.
- Completion of six non-Summer quarters at Stanford; or two non-Summer quarters at Stanford for transfer students.
- Declaration of an undergraduate major.
- Students may apply to one coterm program per quarter, and may not apply to another coterm master's program until the admissions process for the initial application has been completed, including the student's response to the offer of admission (if admitted).

Undergraduates interested in applying to a coterm program should contact the coordinator of coterminal advising in Academic Advising. Note that departments may have additional eligibility requirements, so students are encouraged to check with the department prior to applying for the coterm program.

Application Deadlines

There are two application deadlines in the coterm process: the application deadline that students must submit their completed applications to their departments by, and the quarterly deadline that all admitted coterm applications must be sent to the Registrar's office for program activation. Coterm applicants are responsible for meeting all eligibility requirements and submitting their completed coterm application to the department by the department's coterm application deadline. Coterm applicants should contact their prospective coterm department for more information about the coterm application deadline. Departments are responsible for routing approved coterm applications to the

Registrar's office for processing. Approved coterm applications are processed by the Registrar's office every quarter, and coterm department administrators are required to submit approved coterm applications to the Registrar's Office no later than the last day of classes of the quarter prior to the coterm matriculation quarter.

Application Fee

Students who accept an offer of admission and are matriculated into the graduate degree program are assessed a $125 coterm application fee.

Eligibility for a coterm graduate application fee waiver is based on the Financial Aid Office's evaluation of your need-based aid application. Those from families with income below $125,000 and typical assets for that income range will qualify. The waiver is automatically applied and no special request is necessary.

Application Process

To apply for admission to a coterm master's program, students must submit all of the following to the prospective graduate department:

- Coterm Application (online). Please visit the Coterm Application Information page for links to department web sites for additional application requirements
- Statement of purpose
- Preliminary program proposal
- Two letters of recommendation from Stanford professors
- Current Stanford transcript

Note: Graduate Record Examination (GRE) scores and additional requirements may be specified by the prospective program, and may be found in the bulletin and on department websites (links to department websites found on the Registrar's website).

Admission Process

Each department is responsible for its admissions/acceptance decisions for coterm applicants. Once a coterm application is approved, the departments create the coterm application record in Axess (department staff should refer to the Coterm Resources for Staff page). Additionally, the department must route the completed and approved coterm application to the Office of the Registrar by the quarterly deadline.

If the coterm program permits deferral, students may defer admission to the coterm program and the first graduate quarter to a later quarter as long as their graduate career has not yet been activated and if the later matriculation will still meet all University and departmental requirements for coterm admission. Deferring a coterm matriculation may require that students postpone the conferral of their undergraduate degree. If the graduate coterm career has been activated, then deferring to a later term is not an option. Deferral is coordinated with the master's degree program, prior to the program submitting the completed application to the Office of the University Registrar.

First Graduate Quarter

The first graduate quarter is the quarter in which the coterm student first matriculates into their master's degree program. The first graduate quarter does not necessarily correspond to the first quarter in which a student enrolls in a course in the graduate career, nor is it affected by course transfer (please see Coterm Course Transfer for additional information).

Admitted students must have at least one-quarter of overlap in the undergraduate and graduate career prior to conferring their undergraduate degree. For example, if the first graduate quarter for the coterm degree is Spring Quarter, then the earliest that the undergraduate degree can be conferred is the Spring Quarter. Once matriculated, students may enroll in graduate courses, however, enrollment in graduate courses is not required by the University in the overlap quarter. Students should work with their department to complete a Program Proposal that outlines the graduation/program completion plan by the end of the first graduate quarter.

Adding or Changing Master's Degree Programs

Students wishing to add a second graduate program to their academic plans may only do so after the conferral of the undergraduate degree. Adding or changing a graduate program after the conferral of the undergraduate degree can be done via the Graduate Program Authorization Petition. For additional information, see the "Changes of Degree Programs" section of this bulletin, the Graduate Program Authorization section of the Graduate Academic Policies and Procedures site, and the Graduate Program Authorization page on the Registrar's website.

Coterm students who wish to change from one master's degree to another before conferral of the bachelor's degree must submit an approved request to withdraw from the original degree program using the Request to Permanently Withdraw from Degree Program form, in addition to a completed and approved application for admission to the new program in the same quarter. In this case, all courses, including any prior course transfer from the undergraduate career, remain in the graduate career. The new degree program may choose not to approve all courses towards the new master's degree program requirements. The student may elect to transfer courses back to the undergraduate career if the bachelor's degree has not yet been conferred. Coterms interested in doing a coterm program switch should contact the coordinator of coterminal advising in Academic Advising. *Note*: The discontinued program is listed on the transcript in a 'Discontinued' status, though it is not considered an academic demerit.

Residency

Residency Requirement

Each type of degree offered at Stanford (for example, Bachelor of Arts, Master of Science) has a requirement, called residency for graduate degrees, based on the minimum number of academic units required for the degree. Requirements are described in the Bachelor of Arts (B.A.), Bachelor of Science (B.S.) and Residency Policy for Graduate Students sections of this bulletin. It is Stanford University's general policy that units are applicable toward only one degree, that is, units may not normally be duplicated or double-counted toward the residency requirement for more than one degree. Courses counted towards the undergraduate degree(s) and graduate degree(s) are separately recorded on the undergraduate and graduate transcripts, respectively.

Students pursuing coterminal bachelor's and master's degrees are expected to meet the minimum requirements for each of the degrees, as follows:

Undergraduate Degrees

- *Bachelor's degree:* 180 units for the bachelor's degree
- *Dual undergraduate degree:* 225 units for the bachelor's degree

Master's Degrees

- 45 units (or higher unit-requirement, as determined by the graduate program)

- All 45 units must be from course work completed at Stanford and must be courses at or above the 100-level. Additionally, at least 50 percent of those must be courses designated primarily for graduate students. Department specifications for the level of course work accepted for a particular master's degree program may be higher than the University's specifications. Students may not petition to change the career for a completed course from the undergraduate to the graduate level.

To a limited extent, coterminal students are permitted to move courses between the undergraduate and graduate careers as described in the "Coterminal Course Transfer" section in the Enrollment and Degree Progress tab of this section of the bulletin.

Tuition

Tuition and Tuition Groups

Coterm students are assigned to either the undergraduate coterm tuition group or the graduate coterm tuition group. The tuition group dictates a student's tuition rates, enrollment policies, access to some University services and benefits, and degree progress standards. A coterm student is subject to graduate tuition assessment and adjustment policies once placed in the coterm graduate tuition group (see below for information about when coterm students are moved into the graduate coterm tuition group).

Coterm students are not eligible for undergraduate special registration statuses (with the exception of Graduation Quarter, if the student is applying to confer both their undergraduate and graduate degrees in the same quarter). Coterm students may only be eligible to apply for graduate special registration statuses once their undergraduate degrees have been conferred.

Tuition and fee information is available on the Office of the University Registrar tuition website.

Undergraduate Coterm Tuition Group

Coterm students are normally placed in and remain in the undergraduate coterm tuition group until the completion of 12 undergraduate full-tuition quarters (15 undergraduate full-tuition quarters for dual degree students), or the student requests to transition to the graduate tuition group after 180 units (225 units for dual degree students) are completed, or until conferral of the undergraduate degree(s). For students with transfer credit (not AP or other test credit), 15 transfer units equals one Stanford quarter. Stanford Summer quarters and Flex term, regardless of units taken, will not count towards a coterminal student’s permissible limit in the undergraduate coterm tuition group. With the exception of Summer Quarter 20-21, where full or part time enrollment is equal to one Stanford quarter and will be counted towards a student's permissible limit.

Students in the undergraduate coterm tuition group are assessed the undergraduate tuition rate, and may enroll in as few as 12 units and up to 20 units each quarter (regardless of which career courses are assigned to). Students enrolled in over 20 units across both careers are subject to an enrollment hold effective the following quarter.

Graduate Coterm Tuition Group

Coterminal students in the graduate tuition group are assessed either the regular graduate tuition rate or the graduate Engineering tuition rate. Students in the graduate coterm student group are assessed additional graduate or Engineering tuition on a per-unit basis beginning with the 19th unit. Tuition and fee information is available on the Office of the University Registrar tuition website. Once a student is placed in the graduate coterm tuition group, they may not move back to the undergraduate coterm tuition group.

Transitions to the graduate billing group

Coterminal students in the undergraduate tuition group are moved to the graduate tuition group if any one of the following occurs:

Conferral of Undergraduate Degree

Once coterm students have conferred their undergraduate degree(s), they are automatically moved to the graduate tuition group. Once coterm students have been moved to the graduate tuition group, they may not move back to the undergraduate tuition group.

Student-initiated Request (if eligible)

Coterm students in the undergraduate tuition group who have fewer than 12 quarters at Stanford but who want to transition to the graduate tuition rate may request to be moved to the graduate tuition group if they meet all of the below eligibility requirements. If the student meets these conditions, then the student may request to be moved to the graduate billing group by submitting a SU Services and Support Request ticket by the deadline.

Eligibility for coterm billing switch request

- Student must have an active graduate career. Students with a pending coterm application can request to move to the graduate tuition group only after they receive email confirmation that their coterm program has matriculated.
- Student must have met minimum number of units to be eligible (see the chart below). All undergraduate units, including transfer and test credit, are used in calculating unit completion.
    - BA, BS, BAH, BSH (including double majors); BAS; BASH: 180 units
    - BA + BS or BAH + BSH (official dual degrees): 225 units
- Must submit a SU Services and Support Request ticket to initiate the switch from undergraduate to graduate billing.

When Students Reach their Permissible Limit in Undergraduate Billing

Students are automatically moved from the undergraduate billing group to the graduate billing group once they have completed a certain number of undergraduate quarters.

Undergraduate quarters are calculated in all the below ways:

- Any non-Summer Quarter (full- or part-time) in which a student is enrolled. With the exception of Summer Quarter 20-21, where full or part-time enrollment is equal to one Stanford quarter and will be counted towards a student's permissible limit.
- 15 transfer units (excluding AP or other test credit) are equal to one Stanford quarter. Example: a coterm student has completed 10 non-Summer Quarters at Stanford, but also has 30 units of external transfer credit posted to their record; that would mean the student has (for the purpose of coterm billing) 12 quarters completed, and the student would thus be moved to the graduate billing group.

Once a student has completed 12 quarters (or 15 quarters, if pursuing a dual/concurrent bachelor's degree; see below), they are automatically switched to graduate billing and notified via email. Once students have been moved to the graduate billing group, they may not be moved back to the undergraduate billing group. Students should be advised that external transfer credit can impact how soon they are moved to the graduate billing group, and should plan accordingly.

- BA (including double majors, honors), BS (including double majors, honors), and BAS (including honors) may remain in the undergraduate billing group up to 12 quarters, and are automatically moved to the graduate billing group in their 13th quarter.
- BA + BS (dual/concurrent bachelor's degree) may remain in the undergraduate billing group up to 15 quarters, and are automatically moved to the graduate billing group in their 16th quarter.

Coterm students are traditionally not eligible for reduced graduate tuition rates below 8 units during Autumn, Winter, and Spring quarters prior to conferral of the undergraduate degree. However, coterm graduate students with disabilities covered under the Americans with Disabilities Act may enroll in an approved reduced course load as recommended by the Office of Accessible Education (OAE).

Coterm Students with Research or Teaching Assistantships

Coterm students who are eligible for a teaching (CA/TA) or research (RA) assistantship appointment must be in the graduate billing group in order to receive funding from their department. If a student is not already in the graduate billing group then the student must initiate the request to be moved to the graduate coterm tuition group (see the "Student-initiated Request" section above). Students holding a 20 hour (50%) teaching or research assistantship may not enroll in more than 10 total units. Additionally, once students have moved to the graduate coterm tuition group, they may not be moved back to the undergraduate coterm tuition group even if they no longer hold an assistantship appointment.

See Administrative Guide Memo 10.2.1 Graduate Student Assistantships, and GAP 7.3 Assistantships, for detailed discussion of assistantship policy.

Enrollment and Degree Progress

Enrollment and Degree Progress

Starting with the first graduate quarter, students have an active graduate career and an active undergraduate career. Students are responsible for enrolling in courses each quarter, and assigning them to the appropriate career. Courses assigned to the graduate career count towards the master's degree and courses assigned to the undergraduate career count towards the bachelor's degree. Students in the undergraduate coterm tuition group may not enroll in more than a total of 20 units for the quarter across both careers. Students in the graduate coterm tuition group may not enroll in more than a total of 24 units for the quarter across both careers. Students appointed to a 20-hour (50%) teaching and/or research assistantship may not enroll in more than 10 units.

Academic Progress

Prior to the conferral of the undergraduate degree(s), a coterm student's academic progress is monitored by the coordinator of coterminal advising in Academic Advising (a unit of the office of the Vice Provost for Undergraduate Education) in conjunction with the student's advisers and the graduate program. After conferral of the undergraduate degree(s), the student's degree progress is monitored by the graduate adviser and graduate program.

All courses taken during a quarter, whether enrolled in the undergraduate or graduate career, are used to assess whether minimum academic progress standards, including number of units enrolled and number of units earned, have been met. Students in the undergraduate coterm tuition group are evaluated according to the undergraduate degree progress standards. These standards are described in the "Academic Progress" section of this bulletin. Students in the graduate coterm tuition group are evaluated according to the graduate degree progress standards. These standards are described in the "Minimum Progress Requirements for Graduate Students" section of this bulletin.

Student are expected to maintain an undergraduate grade point average (GPA) which meets the University's undergraduate standards, and a graduate GPA which meets University and program requirements for graduate progress. Courses which have been transferred from the undergraduate to the graduate career are calculated as part of the graduate GPA, and vice versa.

Coterm Course Transfer

After accepting admission to a master's degree program, coterm students may request transfer of Stanford courses from the undergraduate to the graduate career to satisfy requirements for the master's degree and/or from the graduate career to the undergraduate career to satisfy requirements for the bachelor's degree(s). Transfer of courses between the undergraduate and graduate careers requires review and approval by both the undergraduate and graduate departments.

Unless a master's degree program specifies otherwise in this bulletin, courses taken three quarters prior to the first graduate quarter, or later, are eligible for consideration for transfer to the graduate career. Summer Quarter, Flex Quarter, and quarters spent on approved full term leave of absence are not included in the quarter-back count. Although Summer Quarter and Flex Terms are not used to determine how far back a student may transfer courses, units earned in these quarters may be transferred.

In exceptional circumstances, a student may petition the exceptions committee of the Committee on Graduate Studies to transfer courses taken more than three quarters back. No courses taken prior to the first quarter of the sophomore year may be used to meet master's degree requirements.Individual programs have the discretion to set their own policy regarding course transfer for their coterm master's students, provided that no student counts a course taken earlier than the first quarter of sophomore year. The program's policy is stated in the relevant department or program section of this bulletin. Students should visit the Coterm Course Transfer web page on the Registrar's Office website for information about how to request course transfers.

All course transfer requests must be submitted via eForms portal no later than the Late Application to Graduate deadline of the intended bachelor's degree conferral quarter. Course transfers between careers are not possible after the bachelor's degree has been conferred. Undergraduate credit from transfer courses or tests may not be transferred to the graduate career.

Advising, Program Proposal, and Time Limit

In the first graduate quarter, a coterm student must be assigned an adviser in the master's program for assistance in planning a program of study to meet the requirements for the master's degree. The plan is outlined on the Program Proposal for a Master's Degree, which is approved by the master's program by the end of the first graduate quarter. The preliminary program proposal from the coterm application may inform the Program Proposal, but does not satisfy this master's degree requirement. The course of study for each student's master's degree should be outlined on the student's Program Proposal form. The decision as to which courses a program approves in the student's master's program proposal, including changes from the typical curriculum, is within the purview of the department or program. The conversation between the student and the student's graduate adviser is important in this regard.

The master's program proposal must meet University minimum requirements for the master's degree, including at least 45 units taken at Stanford, all courses at 100-level or above, 50% of units designated primarily for graduate students (typically 200-level or above). All courses must be in the graduate career.

All requirements for a master's degree must be completed within three years after the first graduate quarter. An extension requires review of academic performance by the department or program, and is within the discretion of the program. See policies in the "Master's Degrees" section of this bulletin.

Degree Conferral

Students must apply for conferral of each degree separately by filing an Application to Graduate in Axess by the deadline for the expected graduation term(s). The deadlines are available in the Academic Calendar. The master's degree must be conferred simultaneously with, or after, the bachelor's degree. Coterm students may not confer the master's degree prior to the conferral of the undergraduate degree. Coterm students should refer to the Coterm Student Graduation Checklist web page on the Registrar's Office website for important information about items needed for degree conferral.

Coterm Leaves/Reinstatement

Leaves of Absence and Reinstatement (Coterm)

Coterm students who wish to take a leave of absence are subject to the Leave of Absence policies for undergraduate and graduate students, as described in the *Leaves of Absence and Reinstatement (Undergraduate)* and *Leaves of Absence (Graduate)* sections of this bulletin. Graduate students, including coterm students, must obtain permission from the master's degree program. A coterm student whose undergraduate degree has not been conferred must also obtain permission from Academic Advising, and may not take a leave of absence unless approved for both the graduate and undergraduate leave. Coterm students are permitted to request a leave of absence for their first graduate quarter. Leaves of absence are granted for a maximum of one calendar year, or four quarters. An extension of leave, for a maximum of one year or four quarters, is approved only in unusual circumstances. Leaves of absences may not exceed a cumulative total of two years (8 quarters including summer quarters), including both undergraduate and graduate programs.

Coterm students who are seeking to reinstate into both their undergraduate and graduate degree programs must follow both sets of policies as described in the *Leaves of Absence and Reinstatement (Undergraduate)* and *Leaves of Absence (Graduate)* sections of this bulletin.

A Leave of Absence allows a student to take a break from enrollment either before or after a quarter begins. There may also be conditions associated with a leave, which are outlined below. Undergraduates are admitted to Stanford University with the expectation that they complete their degree programs in a reasonable amount of time, usually within four years. Additionally, students pursuing a coterminal master's degree are expected to complete their master's degrees within three years after the first graduate quarter as outlined in the "Time Limit for the Completion of the Master's Degree" section of this bulletin.

Leaves of absences for coterms may not exceed a cumulative total (across both careers) of two years or eight quarters.

Students on leave of absence are not registered at Stanford and, therefore, do not have the rights and privileges of registered students. Students on leave may complete course work for which an 'Incomplete' grade was awarded in a prior term (unless doing so places an undue burden on the part of an instructor, department, staff, or other university resource) and are expected to comply with the maximum one-year time limit for resolving incompletes; a leave of absence does not stop the clock on the time limit for resolving incompletes.

When a student is granted or placed on a leave of absence after the beginning of the term, courses in which the student was enrolled after the final study list deadline appear on the student's transcript and show the symbol 'W' (withdraw). For additional information regarding satisfactory academic progress, refer to the "Academic Progress" section of this bulletin. Information on tuition refunds is available in the "Refunds" section of this bulletin.

Voluntary Leave of Absence

Students have the option of taking a voluntary leave of absence for up to one year, or four quarters, upon filing a Leave of Absence form with the Office of the University Registrar and receiving approval. Students taking a voluntary leave pursuant to the involuntary leave of absence and return policy have a two business day revocation period after submitting an LOA eForm, and may revoke their request to take a voluntary leave by returning to their submitted eForm in Axess and clicking "Cancel." Additionally, students may have additional conditions imposed by the Dean of Students and/or the Vice Provost for Student Affairs.

Except where unexpected circumstances necessitate an immediate leave, students are expected to file for a voluntary leave of absence 30 days prior to the quarter in which the leave will begin. The leave may be extended for up to one additional year, or four quarters, provided the student files a Leave of Absence Extension eForm (available in the eForms portal in the Student tab in Axess) before the end of the initial one-year leave. Leaves requested for a longer period than one year, or four quarters, are approved only in exceptional circumstances (for example, mandatory military service). Leaves of absence for coterm students may not exceed a cumulative total of two years (eight quarters including Summer Quarters) across both the undergraduate and graduate academic careers.

Coterm students who take an approved leave of absence while in good standing from a quarter for which they have registered in advance and do not wish to attend may enroll in the University for the subsequent quarter with the privileges of a continuing student. For coterm students who wish to withdraw from the current quarter after the beginning of the term, courses in which the student was enrolled after the final study list deadline appear on the student's transcript and show the symbol 'W' (withdraw). For additional information regarding satisfactory academic progress, refer to the "Academic Progress" section of this bulletin. In either situation, the University may condition its approval of a petition for leave of absence on the student's meeting such requirements as the University deems appropriate in the individual case for the student to be eligible to return (such as, in the case of a leave for medical reasons, proof of treatment and/or an interview with a provider at Vaden Health Center or Counseling and Psychological Services or its designee). Coterms who wish to withdraw from the current quarter, or from a quarter for which they have registered in advance and do not wish to attend, must file a Leave of Absence e-form (in Axess).

Information on tuition refunds is available in the "Refunds" section of this bulletin. For a full refund, petitions must be received by the Office of the University Registrar no later than the first day of classes for the quarter.

Discontinuation and Reinstatement

A student's active status in their academic degree program may be discontinued if the student:

- fails to be enrolled by the study list deadline; or
- fails to be approved for a leave of absence by the start of the term; or
- voluntarily terminates undergraduate studies; or
- is dismissed for academic reasons; or
- is expelled from the University.

Students who fail to be either enrolled by the final study list deadline, or who fail to submit a Leave of Absence eForm by the published deadline, must apply for reinstatement; more information about the coterm reinstatement process can be found in the Coterm Reinstatement section of the Registrar's website.

Reinstatement

The University is not obligated to approve reinstatement requests from students. Coterm applications for reinstatement are reviewed by both the Vice Provost for Undergraduate Education and the coterm master's department, and are further subject to the approval of the Faculty Senate Committee on Undergraduate Standards and Policy or its designees. The Committee or its designees may determine whether the application for reinstatement will be approved or not, and/or the conditions a student must meet in order to be reinstated. Reinstatement decisions are within the discretion of the University and may be based on the applicant's status when last enrolled, activities while away from campus, the length of the absence, the perceived potential for successful completion of the program, as well as any other factors or considerations regarded as relevant to the Vice Provost for Undergraduate Education, the Committee, or their designees.

Students who have been expelled from Stanford University are not permitted to apply for reinstatement.

Coterm students who wish to terminate study (e.g., for transfer to another institution) should submit a properly endorsed Request to Permanently Withdraw from Degree Program eForm (available in the eForms portal in the Student tab in Axess).

Coterm students with an active undergraduate program may request to withdraw from both of their active degrees (bachelor's and master's) or only from their graduate program. Coterm students with an active undergraduate program may not withdraw from only the undergraduate program and keep the graduate program active.

Involuntary Leave of Absence and Return Policy

In effect as of January 4, 2020

Stanford University is committed to the safety, health and well-being of the campus community. The University recognizes that students may experience situations that significantly limit their ability to function successfully or safely in their role as students. In such circumstances, students should consider requesting a leave of absence. A leave of absence permits students to take a break from the University and their studies, so that they may address the issues that led to the need for the leave and later return to the University with an enhanced opportunity to achieve their educational goals. Students will be given the option to take a voluntary leave of absence before a decision is made with respect to an involuntary leave.

1. **Involuntary Leave of Absence**

   Requiring a student to take a leave of absence is rare and, subject to Section III, only happens when current medical knowledge and/or the best available objective evidence indicates to the Senior Associate Vice Provost and Dean of Students or their designee (hereinafter, Dean of Students) that there is a significant risk to the student's health or safety or the health or safety of others, or the student's behavior severely disrupts the University environment, and no reasonable accommodations can adequately reduce that risk or disruption.

   Consistent with Stanford's Nondiscrimination Policy, Stanford prohibits unlawful discrimination on the basis of any type of disability or any other characteristic protected by applicable law in the administration of the University's programs and activities. Stanford offers a range of resources, support services and accommodations to address the physical and mental health needs of students. However, on rare occasion, a student's needs may require a level of care that exceeds the care the University can appropriately provide. Where current knowledge about the individual's medical condition and/or the best available objective evidence indicates that a student poses a significant risk to the health or safety of a member of the University community, where a student is unable or unwilling to carry out substantial self-care obligations and poses a significant risk to their own safety not based on mere speculation, stereotypes, or generalizations, or where a student's behavior severely disrupts the University environment and the student does not want to take a voluntary leave, the Dean of Students has the authority to place a student on an involuntary leave of absence. Before placing any student on an involuntary leave of absence, Stanford will conduct an individualized assessment, consulting with the Office of Accessible Education (OAE) to determine if there are reasonable accommodations that would permit the student to continue to participate in the University community without taking a leave of absence.

   The Dean of Students may be notified about a student who may meet the criteria of an involuntary leave of absence from a variety of sources including, but not limited to, the student, the student's academic advisor, Residential Education staff, Graduate Life Office staff, an academic department, or a member of the University's threat assessment team. If the Dean of Students deems it appropriate, these procedures will be initiated.

   1. **Procedures for Placing a Student on an Involuntary Leave of Absence**

      1. The Dean of Students will consult with the Office of Accessible Education (OAE) prior to making a decision to impose an involuntary leave of absence.

      2. The Dean of Students will issue a notice to the student in writing that an involuntary leave of absence is under consideration. The written notice will include the reason(s) why the student is being considered for an involuntary leave, contact information for OAE, which can provide information about accommodations, and a copy of this policy. In addition, the notice will provide contact information for the Process Resource, an administrator outside of the decision-making process with knowledge of Stanford's involuntary leave of absence process who will serve as a neutral process resource to answer any student questions about the process from referral through return to Stanford. In the written notice, the student will be encouraged to respond before a decision regarding a leave of absence is made and will be given a specified time period within which to do so.

3. The Dean of Students will consider potential accommodations and/or modifications that could obviate the need for an involuntary leave of absence, such as the option to take a voluntary leave of absence, academic accommodations, housing and dining accommodations, and modifications to University policies, rules, and regulations. Examples of academic, administrative, and housing accommodations that may be facilitated through the Office of Accessible Education (OAE) can be found on the OAE website.

4. The student may be asked to execute an Exchange of Confidential Information Consent Form providing Stanford personnel temporary authority to get information from the student's healthcare provider(s) regarding issues relevant and appropriate to the consideration of an involuntary leave of absence when there is a need for the University to have access to that information as part of the interactive process and individualized assessment. If a student refuses to execute an Exchange of Confidential Information Consent Form or to respond within the timeframe set by the Dean of Students, the Dean may proceed with the assessment based on information in the Dean's possession at the time.

5. The Dean of Students will also confer, as feasible and when appropriate in a particular matter, with individuals regarding the need for an involuntary leave of absence. Although each case will vary, conferring individuals could include:

    - Residence Deans, or Graduate Life Office Deans;
    - Faculty members;
    - Academic advisors;
    - With appropriate authorization, representatives from Stanford's Vaden Health Center (Vaden);
    - With appropriate authorization, the student's treatment provider(s) or other health care professionals;
    - Member(s) of the University's threat assessment team; and/or
    - Such other individuals as may be appropriate in an individual matter.

    In each case, the Dean of Students will confer with a representative from the Office of Accessible Education (OAE) with expertise in mental health disabilities.

6. Particular attention will be paid to the criteria for imposing an involuntary leave of absence, specifically:

    - whether current knowledge about the individual's medical condition and/or the best available objective evidence indicates that a student poses a significant risk to the health or safety of a member of the University community;
    - whether a student is unable or unwilling to carry out substantial self-care obligations and poses a significant risk to their own safety not based on mere speculation, stereotypes, or generalizations; and/or
    - whether a student's behavior severely disrupts the University environment.

    The individualized assessment as to each factor, based on reasonable judgment that relies on current medical knowledge or on the best available objective evidence, should ascertain: the nature, duration, and severity of the risk or disruption; the probability that the risk or disruption will actually occur; and whether reasonable modifications of policies, practices, or procedures will adequately mitigate the risk or disruption so as to eliminate the need for an involuntary leave of absence.

7. The Dean of Students will give significant weight to the opinion of the student's treatment provider(s), including those identified by the student, regarding the student's ability to function academically and safely at the University with or without reasonable accommodations. If the Dean of Students determines that the information provided by the treatment provider(s) is incomplete, requires further explanation or

clarification, or is inconsistent with other information in the student's record, the Dean of Students, with proper authorization, will contact the treatment provider(s) to obtain additional information. In certain circumstances, the University may require the student to undergo an additional evaluation by an independent and objective professional designated by Stanford, if the Dean of Students believes it will facilitate a more informed decision.

8. Following these consultations and based on a review of the relevant documentation and information available, the Dean of Students will make a decision as to whether the student should be placed on an involuntary leave of absence, and will provide written notice of this decision to the student. The written notice of decision will include information about the student's right to appeal and to reasonable accommodations during the appeal process. The review and notice of decision under this policy should be done in a reasonably timely manner. Where students have been asked to remain away from the University while the review is underway, every effort will be made by the Dean of Students to reach a decision within one week, provided the student responds in a timely manner to requests for information and, if appropriate, evaluation.

    - If an involuntary leave of absence is imposed. The written notice of decision to the student will set forth the basis for the decision and a time-frame for when the student must leave the University and when they may be eligible to return to the University and the conditions and/or requirements the student will need to satisfy to be eligible for return. The written notice will also inform the student of their right to reasonable accommodations in the return process and will provide contact information for OAE and the Process Resource. The length of the leave will be determined on an individual basis.

    - If an involuntary leave of absence is not imposed. The Dean of Students may impose conditions and/or requirements under which the student is allowed to remain at the University.

9. Within one week of receiving the decision of the Dean of Students, the student may submit an appeal of the decision in writing to the Vice Provost for Student Affairs or the Vice Provost's designee, who may not be the Dean of Students. The written request for appeal must specify the particular substantive and/or procedural basis for the appeal, and must be made on grounds other than general dissatisfaction with the decision of the Dean of Students. The review by the Vice Provost for Student Affairs or the Vice Provost's designee will be limited to the following considerations:

    - Were the proper facts and criteria brought to bear on the decision?

    - Is there any new information not previously available to the student that may change the outcome of the decision-making process?

    - Were there any procedural irregularities that materially affected the outcome of the matter to the detriment of the appellant?

    - Given the proper facts, criteria, and procedures, was the decision a reasonable one?

After reviewing the matter fully, the Vice Provost for Student Affairs or the Vice Provost's designee will issue a written decision affirming, modifying, or reversing the decision to place the student on an involuntary leave of absence. The Vice Provost's decision shall be final, and no other appeals or grievance procedures are available.

2. **Implications of an Involuntary Leave of Absence**

    1. Student status. Students on a leave of absence generally retain their admitted student status; however, they are not registered and therefore do not have the rights and privileges of registered students.

    2. Housing. Consistent with Stanford's policies and procedures, students assigned to a University residence are subject to the terms of the University Residence Agreement. However, as set forth on the Registrar's Office Leave of Absence website, students with medical disabilities (including mental health disabilities) that require University medical services may petition to remain in campus housing for one term while on

leave. Students who leave the University before the end of a term may be eligible to receive refunds of portions of their housing charges. Eligibility criteria for refunds are set forth in the Residence Agreement which is found on the Residence Agreement website.

3. Effective date(s) of leave. A student must leave the University within the timeframe set forth by the Dean of Students. The leave will remain in effect until (1) it is determined after an individualized assessment that the student is able to return to the University with or without reasonable accommodations and (2) the student has complied with any University requirements applicable to all students returning from a leave and all of the conditions mandated by the Dean of Students and/or the Vice Provost.

4. Notification. At any time during the leave process, the Dean of Students may notify a

   student's parent, guardian, emergency contact, or other individual, consistent with the law, if notification is deemed appropriate.

5. Association with the University while on leave. Unless expressly permitted by the Dean of Students in writing, students on an involuntary leave of absence are not permitted to be present at the University and are not permitted to engage in any University-related activities, including on-campus employment.

6. Coursework taken while on leave. Consistent with Stanford's policies and procedures, academic credit for work done elsewhere may be allowed towards a Stanford degree. Students should refer to the "Transfer Work" section of the Stanford Bulletin and consult with the Registrar's Office and their department prior to taking any coursework while on an involuntary leave of absence.

7. SUnet ID privileges. Unless expressly prohibited by the Dean of Students in writing, students on leave generally may retain their SUnet ID privileges, including their Stanford email account.

8. Transcript notation. Students on a leave of absence will have a notation on their transcript that reads "Leave of Absence."

9. Tuition and fees. Consistent with Stanford's policies and procedures, students who leave the University before the end of a term may be eligible to receive refunds of portions of their tuition. See the Registrar's Tuition Refunds page for a schedule of refunds.

10. Meal Plan. Consistent with Stanford's policies and procedures, a meal plan refund is based on the date when a student moves out of University residence and is approved under conditions as specified in the Residence Agreement. Students with questions about residential meal plan refunds should contact the central office of Stanford Dining.

11. Visa Status. International students (F-1 and J-1 Visa holders) placed on an involuntary leave of absence must speak with a Bechtel International Center advisor regarding their visa status.

2. **Request for Return**

1. For general requirements applicable to all students returning to Stanford after a leave of absence, undergraduate students should refer to the Returning to Stanford website. Graduate students should consult with their academic department and a Graduate Life Office Dean. In addition to the general requirements all students must meet when returning to Stanford after a leave of absence, as well as any conditions mandated by the Dean of Students and/or the Vice Provost for return from an involuntary leave of absence as outlined below in section II.C, students seeking to return from an involuntary leave of absence for reasons of personal or community health and safety may be required to submit additional documentation related to the factors set forth in section I.A.6 as part of an individualized assessment. OAE will work with the students to provide reasonable accommodations in the return process as necessary.

2. A student must make a written request to the Dean of Students to return to the University. Generally, a student will not be allowed to return until one full quarter has elapsed or until the leave period in the involuntary leave of absence notification has elapsed, and all conditions and/or requirements are met.

3. The Dean of Students may require the student to provide evidence that the student, with or without reasonable accommodations, has sufficiently addressed the issues that previously established the criteria for imposing an involuntary leave of absence as set forth in section I.A.6, above. The Dean of Students may also ask, confer with, or seek information from others to assist in making the determination. The information sought may include:

    - At the student's discretion, documentation of efforts by the student to address the issues that led to the leave
    - With appropriate authorization, release of academic records to inform treating clinicians
    - With appropriate authorization, release of treatment information to the extent necessary to determine if the student has sufficiently reduced the risk or disruption that led to the need for the involuntary leave
    - With appropriate authorization, consultation with Vaden to the extent necessary to determine if the student has sufficiently reduced the risk or disruption that led to the need for the involuntary leave
    - Consultation with OAE

4. All returning students must meet the essential eligibility requirements and any technical standards of the University and, if applicable, the relevant school or department, with or without reasonable accommodations. If the Dean of Students is not satisfied that the student is ready to return to the University, the student will be notified in writing of the decision, including the reason for the decision, within a reasonable time after the student has submitted a request for return and required documentation.

5. A student not permitted to return may appeal the decision to the Vice Provost for Student Affairs following the procedure in section I.A.9.

3. **Scope of the Policy and Relationship to Other University Policies**

   A leave of absence is an administrative process; it is not a disciplinary process. This policy and these procedures are not intended to be punitive and do not take the place of disciplinary actions that are in response to violations of Stanford's Fundamental Standard or other policies or directives, nor do they preclude the removal or dismissal of students from the University or University-related programs as a result of violations of other University policies or school or departmental protocols. This policy does not limit the University's ability to place enrollment holds on students for reasons beyond the scope of this policy and nothing in this policy relieves a student of any financial obligations to the University that were in place at the time the involuntary leave of absence was imposed.

   Nothing in this policy limits the power of the University to take administrative action to ensure the safety of the Stanford community. In exceptional circumstances, where the health or well-being of any person may be seriously affected, or where physical safety is seriously threatened, or where the ability of the University to carry out its essential operations is seriously threatened or impaired, the President or the President's designee, may summarily suspend, dismiss, or bar any person from the University or University-related programs. In all such cases, actions taken will be reviewed promptly, typically within one week, by the appropriate University authority.

   In situations involving an imminent or ongoing threat of harm to the student or any other member of the University community, the Dean of Students, in the exercise of his or her reasonable judgment, may require a student to be immediately prohibited from entering Stanford's campus or facilities utilized for University programs or activities while the individualized assessment and review described in section I.A. are taking place. Such students will receive the written notice described in section I.A.2 as quickly as possible.

4. **Requests for Reasonable Accommodation**

   Stanford is committed to providing equal access to all participants in University processes, including students with disabilities. Students with disabilities should contact the Office of Accessible Education (OAE) to request accommodations. Information about the support services OAE provides, types of accommodations offered, and appropriate documentation for accommodations, can be found on the OAE website: https://oae.stanford.edu/.

5. **Related Resources**

   As noted herein, students placed on an involuntary leave of absence may have additional conditions and/or requirements they must meet prior to returning to the University, in addition to any University requirements applicable to all students returning from a leave.

   - Undergraduate Students should consult the Returning to Stanford web page for generally applicable deadlines, information and resources.
   - Graduate Students should consult with a Graduate Life Office Dean and their department for generally applicable deadlines, information and resources.

Students who are placed on an involuntary leave of absence may want to consult with the following offices, where appropriate:

- Office of Accessible Education (OAE)
- Financial Aid
- Student Financial Services
- University Housing
- Vaden Health Center (Vaden)
- Academic Advising
- Graduate Life Office
- Bechtel International Center

The Process Resource will be available to assist all students who are placed on an involuntary leave of absence with their questions about the process to return and resume their studies and life at Stanford.

Graduate Degrees

General Requirements

For each Stanford advanced degree, there is an approved course of study that meets University and department requirements. The University's general requirements, applicable to all graduate degrees at Stanford, are described below. University requirements pertaining to only a subset of advanced degrees are described in the "Master's" tab and "Doctoral" tab in this section of this bulletin.

See the "Graduate Programs" section of each department's listing for specific department degree requirements. Additional information on professional school programs other than Ph.D. and master's degree programs is available in the bulletins of the Graduate School of Business, the School of Law, and the School of Medicine.

Enrollment Requirements

Graduate education at Stanford is a full-time commitment requiring full-time enrollment, typically at least eight units in each academic quarter. Unless permission is granted by the degree program (for example, for field work) enrolled graduate students are required to maintain a significant physical presence on campus throughout each quarter a student is enrolled. Prior to requesting approval to be physically distanced from campus, students should consult with the degree program as well as other university offices about potential funding, visa or other implications. Degree programs and individual faculty should include expectations about physical presence on campus in the advising expectations that are made available to students (see GAP 3.3, Academic Advising).

When considering a student's request to be physically remote, the degree program should carefully consider the student's ability to meet the coursework, research and teaching requirements of the program such that they can make satisfactory academic progress. In cases where the student is not able to make satisfactory academic progress and meet the requirements of the program, a leave of absence may be appropriate. Degree programs are not obligated to approve a student's request to be away from campus.

Graduate students are required to enroll in courses for all terms of the regular academic year (Autumn, Winter, and Spring quarters) from the admission term until conferral of the degree. The only exception to this requirement occurs when the student is granted an official leave of absence (see GAP 5.3, Leaves of Absence, and GAP 5.4, Program Discontinuation and Reinstatement).

Matriculated graduate students are expected to enroll for at least eight units during the academic year; degree programs may set a higher minimum. Petitions for programs of fewer than 8 must be signed by the student's degree program and submitted for consideration to the Office of the Registrar. Graduate students are normally expected to enroll in no more than 24 units. (Students in programs in the Schools of Humanities & Sciences, Engineering, Earth Sciences and Education will pay tuition for each unit over 18. The Schools of Medicine, Law, and Business do not charge for units above 18.) Registration for more than 24 units must be approved by the degree program.

Requests to enroll for fewer than eight units during the academic year are approved only in specific circumstances, including enrollment in the Master of Liberal Arts (M.L.A.) program, or the Honors Cooperative Program (HCP) through the Stanford Center for Professional Development (the Honors Cooperative Program). See GAP 5.2, Part-Time Enrollment.

Failure to enroll in courses for a term during the academic year without taking an approved leave of absence results in denial of further enrollment privileges unless and until reinstatement to the degree program is granted and the reinstatement fee paid.

Registration in Summer quarter is not required and does not substitute for registration during the academic year. Degree programs may require students to enroll in the Summer quarter. Students possessing an F-1 or J-1 student visa may be subject to additional course enrollment requirements in order to retain their legal status in the United States.

In addition to the above requirement for continuous registration during the academic year, graduate students are required by Stanford to be registered:

1. In each term during which any official degree program or university requirement is fulfilled, including qualifying exams or the university oral exam. The period between the last day of final exams of one term and the day prior to the first day of the following term is considered an extension of the earlier term, with the option of considering the two weeks preceding the start of Autumn Quarter as part of Autumn Quarter (rather than as part of Summer Quarter).
2. In any term in which a dissertation/thesis is submitted or at the end of which a graduate degree is conferred.
3. Normally, in any term in which the student receives financial support.
4. In any term for which the student needs to use university facilities.
5. For international students, in any term of the regular academic year (summer may be excluded) for which they have non-immigrant status (i.e., a J-1 or F-1 visa).

Individual students may also find themselves subject to the registration requirements of other agencies (for example, external funding sources such as federal financial aid). Most course work and research are expected to be done on campus unless the degree program gives prior approval.

Completing requirements in the two weeks before Autumn Quarter

Degree programs have the option to include the two weeks before the start of Autumn Quarter as part of Autumn Quarter for the purposes of completing milestones and programmatic requirements. The following considerations apply to this exception:

1. The student must enroll in the subsequent Autumn Quarter in the applicable standard enrollment category prior to the completion of the milestone; a leave of absence is not permitted for that Autumn Quarter.
2. A student exercising this option will not be eligible for Graduation Quarter status until the following Winter Quarter at the earliest.
3. This exception is permitted only for milestones administered by the degree program, such as qualifying examinations or university oral examinations.
4. This exception does not apply to deadlines administered through Stanford University, such as filing the Application to Graduate, or Dissertation/Thesis submission.
5. Degree programs are not obligated to exercise this option solely because a student requests it.

Master's

Degree-Specific Requirements (Master's Degrees)

Master's Program Proposal

Students pursuing an M.A., M.F.A., M.S., or M.P.P. degree are required to submit an acceptable program proposal to their department during the first quarter of enrollment using the Program Proposal for a Master's Degree form. Coterminal students must submit the proposal during the first quarter after admission to the coterminal program. The program proposal establishes a student's individual program of study to meet University and department degree requirements. Students must amend the proposal formally if their plans for meeting degree requirements change.

In reviewing the program proposal or any subsequent amendment to it, the department confirms that the course of study proposed by the student fulfills all department course requirements (for example, requirements specifying total number of units, course levels, particular courses, sequences, or substitutes). The department confirms that all other department requirements (for example, required projects, foreign language proficiency, or qualifying exams) are listed on the form and that all general University requirements (minimum units, residency, and so on) for the master's degree will be met through the proposed program of study. Students who fail to submit an acceptable proposal may be dismissed.

Time Limit for Completion of the Master's Degree

All requirements for a master's degree must be completed within three years after the student's first term of enrollment in the master's program (five years for Honors Cooperative students). Students pursuing a coterminal master's degree must complete their requirements within three years of the first graduate quarter.

The time limit is not automatically extended by a student's leave of absence. All requests for extension, whether prompted by a leave or some other circumstance, must be filed by the student before the conclusion of the program's time limit. Departments are not obliged to grant an extension. The maximum extension is one additional year. Extensions require review of academic progress and any other factors regarded as relevant by the department, and approval by the department; such approval is at the department's discretion.

Master of Arts and Master of Science

In addition to completing the general requirements for advanced degrees and the specified program requirements, candidates for the degree of Master of Arts (M.A.) or Master of Science (M.S.) must outline an acceptable program of study on the Master's Degree Program Proposal and complete their degrees within the time limit for completion of the master's degree.

Master of Public Policy

The degree of Master of Public Policy (M.P.P.) is a two-year program leading to a professional degree. Enrollment in the M.P.P. program is limited to candidates who have earlier been accepted to another Stanford graduate degree program and to recent (within three years) Stanford graduates. In addition to completing the general requirements for advanced degrees and the program requirements specified in the "Public Policy" section of this bulletin, candidates for the degree of Master of Public Policy (M.P.P.) must outline an acceptable program of study on the Program Proposal for a Master's Degree form and complete their degrees within the time limit for completion of the master's degree.

Master of Business Administration

The degree of Master of Business Administration (M.B.A.) is conferred on candidates who have satisfied the requirements established by the faculty of the Graduate School of Business and the general requirements for advanced degrees. Full particulars concerning the school requirements are found on the M.B.A. program web site of the Graduate School of Business. The M.B.A. must be completed within the time limit for completion of the master's degree.

Master of Fine Arts

In addition to completing the general requirements for advanced degrees and the program requirements specified in the "Art and Art History" section of this bulletin, candidates for the degree of Master of Fine Arts (M.F.A.) must outline an acceptable program of study on the Master's Degree Program Proposal and complete their degrees within the time limit for completion of the master's degree.

Master of Liberal Arts

The Master of Liberal Arts (M.L.A.) program is a part-time interdisciplinary master's program in the liberal arts for returning adult students. In addition to completing the general requirements for advanced degrees, candidates for the degree of Master of Liberal Arts (M.L.A.) must complete their degrees within five years, an exception to the rule specified above.

Engineer

In addition to completing the general requirements for advanced degrees and the requirements specified by their department, candidates for the degree of Engineer must be admitted to candidacy and must complete a thesis per the specifications below.

Candidacy

The Application for Candidacy for Degree of Engineer is an agreement between the student and the department on a specific program of study to fulfill degree requirements. Students must apply for candidacy by the end of the second quarter of the program. Honors Cooperative students must apply by the end of the fourth quarter of the program. Candidacy is valid for five calendar years.

Thesis

A University thesis is required for the Engineer degree. Students have the option of submitting the thesis electronically or via the paper process. Standards for professional presentation of the thesis have been established by the Committee on Graduate Studies. Directions for preparation of the thesis for electronic or paper submission are available at the Office of the University Registrar dissertation/thesis web site.

The deadline for submission of theses for degree conferral in each term is specified by the University academic calendar. If submitting via the paper process, three copies of the thesis, bearing the approval of the adviser under whose supervision it was prepared, must be submitted to the Office of the University Registrar before the quarterly deadline listed on the University academic calendar. A fee is charged for binding copies of the paper thesis. If submitting via the electronic process the signed thesis signature page and title page must be submitted to the Student Services Center and one final copy of the thesis must be uploaded, and approved by the Final Reader, on or before the quarterly deadline indicated in the University's academic calendar. There is no fee charged for the electronic submission process.

Students must be registered or on Graduation Quarter in the term in which they submit the thesis; see "Graduation Quarter" section of this bulletin for additional information. At the time the thesis is submitted, an Application to Graduate must be on file, all department requirements must be complete, and candidacy must be valid through the term of degree conferral.

Master of Legal Studies

The Master of Legal Studies degree (M.L.S.), a nonprofessional degree, is conferred upon candidates who satisfactorily complete courses in law totaling the number of units required under the current Faculty Regulations of the Stanford Law School over no less than one academic year and who otherwise have satisfied the requirements of the University and the Stanford Law School. The Stanford Law School Advanced Degree Programs provides detailed information on degree requirements.

Master of Laws

The degree of Master of Laws (L.L.M.) is conferred upon candidates who satisfactorily complete courses in law totaling the number of units required under the current Faculty Regulations of the Stanford Law School over no less than one academic year and who otherwise have satisfied the requirements of the University and the Stanford Law School.

The degree is designed for international graduate students trained in law and is available only to students with a primary law degree earned outside the United States. The L.L.M. program offers students a choice of three areas of specialization: Corporate Governance and Practice; Law, Science, and Technology; or International Economic Law, Business; and Policy. The Stanford Law School Advanced Degree Programs provides detailed information on degree requirements.

Master of the Science of Law

The degree of Master of the Science of Law (J.S.M.) is conferred upon candidates who satisfactorily complete courses in law totaling the number of units required under the current Faculty Regulations of the Stanford Law School over no less than one academic year and who otherwise have satisfied the requirements of the University and the Stanford Law School.

The degree is primarily designed for those qualified students who hold a J.D. or its equivalent and who are at the Stanford Law School for independent reasons (for example, as teaching fellows) and who wish to combine work toward the degree with their primary academic activities. Specially qualified lawyers, public officials, academics, and other professionals who have worked outside the United States may apply for the degree through the Stanford Program in International Legal Studies (SPILS). The Stanford Law School Advanced Degree Programs provides detailed information on degree requirements.

Doctoral

Degree-Specific Requirements (Doctoral Degrees)

Doctor of Jurisprudence

The degree of Doctor of Jurisprudence (J.D.) is conferred on candidates who satisfactorily complete courses in law totaling the number of units required under the current Faculty Regulations of the Stanford Law School over no less than three academic years and who otherwise have satisfied the requirements of the University and the Stanford Law School. The Stanford Law School J.D. Program web site provides detailed information on degree requirements.

Doctor of the Science of Law

The degree of the Doctor of the Science of Law (J.S.D.) is conferred upon candidates who hold a J.D. or its equivalent, who complete one academic year in residence, and who, as a result of independent legal research, present a dissertation that is, in the opinion of the faculty of the Stanford Law School a contribution to knowledge. Such work and dissertation must conform to the rules of the Stanford Law School and the University for the dissertation and the University Oral Examination, as described below in the "Doctor of Philosophy" section of this bulletin.

Candidacy is limited to students of exceptional distinction and promise. The Stanford Law School Advanced Degree Programs web site provides detailed information on degree requirements.

Doctor of Musical Arts

The degree of Doctor of Musical Arts (D.M.A.) is conferred on candidates who have satisfied the general requirements for advanced degrees, the program requirements specified in the "Music" section of this bulletin, and the candidacy requirement as described below in the "Doctor of Philosophy" section.

Doctor of Medicine

Candidates for the degree of Doctor of Medicine (M.D.) must satisfactorily complete the required curriculum in medicine. The requirements for the M.D. degree are detailed on the School of Medicine's web site.

Doctor of Philosophy

The degree of Doctor of Philosophy (Ph.D.) is conferred on candidates who have demonstrated to the satisfaction of their department or school substantial scholarship, high attainment in a particular field of knowledge, and the ability to do independent investigation and present the results of such research. They must satisfy the general requirements for advanced degrees, the program requirements specified by their departments, and the doctoral requirements described below. The option for a Ph.D. minor is also described below, though it is not a Ph.D. requirement.

Candidacy

Admission to a doctoral degree program is preliminary to, and distinct from, admission to candidacy. Admission to candidacy for the doctoral degree is a judgment by the faculty in the degree program of the student's potential to successfully complete the requirements of the degree program. Students are expected to complete degree program qualifying procedures and apply for candidacy by the end of their second year in the doctoral program. Honors Cooperative students are required to apply by the end of their fourth year. Candidacy is valid for five calendar years (through the end of the quarter in which candidacy expires), unless terminated by the degree program (for example, for unsatisfactory academic progress). A Pregnancy or Parental Leave of Absence automatically extends the pre-candidacy or candidacy period (see GAP 5.9, **Pregnancy, Childbirth and Adoption**, for details).

Admission to candidacy for the doctoral degree is granted by the degree program following a student's successful completion of qualifying procedures as determined by the degree program. Programmatic policy determines procedures for subsequent attempts to advance to candidacy in the event that the student does not successfully complete the procedures. Failure to advance to candidacy results in the dismissal of the student from the doctoral program (see GAP 5.6, **Dismissal for Academic and Professional Reasons**).

Candidacy is confirmed on the **Application for Candidacy for Doctoral Degree** (or a departmental version of this form). This form also specifies a departmentally approved program of study to fulfill degree requirements, including required course work, language requirements, teaching requirements, dissertation (final project and public lecture-demonstration for D.M.A.), and university oral examination (for other doctoral degrees). The department should confirm at this point that the student's program will meet all university and degree program requirements.

Prior to candidacy, at least 3 units of course work must be taken with each of four Stanford faculty members. To reiterate, however, a student will only be admitted to candidacy if, in addition to the student fulfilling programmatic prerequisites, the faculty makes the judgment that the student has the potential to successfully complete the requirements of the degree program.

If the doctoral student is pursuing a minor, approval by the degree program awarding the minor is also required on the Application for Candidacy.

Extension of the Pre-Candidacy Period

The degree program may determine that extension of the pre-candidacy period is necessary to provide a student with additional time to complete qualifying procedures or to provide faculty with necessary evidence on which to base a candidacy decision. Decisions to extend the pre-candidacy period and thus delay the candidacy decision should be made on an individual student basis and should not be applied to entire cohorts or students absent exceptional circumstances. Degree programs are not obligated to extend the pre-candidacy period.

When providing an extension of the pre-candidacy period, the degree program should communicate in writing the reason for the extension, expectations for the academic work to be completed by the student, the duration of the extension, and the timeline for the candidacy review. Extensions of the pre-candidacy period should generally not

extend beyond two academic quarters.

Time Limit for Completion of a Degree with Candidacy

Students are required to maintain active candidacy through conferral of the doctoral degree. All requirements for the degree must be completed before candidacy expires. Candidacy is valid for five calendar years (through the end of the quarter in which candidacy expires), unless terminated by the degree program (for example, for academic unsatisfactory progress). The candidacy time limit is not automatically extended by a student's leave of absence.

Failure to make minimum academic progress or complete university, department, and program requirements in a timely or satisfactory manner may lead to dismissal of the student (see GAP 5.6, **Dismissal for Academic Reasons**).

Extension of Candidacy

All requests for candidacy extension, whether prompted by a leave or some other circumstance, must be filed by the student before the conclusion of the program's time limit, using the Application for Extension of Candidacy or Master's Program form. Departments are not obligated to grant an extension. Students may receive a maximum of one additional year of candidacy per extension. Extensions require review by the department of a dissertation progress report, a timetable for completion of the dissertation, any other factors regarded as relevant by the department, and approval by the department; such approval is at the department's discretion.

A Pregnancy or Parental Leave of Absence will also result in an extension of candidacy (or of the pre-candidacy period). See GAP 5.9, Pregnancy, Childbirth and Adoption, for details.

Teaching and Research Requirements

A number of departments/schools require their students to teach (serving as a Teaching Assistant) or assist a faculty member in research (serving as a Research Assistant) for one or more quarters as part of their doctoral programs. Detailed information is included in the department sections of the Stanford Bulletin and in departmental requirements.

Foreign Language Requirement

Some departments require a reading knowledge of one or more foreign languages as indicated in department sections of the University Bulletin and in departmental requirements. Fulfillment of language requirements must be endorsed by the chair of the major department.

University Oral Examination

Passing a university oral examination is a requirement of the Ph.D., J.S.D. and Ed.D. degrees. The purpose of the examination is to test the candidate's command of the field of study and to confirm fitness for scholarly pursuits. Degree programs determine which of the following three types of oral examinations is to be required in their doctoral programs:

- A test of knowledge of the student's field; this type of examination is intended to assess the student's overall mastery of a specific field of knowledge
- A review of the dissertation proposal covering content relevant to the area of study, rationale for the proposed investigation, and strategy to be used in the research; this type of examination is intended to assist the student in refining a dissertation topic and to ensure mastery of theoretical and methodological issues as well as the materials needed to conduct the research effectively

- A defense of the dissertation presented either upon completion of a substantial portion of the dissertation or upon completion of a pre-final draft (in either case, a draft of the work completed should be available for the examining committee well in advance of the examination); this type of examination is intended to verify that the research represents the candidate's own contribution to knowledge, and to test his or her understanding of the research. General questions pertaining to the field as a whole, but beyond the scope of the dissertation itself, may be included.

Applicability:

All Ph.D., J.S.D., and Ed.D. degree candidates and programs.

Timing and Process

Students must be registered in the term in which the University oral examination is taken. The period between the last day of final exams of one term and the day prior to the first day of the following term is considered an extension of the earlier term. Candidacy must also be valid.

The University Oral Examination form must be submitted to the department graduate studies administrator at least two weeks prior to the proposed examination date. The examination is conducted according to the major department's adopted practice, but it should not exceed three hours in length, and it must include a period of private questioning by the examining committee.

Committee Membership

The University oral examination committee consists of at least five Stanford faculty members: four examiners and the committee chair from another department. All committee members are normally members of the Stanford University Academic Council, and the chair must be a member of the Stanford University Academic Council. Emeritus faculty are also eligible to serve as examiners or as chair of the committee. Emeritus Stanford faculty, though no longer current members of the Academic Council, count as Academic Council members on dissertation oral committees.

Out-of-Department Chair

The chair of a Stanford oral examination is appointed for this examination only, to represent the interests of the University for a fair and rigorous process. The chair of the examining committee may not have a full or joint appointment in the principal dissertation adviser's, co-advisers or student's department, but may have a courtesy appointment in the department. The chair can be from the same department as any other member(s) of the examination committee and can be from the student's minor department provided that the student's adviser does not have a full or joint appointment in the minor department.

The department of Electrical Engineering has been granted an exception to this policy, whereby "out-of-department" may include a faculty member from another division of the department. The Graduate School of Education has been granted an exception to this policy, whereby "out-of-department" may include a faculty member from another program area of the school.

For Interdisciplinary Degree Programs (IDPs), the chair of the examining committee may not have a full or joint appointment in the primary adviser's major department and must have independence from the student and adviser. The faculty director of the IDP is not allowed to chair an examining committee for students in that IDP.

Responsibility for monitoring appointment of the oral examination chair rests with the candidate's major department. The department cannot require the candidate to approach faculty members to serve as chair; many departments, however, invite students and their advisers to participate in the process of selecting and contacting potential chairs.

Exceptions

A Petition for Non-Academic Council Doctoral Commitment Members to appoint an examining committee member who is neither a current or emeritus member of the Academic Council may be approved by the chair of the department or faculty director of graduate studies, according to local policy, if that person contributes an area of expertise that is not readily available from the faculty and holds a Ph.D. or equivalent foreign degree.

Exceptions for individuals whose terminal degree is not the Ph.D. or equivalent foreign degree may be granted by the Office of the Vice Provost for Graduate Education, upon the request of the student's department chair or faculty director of graduate studies. The prospective committee member's curriculum vitae and a brief description of their contributions to the student's research should be submitted via email to the Office of the Vice Provost for Graduate Education.

The majority of the examiners must be current or emeritus Academic Council members; more specifically, one of four or five examiners or two of six or seven examiners who are not current or emeritus members of the Academic Council may be appointed to the oral examination committee by means of this petition and approval by the Office of the Vice Provost for Graduate Education, as required for members who do not have a PhD degree.

Reporting

The candidate passes the examination if the examining committee casts four favorable votes out of five or six, five favorable votes out of seven, or six favorable votes out of eight. Five members present and voting constitute a quorum. If the committee votes to fail a student, the committee chair sends within five days a written evaluation of the candidate's performance to the major department and the student. Within 30 days and after review of the examining committee's evaluation and recommendation, the chair of the student's major department must send the student a written statement indicating the final action of the department.

Dissertation

An approved doctoral dissertation is required for the Ph.D. and J.S.D. degrees. The doctoral dissertation must be an original contribution to scholarship or scientific knowledge and must exemplify the highest standards of the discipline. If it is judged to meet this standard, the dissertation is approved for the school or department by the doctoral dissertation reading committee (see GAP 4.8 Doctoral Degrees: Dissertations and Dissertation Reading Committees for more explanation).

Approval

One reading committee member, who must be a current member of the Academic Council, reads the dissertation in its final form and certifies on the **Certificate of Final Reading** that degree program and university specifications, described below, have been met. Typically, the principal dissertation advisor serves as final reader though another member of the committee who is a current Academic Council member may provide the final signature.

- All suggested changes have been taken into account and incorporated into the manuscript where appropriate.
- If the manuscript includes joint group research, the student's contribution is clearly explained in an introduction.
- Format complies with university requirements.
- If previously published materials are included in the dissertation, publication sources are indicated, written permission has been obtained for copyrighted materials, and all of the dissertation format requirements have been met.
- The dissertation is ready-for-publication in appearance and ready for microfilming and binding.

Dissertations must be in English. Exceptions to permit dissertations in a language other than English are granted by the school dean upon a written request from the chair of the student's major department. The student is required to submit directly to the Student Services Center a paper copy of the approval letter (or email message chain) from the school dean. Approval for writing a dissertation in another language is normally granted only in cases where the other language or literature in that language is also the subject of the discipline. Approval is routinely granted for dissertations in the Division of Literatures, Cultures, and Languages, within degree program specifications. Dissertations written in another language must include an extended summary in English (usually 15-20 pages in length).

When submitting electronically a dissertation in a language other than English, the student should upload the English summary as a supplemental file. When submitting such a dissertation on paper, the student is required to submit the abstract for ProQuest in English.

Submission

Students have the option of submitting the dissertation electronically or via the paper process. Directions for preparation of the dissertation for electronic or paper submission are available at the Office of the University Registrar dissertation web site. If submitting via the paper process, the signed dissertation copies and accompanying documents must be submitted to the Office of the University Registrar on or before the quarterly deadline indicated in the University's academic calendar. A fee is charged for the microfilming and binding of the paper dissertation copies. If submitting via the electronic process the signed dissertation signature page and title page must be submitted to the Student Services Center and one final copy of the dissertation must be uploaded, and approved by the Final Reader, on or before the quarterly deadline indicated in the University's academic calendar. There is no fee charged for the electronic submission process.

Enrollment

Students must either be registered or on graduation quarter in the term they submit the dissertation; see "Graduation Quarter" in the "Graduate Degrees" section of this Bulletin for additional information. At the time the dissertation is submitted, an Application to Graduate must be on file, all department requirements must be complete, and candidacy must be valid through the term of degree conferral.

Doctoral Dissertation Reading Committee

The doctoral dissertation reading committee consists of the principal dissertation adviser and, typically, two other readers. The doctoral dissertation reading committee must have at least three members and may not have more than five members. All members of the reading committee approve the dissertation. At least one member must be from the student's major department. Normally, all committee members are members of the Stanford University Academic Council or are emeritus Academic Council members.

The student's department chair or faculty director of graduate studies, according to local policy, may, in some cases, approve the appointment of a reader who is not a current or emeritus member of the Academic Council, if that person is particularly well qualified to consult on the dissertation topic and holds a Ph.D. or equivalent foreign degree, via the Petition for Non-Academic Council Doctoral Committee Members. Former Stanford Academic Council members and non-Academic Council members may thus, on occasion, serve on a reading committee. A non-Academic Council member (including former Academic Council members) may replace only one of three required members of dissertation reading committees. If the reading committee has four or five members, at least three members (comprising the majority) must be current or emeritus members of the Academic Council. Emeritus Stanford faculty, though no longer current members of the Academic Council, count as Academic Council members on dissertation reading committees.

Exceptions for individuals whose terminal degree is not the Ph.D. or equivalent foreign degree may be granted by the Office of the Vice Provost for Graduate Education, upon the request of the student's department chair or faculty director of graduate studies. The prospective committee member's curriculum vitae and a brief description of their contributions to the student's research should be submitted via email to the Office of the Vice Provost for Graduate Education.

Any member of the Academic Council may serve as the principal dissertation adviser. A former Academic Council member, emeritus Academic Council member or non-Academic Council member may serve as co-adviser with the appointment of a principal dissertation adviser who is currently on the Academic Council. This is to ensure representation for the student in the department by someone playing a major adviser role in completion of the dissertation. Professors who have recently become emeritus and have been recalled to active duty may serve as principal dissertation advisers, though they are no longer members of the Academic Council. Requests for further exceptions to the requirement that the principal dissertation adviser be a current member of the Academic Council, for example for recently retired emeritus professors who are still actively engaged on campus but not recalled to active duty, will be reviewed by the Office of the Vice Provost for Graduate Education.

The reading committee, as proposed by the student and agreed to by the prospective members, is endorsed by the chair of the major department on the Doctoral Dissertation Reading Committee form. This form must be submitted before approval of Terminal Graduate Registration (TGR) status or before scheduling a University oral examination that is a defense of the dissertation. The reading committee may be appointed earlier, according to the department timetable for doctoral programs. All subsequent changes to the reading committee must be approved by the chair or faculty director of graduate studies of the major department. The reading committee must conform to University regulations at the time of degree conferral.

Ph.D. Minor

Students pursuing a Ph.D. may pursue a minor in another department or program to complement their Ph.D. program. This option is not available to students pursuing other graduate degrees. Ph.D. candidates cannot pursue a minor in their own major department or program. In rare cases, a Ph.D. student may complete the requirements for more than one minor. In that case, 20 unduplicated units must be completed for each minor.

Only departments that offer a Ph.D. may offer a minor, and those departments are not required to do so. Interdisciplinary Ph.D. minors, administered by a designated academic department, may be approved by the Faculty Senate. The minor should represent a program of graduate quality and depth, including core requirements and electives or examinations. The department offering the minor establishes the core and examination requirements. Elective courses are planned by the students in conjunction with their minor and Ph.D. departments.

The minimum University requirement for a Ph.D. minor is 20 units of course work at the graduate level (typically courses numbered 200 and above). If a minor department chooses to require those pursuing the minor to pass the Ph.D. qualifying or field examinations, the 20-unit minimum can be reduced. All of the course work for a minor must be done at Stanford and must be completed prior to a student moving to TGR status.

Units taken for the minor can be counted as part of the overall requirement for the Ph.D. of 135 units of graduate course work done at Stanford. Courses used for a minor may not be used also to meet the requirements for a master's degree or for the completion of a different Ph.D. minor.

An Application for Ph.D. Minor outlining a program of study must be approved by the major and minor departments; to submit the application, go to Axess and select Student eForms from the student mega menu. This form is submitted at the time of admission to candidacy and specifies whether representation from the minor department on the University oral examination committee is required.

Joint Degrees

Joint Degree Programs

A joint degree program (JDP) is a specified combination of degree programs or degree types in which a student is enrolled in two graduate degree programs concurrently. JDPs are developed and proposed by the relevant academic units with agreement of the deans of the schools affected.

An approved JDP includes a set of agreements between the participating programs and schools about matters such as admissions, advising, curricula, and tuition. In a JDP, a specified number of units may be double-counted toward the minimum University residency requirements for both degrees, reducing the total number of residency units required to complete both degrees. Students pursuing a joint degree that includes a Ph.D. may not also count a Stanford master's degree or transfer units towards residency for the Ph.D. degree. Application deadlines for each program or degree apply. Students must be admitted to the JDP no later than the study list deadline of the term prior to the term of expected degree conferral. In a JDP, both degrees are conferred concurrently since the units required for each degree are linked to the completion of both degrees. The sole exception is the J.D. degree which may be awarded prior to the second degree.

The following joint degree programs, permitting students to complete requirements for two degrees with a reduced number of total residency units, are offered:

- Juris Doctor with a Master of Arts in Economics, Education, History, Public Policy, or the Division of International Comparative and Area Studies: African Studies, East Asian Studies, International Policy, Latin American Studies, and Russian, East European and Eurasian Studies (J.D./M.A.)
- Juris Doctor with a Master of Science in Bioengineering, Computer Science, Electrical Engineering, Environment and Resources, Health Research and Policy, or Management Science and Engineering (J.D./M.S.)
- Juris Doctor with a Master of Public Policy (J.D./M.P.P)
- Juris Doctor with a Doctor of Philosophy in Bioengineering, Communication, Computer Science, Economics, English, Environment and Resources, History, Management Science and Engineering, Neuroscience, Philosophy, Political Science, Psychology, or Sociology and with the Graduate School of Business Ph.D. program (J.D./Ph.D.)
- Juris Doctor with a Master of Business Administration (J.D./M.B.A.)
- Master of Business Administration with a Master of Arts in Education (M.B.A./M.A.)
- Master of Business Administration with a Master of Science in Computer Science, Electrical Engineering, and Environment and Resources (M.B.A./M.S.)
- Master of Business Administration with a Master of Public Policy (M.B.A./M.P.P.)
- Master of Arts in Education or International Policy with a Master of Public Policy (M.A./M.P.P.)
- Master of Science in Management Science and Engineering with a Master of Public Policy (M.S./M.P.P.)
- Doctor of Philosophy in Economics, Education, Psychology, Sociology, or Structural Biology with a Master of Public Policy (Ph.D./M.P.P.)
- Juris Doctor with a Doctor of Medicine (J.D./M.D.)
- Master of Public Policy with a Doctor of Medicine (M.P.P./M.D.)

Specific requirements for the joint degree programs are available from the participating departments and schools and at Registrar's web site.

Creation of additional joint degree programs that are combinations of J.D./M.A., J.D./M.S., and Ph.D./M.P.P. degrees have been authorized by the Faculty Senate. New JDPs from among these combinations may double-count up to 45 units towards residency requirements. JDPs from these combinations are proposed by the coordinating programs and

schools. Once approvals from the chairs of the programs and deans of the relevant schools are obtained, approval on behalf of the Committee on Graduate Studies is granted by the Office of the Vice Provost for Graduate Education, and final approval is granted by the Office of the University Registrar.

JDPs combining the J.D. and Ph.D. degrees that allow up to the 54-unit reduction of the residency requirement for both degrees separately, following the model of previously approved joint J.D./Ph.D.s listed above, can be approved by the Office of the Vice Provost for Graduate Education and final approval is granted by the Office of the University Registrar.

JDPs combining other degree types or programs may be proposed, but require review by the Faculty Senate Committee on Graduate Studies and must be approved by the Faculty Senate.

Degree Progress

Minimum Progress Requirements for Graduate Students

The academic requirements for graduate students include completion of University, department, and program requirements, such as admission to candidacy, successful completion of qualifying exams, and so on in a timely and satisfactory manner. Graduate students must also meet the following standards of minimum progress as indicated by units and grades. (These standards apply to all advanced degree programs except the Graduate School of Business Ph.D., and the M.B.A., J.D., L.L.M., J.S.M., J.S.D., M.D., and M.L.A., which follow guidelines issued by the respective schools and are described in their respective school bulletins.)

Graduate students enrolled for 11 or more units must pass at least 8 units per term by the end of each term. Those registered for fewer than 11 units must pass at least 6 units per term by the end of each term, unless other requirements are specified in a particular case or for a particular program.

In addition, graduate students must maintain a 3.0 (B) grade point average overall in courses applicable to the degree.

Department requirements for minimum progress that set a higher standard for units to be completed, or a higher or lower standard for grade point average to be maintained, take precedence over the University policy; any such different standards must be published in the Stanford Bulletin.

Students identified as not meeting the requirements for minimum progress and timely and satisfactory completion of requirements are reviewed by their departments to determine whether the problem lies with administrative matters such as reporting of grades or with academic performance. Students have the opportunity to explain any special circumstances. Approval for continuation in the degree program is contingent on agreement by the student and department to a suitable plan to maintain appropriate progress in subsequent quarters. Dismissal of graduate students is addressed in separate guidelines.

During the academic year, graduate students who have been granted Terminal Graduate Registration (TGR) status must enroll for zero units in the TGR course in their department in the section appropriate for the adviser (801 for master's and Engineer degree students or 802 for doctoral students). An 'N' grade signifies satisfactory progress, whereas an 'N-' grade indicates unsatisfactory academic progress. The first 'N-' grade constitutes a warning; additional 'N-' grades normally call for departmental review, which can result in a denial of enrollment or dismissal from the degree program.

Students receiving federal student aid funds, including student loans, must maintain satisfactory academic progress standards that may be stricter than departmental standards. See the Financial Aid Office web site for details.

Graduate Unit Requirements

The University's expectation is that the units counted towards all graduate degrees are primarily in graduate courses. The University has set specific requirements for units applied to the minimum requirement for the M.A., M.S., and M.F.A. degrees: All units must be in courses at or above the 100 level and at least 50 percent of those must be courses

designated primarily for graduate students (typically at least the 200 level). Units earned in courses below the 100 level may not be counted towards the minimum unit requirement for the master's degree. Department specifications for the level of course work accepted for a particular master's degree program may be higher than the University's specifications.

Changes of Degree Programs

Graduate students are admitted to Stanford for a specific degree program. Students who have attended Stanford for at least one term and who are currently enrolled may submit a Graduate Program Authorization Petition in Axess to make one of the following changes:

1. change to a new degree program in the same department;
2. change to a new degree program in a different department;
3. add a new degree program in the same or a different department to be pursued with the existing program. Students cannot add or pursue the same degree program for which they are already enrolled. Coterminal students must have the bachelor's degree conferred before adding a second advanced degree program. Summer term enrollment is optional for students beginning a new degree program in the Autumn term provided that they have been enrolled the prior Spring term.

It is important that the attempt to add or change degree programs be made while enrolled. Otherwise, a new Application for Graduate Admission must be submitted and an application fee paid. The Graduate Program Authorization Petition is submitted electronically through Axess to the department in which admission is requested. If applying for a higher degree program, students may also be required to submit other application materials such as GRE General or Subject Test scores, a statement of purpose, or new letters of recommendation. Decisions on the petitions are made by the programs or departments to which they are directed, and are at the discretion of those programs or departments.

International students changing departments or degree programs must also obtain the approval of the International Student Adviser at the Bechtel International Center. If the requested change lengthens their stay, they also are required to submit verification of sufficient funding to complete the new degree program.

Students who wish to terminate study in a graduate program should submit a properly endorsed Request to Permanently Withdraw from Degree Program form. To return to graduate study thereafter, the student is required to apply for reinstatement (if returning to the same degree program) or admission (if applying to a different program). Both applications require payment of a fee. Reinstatement is contingent upon departmental approval.

Guidelines for Dismissal of Graduate Students for Academic or Professional Reasons

Admission to graduate programs at Stanford is highly selective. It is anticipated that every admitted student will be able to fulfill the requirements for the advanced degree. This document provides guidelines to be used in the unusual circumstance that a department must consider dismissal of a graduate student for academic reasons. These guidelines apply to all advanced degree programs except those in the schools of Law and Business, the STEP program in the Graduate School of Education, and the M.D. program in the School of Medicine, which follow guidelines issued by the respective schools.

The principal conditions for continued registration of a graduate student are the timely and satisfactory completion of the University, department, and program requirements for the degree, fulfillment of minimum progress requirements, and meeting standards of professional behavior. The guidelines that follow specify procedures for dismissal of graduate students who are not meeting these conditions. In such cases, a departmental committee (hereafter "the committee"), whether the department's committee of the faculty or other committee authorized to act on the department's behalf such as the departmental graduate studies committee, will:

1. Where possible and as early as possible, warn the student, in writing, of the situation and deficiency. A detailed explanation of the reason for the warning should be provided.
2. Consider extenuating circumstances communicated by the student.
3. Decide the question of dismissal by majority vote of the committee (with at least three faculty members participating in the committee's deliberation) and communicate the decision to the student in writing.
4. Place a summary of department discussions, votes, and decisions in the student's file.
5. Provide students the opportunity to examine their department files, if requested.
6. Provide students with information on their rights to appeal under the Student Academic Grievance Procedure. See the "Student Academic Grievance Procedure" section of this bulletin.

Careful records of department decisions safeguard the rights of both students and faculty.

Guidelines for Addressing Graduate Student Professional Conduct

The success of any academic institution depends on a shared willingness to discharge the ethical obligations that bind students, staff and faculty together in a system of mutually supporting professional roles. Stanford University is no exception (see Administrative Guide, 1.1.1 Code of Conduct). The relevant ethical obligations are clearly defined for faculty in the Faculty Handbook: “In order to maintain the integrity of its teaching and research and to preserve academic freedom, Stanford University demands high standards of professional conduct from its faculty” (see Faculty Handbook 4.3.A). The purpose of this policy is to similarly define the professionalism expectations for graduate students as they prepare to be responsible members of professional communities.

Graduate students are expected to meet standards of professional behavior, including: being present on campus to meet the academic and research expectations of the school or department; communicating in a timely, respectful and professional manner; complying with institutional policies and procedures; and participating appropriately in the program’s community. Graduate students are expected to familiarize themselves with applicable University policy and degree program requirements. Failure to meet these standards may be grounds for dismissal.

Information about degree program requirements, including department and program academic advising expectations, is available from departments and in the Explore Degrees section of this bulletin. Students are encouraged to consult with faculty and staff in those programs should they have questions about local requirements.

When the University has professionalism concerns about a graduate student, the University manages the concern utilizing the Guidelines for Dismissal of Graduate Students for Academic or Professional Reasons (above).

Additional Specifics for Degrees with Candidacy

Before the Review for Candidacy

The committee, before review for admission to candidacy, may vote to dismiss a student who is not making minimum progress or completing requirements in a timely and satisfactory way or meeting standards of professional behavior. Before considering dismissal, the committee should meet with the student to discuss their academic or professional performance and identify steps to correct deficiencies, where such deficiencies are deemed correctable. Following the meeting, the student should receive a written summary of the discussion. Should it not be possible to meet, a written communication detailing academic and professional performance and steps required to correct any deficiencies should be provided to the student.

At the Review for Candidacy

In a review for admission to candidacy, if the committee votes not to recommend the student for admission to candidacy, the vote results in the dismissal of the student from the program. The department chair, or Director of Graduate Studies, or the student's adviser shall communicate the department's decision to the student in writing and whenever possible, in person. The student may submit a written request for reconsideration. The committee shall respond in writing to the request for reconsideration; it may decline to reconsider its decision.

During Candidacy

When a student admitted to candidacy is not making minimum progress, or not meeting standards of professional performance, or not completing University, department, or program requirements in a timely and satisfactory manner, the student's adviser, the Director of Graduate Studies, or department chair, and other relevant faculty should meet with the student, whenever possible. A written summary of these discussions shall be sent to the student and the adviser and added to the student's department file. The summary should specify the student's academic or professional deficiencies, the steps necessary to correct them (if deemed correctable), and the period of time that is allowed for their correction (normally one academic quarter). At the end of the warning period, the committee should review the student's progress and notify the student of its proposed actions. If the student has corrected the deficiencies, he or she should be notified in writing that the warning has been lifted.

If the deficiencies are not deemed correctable by the committee (for example, the failure of a required course or examination, or a pattern of unsatisfactory behavior or performance) or if, at the end of the warning period, the student has not in the view of the committee corrected the deficiencies, the committee may initiate proceedings for dismissal. The student shall be notified in writing and whenever possible, in person, that the case of dismissal will be considered at an impending committee meeting. The student has the right to be invited to attend a portion of the scheduled meeting to present his or her own case; a student may also make this case to the committee in writing.

After full discussion at the committee meeting, the committee, without the student present, shall review the case and vote on the issue of dismissal. The student shall be notified of the decision in writing and, whenever possible, in person. The student should receive a written summary of the discussion, including the committee's decision and the reasons for it. The student may submit a written request for reconsideration. The committee's response to the request for reconsideration shall be made in writing; it may decline to reconsider its decision.

Pregnancy, Childbirth, Adoption and Lactation Policy

Stanford prohibits discrimination on the basis of any characteristic protected by law including discrimination on the basis of pregnancy. Stanford complies with requirements of California Education Code section 66281.7. Stanford's policy provides that pregnant graduate students be supported either by staying enrolled or taking a pregnancy leave of absence (see GAP 5.9 Pregnancy, Childbirth, Adoption and Lactation). The policy also provides childbirth accommodations for graduate students giving birth as well as support for non-birth parents who have recently experienced the birth of a child. Questions about the policy can be directed to the Office of the Vice Provost for Graduate Education.

Residency

Residency Policy for Graduate Students

Each type of graduate degree offered at Stanford (for example, Master of Science, Doctor of Philosophy) has a residency requirement based on the number of academic units required for the degree. These residency requirements and the maximum allowable transfer units for each degree type are listed below. Unless permission is granted by the department (for example, for fieldwork) enrolled graduate students must maintain a significant physical presence on campus throughout each quarter a student is enrolled.

The unit requirements for degrees can represent solely course work required for the degree or a combination of course work, research, and a thesis or dissertation. Academic departments and schools offering degrees may establish unit requirements that are higher than the minimum University residency requirement, but they may not have a residency requirement that is lower than the University standard. In addition to the University's residency requirement based on a minimum number of units for each degree, the School of Medicine and the Graduate School of Business may establish residency requirements based on the number of quarters of full-time registration in which students are enrolled to earn a degree. However, in no case may a student earn fewer units than the University minimum for each degree. All residency requirements are published in the Stanford Bulletin. Students should consult the Stanford Bulletin or their academic department to determine if their degree program has residency requirements that exceed the minimum.

Students eligible for Veterans Affairs educational benefits should refer to the "Veterans' Educational Benefits" section of this bulletin.

It is Stanford University's general policy that units are applicable toward only one degree. Units may not normally be duplicated or double-counted toward the residency requirement for more than one degree, with the exception that up to 45 units of a Stanford M.A. or M.S. degree may be applied to the residency requirement for the Ph.D., D.M.A., or Engineer degrees. Other exceptions to this general policy for specified combinations of degree types, known as Joint Degree Programs, may be approved by agreement of the Faculty Senate and the deans of the schools affected, with review by the Committee on Graduate Studies. Students pursuing a Joint Degree that includes a Ph.D. may not also count a Stanford master's degree or transfer units towards residency for the Ph.D. degree. See the "Joint Degree Programs" tab of this section of this bulletin for additional information.

Only completed course units are counted toward the residency requirement. Courses with missing, incomplete, in progress, or failing grades do not count toward the residency requirement. Courses from which a student has formally withdrawn do not count toward the residency requirement.

Terminal Graduate Registration (TGR) is available to graduate students who have met all of the conditions listed in the "TGR" section of this bulletin.

University Minimum Residency Requirements for Graduate Degrees1

		University Minimum Residency Requirements for Graduate Degrees
DEGREE TYPE	**MINIMUM # OF UNITS**	**MAXIMUM ALLOWABLE EXTERNAL TRANSFER UNITS**
M.A., M.S., M.F.A., M.L.A.	45	0 (see note 4)
Engineer (see note 2)	90	45
M.B.A., M.P.P. (see note 3)	90	0 (see note 4)
Ph.D., D.M.A. (see note 5)	135	45
M.D.	235	90
M.S. in Physician Assistant Studies	186 (see note 6)	0 (see note 4)
J.D.	109	45
M.L.S., L.L.M., J.S.M.	35	0 (see note 4)
J.S.D.	44	0 (see note 4,7)

1	The University has authorized the granting of the M.A.T., Ed.S., and Ed.D. degrees, but they are not being offered.
2	Up to 45 units completed at Stanford toward an M.A. or M.S. degree or accepted as transfer credit, but not both, in an Engineering discipline may be used toward the 90 unit residency requirement for the Engineer degree. At least 45 units of work at Stanford are necessary to complete the 90 residency units for the Engineer degree.
3	Enrollment in the M.P.P. degree program is limited to candidates who have earlier been accepted to another Stanford graduate degree program and to recent (within three years) Stanford graduates.
4	Students eligible for Veterans Affairs educational benefits should refer to the Veterans Benefits section of "Admissions and Financial Aid" in this bulletin.
5	Up to 45 units completed at Stanford toward an M.A. or M.S. degree or accepted as transfer credit, but not both, may be used toward the 135 unit residency requirement for the Ph.D. or D.M.A. degree. At least 90 units of work at Stanford are necessary to complete the 135 residency units for the Ph.D. or D.M.A. degree.
6	6 units of the total are in an area of scholarly concentration.
7	Up to 35 units completed at Stanford toward a J.S.M degree may be used toward the 44-unit residency requirement for the J.S.D degree.

University Minimum Residency Requirements for Graduate Degree Combinations

Students with multiple degree programs must complete the residency requirements for all their degree types. Students enrolled in a joint degree program should see the "Joint Degree Program" section of this Bulletin.

A table of these residency requirements is also available on the Registrar's website.

			University Minimum Residency Requirements for Graduate Degree Combinations
DEGREE/DEGREE COMBINATION	**MINIMUM # OF STANFORD UNITS REQUIRED**	**MAXIMUM ALLOWABLE EXTERNAL TRANSFER UNITS**	**MINIMUM # OF RESIDENCY UNITS REQUIRED**
MA/MS/MSM	45	0*	45
MA/MS/MSM + MA/MS	90	0*	90
Engineer	45	45	90
Engineer + MA/MS	90	0*	90
Ph.D.	90	45	135
Ph.D. + MA/MS	135	0*	135
Ph.D. + 2 MA/MS	180	0*	180
Ph.D. + Engineer	180	45	225
Ph.D. + Engineer + MA/MS	225**	0*	225**
Ph.D. + Ph.D.	180	90***	270

*	Students eligible for Veterans Affairs educational benefits should refer to the "Veterans Benefits" section of this bulletin.
**	Civil and Environmental Engineering (CEE) students should refer to the CEE program page in the Stanford Bulletin for additional information regarding residency.
***	Up to 45 quarter units of work completed outside of Stanford may be applied towards a Ph.D. via the Graduate Residency Credit petition process. Students may apply up to 45 unduplicated units towards each Ph.D. (i.e., students may not use the same external course work towards both Ph.Ds).

Graduate Residency Transfer Credit

After at least one quarter of enrollment, students pursuing an Engineer, D.M.A., or Ph.D. may apply for transfer credit for graduate work done at another institution (Graduate Residency Transfer Credit).

Engineer candidates who also earned their master's at Stanford may not transfer residency credit, nor may any master's degree students. Ph.D. or D.M.A. students may only apply a total of 45 units of transfer credit and credit earned for a Stanford master's degree toward the Ph.D. residency total. The M.D. program permits 90 transfer units (3.0 terms) and the J.D. program permits 30 transfer units (2.0 terms). The M.B.A. program does not allow the transfer of units.

A maximum of 45 units for graduate work completed at another institution or completed at Stanford towards a master's degree may be applied to the Stanford requirements for the degrees of Ph.D., D.M.A., or Engineer.

Applications for transfer credit should only be made after successful completion of at least one quarter of graduate work at Stanford. Students enrolled at Stanford who are going to study elsewhere during their degree program should obtain prior approval of any transfer credit sought before their departure.

The following criteria are used by the degree program in determining whether, in its discretion, Stanford will award transfer residency credit for graduate-level work done at another institution:

1. Transfer of units earned for graduate work completed at another institution including coursework completed partially or fully online must be approved by the student's degree program.
2. The graduate work must have been completed after conferral of the bachelor's degree; the only exception is for graduate work taken through program structured like the Stanford coterminal bachelor's/master's program.
3. Up to 12 units of graduate work completed when a student is not enrolled in a graduate degree granting program (e.g., extension courses or non-matriculated enrollment) are eligible for transfer; with degree program approval.
4. Graduate work must have been completed with a grade of B or better in each course. Degree programs may accept a course with a lower grade provided the graduate work accepted for transfer received an overall grade point average (GPA) of 3.0 (B) or better. Pass grades may be accepted at the discretion of the degree program.
5. Graduate work must have been completed at a regionally accredited institution in the U.S. or at an officially recognized institution in a foreign country. Graduate work completed at foreign universities must be at the level of study comparable to a U.S. graduate program.
6. Units of graduate work accepted for transfer do not automatically exempt a student from completing Stanford course requirements for their degree.

The Application for Graduate Residency Credit is reviewed by the degree program and the Office of the University Registrar. For transfer credit done under a system other than the quarter system, the permissible maximum units are calculated at an appropriate ratio of equivalence.

Evaluation of Credit for Students Receiving VA Educational Benefits

Liaison among the university, its students, and the various federal, state, and local agencies concerned with veterans' educational benefits is provided by the Office of the University Registrar. All students eligible to receive veterans' educational benefits while attending the university are urged to complete arrangements with the appropriate agency well in advance of enrollment. In addition, students are required to have their degree program approve their study lists as meeting graduation requirements before the Office of the University Registrar can certify the courses for Veterans Affairs.

Subject to current federal and university guidelines, students eligible for receipt of VA educational benefits have their prior education and training evaluated up to the credit limits outlined in this Residency policy. As an exception to this policy, students in master's programs in the Schools of Earth Sciences, Education, Engineering, Humanities and Sciences, Law, Medicine, and Graduate School of Business are allowed a maximum of 6 transfer (quarter) units.

Leave/Reinstatement

Leaves of Absence (Graduate)

Students on leave of absence are not registered at Stanford and, therefore, do not have the rights and privileges of registered students. They cannot fulfill any official department or University requirements during the leave period.

Leaves do not delay candidacy or master's program expiration dates, except for pregnancy or parental leaves of absence, which do extend these degree milestones.

Students on leave may complete course work for which an 'Incomplete' grade was awarded in a prior term and are expected to comply with the maximum one-year time limit for resolving incompletes; a leave of absence does not stop the clock on the time limit for resolving incompletes. Students with extenuating circumstances that may warrant an exception to academic policy should discuss the need for an extension to the time limit with their adviser and the course instructor. Students may request an extension of the deadline for resolving an incomplete by submitting the Petition to Change Course Enrollment (Graduate Students).

When a student is granted (or placed on) a leave of absence after the beginning of the term, courses in which the student was enrolled after the drop deadline appear on the student's transcript and show the symbol 'W' (Withdraw).

Voluntary Leaves of Absence

Graduate students who do not meet the requirement for continuous registration during the academic year (Autumn, Winter, and Spring quarters) must obtain an approved leave of absence, in advance, for the term(s) they will not be registered. (For a complete definition of full-time enrollment, see the "Definition of Full-time Enrollment" section of this bulletin.) The leave of absence must be reviewed for approval by the chair or director of graduate studies of the student's major department and, if the student is in the United States on a foreign student visa, by the Bechtel International Center. Except in the case of pregnancy or parental leaves, the granting of a leave of absence is at the discretion of the department and subject to review by the Office of the University Registrar. The University may condition its approval of a petition for leave of absence on the student's meeting such requirements as the University deems appropriate in the individual case for the student to be eligible to return (such as, in the case of a leave for medical reasons, proof of treatment and/or an interview with a health care professional at Vaden Health Center or Counseling and Psychological Services or its designee).

New graduate students may not take a leave of absence during their first quarter. However, new Stanford students may request a deferment from the department.

Coterminal students who wish to take a leave of absence are subject to the Leave of Absence policies for both undergraduate and graduate students, as described here and in the undergraduate Leaves of Absence and Reinstatement section of this Bulletin. A coterminal student whose undergraduate degree has not been conferred must obtain permission from the master's degree program and the office of Undergraduate Advising and Research, and may not take a leave of absence unless approved for both the graduate and undergraduate leave. Coterminal students are permitted to request a leave of absence for the first quarter of the graduate program.

Leaves of absence are granted for a maximum of one calendar year, or four quarters. Leaves requested for a longer period are approved only in exceptional circumstances (for example, mandatory military service). An extension of leave, for a maximum of one year or four quarters, is approved only in unusual circumstances. Extension requests must be made before the expiration of the original leave of absence. Leaves of absence for graduate students may not exceed a cumulative total of two years (eight quarters including summer quarters).

Any pregnant graduate student may request a Pregnancy Leave of Absence to suspend enrollment around the time of the birth. Alternatively, a pregnant student may choose to remain enrolled and to request a Childbirth Accommodation. Non-birth parents may request a Parental Leave of Absence. Non-birth parents include: parents anticipating or recently experiencing the birth of a child; parents who adopt a child; and parents by means of surrogacy.

In the case of Pregnancy and Parental Leaves of Absence, all provisions of the policy for Voluntary Leaves of Absence, defined above, will apply, except:

- Any matriculated pregnant student requesting a Pregnancy Leave of Absence will automatically be approved for a leave period of four quarters (12 months).
- Non-birth parents who request a Parental Leave of Absence will automatically be approved for a leave period of one academic quarter.
- Any student on a Pregnancy Leave of Absence in a degree program requiring candidacy, who has not yet been admitted to candidacy, will have the period of time in which to achieve candidacy automatically extended by 12 months (four quarters). If the student has been admitted to candidacy, the candidacy period will be automatically extended by 12 months (four quarters). The 12-month extension of pre-candidacy or candidacy will be applicable whether the student takes a full year of leave or returns in less than one year.
- Any student on a Parental Leave of Absence in a degree program requiring candidacy, who has not yet been admitted to candidacy, will have the period of time in which to achieve candidacy automatically extended by three months (one quarter). If the student has been admitted to candidacy, the candidacy period will be automatically extended by three months (one quarter).
- In the case where a Pregnancy or Parental Leave of Absence would extend the student's cumulative total beyond 8 quarters, that extension will be permitted so that the student may return to their program. The student will then be considered to have reached their maximum cumulative leave.

Discontinuation and Reinstatement

A student's academic degree program may be discontinued if the student:

- fails to be enrolled by the study list deadline; or
- fails to be approved for a leave of absence by the start of the term; or
- voluntarily terminates graduate studies; or
- is dismissed from graduate studies for academic reasons; or
- is expelled from the University.

Students who fail to be either enrolled by the final study list deadline or approved for a leave of absence by the start of a term or after a voluntary withdrawal are required to apply for reinstatement through the Graduate Admissions office before they can return to the same degree program. Students whose master's program or doctoral candidacy has expired must petition to have extensions of their programs or candidacy approved by their departments before reinstatement may be approved.

The decision to approve or deny reinstatement is made by the student's department or program. Departments are not obliged to approve reinstatements of students. Reinstatement decisions are made at the discretion of the department or the program and may be based on the applicant's academic status when last enrolled, activities while away from campus, the length of the absence, the perceived potential for successful completion of the program, and the ability of the department to support the student both academically and financially, as well as any other factors or considerations regarded as relevant by the department or program.

If the student is eligible to be reinstated and is seeking reinstatement to a degree program that is no longer offered by Stanford University, the student should contact the department or program that offers the most similar degree to inquire about admission into the new degree program. The decision to grant admission into this new degree program rests with the department or program.

Reinstatement information is available from the Graduate Admissions office. Successful applicants are billed. Department-approved reinstatement applications must be submitted prior to the first day of the term for which re-enrollment is requested if the student is registering for courses. International students must submit reinstatement applications early enough to allow time for I-20 or DS-2019 production, visa interview, etc.

In the rare circumstance where a student who had been dismissed for academic reasons wishes to return to the same degree program, and where reinstatement was not precluded at the time of the dismissal, the student should request reinstatement as described above. In this circumstance, the degree program may review such relevant information as course work completed elsewhere or any other factors deemed to be appropriate for consideration.

Conditions for reinstatement may be established at the discretion of the program. The decision to approve or deny reinstatement is made by the department or program to which the student is seeking reinstatement, and is in its discretion. In addition, the department or program retains the right to condition reinstatement on such academic or other conditions as it deems appropriate.

Students who have been expelled from Stanford University are not permitted to apply for reinstatement.

Involuntary Leave of Absence and Return Policy

In effect as of January 4, 2020

Stanford University is committed to the safety, health and well-being of the campus community. The University recognizes that students may experience situations that significantly limit their ability to function successfully or safely in their role as students. In such circumstances, students should consider requesting a leave of absence. A leave of absence permits students to take a break from the University and their studies, so that they may address the issues that led to the need for the leave and later return to the University with an enhanced opportunity to achieve their educational goals. Students will be given the option to take a voluntary leave of absence before a decision is made with respect to an involuntary leave.

1. Involuntary Leave of Absence

   Requiring a student to take a leave of absence is rare and, subject to Section III, only happens when current medical knowledge and/or the best available objective evidence indicates to the Senior Associate Vice Provost and Dean of Students or their designee (hereinafter, Dean of Students) that there is a significant risk to the student's health or safety or the health or safety of others, or the student's behavior severely disrupts the University environment, and no reasonable accommodations can adequately reduce that risk or disruption.

   Consistent with Stanford's Nondiscrimination Policy, Stanford prohibits unlawful discrimination on the basis of any type of disability or any other characteristic protected by applicable law in the administration of the University's programs and activities. Stanford offers a range of resources, support services and accommodations to address the physical and mental health needs of students. However, on rare occasion, a student's needs may require a level of care that exceeds the care the University can appropriately provide. Where current knowledge about the individual's medical condition and/or the best available objective evidence indicates that a student poses a significant risk to the health or safety of a member of the University community, where a student is unable or unwilling to carry out substantial self-care obligations and poses a significant risk to their own safety not based on mere speculation, stereotypes, or generalizations, or where a student's behavior severely disrupts the University environment and the student does not want to take a voluntary leave, the Dean of Students has the authority to place a student on an involuntary leave of absence. Before placing any student on an involuntary leave of absence, Stanford will conduct an individualized assessment, consulting with the Office of Accessible Education (OAE) to determine if there are reasonable accommodations that would permit the student to continue to participate in the University community without taking a leave of absence.

   The Dean of Students may be notified about a student who may meet the criteria of an involuntary leave of absence from a variety of sources including, but not limited to, the student, the student's academic advisor, Residential Education staff, Graduate Life Office staff, an academic department, or a member of the University's

threat assessment team. If the Dean of Students deems it appropriate, these procedures will be initiated.

1. Procedures for Placing a Student on an Involuntary Leave of Absence

    1. The Dean of Students will consult with the Office of Accessible Education (OAE) prior to making a decision to impose an involuntary leave of absence.

    2. The Dean of Students will issue a notice to the student in writing that an involuntary leave of absence is under consideration. The written notice will include the reason(s) why the student is being considered for an involuntary leave, contact information for OAE, which can provide information about accommodations, and a copy of this policy. In addition, the notice will provide contact information for the Process Resource, an administrator outside of the decision-making process with knowledge of Stanford's involuntary leave of absence process who will serve as a neutral process resource to answer any student questions about the process from referral through return to Stanford. In the written notice, the student will be encouraged to respond before a decision regarding a leave of absence is made and will be given a specified time period within which to do so.

    3. The Dean of Students will consider potential accommodations and/or modifications that could obviate the need for an involuntary leave of absence, such as the option to take a voluntary leave of absence, academic accommodations, housing and dining accommodations, and modifications to University policies, rules, and regulations. Examples of academic, administrative, and housing accommodations that may be facilitated through the Office of Accessible Education (OAE) can be found on the OAE website.

    4. The student may be asked to execute an Exchange of Confidential Information Consent Form providing Stanford personnel temporary authority to get information from the student's healthcare provider(s) regarding issues relevant and appropriate to the consideration of an involuntary leave of absence when there is a need for the University to have access to that information as part of the interactive process and individualized assessment. If a student refuses to execute an Exchange of Confidential Information Consent Form or to respond within the timeframe set by the Dean of Students, the Dean may proceed with the assessment based on information in the Dean's possession at the time.

    5. The Dean of Students will also confer, as feasible and when appropriate in a particular matter, with individuals regarding the need for an involuntary leave of absence. Although each case will vary, conferring individuals could include:

        1. Residence Deans, or Graduate Life Office Deans;

        2. Faculty members;

        3. Academic advisors;

        4. With appropriate authorization, representatives from Stanford's Vaden Health Center (Vaden);

        5. With appropriate authorization, the student's treatment provider(s) or other health care professionals;

        6. Member(s) of the University's threat assessment team; and/or

        7. Such other individuals as may be appropriate in an individual matter.

        In each case, the Dean of Students will confer with a representative from the Office of Accessible Education (OAE) with expertise in mental health disabilities.

    6. Particular attention will be paid to the criteria for imposing an involuntary leave of absence, specifically:

        1. whether current knowledge about the individual's medical condition and/or the best available objective evidence indicates that a student poses a significant risk to the health or safety of a member of the University community;

2. whether a student is unable or unwilling to carry out substantial self-care obligations and poses a significant risk to their own safety not based on mere speculation, stereotypes, or generalizations; and/or

3. whether a student's behavior severely disrupts the University environment.

   The individualized assessment as to each factor, based on reasonable judgment that relies on current medical knowledge or on the best available objective evidence, should ascertain: the nature, duration, and severity of the risk or disruption; the probability that the risk or disruption will actually occur; and whether reasonable modifications of policies, practices, or procedures will adequately mitigate the risk or disruption so as to eliminate the need for an involuntary leave of absence.

7. The Dean of Students will give significant weight to the opinion of the student's treatment provider(s), including those identified by the student, regarding the student's ability to function academically and safely at the University with or without reasonable accommodations. If the Dean of Students determines that the information provided by the treatment provider(s) is incomplete, requires further explanation or clarification, or is inconsistent with other information in the student's record, the Dean of Students, with proper authorization, will contact the treatment provider(s) to obtain additional information. In certain circumstances, the University may require the student to undergo an additional evaluation by an independent and objective professional designated by Stanford, if the Dean of Students believes it will facilitate a more informed decision.

8. Following these consultations and based on a review of the relevant documentation and information available, the Dean of Students will make a decision as to whether the student should be placed on an involuntary leave of absence, and will provide written notice of this decision to the student. The written notice of decision will include information about the student's right to appeal and to reasonable accommodations during the appeal process. The review and notice of decision under this policy should be done in a reasonably timely manner. Where students have been asked to remain away from the University while the review is underway, every effort will be made by the Dean of Students to reach a decision within one week, provided the student responds in a timely manner to requests for information and, if appropriate, evaluation.

   1. If an involuntary leave of absence is imposed. The written notice of decision to the student will set forth the basis for the decision and a time-frame for when the student must leave the University and when they may be eligible to return to the University and the conditions and/or requirements the student will need to satisfy to be eligible for return. The written notice will also inform the student of their right to reasonable accommodations in the return process and will provide contact information for OAE and the Process Resource. The length of the leave will be determined on an individual basis.

   2. If an involuntary leave of absence is not imposed. The Dean of Students may impose conditions and/or requirements under which the student is allowed to remain at the University.

9. Within one week of receiving the decision of the Dean of Students, the student may submit an appeal of the decision in writing to the Vice Provost for Student Affairs or the Vice Provost's designee, who may not be the Dean of Students. The written request for appeal must specify the particular substantive and/or procedural basis for the appeal, and must be made on grounds other than general dissatisfaction with the decision of the Dean of Students. The review by the Vice Provost for Student Affairs or the Vice Provost's designee will be limited to the following considerations:

   1. Were the proper facts and criteria brought to bear on the decision?

   2. Is there any new information not previously available to the student that may change the outcome of the decision-making process?

   3. Were there any procedural irregularities that materially affected the outcome of the matter to the detriment of the appellant?

4. Given the proper facts, criteria, and procedures, was the decision a reasonable one?

After reviewing the matter fully, the Vice Provost for Student Affairs or the Vice Provost's designee will issue a written decision affirming, modifying, or reversing the decision to place the student on an involuntary leave of absence. The Vice Provost's decision shall be final, and no other appeals or grievance procedures are available.

2. Implications of an Involuntary Leave of Absence

    1. Student status. Students on a leave of absence generally retain their admitted student status; however, they are not registered and therefore do not have the rights and privileges of registered students.

    2. Housing. Consistent with Stanford's policies and procedures, students assigned to a University residence are subject to the terms of the University Residence Agreement. However, as set forth on the Registrar's Office Leave of Absence website, students with medical disabilities (including mental health disabilities) that require University medical services may petition to remain in campus housing for one term while on leave. Students who leave the University before the end of a term may be eligible to receive refunds of portions of their housing charges. Eligibility criteria for refunds are set forth in the Residence Agreement which is found on the Residence Agreement website.

    3. Effective date(s) of leave. A student must leave the University within the timeframe set forth by the Dean of Students. The leave will remain in effect until (1) it is determined after an individualized assessment that the student is able to return to the University with or without reasonable accommodations and (2) the student has complied with any University requirements applicable to all students returning from a leave and all of the conditions mandated by the Dean of Students and/or the Vice Provost.

    4. Notification. At any time during the leave process, the Dean of Students may notify a

        student's parent, guardian, emergency contact, or other individual, consistent with the law, if notification is deemed appropriate.

    5. Association with the University while on leave. Unless expressly permitted by the Dean of Students in writing, students on an involuntary leave of absence are not permitted to be present at the University and are not permitted to engage in any University-related activities, including on-campus employment.

    6. Coursework taken while on leave. Consistent with Stanford's policies and procedures, academic credit for work done elsewhere may be allowed towards a Stanford degree. Students should refer to the "Transfer Work" section of the Stanford Bulletin and consult with the Registrar's Office and their department prior to taking any coursework while on an involuntary leave of absence.

    7. SUnet ID privileges. Unless expressly prohibited by the Dean of Students in writing, students on leave generally may retain their SUnet ID privileges, including their Stanford email account.

    8. Transcript notation. Students on a leave of absence will have a notation on their transcript that reads "Leave of Absence."

    9. Tuition and fees. Consistent with Stanford's policies and procedures, students who leave the University before the end of a term may be eligible to receive refunds of portions of their tuition. See the Registrar's Tuition Refunds page for a schedule of refunds.

    10. Meal Plan. Consistent with Stanford's policies and procedures, a meal plan refund is based on the date when a student moves out of University residence and is approved under conditions as specified in the Residence Agreement. Students with questions about residential meal plan refunds should contact the central office of Stanford Dining.

    11. Visa Status. International students (F-1 and J-1 Visa holders) placed on an involuntary leave of absence must speak with a Bechtel International Center advisor regarding their visa status.

2. Request for Return

    1. For general requirements applicable to all students returning to Stanford after a leave of absence, undergraduate students should refer to the Returning to Stanford website. Graduate students should consult with their academic department and a Graduate Life Office Dean. In addition to the general requirements all students must meet when returning to Stanford after a leave of absence, as well as any conditions mandated by the Dean of Students and/or the Vice Provost for return from an involuntary leave of absence as outlined below in section II.C, students seeking to return from an involuntary leave of absence for reasons of personal or community health and safety may be required to submit additional documentation related to the factors set forth in section I.A.6 as part of an individualized assessment. OAE will work with the students to provide reasonable accommodations in the return process as necessary.

    2. A student must make a written request to the Dean of Students to return to the University. Generally, a student will not be allowed to return until one full quarter has elapsed or until the leave period in the involuntary leave of absence notification has elapsed, and all conditions and/or requirements are met.

    3. The Dean of Students may require the student to provide evidence that the student, with or without reasonable accommodations, has sufficiently addressed the issues that previously established the criteria for imposing an involuntary leave of absence as set forth in section I.A.6, above. The Dean of Students may also ask, confer with, or seek information from others to assist in making the determination. The information sought may include:

        1. At the student's discretion, documentation of efforts by the student to address the issues that led to the leave

        2. With appropriate authorization, release of academic records to inform treating clinicians

        3. With appropriate authorization, release of treatment information to the extent necessary to determine if the student has sufficiently reduced the risk or disruption that led to the need for the involuntary leave

        4. With appropriate authorization, consultation with Vaden to the extent necessary to determine if the student has sufficiently reduced the risk or disruption that led to the need for the involuntary leave

        5. Consultation with OAE

    4. All returning students must meet the essential eligibility requirements and any technical standards of the University and, if applicable, the relevant school or department, with or without reasonable accommodations. If the Dean of Students is not satisfied that the student is ready to return to the University, the student will be notified in writing of the decision, including the reason for the decision, within a reasonable time after the student has submitted a request for return and required documentation.

    5. A student not permitted to return may appeal the decision to the Vice Provost for Student Affairs following the procedure in section I.A.9.

3. Scope of the Policy and Relationship to Other University Policies

    A leave of absence is an administrative process; it is not a disciplinary process. This policy and these procedures are not intended to be punitive and do not take the place of disciplinary actions that are in response to violations of Stanford's Fundamental Standard or other policies or directives, nor do they preclude the removal or dismissal of students from the University or University-related programs as a result of violations of other University policies or school or departmental protocols. This policy does not limit the University's ability to place enrollment holds on students for reasons beyond the scope of this policy and nothing in this policy relieves a student of any financial obligations to the University that were in place at the time the involuntary leave of absence was imposed.

    Nothing in this policy limits the power of the University to take administrative action to ensure the safety of the Stanford community. In exceptional circumstances, where the health or well-being of any person may be seriously affected, or where physical safety is seriously threatened, or where the ability of the University to carry out its

essential operations is seriously threatened or impaired, the President or the President's designee, may summarily suspend, dismiss, or bar any person from the University or University-related programs. In all such cases, actions taken will be reviewed promptly, typically within one week, by the appropriate University authority.

In situations involving an imminent or ongoing threat of harm to the student or any other member of the University community, the Dean of Students, in the exercise of his or her reasonable judgment, may require a student to be immediately prohibited from entering Stanford's campus or facilities utilized for University programs or activities while the individualized assessment and review described in section I.A. are taking place. Such students will receive the written notice described in section I.A.2 as quickly as possible.

4. Requests for Reasonable Accommodation

   Stanford is committed to providing equal access to all participants in University processes, including students with disabilities. Students with disabilities should contact the Office of Accessible Education (OAE) to request accommodations. Information about the support services OAE provides, types of accommodations offered, and appropriate documentation for accommodations, can be found on the OAE website: https://oae.stanford.edu/.

5. Related Resources

As noted herein, students placed on an involuntary leave of absence may have additional conditions and/or requirements they must meet prior to returning to the University, in addition to any University requirements applicable to all students returning from a leave.

- Undergraduate Students should consult the Returning to Stanford web page for generally applicable deadlines, information and resources.
- Graduate Students should consult with a Graduate Life Office Dean and their department for generally applicable deadlines, information and resources.

Students who are placed on an involuntary leave of absence may want to consult with the following offices, where appropriate:

- Office of Accessible Education (OAE)
- Financial Aid
- Student Financial Services
- University Housing
- Vaden Health Center (Vaden)
- Academic Advising
- Graduate Life Office
- Bechtel International Center

The Process Resource will be available to assist all students who are placed on an involuntary leave of absence with their questions about the process to return and resume their studies and life at Stanford.

Special Registration Statuses

Special Registration Statuses

Terminal Graduate Registration (TGR)

Doctoral students who have been admitted to candidacy, completed all required courses and degree requirements other than the University oral exam and dissertation, completed 135 units or 10.5 quarters of residency (if under the old residency policy), and submitted a Doctoral Dissertation Reading Committee form, may request Terminal Graduate Registration status to complete their dissertations. Students pursuing Engineer degrees may apply for TGR status after admission to candidacy, completion of all required courses, and completion of 90 units or six quarters of residency (if under the old residency policy). Students enrolled in master's programs with a required project or thesis may apply for TGR status upon completion of all required courses and completion of 45 units. Students with more than one active graduate degree program must be TGR-eligible in all programs in order to apply for TGR status.

The TGR Final Registration status may also be granted for one quarter only to a graduate student who is working on 'Incomplete' grades in his or her final quarter or registering for one final term after all requirements are completed when Graduation Quarter is not applicable. TGR requirements above apply. Doctoral students under the term-based residency policy need nine quarters of residency to qualify for TGR Final Registration Status. Students on TGR Final Registration status may only enroll in their TGR course.

During the academic year TGR students must enroll for zero units in their department's TGR course in the appropriate section for their adviser (801 for master's and Engineer degree students or 802 for doctoral students). Students in TGR status are charged a special tuition rate and are certified as enrolled full time. TGR students may enroll in up to 3 units of course work per quarter at the TGR tuition rate without incurring additional tuition charges. TGR students may enroll in more than 3 units, in such cases tuition will be charged at the applicable unit rate. Courses completed while in TGR status cannot be applied towards requirements for any degree program. See the "Minimum Progress Requirements for Graduate Students" of this bulletin for information about satisfactory progress requirements for TGR students.

While enrollment in Summer Quarter is typically optional, degree programs, advisors, or funding sources may require students in TGR status to enroll. The minimum enrollment requirement in Summer Quarter is one unit or the appropriate TGR rate.

Graduate Petition for Part-time Enrollment

(Formerly Graduate Tuition Adjustment)

Requests to enroll for fewer than 8 units during the academic year are approved only in specific circumstances. Graduate students who need fewer than 8 remaining units to complete degree requirements or to qualify for TGR status, may register for one quarter on a unit basis (3 to 7 units) to cover the deficiency. This status may be used only once during a degree program. Coterminal students are not eligible for this status when their undergraduate career remains open.

Matriculated and enrolled pregnant graduate students may request up to two quarters of part-time enrollment for an approved Childbirth Academic Accommodation; see the "Pregnancy, Childbirth, Adoption and Lactation Policy" section of this bulletin and the GAP 5.9 Pregnancy, Childbirth, Adoption and Lactation.

International students should consult with Bechtel International Center prior to requesting part-time enrollment to ensure compliance with visa regulations.

All students requesting part-time enrollment should submit the Graduate Petition for Part-time Enrollment eForm.

Graduate Petition for Part-time Enrollment - OAE Accommodation

Graduate students with disabilities covered under the Americans with Disabilities Act may enroll in an approved reduced course load as recommended by the Office of Accessible Education (OAE). Students who have been approved by OAE may request this status for multiple quarters. Coterminal students who are approved to go on this status by OAE will also be approved by the Office of the University Registrar.

International students should consult with Bechtel International Center prior to requesting part-time enrollment to ensure compliance with visa regulations.

All students requesting part-time enrollment on the basis of an OAE Accommodation should submit the Graduate Petition for Part-Time Enrollment -OAE Accommodation eForm to ensure proper routing and processing of their request.

Graduation Quarter Status

Registration is required for the term in which a student defends and/or submits a dissertation, or has a degree conferred. Students who meet all the following conditions are eligible to be assessed a special tuition rate for the quarter in which they are receiving a degree:

1. All course work, degree requirements, and residency requirements for all graduate degree programs, including joint degree programs, have been completed prior to the start of the requested Graduation Quarter.
2. The student has formally applied to graduate in Axess.
3. The student has only to defend and/or submit the dissertation, project, or master's thesis by the deadline for submission in the term designated as the graduation quarter.
4. The student has filed all necessary forms regarding graduation quarter before the first day of the term chosen as graduation quarter.

A student who is returning after reinstatement in which all degree requirements are complete, with the exception of the dissertation defense and/or submission, is eligible to reinstate into a Graduation Quarter status.

Students on graduation quarter are registered at Stanford and, therefore, have the rights and privileges of registered students. Graduation Quarter status may be used only once during a degree program. There is a tuition rate of $150 for the graduation quarter. Students in Graduation Quarter status and enrolled in a course numbered 801 or 802 are certified as enrolled full time. Students may not enroll in any additional units.

Degree Conferral

Conferral of Degrees

Upon recommendation to the Senate of the Academic Council by the faculty of the relevant departments or schools and the Committee on Graduate Studies, degrees are awarded four times each year, at the conclusion of Autumn, Winter, Spring, and Summer terms. All diplomas, however, are prepared and distributed after degree conferral in accordance to the distribution dates listed on the Registrar's Office web site.

Students must apply for conferral of a graduate degree by filing an Application to Graduate in Axess by the deadline for each term. The deadlines are available in the Academic Calendar. A separate application must be filed for each degree program and for each conferral term.

Requests for conferral are reviewed by the Office of the University Registrar and the student's department to verify completion of degree requirements. Students must be registered in the term of degree conferral. Students with unmet financial obligations resulting in the placement of a hold on their registration cannot receive a transcript, statement of completion, degree certificate, or diploma until the hold is released by the Office of Student Financial Services. An academic record where no other degree objective is being pursued is permanently frozen after the final degree conferral.

Students are typically expected to apply to graduate when they have completed their degree requirements. The University, however, reserves the right to confer a degree on a student who has completed all of the requirements for a degree even though the student has not applied to graduate; such an individual would then be subject to the University's usual rules and restrictions regarding future enrollment or registration.

Students who wish to withdraw a request for conferral or make changes to the Application to Graduate can do so in Axess by the late application to graduate deadline. Students who withdraw their graduation applications or fail to meet degree requirements must reapply to graduate in a subsequent term.

Stanford University awards no honorary degrees.

Advising and Credentials

Advising and Credentials

Graduate Advising

Academic advising by Stanford faculty is a critical component of all graduate students' education. By the start of their first term, all graduate students should identify or be paired by the department with a faculty adviser who assists them in planning a program of study to meet degree requirements. The process by which students are matched with faculty advisers varies by department or program.

The University requires that within each department or program minimum advising expectations be set for both adviser and advisee. Such minimum expectations must differentiate between master's and doctoral programs, and between different types of advisers (academic/program vs. research). These department or program expectations must be distributed to faculty and graduate students on an annual basis at the start of each academic year and must be easily accessible on the web. Advising expectations are also listed under the "Graduate Advising" tab under the description of each graduate program in this bulletin. Faculty are expected to affirm that they have received the advising expectations. Each faculty member has the prerogative to augment the departmental advising expectations with their specific additional expectations, while remaining consistent with the departmental advising policies.

Faculty advisers are to:

- serve as intellectual and professional mentors to their graduate students
- provide knowledgeable support concerning the academic and non-academic policies that pertain to graduate students
- help to prepare students to be competitive for employment
- maintain a high level of professionalism in the relationship
- establish and collaboratively maintain expectations of the adviser/advisee relationship, consistent with departmental standards.

Students are obliged to follow university and department procedures for identifying advisers and committee members for their dissertation reading and university oral examinations. The principal dissertation adviser for doctoral students must be a member of the Academic Council. Students may identify a co-adviser in addition to the principal dissertation adviser; normally both principal adviser and co-adviser are members of the Academic Council. A former Stanford Academic Council member, emeritus professor, or non-Academic Council member may serve as co-adviser with the appointment of a principal dissertation adviser who is currently on the Academic Council.

Occasionally, a student's research may diverge from the area of competence of the adviser, or irreconcilable differences may occur between the student and the faculty adviser. In such cases, the student or the faculty adviser may request a change in assignment. If the department decides to grant the request, every reasonable effort must be made to pair the student with another suitable adviser. This may entail some modification of the student's research project.

In the rare case where a student's dissertation research on an approved project is in an advanced stage and the dissertation adviser is no longer available, every reasonable effort must be made to appoint a new adviser, usually from the student's reading committee. This may also require that a new member be added to the reading committee before

the draft dissertation is evaluated, to keep the reconstituted committee in compliance with the University requirements for its composition.

Departments should make every effort to assist doctoral students who are not yet admitted to candidacy in finding an appropriate principal dissertation adviser. The department should also inform doctoral students in a timely fashion about procedures for selecting a dissertation adviser, reading committee members, and orals committee members.

In addition to this bulletin and the GAP 3.3. Academic Advising, several University policies apply to all faculty-student advising relationships. The University's Research Policy Handbook 1. Conduct of Research outlines policies and practices related to the conduct of research, including obligations to students, staff, and sponsors. The Administrative Guide 1.1.1. University Code of Conduct articulates the policy that all members of the Stanford community are responsible for sustaining the highest ethical standards and values of the university and of the broader community.

Additional information and resources about advising can be found on the Office of the Vice Provost for Graduate Education's Advising & Mentoring web pages.

Teaching Credentials

Stanford University is accredited by the California Commission on Teacher Credentialing and is authorized to recommend candidates for credentials. The University offers a complete training program for both Single (Secondary) and Multiple (Elementary) Subject teaching credentials. Upon completion of a Stanford approved program, the credentials allow teachers to serve in California public schools.

Current Stanford undergraduates wishing to complete the requirements for a teaching credential should apply to the coterminal program at the Graduate School of Education. All other applicants should apply directly to the Stanford Teacher Education Program (STEP) at the Graduate School of Education.

Transfer Work

Stanford accepts a small number of undergraduate transfer students each year. Requirements for admission are described as part of the undergraduate application process and are listed on the Undergraduate Admission web site. Stanford University has a designated adviser who coordinates support for transfer students.

In conjunction with appropriate review bodies, the Office of the University Registrar evaluates and records the amount of transfer credit and advanced placement test credit an undergraduate can apply toward graduation requirements. Stanford awards credit based on course work completed at U.S. colleges or universities accredited by a regional accrediting association; or course work completed at international colleges or universities of recognized standing. Credit may also be awarded for certain Advanced Placement programs, International Baccalaureate Program, GCE, French Baccalaureate, and the German Abitur examinations.

See the "Advanced Placement" section of this Bulletin for information concerning Stanford's policy on credit for Advanced Placement work. Details on how to request credit for advanced placement examinations are available at the Registrar's Advanced Placement site.

Undergraduate Transfer Work

Academic credit for work done elsewhere may be allowed toward a Stanford bachelor's degree under the following rules and conditions:

1. Credit may be granted for work completed at institutions in the U.S. only if the institutions are regionally accredited.
2. Study in institutions outside the U.S., when validated by examination results, tutorial reports, or other official evidence of satisfactory work, may be credited toward a Stanford bachelor's degree, subject to the approval of the credit evaluator and the appropriate departments. See the Registrar's web site for additional information regarding transfer credit requests for course work completed abroad.
3. Credit is officially allowed only after the student has been unconditionally admitted to Stanford.
4. Credit is allowed for work completed at institutions in the U.S. only on the basis of an official transcript received by the Registrar at Stanford directly from the institution where the credit was earned. In order for transfer credit to be awarded, students must submit an official transcript that clearly indicates all of the below information for each course:
    - Course codes/numbers
    - Course titles or descriptions
    - Final grades earned
    - Course credits earned
5. Credit from another institution may be transferred for courses which are substantially equivalent to those offered at Stanford University on the undergraduate level, subject to the approval of the credit evaluator. A maximum of 20 quarter units may represent courses which do not parallel specific undergraduate courses at Stanford, again, subject to the approval of the credit evaluator as to quality and suitability.
6. Course work cannot duplicate, overlap, or regress previous work.
7. Transfer course work cannot count towards secondary school diploma and/or graduation requirements.

8. For students interested in fulfilling a Ways of Thinking/Doing (Ways) breadth requirement through transfer work, a transfer course evaluation must be submitted to confirm if the course will meet the Ways criteria. Requests for fulfilling Ways requirements in transfer require pre-approval prior to course enrollment and the pre-approval requests must be submitted prior to the term in which students intend to enroll in the transfer course and as defined on the Ways transfer page. Courses must be taken for a minimum of 3 quarter units (except Creative Expression) and must be taken for a letter grade.
   For incoming transfer students, a proportion of their Ways requirement must be fulfilled at Stanford based on the number of qualified transfer units awarded at matriculation. Students must complete a number of Ways courses to fulfill the Ways requirement as outlined in the Transfer Credit for Ways section of this bulletin.

9. Transfer work can be used to satisfy a department major or minor requirement. The transfer work must first be officially accepted into the University through the Office of the University Registrar. After the transfer credit has been approved and posted by the Office of the University Registrar, the departments determine if the approved transfer work can be used to satisfy a department major or minor requirement. Students should consult with their departments about a program's transfer credit policies/procedures.

10. The credit allowed at Stanford for one quarter's work may not exceed the number of units that would have been permissible for one quarter if the work had been done at Stanford; for work done under a system other than the quarter system, the permissible maximum units are calculated at an appropriate ratio of equivalence (i.e. is converted into quarter units).

11. Credit is allowed at Stanford for work graded 'C-' (or better) or 'Pass' (where 'Pass' is equivalent to a letter grade of 'C-' or above), but not for work graded 'D' or below.

12. No more than 45 (90 for transfer students) quarter units of credit for work done elsewhere (including external test credit) may be counted toward a bachelor's degree at Stanford.

13. Credit earned in extension, correspondence, and online courses is transferable only if the university offering the courses allows that credit toward its own bachelor's degree. Such credit is limited to a maximum of 45 quarter units for extension courses, a maximum of 15 quarter units for correspondence and online study, and a maximum of 45 quarter units for the combination of extension, correspondence, and online courses. Online and independent study courses are not eligible for Ways credit.

14. Credit earned in military training and service is not transferable to Stanford, unless offered by an accredited college or university in the U.S. and evaluated as above by the credit evaluator.

See the Registrar's web site for additional information regarding transfer credit policies and procedures.

Graduate Residency Transfer Credit

After at least one quarter of enrollment, students pursuing an Engineer, D.M.A., or Ph.D. may apply for transfer credit for graduate work done at another institution. Engineer candidates who also earned their master's at Stanford are not eligible for transfer residency credit, nor are any master's degree students. Ph.D. or D.M.A. students may only apply a total of 45 units of transfer credit and credit earned for a Stanford master's degree toward the PhD residency total. Ph.D. or D.M.A. students who are awarded graduate residency credit, who then add another graduate degree to their academic plan, may be required to earn a higher number of units in order to confer their degrees. Students should visit the Minimum Residency Requirements for Graduate Degrees page for more information. Students who are going to study elsewhere during their degree program at Stanford should obtain prior approval of any transfer credit sought before their departure.

The following criteria are used by the department in determining whether, in its discretion, it awards transfer credit for graduate-level work done at another institution:

1. Courses should have comparable Stanford counterparts that are approved by the student's department. A maximum of 12 units of courses with no Stanford counterparts and/or research units may be granted transfer credit.
2. The student must have been enrolled at the other institution in a student category which yields graduate credit. The maximum amount of credit given for extension and non-matriculated (non-degree) courses is 12 units. No transfer credit is given for online or correspondence work.
3. Courses must have been taken after the conferral of the bachelor's degree. The only exception is for work taken through programs structured like the Stanford coterminal bachelor's/master's program. Any work taken through such programs must be at the graduate level and applied toward the completion of a graduate degree.
4. Courses must have been completed with a grade point average (GPA) of 3.0 (B) or better. Pass grades are accepted only for courses for which letter grades were not an option and for which the standard of passing is 'B' quality work. The only exception to this is for thesis/research/dissertation coursework, for which Pass/Satisfactory/Credit grades can be accepted.
5. Courses must have been taken at a regionally accredited institution in the U.S. or at an officially recognized institution in a foreign country. Courses taken at foreign universities must be at the level of study comparable to a U.S. graduate program. Students should visit the Graduate Residency Transfer Credit page on the Registrar's web page for more information about what information is needed for international transfer work.

The Application for Graduate Residency Credit is reviewed by the department and the Office of the University Registrar. For transfer credit done under a system other than the quarter system, the permissible maximum units are calculated at an appropriate ratio of equivalence (i.e. credit is converted into quarter units). One semester unit or hour usually equals 1.5 quarter units.

Veterans Education Benefits

Veterans Education Benefits

Veterans Education Benefits

The Office of the University Registrar serves as the liaison between the University, its students, and the various federal, state, and local agencies concerned with Veterans Affairs (VA) education benefits and Department of Defense (DoD) tuition assistance.

Stanford University has made a good faith effort to comply with the Principles of Excellence established by Executive Order 13607. Stanford University participates in the Department of Defense Voluntary Education Partnership program so that eligible active duty service members are able to obtain Tuition Assistance from their military branch as administered by the Department of Defense. The VA Certifying Officer in the Student Services Center serves as the first point of contact for Veterans education benefits assistance and DoD tuition assistance.

Stanford certifies enrollment for Veterans education benefits for students in degree seeking programs, and students in VA approved certificate programs offered through the Stanford Center for Professional Development and the Graduate School of Business. Non-matriculated and unapproved certificate programs are not eligible. All students eligible to receive Veterans education benefits or DoD tuition assistance while attending the University are urged to complete arrangements with the appropriate agency in advance of enrollment.

Stanford University is required to certify only those courses that meet minimum graduation requirements. Courses not directly related to a student's degree program or courses beyond those required for a specific degree program are not certified. Undergraduates should meet with an adviser to develop a course enrollment plan. Graduate students should have their departments approve their study lists as meeting graduation requirements on a quarterly basis.

To comply with federal regulations concerning credit for previous training (38 CFR 21.4253), Stanford University is required to evaluate all previous education and training completed elsewhere to determine what credit, if any, should be granted to students eligible to receive Veterans education benefits or DoD tuition assistance. Stanford is required to complete an evaluation; credit is granted when appropriate. Credit is evaluated toward the degree program registered with Veterans Affairs or DoD as determined by the Office of the University Registrar in conjunction with the relevant academic department(s) or program(s). All relevant policies regarding transfer credit apply. In addition, this evaluation occurs each time a student's degree program is changed. Subject to current federal and University guidelines, students eligible for receipt of Veterans education benefits or DoD tuition assistance have their prior education and training evaluated up to the credit limits outlined in the "Residency Policy for Graduate Students" and “Transfer Work” sections of this bulletin. As an exception to that policy, students in master's programs in the schools of Earth Sciences, Education, Engineering, Humanities and Sciences, Law, Medicine, and Graduate Business are allowed a maximum of 6 transfer (quarter) units.

VA Status

VA Status

In order to activate students’ VA education benefits at Stanford, students are required to submit the following forms:

- A copy of the Certificate of Eligibility distributed by the VA
- DD-214 (if applicable)
- Any official transcripts from other institutions

It is the students’ responsibility to ensure that all forms are submitted to the VA Certifying Officer in order to activate the student as a VA education benefits receiving student.

In order to comply with VA regulations, students are responsible for the following:

- Obtain official transcripts from all postsecondary institutions attended, whether VA education benefits were received or not.
- Report any changes in enrollment status to the VA Certifying Officer.
- Report any changes that are made to a degree plan. Undergraduates declaring or making changes to their major(s), minor(s), honor(s), or degree program(s) in Axess and Graduates adding or removing degree programs through the Graduate Program Authorization Petition in Axess should email the VA Certifying Officer at vabenefits@stanford.edu to report a degree plan change.
- Overpayment funds which were paid to the student (generally-- housing and book stipends) are the student's responsibility to repay to VA. Overpayment funds which were paid to Stanford (generally-- tuition, fees, and Yellow Ribbon) will be returned to VA by Stanford. If there is a discrepancy between VA and Stanford's refund calculation, the student will be responsible for any difference.
- Stanford University is required to certify only those courses that meet minimum graduation requirements. Courses not directly related to a student's degree program or courses beyond those required for a specific degree program are not certified. Undergraduates should meet with their adviser to develop a course enrollment plan. Graduate students should have their departments approve their study lists as meeting graduation requirements on a quarterly basis.
- If concurrently enrolled with another college/university, notify both Stanford and the host institution.
- *Undergraduates only:* VA regulations require undergraduates to declare their major by the end of their sophomore year. Stanford cannot certify enrollment to the VA beyond sophomore year unless a major has been declared. Note that a student can change their major at any time.

Certification

Certification

Stanford's VA Certifying Officer certifies enrollment to the Department of Veterans Affairs (VA) quarterly, using a two-step certification process. Up to 30 days prior to the start of the quarter, students enrolled full-time per their degree program will be certified for the Monthly Housing Allowance (MHA). See the Stanford Academic Calendar for exact dates in each quarter.

After the Final Study list deadline, Stanford's VA Certifying Officer confirms student enrollment and completes the certification for tuition and fees. Students are certified based on the terms indicated in the VA Education Benefits Enrollment Application that must be submitted annually. Should an adjustment need to be made, it is the student's responsibility to contact the VA Certifying Officer at vabenefits@stanford.edu as soon as possible to provide an update.

Stanford receives tuition, fee, and Yellow Ribbon (if applicable) payments directly from VA for Chapter 31 and Chapter 33 recipients. All other funding is paid directly from VA to the beneficiary.

Programs Subject to Restriction

Note that the following programs cannot be certified due to VA and federal regulations:

- *Certificate programs for non-matriculated students:* The VA defines "matriculated" as having been formally admitted to a college or university. Per VA, educational benefits cannot be paid to "non-matriculated" college or university students. Hence, any certificate program that does not officially admit its students into Stanford University cannot be certified. All Stanford approved certificate programs are listed via the Web Enable Approval Management System (WEAMS).

- *Visiting Students Programs:* Stanford cannot certify visiting students unless they meet one of the following conditions:

1. The student has an approved parent letter from the home institution which guarantees the courses can be transferred back to their original program.
2. The student is pending admission to a Stanford degree program and is required to take a prerequisite course(s). In that case the student can be certified for two terms.

- *Medical Residencies/Fellowship programs that are not certified by the ACGME:* these residencies are not allowed to be certified as on the job training. This is according to VA guidelines and the Federal Code of Regulations. See the School of Medicine for a full list of the fellowship/residency programs.

All students eligible to receive Veterans education benefits while attending the University are urged to complete arrangements with the appropriate agency in advance of enrollment.

Financial Aid

Financial Aid

The Post-9/11 GI Bill®, also known as Chapter 33, is the most commonly used VA education benefit program at Stanford. This program provides funding for tuition, required fees, books and housing. The level of an individual student's Chapter 33 benefits is determined by the qualifying veteran's length of military service since 9/11/2001. Eligible students may also receive funds through the Yellow Ribbon Provision.

Most of the VA education benefit programs pay benefits directly to students on a monthly basis. However, under the Post-9/11 GI Bill® (Chapter 33), the VA sends tuition and fees benefits to Stanford, where the Financial Aid Office is responsible for applying the funds to the student account (university bill). Chapter 33 books and housing benefits are sent directly to students monthly. Students may need to apply the housing benefits to the university bill to pay for on-campus room and board.

Yellow Ribbon Provision

Stanford elects on a yearly basis to participate in the Yellow Ribbon Program. Under this provision Stanford provides an annual contribution to supplement the Chapter 33 base tuition benefit. The VA matches Stanford's Yellow Ribbon contribution. For graduate and professional students, the amount of Stanford's Yellow Ribbon contribution varies by school and program; see the Yellow Ribbon information on Stanford's website. Also, see the U.S. Department of Veteran's Affairs Yellow Ribbon web site for additional information.

Undergraduates

Undergraduates may apply for need-based financial aid from Stanford to supplement VA education benefits. If the financial aid application demonstrates financial need beyond the amount of expected VA education benefits, the student may be awarded institutional aid to meet the additional need.

If the student will be receiving VA education benefits transferred from a parent, the student will be treated as a dependent student for financial aid purposes. The student's parents' income and asset information will be considered in determining eligibility for need-based aid from Stanford. If the student is a Veteran, the student will most likely be treated as an independent student and will not need to provide parent information. Receipt of VA education benefits does not impact your eligibility for federal student loan programs.

VA education benefits are treated like other outside awards in that they can reduce or replace the Student Responsibility portion of the aid package. VA education benefits do not reduce or replace the Parent Contribution in the determination of eligibility for need-based Stanford aid.

Graduate Students

Schools and departments are responsible for providing the Yellow Ribbon contribution for eligible graduate students. The Financial Aid Office will coordinate receipt of funds with responsible individuals in each school. Receipt of VA education benefits does not impact your eligibility for federal student loan programs.

GI Bill® is a registered trademark of the U.S. Department of Veterans Affairs (VA). More information about education benefits offered by VA is available at the official U.S. government web site at https://www.benefits.va.gov/gibill.

Veterans Benefits and Transition Act of 2018 (Section 103)

Veterans Benefits and Transition Act of 2018 (Section 103)

Stanford University is a participant in the Veterans Benefits and Transition Act of 2018 signed into law on December 31, 2018, by the President of the United States. This provision was effective August 1, 2019 for any students who are considered "a covered individual" using "Chapter 33: Post 9/11 GI Bill®" benefits or any participants in "Chapter 31: Vocational Rehabilitation and Employment Program" benefits at a public, private for-profit, or not-for-profit institution regarding unpaid tuition and fees.

The policy states that the University will not:

1. Assess late penalty fees/charges due to delayed disbursements from the Department of Veterans Affairs under Chapter 31 or Chapter 33.
2. Prevent students from enrolling in classes.
3. Require the student to secure alternative or additional funding to cover the applicable tuition and fee expenses.
4. Deny the student access to any school resources to include (access to classes, libraries, or other institutional facilities) that are available to other paid students.

The school will require that each student provide the following:

1. An official Department of Veterans Affairs Certificate of Eligibility" or "Statement of Benefits" from the VA website or (eBenefits, VAF 28-1905) on or before the first day of class for the quarter.
2. Complete a written certification request to be certified for benefits.
3. Provide additional information required to ensure proper certification of benefits.

If there is a difference in the amount of the student's financial obligation to the University and the amount that the student is eligible to receive from the Department of Veterans Affairs, the student may incur an additional fee or payment may be required to make an additional payment to make up the difference.

With all contingencies met, the Department of Veterans Affairs will provide the University with payment ending on the earlier of the dates following:

- the date on which the payment from the VA is made to the institution.
- 90 days after the date that the institution has certified tuition and fees following the receipt of the "Certificate of Eligibility".

Who is a "Covered Individual?"

Any individual who is entitled to receive educational assistance under either "Chapter 33: Post 9/11 GI Bill®" or a participant under "Chapter 31: Vocational Rehabilitation and Employment Program".

GI Bill® is a registered trademark of the U.S. Department of Veterans Affairs (VA). More information about education benefits offered by VA is available at the official U.S. government web site at https://www.benefits.va.gov/gibill.

University Policies and Statements

Compliance with University Policies/Registration Holds

Registration as a student constitutes a commitment by the student to abide by and accept University policies, rules, requirements, and regulations, even when such policies, rules, requirements, and regulations appear to conflict with ASSU policies or procedures. The policies, rules, requirements, and regulations that students must abide by include (but are not limited to) those concerning registration, academic performance, student conduct, Title IX, health and safety, housing, use of the libraries and computing resources, intellectual property (including completing and signing the SU-18), operation of vehicles on campus, University facilities, and the payment of fees and assessments. Some of these are set forth in this bulletin while others are available in relevant University offices.

Students should take responsibility for informing themselves of applicable University policies, rules, requirements, and regulations. A collection is available on the Stanford University policy website. Many are also set forth in the Research Policy Handbook and the Graduate Academic Policies and Procedures Handbook (the GAP handbook).

The University reserves the right to withhold registration privileges or to cancel the registration of any student: who is not in compliance with its policies, rules, requirements, or regulations; or for reasons pertaining to academic performance, health and wellness, qualification to be a student, behavioral conduct, or the safety of the University community. In extraordinary circumstances, the President may temporarily or permanently discontinue students who present a threat to the health and safety of the University community.

University Communication with Students

Stanford University uses electronic means (such as email, texts, and the Internet) as a method of communication and of providing billing, payment, and enrollment services. For many University communications, email to a student's Stanford email account is the official form of notification to the student, and emails sent by University officials to such email addresses will be presumed to have been received and read by the student. Signatures or acknowledgments provided by a student electronically to the University via Stanford systems and/or @stanford.edu email are valid and legally binding.

Notification/Obligation to Read Email

For many University communications, email to a student's Stanford email account is the official form of notification to the student, and emails sent by University officials to such email addresses will be presumed to have been received and read by the student. Emails and forms delivered through a SUNet account by a student to the University may likewise constitute a formal communication, with the use of this password-protected account constituting the student's electronic signature.

Forms of Instruction

Forms of Instruction

The University offers a broad array of courses and forms of instruction including lectures, laboratories, seminars, practical exercises, directed research, clinics, and online instruction utilizing Canvas and other technology tools. The University reserves the right to determine the form of instruction offered and to modify the form at any time without notice.

Registration and Study Lists

Registration and Study Lists

The preliminary study list deadline is the first day of classes of each quarter during the academic year. As early as possible, but no later than this deadline, students (including those with TGR status) must submit to the Office of the University Registrar via Axess, a study list to enroll officially in classes for the quarter. Students are expected to be enrolled "at status" by the preliminary study list deadline; meaning that students must be enrolled in sufficient units to meet requirements for their status, whether full-time, or on approved special registration status. Students who enroll in more units than their anticipated tuition charge covers will be charged the additional tuition. They may not enroll in courses for zero units unless those courses, like TGR, are defined as zero-unit courses. Zero-unit courses, excluding TGR courses, require concurrent enrollment with unit-bearing courses in all quarters. Undergraduates are subject to academic load limits described in the **Amount of Work** section below. Students will be charged a $200 late study list fee for submitting their study lists after the quarterly deadline.

The University reserves the right to withhold registration from, and to cancel the advance registration or registration of, any student having unmet obligations to the University.

Study List Changes

Students may add courses or units to their study lists through the end of the third week of classes. (Individual faculty may choose to close their classes to new enrollments at an earlier date.) Courses or units may be added only if the revised program remains within the normal load limits.

Courses or units may be dropped by students through the end of the third week of classes, without any record of the course remaining on the student's transcript. No drops are permitted after this point. The Final Study List deadline is the last day for tuition reassessment for dropped courses or units.

A student may withdraw from a course after the final study list deadline through the end of the eighth week of each quarter. In this case, a grade notation of 'W' (withdraw) is automatically recorded on the student's transcript for that course. There are no tuition reassessments for withdrawing from individual courses. Students who do not officially withdraw from a class by the end of the eighth week are assigned the appropriate grade or notation by the instructor to reflect the work completed.

Through the end of the eighth week of classes, students may choose the grading option of their choice in courses where an option is offered.

If the instructor allows a student to take an 'I' (incomplete) in the course, the student must make the appropriate arrangements for that with the instructor by the last day of classes.

The deadlines described above follow the same pattern each quarter but, due to the varying lengths of Stanford's quarters, they may not always fall in exactly the week specified. Students should consult the University's academic calendar for the deadline dates each term. Other deadlines may apply in Law, Graduate School of Business, Medicine, and Summer Session.

Repeated Courses

Students may not enroll in courses for credit for which they received either Advanced Placement (AP) or transfer credit. If students enroll in courses at Stanford for which they received equivalent AP unit credit, the duplicating AP unit credit will be removed.

Some Stanford courses may be repeated for credit; they are specially noted in this bulletin. Most courses may not be repeated for credit. Under the general University grading system, when a course which may not be repeated for credit is retaken by a student, the following special rules apply:

1. A student may retake any course on his or her transcript, regardless of grade earned, and have the original grade, for completed courses only, replaced by the notation 'RP' (repeated course). When retaking a course, the student must enroll in it for the same number of units originally taken. When the grade for the second enrollment in the course has been reported, the units and grade points for the second course count in the cumulative grade point average in place of the grade and units for the first enrollment in the course. Because the notation 'RP' can only replace grades for completed courses, the notation 'W' cannot be replaced by the notation 'RP' in any case.
2. A student may not retake the same course for a third time unless he or she received a 'NC' (no credit) or 'NP' (not passed) when it was taken and completed the second time. Undergraduate students must submit a request for approval to take the course for a third time with the office of the Vice Provost for Undergraduate Education, via the office of Academic Advising, Sweet Hall. When a student completes a course for the third time, grades and units for both the second and third completions count in the cumulative grade point average. The notation 'W' is not counted toward the three-retake maximum.

Amount of Work

The usual amount of work for undergraduate students is 15 units per quarter; 180 units (225 for dual degree students) are required for graduation. Registration for fewer than 12 units is rarely permitted and may cause the undergraduate to be ineligible for certification as a full-time student. The maximum is 20 units (21 if the registration includes a 1-unit activity course). Requests for exception to the maximum may be considered for compelling reasons, the approval of which may include conditions or restrictions. A past superior academic performance is not considered to be sufficient justification for exceeding the maximum. Requests for registration of fewer than 12 or more than 20 units must be submitted to the office of the Vice Provost for Undergraduate Education, via the office of Academic Advising, Sweet Hall, first floor. For additional information regarding satisfactory academic progress, refer to the "Academic Progress" section of this bulletin.

Matriculated graduate students are expected to enroll for at least eight units during the academic year; schools and departments may set a higher minimum. Petitions for programs of fewer than 8 must be signed by the student's department and submitted for consideration to the Office of the University Registrar. Graduate students are normally expected to enroll in no more than 24 units; registration for more than 24 units must be approved by the department. Under certain circumstances, graduate students may register on a part-time basis. See the "Tuition, Fees, and Housing" section of this bulletin.

Enrollment for coterminal students is determined by their tuition group. See Tuition in the "Coterminal Master's Degrees" section of this bulletin.

Undergraduates and graduate students with disabilities who may seek a reduced course load should contact the Office of Accessible Education.

Unit of Credit

Guidance for faculty and instructors on how to comply with this policy is available on the Registrar's web site.

Every unit for which credit is given is understood to represent approximately three hours of actual work per week for the average student. Thus, in lecture or discussion work, for 1 unit of credit, one hour per week may be allotted to the lecture or discussion and two hours for preparation or subsequent reading and study. Where the time is wholly occupied with studio, field, or laboratory work, or in the classroom work of conversation classes, three full hours per week through one quarter are expected of the student for each unit of credit; but, where such work is supplemented by systematic outside reading or experiment under the direction of the instructor, a reduction may be made in the actual studio, field, laboratory, or classroom time as seems just to the department.

Religious Holidays

Students planning not to attend class or take an exam because of a religious observance are expected to convey this information to instructors in advance. The Office for Religious Life makes available to faculty, staff, and students a list of significant religious observances at the beginning of each academic year. For further information, contact the Deans for Religious Life at (650) 723-1762 or see the Religious Life web site.

Privacy

Privacy of Students Records

Notification of Rights Under FERPA

The Family Educational Rights and Privacy Act of 1974 (FERPA) affords students certain rights with respect to their education records. They are:

1. The right to inspect and review the student's education records within 45 days of the date the University receives a request for access.
   Current and former students who wish to make a FERPA-related request to view records should submit an online request to the Office of the University Registrar that identifies the record(s) the student wishes to inspect. Under FERPA, a student is an individual who is or has been in attendance at an educational institution. Applicants do not have FERPA rights unless and until they are admitted and are in attendance at the University. Students are advised to provide complete information in order to assist the University in following up on the request. Please note that only the actual student can submit a FERPA request to review their education records. Federal law requires that the University provide access to requested extant records within 45 days. A Registrar's Office official will make arrangements for access and notify the student of the time and place where the records may be inspected. If the records requested are not under the control of the Registrar's Office, the Registrar's Office will make arrangements for the relevant office to provide the records within the time frame established under the law.

2. The right to request the amendment of the student's education records that the student believes are inaccurate, misleading, or otherwise in violation of the student's privacy rights under FERPA.

    1. A student may ask the University to amend the record that he or she believes is inaccurate or misleading. The student should write the University official responsible for the record (with a copy to the University Registrar), clearly identify the part of the records he or she wants changed, and specify why it should be changed.

    2. If the University decides not to amend the record as requested by the student, the University will notify the student of the decision and advise the student of his or her right to a hearing regarding the request for amendment.

    3. Additional information regarding the hearing procedures is provided to the student when notified of the right to a hearing.

3. The right to consent to disclosures of personally identifiable information contained in the student's education records, except to the extent that FERPA authorizes disclosure without consent.
   FERPA contains various exceptions to the general rule that the University should not disclose education records without seeking the prior written consent of the student. The following circumstances are representative of those in which education records (and information drawn from education records) may be disclosed without the student's prior written consent:

    1. Upon request, the University may release Directory Information (see the "Directory Information" section of this bulletin below).

    2. School officials who have a legitimate educational interest in a student's education record may be permitted to review it. A school official is: a person employed by the University in an administrative, supervisory, academic or research, or support staff position (including law enforcement unit personnel and health staff); a

person or company with whom the University has contracted (such as an attorney, auditor, or collection agent); a person serving on the Board of Trustees; or a student or volunteer serving on an official committee (or representing a recognized student group), such as a disciplinary or grievance committee, or assisting another school official in performing his or her tasks. A school official has a legitimate educational interest if the official needs to review an education record in order to fulfill his or her responsibility to Stanford or to the student.

3. The University discloses education records without consent to officials of another school, in which a student seeks or intends to enroll, upon request of officials at that other school.
4. The University may choose to disclose education records (and information drawn from education records) to either supporting parent(s) or guardian(s) where the student is claimed as a dependent under the Internal Revenue Code.
5. The University may inform persons including either parent(s) or guardian(s) when disclosure of the information is necessary to protect the health or safety of the student or other persons.
6. For students under the age of 21, the University may notify either parent(s) or guardian(s) of a violation of any law or policy relating to the use of alcohol or controlled substances.
7. The University must provide records in response to lawfully issued subpoenas, or as otherwise compelled by legal process.

4. The right to file a complaint with the U.S. Department of Education concerning alleged failures by the University to comply with the requirements of FERPA.

The name and address of the office that administers FERPA is: Student Privacy Policy Office, U.S. Department of Education, 400 Maryland Avenue, SW, Washington, DC 20202-5920. Phone: 1-800-872-5327.

Sharing Information with Parents

Students are encouraged to maintain an ongoing, open dialogue with parents throughout their careers at Stanford about academic progress and personal development. Most student difficulties are resolved at Stanford without involving parents. The University does recognize, however, that there are some exceptional situations where parental involvement may be appropriate to assist a student through a difficult circumstance. Under those circumstances, Stanford may (but is not required to) choose to disclose information to parents if permitted by law.

Under the Family Educational Rights and Privacy Act (FERPA), Stanford is permitted to disclose information drawn from education records to parents if one or more parent claims the student as a dependent for federal tax purposes. Some laws, especially those relating to medical and mental health care, prohibit the disclosure of information without the student's consent, even where the student is a tax dependent.

Directory Information

The University regards the following items of information as "directory information," that is, information that the University may make available to any person upon specific request (and without student consent):

- Name*
- Email addresses
- Specific quarters or semesters of registration at Stanford
- Stanford degree(s) awarded and date(s)
- Major(s), minor(s), and field(s)

- University degree honors
- Student theses and dissertations
- Participation in officially recognized sports or activities*
- Weight and height of members of athletic teams*
- Institution attended immediately prior to Stanford
- ID card photographs

For more information, see Stanford's FERPA web page.

Students may prohibit the release of any of the items listed above (except those with an '*') by designating which items should not be released on the Privacy function of Axess. Students may prohibit the release of all directory information listed above after an appointment with the Office of the University Registrar to discuss the ramifications of this action. Student theses and dissertations can be restricted through the publishing options and embargo settings students select during submission.

Students, faculty, and others with questions regarding student records should contact the Office of the University Registrar.

Consent to Use of Photographic Images

Registration as a student and attendance at or participation in classes and other campus and University activities constitutes an agreement by the student to the University's use and distribution (both now and in the future) of the student's image or voice in photographs, video or audio capture, or electronic reproductions of such classes and other campus and University activities.

If any student in a class where such photographing or recording is to take place does not wish to have his or her image or voice so used, the student should raise the matter in advance with the instructor.

Examinations

Midterms

Classes that give midterm examinations outside of regular class hours must:

1. announce the date and time during the first week of the academic quarter, and
2. provide reasonable alternative times to those students who have another class or other University commitment at that time.

According to Honor Code interpretations and applications, different examinations may be given at these alternative times.

End-Quarter Policy Statement

The End-Quarter Period is a time of reduced social and extracurricular activity preceding final examinations. Its purpose is to permit students to concentrate on academic work and to prepare for final examinations.

In Autumn, Winter, and Spring quarters, End-Quarter starts seven full days (to begin at 12:01 a.m.) prior to the first day of final exams. In Spring Quarter, final examinations begin on Friday; no classes are held on Thursday, the day before. In Summer Quarter, this consists of the weekend and the four class days preceding the final examinations, which take

place on Friday and Saturday of the eighth week. (See the Time Schedule for dates.)

During the End-Quarter Period, classes are regularly scheduled and assignments made; this regular class time is used by instructors in whatever way seems best suited to the completion and summation of course material. Instructors should neither make extraordinary assignments nor announce additional course meetings in order to "catch up" in course presentations that have fallen behind. They are free, however, and even encouraged to conduct optional review sessions and to suggest other activities that might seem appropriate for students preparing for final examinations.

No graded homework assignments, mandatory quizzes, or examinations should be given during the End-Quarter Period except:

1. In classes where graded homework assignments or quizzes are routine parts of the instruction process.
2. In classes with laboratories where the final examination will not test the laboratory component. In such a case, the laboratory session(s) during the End-Quarter Period may be used to examine students on that aspect of the course.

Major papers or projects about which the student has had reasonable notice may be called due in the End-Quarter Period.

Take-home final examinations, given in place of the officially scheduled in-class examination, may be distributed in the End-Quarter Period. Although the instructor may ask students to return take-home examinations early in the final examination period, the instructor may not call them due until the end of the regularly scheduled examination time for that course. Such a policy respects the principle that students' final examinations are to be scheduled over a period of several days.

End-quarter examinations may not be held during this period. This policy preserves the instruction time for courses and protects the students' opportunities for extensive review and synthesis of their courses.

During the End-Quarter Period, no musical, dramatic, or athletic events involving student participation may be scheduled, unless approved as exceptions by the Committee on Undergraduate Standards and Policy (C-USP), nor may routine committee meetings be scheduled (such as those of the ASSU, the Senate of the Academic Council, or the committees of the President of the University) when such meetings normally would involve student participation.

Note—Students who believe that there are faculty who are violating End-Quarter policy should contact the Office of the University Registrar.

End-Quarter Examinations

Examinations are part of the process of education at the same time that they are a means to measure the student's performance in course work. Their structure, content, frequency, and length are to be determined in accordance with the nature of the course and the material presented in it, subject only to the limitations contained herein.

Great flexibility is available regarding the types of examinations that an instructor may choose to employ. Examinations, including final examinations, may be, for example, in-class essay examinations, take-home essay examinations, objective examinations, oral examinations, or appropriate substitutes such as papers or projects. Instructors may use any type of examination, paper, or project, or any combination thereof, guided only by the appropriateness of the types of examinations, papers, or projects for the material upon which the student is being examined.

When the final examination is an in-class examination, the following regulations apply:

1. A three-hour period is reserved during examination week for the final examination in each course of more than 2 units. This examination period must be available for students, but not necessarily in its entirety, if an in-class examination is given. In courses with extraordinary meeting times, such that ambiguity might exist as regards the period reserved for the final examination, the schedule should be clarified and students informed no later than the end of the second week of the quarter.

2. Examinations in 1- or 2-unit courses must be completed by the end of the last class meeting before the End-Quarter Period, except in Summer Quarter when examinations must be completed during the last regularly scheduled class session.

When the final examination or its appropriate substitute is not an in-class examination (for example, when an instructor chooses to employ a take-home examination, paper, or project in lieu of an in-class examination), the following regulations apply:

1. The schedule and format of the final examination or its appropriate substitute are made known not later than the end of the second week of the quarter and, if changed subsequently, may be only an option of the plan originally announced by the instructor.

2. Although the instructor may ask students to return take-home examinations early in the final examination period, the instructor may not call them due until the end of the regularly scheduled examination time for that course.

In submitting official Study Lists, students commit to all course requirements, including the examination procedures chosen and announced by the course instructor. In choosing courses, students should take cognizance of the official schedule of final examinations announced on the Registrar's web site. Students anticipating conflicts in final examination schedules should seek to resolve these with the instructors involved before the Preliminary Study List deadline at the beginning of the quarter. If accommodation cannot be made at that time, the student should revise his or her Study List before the Final Study List deadline at the end of the third week of the quarter in order to be able to meet the required final examination.

If unforeseen circumstances prevent the student from sitting for the regularly scheduled examination, instructors should make alternative arrangements on an individual basis. Such unforeseen circumstances include illness, personal emergency, or the student's required participation in special events (for example, athletic championships) approved as exceptions by the Committee on Undergraduate Standards and Policy (C-USP). Inquiries regarding these circumstances may be directed to the office of the Vice Provost for Undergraduate Education, via the office of Academic Advising, Sweet Hall.

Statement Concerning Early Examinations

Students are reminded that taking final examinations earlier than the scheduled time is a privilege, not a right. They should request this privilege only in the event of extraordinary circumstances.

Since the final examination schedule for each quarter is published annually on the Registrar's web site at the time of course selection and enrollment, students are expected to make their academic plans in light of known personal circumstances that may make certain examination times difficult for them.

In general, faculty members are discouraged from giving final examinations earlier than the published and announced times. If faculty nevertheless decide to administer early examinations, either the questions should be completely different from those on the regularly scheduled examination or the early examination should be administered in a highly controlled setting. An example of such a setting would be a campus seminar room where the examination questions would be collected along with students' work and students would be reminded of their Honor Code obligations not to share information about the examination contents. Giving students easy opportunities to abuse the integrity of an examination is unfair to honest students and inconsistent with the spirit of the Honor Code.

Academic fields differ in the degree to which early examination requests present dilemmas for faculty. If, for example, an examination format consists of a small number of essay questions, where students would be greatly advantaged by knowing the question topics, faculty should be especially reluctant to allow early examinations unless they are willing to offer totally different examinations or a different kind of academic task, for example, a final paper in lieu of an examination.

Grading

General University Grading Systems

The general University grading system is applicable to all of Stanford University except the Graduate School of Business, the School of Law, and M.D. students in the School of Medicine.

Effective Spring Quarter 2015-16, the GPA is computed under the general University grading system and published on the official undergraduate transcript. Transcripts for students with coterminal degree programs publish only the undergraduate career GPA based upon the courses assigned to the undergraduate degree program. For undergraduates who graduated before 1986, the GPA is not included on the transcript. For further information about how the internal General University GPA is determined, see How the General University GPA is Determined.

The GPA does not appear on the official graduate transcript.

Stanford University does not calculate a rank in class.

Most courses are graded according to the general University grading system. However, courses offered through Law, Business, and Medicine are graded according to those schools' grading systems, even in cases where students in other programs are enrolled in their classes. Note also that, as to graduate students, there may be departmental requirements as to grades that must be maintained for purposes of minimum academic progress.

Definition and Explanation of Grading Systems

All grades/notations for courses taken in 1995-96 or later are to be visible on student transcripts. Effective Summer Quarter 2008-09, the notation * was changed to GNR (Grade Not Reported).

	Definition and Explanation of Grading Systems
GRADE	**DESCRIPTION**
A (+,-)	Excellent
B (+,-)	Good
C (+,-)	Satisfactory
D (+,-)	Minimal pass
NP	Not Passed
NC	No Credit (unsatisfactory performance, 'D+' or below equivalent, in a class taken on a satisfactory/no credit basis)
CR	Credit (student-elected satisfactory; A, B, or C equivalent)
S	No-option Satisfactory; A, B, or C equivalent
L	Pass, letter grade to be reported
W	Withdraw
N (-)	Continuing course
I	Incomplete
RP	Repeated Course
*	No grade reported (effective through Spring 2008-09).
GNR	Grade not reported (effective beginning Autumn Quarter 2009-10).

Explanation

	Definition and Explanation of Grading Systems
GRADE	**DESCRIPTION**
NC	The notation 'NC' represents unsatisfactory performance in courses taken on a satisfactory/no credit basis. Performance is equivalent to letter grade 'D+' or below.
NP	The notation 'NP' is used by instructors in courses taken for a letter grade that are not passed.
CR	In a course for which some students receive letter grades, the 'CR' represents performance that is satisfactory or better when the student has elected the 'CR' grading option.

S	For an activity course or a course in which the instructor elects to grade students only on a satisfactory/no credit basis, the 'S' represents performance that is satisfactory or better. For such a course, no letter grades may be assigned for satisfactorily completed work. It should be noted that the Registrar is unable to record course grades submitted when the instructor has not observed the required distinction between 'S' and 'CR.' The 'satisfactory' options are intended to relieve the pressure on students for achievement in grades. The 'satisfactory' options in no way imply fewer or different course work requirements than those required of students who elect evaluation with a letter grade. A department may limit the number of 'satisfactory' courses to count for a major program. No more than 36 units of Stanford course work (including activity courses) in which a 'CR' or 'S' was awarded can be applied toward the 180 (225 if dual degrees are being pursued) units required for a bachelor's degree. Transfer students are limited to 27 'CR' or 'S' units applied to the 180/225 minimum.
L	The 'L' is a temporary notation that represents creditable completion of a course for which the student will receive a permanent letter grade before the start of the next quarter. The 'L' is given when the instructor needs additional time to determine the specific grade to be recorded, but it is not appropriate if additional work is expected to be submitted by the student. A student receives unit credit for work graded 'L.'
N	The 'N' indicates satisfactory progress in a course that has not yet reached completion. Continuation courses need not continue at the same number of units, but the grade for all quarters of such a course must be the same.
N-	The 'N-' grade indicates unsatisfactory progress in a continuing course. The first 'N-' grade constitutes a warning. The adviser, department chair, and student should discuss the deficiencies and agree on the steps necessary to correct them. A second consecutive 'N-' will normally cause the department to deny the student further registration until a written plan for the completion of the degree requirements has been submitted by the student and accepted by the department. Subsequent 'N-' grades are grounds for dismissal from the program.
I	The 'I' is restricted to cases in which the student has satisfactorily completed a substantial part of the course work. No credit is given until the course is completed and a passing grade received. When a final grade is received, all reference to the initial 'I' is removed. 'I' grades must be changed to a permanent notation or grade within a maximum of one year. If an incomplete grade is not cleared at the end of one year, it is changed automatically by the Office of the University Registrar to an 'NP' (not passed) or 'NC' (no credit) as appropriate for the grading method of the course. Students must request an incomplete grade by the last class meeting. Faculty may determine whether to grant the request or not. Faculty are free to determine the conditions under which the incomplete is made up, including setting a deadline of less than one year (but not more than one year). A leave of absence does not stop the clock on the time limit for resolving incompletes. Graduate students with extenuating circumstances, that may warrant an exception to academic policy, should discuss the need for an extension to the time limit with their advisor and the course instructor. Students may request an extension of the deadline for resolving an incomplete by submitting the Petition to Change Course Enrollment (Graduate Students).

RP	The notation 'RP' (meaning Repeated Course) replaces the original grade recorded for a course when a student retakes a course. (See the "Repeated Courses" section of this bulletin.)
W	The notation 'W' (meaning Withdraw) is recorded when a student withdraws from a course.
*	The ' ' *symbol appears when no grade has been reported to the Registrar for courses taken prior to 2001-02. The* ' symbol remains on the transcript until a grade has been reported (effective through Spring 2008-09).
GNR	The notation 'GNR' appears when no grade has been reported to the Registrar. The 'GNR' notation remains on the transcript until a grade has been reported. (Effective beginning Autumn Quarter 2009-10.)

Reporting of Grades

All grades should be reported within 96 hours after the time and day reserved for the final examination, and in no case later than noon of the fourth day (including weekends) after the last day of the final examination period.

In the case of degree candidates in Spring Quarter, final grades should be reported by noon of the day following the end of the final examination period.

Revision of End-Quarter Grades

When duly filed with the Office of the University Registrar, end-quarter grades are final and not subject to change by reason of a revision of judgment on the instructor's part; nor are grades to be revised on the basis of a second trial (for example, a new examination or additional work undertaken or completed after the end of the quarter). Changes may be made at any time to correct an actual error in computation or transcription, or where some part of the student's work has been unintentionally overlooked; that is, if the new grade is the one that would have been entered on the original report had there been no mistake in computing and had all the pertinent data been before the instructor, the change is a proper one.

If a student questions an end-quarter grade based on the grading of part of a specific piece of work (for example, part of a test) on the basis of one of the allowable factors mentioned in the preceding paragraph (for example, an error in computation or transcription, or work unintentionally overlooked, but not matters of judgment as mentioned below), the instructor may review the entire piece of work in question (for example, the entire test) for the purpose of determining whether the end-quarter grade was a proper one. In general, changing an end-quarter grade is permitted on the basis of the allowable factors already mentioned whether an error is discovered by the student or the instructor; however, changing a grade is not permitted by reason of revision of judgment on the part of the instructor.

In the event that a student disputes an end-quarter grade, the established grievance procedure should be followed (see the Student Academic Grievance Procedure section of this bulletin).

Freezing of Grades Upon Graduation

All grades, with the exception of 'I' (Incomplete), 'GNR' (Grade Not Reported), 'L' (Pass, grade to follow), and 'N' (Continuation) grades, are frozen at the time of graduation. Grades of Incomplete become frozen 12 months after the quarter in which they were awarded, either as 'NP' (Not Passed) if the course work has not been successfully completed, or another grade if it has. Grades of 'GNR', 'L', or 'N' also have one year to be updated after which they are frozen as they stand. The Office of the University Registrar evaluates prior to graduation whether the GPA on a transcript bearing grades of Incomplete would meet University requirements for graduation even if all 'I' grades were replaced by 'NP'.

Graduate School of Business Grades

All courses offered by the Graduate School of Business are graded according to the following five-level scheme:

	Definition and Explanation of Grading Systems
GRADE	**DESCRIPTION**
H	Honors. Work that is of truly superior quality.
HP	High Pass. A passing performance, and one that falls approximately in the upper quarter of passing grades.
P	Pass. A passing performance that falls in the center of the distribution of all passing grades.
LP	Low Pass. A passing performance that falls approximately in the lower quarter of passing grades.
U	Unsatisfactory. A failing performance. Work that does not satisfy the basic requirements of the course and is deficient in significant ways.
GNR	The notation 'GNR' appears when no grade has been reported to the Registrar. The 'GNR' notation remains on the transcript until a grade has been reported (effective Autumn Quarter 2009-10).

GSB courses may receive grades of "+" (Pass) for courses taken on a Pass-Fail basis, with "U" denoting a failing grade, "I" for Incomplete, and "N" for a continuing grade. The grade of N is recorded in a course that spans more than a single quarter, where the grade in an earlier quarter will be determined only later, after the entire course sequence is complete..

Prior to 2009-10, an asterisk (*) notation was placed when no grade was reported.

For more information, see the GSB Grades web site.

Stanford Law School Grades

Effective Autumn Quarter 2009-10, units earned in the Stanford Law School are quarter units. Units earned in the Stanford Law School prior to 2009-10 were semester units. The following grading system became effective in Autumn Semester 2008-09. J.D. students who graduated in 2009 remained on the prior grading system but all other students shifted to the new grading system. For more information, see the Stanford Law School Handbook.

	Definition and Explanation of Grading Systems
GRADE	**DESCRIPTION**
H	Honors (exceptional work, significantly superior to the average performance at the school)
P	Pass (representing successful mastery of the course material)
R	Restricted credit (representing work that is unsatisfactory)
F	Fail (representing work that does not show minimally adequate mastery of the material)
MP	Mandatory pass (representing P or better work)
N	Continuing course
I	Incomplete
*	No grade reported
GNR	Grade not reported (effective Autumn Quarter 2009-10).

The grading systems employed at the Stanford Law School September 2001 through Spring 2009 were as follows. Under the numerical system (with letter equivalents), the range of satisfactory grades ran from 4.3 to 2.5 as outlined in the following distribution. Below the grade of 2.5 was one level of restricted credit (2.2) and one level of failure (2.1). The number grades with letter equivalents were as follows:

	Number Grades with Letter Equivalents
NUMBERING	**GRADE**
4.3-4.2	A+
4.1-3.9	A
3.8-3.5	A-
3.4-3.2	B+
3.1-2.9	B
2.8-2.5	B-
2.2	Restricted Credit
2.1	Failure

On this old system, students could elect to take a limited number of courses on a credit/restricted credit/no credit system (K/RK/NK). 'K' was awarded for work that was comparable to numerical grades 4.3 to 2.5, 'RK' for Restricted Credit-level work (2.2), and 'NK' for Failure-level work (2.1). A limited number of courses were offered on a mandatory credit (KM)/no credit (NK) basis.

'N' is a temporary notation used in a continuing course; it is replaced with a final grade upon completion of the course series.

School of Medicine Grades

In general, the following grades are used in reporting on the performance of students in the M.D. program and in the M.S. in Physician Assistant Studies program:

	Definition and Explanation of Grading Systems
GRADE	**DESCRIPTION**
Pass (+)	Indicates that the student has demonstrated to the satisfaction of the department or teaching group responsible for the course that the student has mastered the material taught in the course.
Fail (-)	Indicates that the student has not demonstrated to the satisfaction of the department or teaching group responsible for the course that the student has mastered the material taught in the course.
Incomplete (I)	Indicates that extenuating medical or personal circumstances have prevented the student from completing the course requirements. This grade is given when requested by the student with the prior approval of an Advising Dean in the School of Medicine.
Continuing (N)	Indicates that the course has not concluded and the student is continuing the course.
Exempt (Ex)	Indicates a course that is exempted by examination. No units are awarded.
GNR	The notation 'GNR' appears when no grade has been reported to the Registrar. The 'GNR' notation remains on the transcript until a grade has been reported (effective Autumn Quarter 2009-10).

In general, a 'Fail' grade can be cleared by repeating and passing the particular course or by other arrangement prescribed by the department or teaching group. An 'Incomplete' grade can be made up in a manner specified by the department or teaching group within a reasonable time; if the deficiency is not made up within the specified time, the 'Incomplete' grade becomes a 'Fail' grade. The opportunity to clear a 'Fail' grade or an 'Incomplete' grade cannot be extended to individuals who are not registered or eligible to register as students in the M.D. program. For more specific information, see the Assessment of Student Academic Performance web site.

Records

Records

As a general proposition, only information classified by the University as directory information (see the "Directory Information" section of this bulletin) can be confirmed to inquirers other than the student.

Transcripts

Transcripts of Stanford records are issued by the Office of the University Registrar upon the student's request when submitted in writing or via the online Axess system. There is no charge for official transcripts. The courses taken in one quarter do not appear on any student's transcript until after the final study list deadline. The University reserves the right to withhold transcripts or records of students with unmet obligations to the University.

Certification of Enrollment or Degrees

The Office of the University Registrar can provide written confirmation of registration, enrollment, or degree status upon request by the student. The printed certification can be used whenever enrollment or degree verification is required for car insurance, loan deferments, medical coverage, scholarship purposes, and so on. Using Axess, students are able to print an official certification at no charge. Certification of full- or part-time enrollment cannot be provided until after the study list is filed for the quarter in question.

Degrees are conferred quarterly, but diplomas are issued in accordance to the distribution dates listed on the Registrar's Office web site. After conferral, the degree awarded to a student can be verified by contacting the Office of the University Registrar for an official transcript, or official degree certification form. Requests for transcripts or degree certifications must be made by the student in writing or through Axess.

Stanford University has authorized the National Student Clearinghouse (NSC) to act as its agent for purposes of third party enrollment and degree verification. The NSC will be able to verify degrees and enrollment for only those students who have not placed a privacy block on their academic record. The student's name when enrolled, Social Security Number or Student ID, and date of birth will be required for identification purposes and enrollment or degree verification. All third parties should contact the National Student Clearinghouse by phone or visit their web site for current enrollment and degree verification information, instructions, and fees.

Definition of Full-time Enrollment

Undergraduate

As a general proposition, full-time enrollment for undergraduates is considered to be enrollment in a minimum of 12 units of course work per quarter at Stanford. Work necessary to complete units from previous quarters does not count toward the 12 units necessary for full-time status in the current quarter. Enrollment in 8 to 11 units is considered half-time enrollment. Enrollment in 1 to 7 units is considered less-than-half-time, or part-time enrollment.

For students with disabilities taking a reduced course load, contact the Office of Accessible Education for additional information.

All undergraduates validly registered at Stanford are considered to be in good standing for the purposes of enrollment certification.

Graduate and Professional Students

Stanford uses the following definitions (in units) to certify the enrollment status of graduate and professional students each quarter:

				Enrollment Status of Graduate and Professional Students
STATUS	**GRADUATE**	**BUSINESS (M.B.A./SLOAN)**	**LAW**	**MEDICINE (M.D.)**
Full time:	8 or more	11 or more	9 or more	9 or more
Half time:	6 or 7	6-10	6-8	6-8
Part time:	5 or fewer	5 or fewer	5 or fewer	5 or fewer

TGR students enrolled in a course numbered 801 or 802 are certified as full time. Graduate students on an approved Graduation Quarter status are certified as full time. During Summer Quarter, all graduate students who hold appointments as research or teaching assistants are considered to be enrolled on at least a half-time basis.

H-1B Degree Certification

As the H-1B application deadline is April 1 and Winter Quarter degree conferral does not occur until after this date (or just before), the Office of the University Registrar provides an H-1B Degree Certification Letter for eligible students graduating Winter Quarter who are applying for the H-1B visa and have completed all school/department and University degree requirements.

Students conferring degrees in all terms except Winter Quarter should request an official transcript in their student Axess account after the degree conferral date of their graduation term. The official transcript indicates the results of all work completed and degrees awarded. Students can also request an official degree certification via Axess, or by completing a Degree Certification Request form. See Certifications and Verifications for details on requesting degree verification.

An Enrollment Verification is included with the H-1B Degree Certification Letter. The Enrollment Certification states a student's enrollment history, current program of study, major, expected degree, and expected degree conferral date. This document bears the University seal and signature of the University Registrar. For more information see the Office of the University Registrar H-1B Certification Letter web site.

Bechtel International Center organizes H-1B workshops which students are encouraged to attend if they have any questions regarding H-1B issues.

Posthumous Degrees

Stanford will consider granting a posthumous degree in instances in which a student was in good standing and had completed at least 90% of all graduation requirements at the time of death. Requests must be approved by the chair of the major department or the dean of a professional school and the University Registrar. Requests should be addressed to the University Registrar and generally should take place within 12 months of the student's death.

Academic Progress

Academic Progress

Undergraduates must maintain a minimum 2.0 cumulative GPA and a quantitative unit requirement for satisfactory academic progress. In addition, a minimum 2.0 cumulative GPA is required for conferral of a baccalaureate degree.

Undergraduates normally are expected to plan their academic programs so that they can complete 180 units in four years (twelve quarters), including the requirements for a major and the General Education (Ways/GERs), Writing and Rhetoric, and Language Requirements. Satisfactory academic progress is, on average, 45 units per academic year for four years leading to at least 180 units, a cumulative grade point average of at least 2.0, and a baccalaureate degree.

While undergraduates are expected to register for a minimum of 12 units, they are required to earn at least 9 units each quarter (by the end of the final exam period) and at least 36 units in their most recent three quarters of Stanford enrollment (by the end of the third final exam period). In addition, students are expected to maintain a cumulative grade point average of at least 2.0. Transfer work completed at other institutions is not considered in this calculation.

A student earning fewer than 9 units per quarter or fewer than 36 units in three quarters, or earning less than a 2.0 cumulative grade point average, is placed on academic probation. (For students with disabilities taking a reduced course load, contact the Office of Accessible Education for additional information.) Additionally, a student may be placed directly on provisional registration or academic suspension (both further defined in this section) without first being placed on academic probation if the student had a prior probation status. Students on academic probation or provisional registration status are required to earn a minimum of 12 units of new course work per quarter (by the end of the final quarter examination period for each quarter) in each quarter for three quarters of consecutive enrollment (excluding Summer, and achieve and maintain a cumulative grade point average of at least 2.0 to attain a satisfactory academic progress status. The C-USP Subcommittee on Academic Progress may stipulate otherwise by acting upon a request for fewer units (i.e. reduced course load).

Full-time enrollment is considered to be enrollment in a minimum of 12 units of course work per quarter at Stanford. Under extenuating circumstances, students may submit a request to the C-USP Subcommittee on Academic Progress to take fewer units. As a general proposition, work necessary to complete units from previous quarters does not count toward the 12 units necessary for full-time enrollment in the current quarter. All students registering for fewer than 12 units should consider the effects of that registration on their degree progress, visas, residency requirements, varsity athlete status, and their eligibility for financial aid and awards as well as eligibility for or deferment of student loans.

All undergraduates validly registered at Stanford are considered to be in good standing for the purposes of enrollment certification and athletic participation.

Units are granted for courses completed with grades 'A,' 'B,' 'C,' 'D,' 'Satisfactory' ('CR' or 'S'), and 'L.' Courses graded 'N' are counted provisionally as units earned, provided the student enrolls in the continuing segment of that course the following quarter. When the course is completed satisfactorily, the student receives the units for which he or she enrolled. No units are granted for a course in which the student receives an 'I' or a 'GNR' ('GNR' replaced the '*' effective Autumn Quarter 2009-10) until the course is completed satisfactorily and the final grade reported. No units are granted for a course in which the student receives a 'W'. (See the "Grading Systems" section of this bulletin).

Students who receive all 'W's as the result of a Leave of Absence (either voluntary or involuntary) are subject to Academic Progress policies.

The C-USP Subcommittee on Academic Progress, in its discretion, is empowered to place conditions on students with an academic progress status (e.g., academic probation, provisional registration, etc.) with regard to enrollment and participation in programs and activities. In addition, students on academic probation require approval in advance from Academic Advising, Residential Education, and the Overseas Studies Program office or Stanford in Washington Program office or Stanford in New York or Stanford at Sea in order to participate in Stanford's Overseas Studies Program or Stanford in Washington Program or Stanford in New York or Stanford at Sea; while students on other statuses (e.g., provisional registration, etc.) are ineligible to participate in these programs.

Degree Progress standards for coterminal students are described in the coterminal bachelor's and master's degrees section of the Bulletin.

Students receiving federal student aid funds must maintain satisfactory academic progress standards that may be more strict than those outlined here. See the Financial Aid Office web site for details.

Academic Probation

A student who fails to earn at least 36 units of work (by the end of the third final exam period) in his or her most recent three quarters of enrollment at the University (excluding Summer), or who fails to earn by the end of the final examination period at least 9 quarter units of work in his or her most recent quarter of enrollment at the University (excluding Summer), or who has a cumulative grade point average of less than 2.0, may be placed on academic probation.

A student shall be removed from academic probation if, in each of three subsequent quarters of consecutive enrollment at the University (excluding Summer*, see above), he or she earns a minimum of 12 units of new course work by the end of the final examination period and achieves and maintains a cumulative grade point average of at least 2.0. A student may also be removed from academic probation at the discretion of the C-USP Subcommittee on Academic Progress or its designees as a result of a review of individual records.

Provisional Registration

A student who, while on academic probation, fails in any quarter of registration (excluding Summer*, see above) to earn a minimum of 12 units of new course work by the end of the final examination period or fails to achieve and maintain a cumulative grade point average of at least 2.0, may be placed on provisional registration status. In addition, and on occasion, a student may also be placed directly on provisional registration without first being placed on academic probation if the student has had a prior probation status.

A student shall be removed from provisional registration if, in each of three subsequent quarters of enrollment at the University (excluding Summer*, see above), he or she earns a minimum of 12 units of new course work by the end of the final examination period and achieves and maintains a cumulative grade point average of at least 2.0. A student may also be removed from provisional registration at the discretion of the C-USP Subcommittee on Academic Progress or its designees as a result of a review of individual records.

Academic Suspension

A student who, while on provisional registration, fails in any quarter of registration (excluding Summer*, see above) to earn a minimum of 12 units of new course work by the end of the final examination period or fails to achieve and maintain a cumulative grade point average of at least 2.0, may be placed on academic suspension. In addition, and on occasion, a student may also be placed on academic suspension directly from academic probation; or may be placed on academic suspension without first being placed on academic probation or provisional registration if the student has had a prior probation status.

While students placed on academic suspension for the first time are suspended for one year, students placed on academic suspension a subsequent time may be suspended for up to three years.

Students suspended for one year are not eligible to enroll for four quarters (including Summer Quarter) following the quarter in which the academic suspension was issued. Students suspended for up to three years are not eligible to enroll for up to twelve quarters (including Summer Quarter) following the quarter in which the academic suspension was issued.

As well, until re-enrollment, students who are suspended are ineligible for the privileges associated with registration, privileges that include living in University housing, participating in voluntary student organizations, and involvement in any activity for which enrollment is a requirement.

The C-USP Subcommittee on Academic Progress or its designees, in its discretion, may impose conditions of the academic suspension, and/or to a return from the academic suspension.

Reconsideration of Academic Suspension

Students who receive an academic suspension and believe they have information that presents relevant and compelling material previously unknown to the subcommittee or its designees, such that reconsideration for immediate continuation of their studies without a break in enrollment is suitable, should meet with an adviser from the office of Academic Advising in VPUE to discuss their circumstances. Students with such relevant circumstances may submit a Request for Reconsideration of Academic Suspension. Granting such requests is at the discretion of the subcommittee or its designees, and may be based on factors or considerations regarded as relevant including the demonstrated or perceived likelihood for immediate academic success. Requests for reconsideration submitted after the deadline are not accepted. A student may also grieve an academic suspension under the Student Academic Grievance Procedure.

Students are expected to complete their academic suspension in full. An academic suspension may not be substituted, in part or in whole, by a Leave of Absence.

Returning from Suspension

Students are required to submit a properly endorsed application for reinstatement to request re-enrollment after the suspension period has been completed. Instructions, including deadlines for requesting to return, should be obtained from the Office of the Vice Provost for Undergraduate Education, via the office of Academic Advising, Sweet Hall. The C-USP Subcommittee on Academic Progress, or those designated by the subcommittee, acts upon all requests concerning academic progress and its statuses, including a Request to Return and Register after completion of the academic suspension. The subcommittee or its designees may determine whether the application for reinstatement to return will be approved or not, and/or the conditions a student must meet in order to return. Request to Return and Register decisions are at the discretion of the University and may be based on activities while away from campus, the perceived potential for successful completion of the program, as well as any other factors or considerations regarded as relevant to the Vice Provost for Undergraduate Education or the subcommittee or its designees.

Students who return from an academic suspension are given the academic progress status "provisional registration", and must adhere to and comply with the policies above and elsewhere related to that status upon their return. Questions concerning academic progress or requests to return should be directed to the office of Academic Advising, Sweet Hall.

Students returning from academic suspension should also contact appropriate campus offices, such as Housing and Financial Aid, regarding those offices' deadlines and procedures.

Notification (Academic Progress)

Written notification that a student is on academic probation, provisional registration, or academic suspension is sent to the student, to the student's academic adviser(s), and to other relevant university offices and individuals as soon as possible after the close of the quarter. Students also receive written notification of the outcome of their Request for Reconsideration of Academic Suspension, or their Request to Return and Register after completion of their academic suspension. Current student status, such as whether a student is enrolled or not, is considered Directory Information for the purposes of FERPA at Stanford, and Stanford may provide either parent(s) or guardian(s) written notification of a change in student status. Provided that a student consents, or the student is a dependent for income tax purposes, Stanford may also provide either parent(s) or guardian(s) written notification that the student is on academic probation, provisional registration, academic suspension, or Leave of Absence (either voluntary or involuntary). Other FERPA exceptions may also apply.

Student Academic Grievance Procedure

Student Academic Grievance Procedure

General information about Stanford's grievance procedures may be found in the "Nonacademic Regulations" section of this bulletin.

The following policy is subject to periodic review and modification.

1. Coverage
    1. Any Stanford undergraduate or graduate student who believes that he or she has been subjected to an improper decision on an academic matter is entitled to file a grievance to obtain an independent review of the allegedly improper decision, followed by corrective action if appropriate. A grievance is a complaint in writing made to an administrative officer of the University concerning an academic decision, made by a person or group of persons acting in an official University capacity, that directly and adversely affects the student as an individual in his or her academic capacity.
    2. This grievance procedure applies only in those cases involving a perceived academic impropriety arising from a decision taken by: (1) an individual instructor or researcher; (2) a school, department, or program; (3) a committee charged to administer academic policies of a particular school, department, or program; or (4) the University Registrar, the Vice Provost for Undergraduate Education, the C-USP Subcommittee on Academic Progress, or a Senate committee or subcommittee charged to administer academic policies of the Senate of the Academic Council. This procedure does not apply to: (1) complaints expressing dissatisfaction with a University policy of general application challenged on the grounds that the policy is unfair or inadvisable; (2) individual school, department, or program academic policies, as long as those policies are not inconsistent with general University policy; (3) matters proceeding or addressed through the Office of Community Standards; or (4) involuntary leave decisions.
    3. Individuals should be aware that the University Ombuds Office is available to all Stanford students, faculty, and staff to discuss and advise on any matter of University concern and frequently helps expedite resolution of such matters. Although it has no decision-making authority, the University Ombuds Office has wide powers of inquiry, including into student complaints against instructors.
2. Grievance and Appeal Procedures
    1. Informal Attempts at Resolution: the student first should discuss the matter, orally or in writing, with the individual(s) most directly responsible. If no resolution results, the student should then consult with the individual at the next administrative level, for example, the chair or director of the relevant department or program, or, for those cases in which there is none, with the school dean. At this stage, the department chair or program director, if any, may inform the dean that the consultation is taking place and may solicit his or her advice on how to ensure that adequate steps are taken to achieve a fair result. Efforts should be made to resolve the issues at an informal level without the complaint escalating to the status of a formal grievance.
    2. The Filing of the Grievance:
        1. If informal means of resolution prove unsatisfactory, the student should set forth in writing a statement of the decision that constitutes the subject matter of the dispute, the grounds on which it is being challenged, and the reasons why the grievant believes that the decision was improperly taken. The statement should also include a description of the remedy sought and the informal efforts taken to date to resolve the matter. It is at this point that the complaint becomes a formal grievance. The written grievance should specifically address the matters set forth in the Standards for Review, as stated in Section 4 below. The grievance should include an allegation of any adverse effects on the grievant, known to the grievant at the time of filing.
        2. The grievance document should be submitted to the dean of the school in which the grievance arose; for a grievance concerning a decision of the University Registrar, the Vice Provost for Undergraduate Education, or of a Senate committee or subcommittee, the procedures set forth herein for grievances and appeals shall be modified as stated in Section 3 below. A grievance must be filed in a timely fashion, that

is, no later than 30 days after the end of the academic quarter in which the adverse decision occurred or should reasonably have been discovered. Except in extraordinary circumstances, delay in filing a grievance will constitute grounds for rejection of the grievance.

3. The grievance process does not relieve the student from their obligation to timely meet course or degree requirements. The student should continue to fulfill course and degree requirements following submission of the grievance and throughout the time required for disposition of the grievance. Additionally, the grievance process does not pause or otherwise delay University or departmental actions taken for academic or other reasons and which may impact student status or eligibility for housing or other University services or resources.

3. The Response to the Grievance:

    1. The relevant dean will consider the grievance. The dean may attempt to resolve the matter informally or make whatever disposition of the grievance that he or she deems appropriate. The dean may, in appropriate cases, remand the grievance to a lower administrative level (including to the level at which the grievance arose) for further consideration.

    2. The dean may also refer the grievance, or any issue therein, to any person (the "grievance officer") who will consider the matter and report to the dean as the latter directs. The dean will inform the grievant (and the party against whose decision the grievance has been filed) in writing of any referral of the matter and will specify the matters referred, the directions to the person or persons to whom the referral is made (including the time frame within which the person is to report back to the dean), and the name of that person.

    3. In undertaking the review, the dean or the grievance officer may request a response to the issues raised in the grievance from any individuals believed to have information considered relevant, including faculty, staff, and students.

    4. Should attempts to resolve the matter informally not be successful, the dean will decide the grievance, and will notify the grievant (and the party against whose decision the grievance has been filed) in writing of the disposition made of the grievance and the grounds for the disposition at the earliest practicable date after his or her receipt of the grievance.

    5. Normally, no more than 60 days should elapse between the filing of a grievance and the disposition by the dean. If, because of absence of key persons from the campus or other circumstances or exigencies (including those due to breaks in the academic calendar), the dean decides that disposition on that schedule is not possible, he or she shall inform the grievant (and the party against whose decision the grievance has been filed) of that in writing, giving the grounds therefore and an estimate of when a disposition can be expected. During summers and the winter closure, this time frame will nearly always be extended.

4. The Filing of an Appeal:

    1. If the grievant is dissatisfied with the disposition of the grievance at the decanal level, either on substantive or on procedural grounds, he or she may appeal in writing to the Provost.

    2. The appeal must specify the particular substantive or procedural bases of the appeal (that is, the appeal must be made on grounds other than general dissatisfaction with the disposition) and must be directed only to issues raised in the grievance as filed or to procedural errors in the grievance process itself, and not to new issues. The appeal must contain the following:

        1. A copy of the original grievance and any other documents submitted by the grievant in connection therewith.

        2. A copy of the determination made by the dean on that grievance.

3. A statement of why the reasons for the determination of the dean are not satisfactory to the grievant. This statement should specifically address the matters set forth in the Standards for Review in Section 4 below.

3. The grievant will file his or her appeal at the earliest practicable date after the grievant's receipt of the determination by the dean. Normally, no more than 30 days should elapse between the transmittal of the dean's decision on the grievance and the filing of the appeal. Except in extraordinary circumstances, delay in filing an appeal will constitute grounds for rejection of the appeal.

4. The appeal process does not relieve the student from their obligation to timely meet course or degree requirements. The student should continue to fulfill course and degree requirements following submission of the appeal to the Provost and throughout the time required for disposition of the appeal. Additionally, the appeal process does not pause or otherwise delay University or departmental actions taken for academic or other reasons and which may impact student status or eligibility for housing or other University services or resources.

5. The Response to the Appeal:

    1. The Provost may attempt to resolve the matter informally, or refer the appeal, or any issue thereof, to any person (the "grievance appeal officer") who shall consider the matter and report to the Provost as the latter directs. The Provost may also, in appropriate cases, remand the matter to a lower administrative level (including to the level at which the grievance arose) for further consideration.

    2. The Provost will inform the grievant (and the party against whose decision the grievance has been filed) in writing of any referral of the matter and will specify the matters referred, the directions to the person to whom the referral is made (including the time frame within which the person is to report back to the Provost), and the name of that person.

    3. Should attempts be made to resolve the matter informally not be successful, the Provost will decide the appeal, and will notify the grievant (and the party against whose decision the grievance has been filed) in writing of the disposition made of the grievance and the grounds for the disposition at the earliest practicable date after his or her receipt of the appeal. The decision of the Provost is final.

    4. Normally no more than 45 days should elapse between the filing of the appeal and the disposition by the Provost. If, because of absence of key persons from the campus or other circumstances or exigencies (including those due to breaks in the academic calendar), the Provost judges that disposition on that schedule is not possible, he or she will inform the grievant (and the party against whose decision the grievance has been filed) of the fact in writing, giving the grounds therefore and an estimate of when a disposition can be expected. During summers and the winter closure, this time frame will nearly always be extended.

3. Grievances Concerning Decisions of the University Registrar, the Vice Provost for Undergraduate Education, or of a Senate Committee or Subcommittee

    1. For a grievance concerning a decision of the University Registrar, the Vice Provost for Undergraduate Education, the C-USP Subcommittee on Academic Progress, or of a Senate committee or subcommittee, the grievant will file his or her grievance with the Provost, rather than with the dean, and the Provost will handle that grievance in accordance with the procedures set forth in Section 2c above.

    2. There is no appeal of the Provost's disposition of that grievance.

4. Standards for Review and Procedural Matters

    1. The review of grievances or appeals will usually be limited to the following considerations:

        1. Were the proper facts and criteria brought to bear on the decision? Were improper or extraneous facts or criteria brought to bear that substantially affected the decision to the detriment of the grievant?

2. Were there any procedural irregularities that substantially affected the outcome of the matter to the detriment of the grievant?
3. Given the proper facts, criteria, and procedures, was the decision one which a person in the position of the decision maker might reasonably have made?

2. The time frames set forth herein are guidelines. They may be extended by the relevant administrative officer in his or her discretion for good cause.
3. Questions concerning the filing and appeal of grievances should be directed to the Office of the Provost.

Stanford ID

Stanford University ID Number

The Stanford University ID Number is assigned to each student's academic record for unique identification. It is printed on the Stanford University ID card and on documents distributed by the Office of the University Registrar and other administrative offices. It is a violation of University policy to use another's Stanford University ID Number to misrepresent yourself in any way; such use can result in loss of student privileges or other disciplinary action.

SUNet ID

The SUNet ID provides access to the Stanford University Network (SUNet) and its services, and identifies authorized users of these services. Each member of the Stanford electronic community creates a unique SUNet ID and SUNet ID password for him/herself. SUNet IDs provide:

- Axess services
- Email service
- Storage space within Stanford's distributed file system
- Usenet newsgroups
- World wide web services, including serving of personal web pages on the Leland system and access to Stanford Web Resources

The SUNet ID together with SUNet ID password may serve in place of a signature on electronic forms. The SUNet ID password must remain confidential; it is a violation of University policy to permit another person to use your SUNet ID or password. It is a violation of University policy to use another's SUNet ID or SUNet ID password to misrepresent yourself in any way; such use can result in loss of student privileges or other disciplinary action.

Identification Cards

The ID card serves as an identification card, an electronic key, and a debit card, allowing cardholders to use services for which they have privileges, to enter certain facilities, and to make purchases.

ID cards are available to registered students, faculty, academic staff, and regular staff. Students obtain their ID cards at the Student Services Center, Tresidder Union, 459 Lagunita Drive, 2nd Floor (650) 498-CARD). Faculty and staff obtain ID cards at George Forsythe Hall, 275 Panama Street, Room 190 (650-498-CARD).

Courtesy ID cards are available for spouses and domestic partners of the Stanford professoriate, academic staff, regular staff, and students. These cards may be obtained from the Stanford Card ID Office at Forsythe Hall. The spouse/partner courtesy ID card enables use of some campus services during terms for which the student is registered.

Visiting Scholars who are on campus for a minimum of one quarter and contribute to Stanford's mission by teaching or collaborating on Stanford research also receive ID cards and campus privileges during their stay on campus. These cards may be obtained from the Stanford Card ID Office at Forsythe Hall.

Library access and borrowing privileges are reserved for the Stanford professoriate, academic staff, regular staff, students, and others associated with the University with a need for such access.

ID cards bear a photograph of the cardholder. This photograph is maintained in an online database and, as stated in the Privacy section of this bulletin, is available for classroom, student residence, and other use upon specific request and without student consent unless the student has designated that the photograph not be released. Photographs can be designated as private using the Privacy function of Axess.

Misuse of the ID card may result in discipline or administrative action.

For more information, see the Campus Card Service web site. For the complete policy on Stanford Identification Cards, see the Administrative Guide, 28-4 (pdf).

Auditing

Auditing

2021-22 Academic Year: Due to current health guidelines, auditing is only allowed for matriculated undergraduates, matriculated graduate/professional students, Stanford faculty, and Stanford staff, with the consent of the instructor.

No person shall attend any class unless he or she is a fully registered student enrolled in the course or meets the criteria for auditors. Auditors are not permitted in courses that involve direct participation such as language or laboratory science courses, field work, art courses with studio work, or other types of individualized instruction (i.e., labs, seminars, case study, language, and activity courses are not permitted). Auditors are expected to be observers rather than active participants in the courses they attend, unless the instructors request attendance on a different basis. Stanford does not confer credit for auditing, nor is a permanent record kept of courses audited. Students who have been suspended are not permitted to audit.

Auditors may not join classes for the first time after the University's final study list deadline. Auditors are not eligible for other University services or privileges including housing, health insurance (Cardinal Care), Vaden clinical services, and the University health plan. The University Registrar reviews for approval any other services or privileges that may be sought.

The Auditor status is available to Stanford faculty or staff members for no fee. Otherwise, the Permit to Attend fee is assessed. The Application for Auditor or Permit to Attend (PTA) Status is required. In all cases of auditing, the instructor, department administrator, and the Office of the University Registrar's prior approvals are required. Further information is available from the Student Services Center.

Force Majeure

Force Majeure

The University assumes no responsibility or liability for any delay or failure to provide some or all academic or other campus activities or for any modification to instruction or institutional offerings due to any force majeure. For these purposes, the term “force majeure” shall mean fire, earthquake, flood, act of God, strikes, work stoppages or other labor disturbances, riots or civil commotions, crimes, litigation, war or other act of any foreign nation, plague, epidemic, pandemic, power of government or governmental agency or authority, or any other cause like or unlike any cause

mentioned above, which is beyond the control or authority of Stanford and either makes performance of the policies and protocols set forth herein illegal, impractical, and/or in the reasonable judgment of Stanford, threatens the safety and wellness of its students, employees and/or community members.

Nonacademic Regulations

The Bulletin publishes the following nonacademic policies which are applicable to all Stanford students.

The University reserves the right to make changes at any time without prior notice. Nonacademic policies as published on this site are the currently applicable policies.

For other policy information applicable to members of the Stanford community, see Student Activities and Leadership (student organizations, programs, and events), the "GAP" (Graduate Academic Policies and Procedures), the Office of Special Events and Protocols (University Event Policies), and the Administrative Guide ("guidelines for non-research University activities that govern workplace interactions, approaches, procedures, and processes").

Students with questions about nonacademic policies should submit a SU Services & Support Request.

- Nondiscrimination Policy
- Age Discrimination Act of 1975
- ADA (Americans with Disabilities Act)/Section 504 Grievance Procedure (Student)
- Campus Disruptions
- Campus Safety and Criminal Statistics
- Computer and Network Usage Policy
- Copyright
- Dangerous Weapons on Campus
- Grievances
- Hazing Policy
- Involuntary Leave of Absence and Return Policy
- Main Quadrangle • Memorial Court • Oval • White Plaza
- No Camping
- Noise and Amplified Sound
- Online Accessibility Policy
- Peer-to-Peer File Sharing
- Protection of Sensitive Data
- Political, Campaign, and Lobbying Activities
- Recording Lectures
- Sexual Harassment and Consensual Sexual or Romantic Relationships
- Sexual Misconduct and Sexual Assault
- Smoke-Free Environment
- Stanford Name and Trademarks
- Student Alcohol and Other Drugs Policy

- Student Non-Academic Grievance Procedure
- Title VI of the Civil Rights Act of 1964
- Title IX of the Education Amendments of 1972
- Visitor Policy • University Statement on Privacy

Aeronautics and Astronautics Department

Contacts

Office: Durand Building, 496 Lomita Mall
Mail Code: 94305-4035
Phone: (650) 723-3317
Web Site: http://aa.stanford.edu

Courses offered by the Department of Aeronautics and Astronautics are listed under the subject code AA on the Stanford Bulletin's ExploreCourses web site.

The Department of Aeronautics and Astronautics prepares students for professional positions in industry, government, and academia by offering a comprehensive program of undergraduate and graduate teaching and research. In this broad program, students have the opportunity to learn and integrate multiple engineering disciplines. The program emphasizes structural, aerodynamic, guidance and control, and propulsion problems of aircraft and spacecraft. Courses in the teaching program lead to the degrees of Bachelor of Science, Master of Science, Engineer, and Doctor of Philosophy. Undergraduates and doctoral students in other departments may also elect a minor in Aeronautics and Astronautics.

Requirements for all degrees include courses on basic topics in Aeronautics and Astronautics, as well as in mathematics, and related fields in engineering and the sciences.

The current research and teaching activities cover a number of advanced fields, with emphasis on:

- Aeroelasticity and Flow Simulation
- Aircraft Design, Performance, and Control
- Applied Aerodynamics
- Astrodynamics
- Autonomy
- Computational Aero-Acoustics
- Computational Fluid Dynamics
- Computational Mechanics and Dynamical Systems
- Control of Robots, including Space and Deep-Underwater Robots
- Conventional and Composite Materials and Structures
- Decision Making under Uncertainty
- Direct and Large-Eddy Simulation of Turbulence
- High-Lift Aerodynamics
- Hybrid Propulsion
- Hypersonic and Supersonic Flow
- Micro and Nano Systems and Materials
- Mission Planning and Spacecraft Operations

- Multidisciplinary Design Optimization
- Navigation Systems (especially GPS)
- Optimal Control, Estimation, System Identification
- Sensors for Harsh Environments
- Space Debris Characterization
- Space Environment Effects on Spacecraft
- Space Plasmas
- Space Policy and Economics
- Spacecraft Design and Satellite Engineering
- Spacecraft Guidance, Navigation, and Control
- Turbulent Flow and Combustion

Graduate Programs in Aeronautics and Astronautics

Admission

To be eligible to apply for admission to the department, a student must have a bachelor's degree in engineering, physical science, mathematics, or an acceptable equivalent. Beginning with the application term 2021-2022, an MS degree will no longer be required to apply to the PhD program in Aeronautics and Astronautics. Students with a Bachelor's degree who ultimately intend to complete a PhD degree are strongly encouraged to apply directly to the PhD program, rather than the MS program. A completed application (including letters of recommendation, transcripts and GRE/TOEFL scores) must be received by the application deadline.

Information about admission to the Honors Cooperative Program is included in the "School of Engineering" section of this bulletin. The department considers HCP applications for the Autumn, Winter and Spring Quarters; prospective applicants may contact the department's student services office with questions.

The Graduate Record Exam (GRE) General Test is required for application to the department. Further information and application forms for all graduate degree programs may be obtained from Graduate Admissions, the Registrar's Office, http://gradamissions.stanford.edu.

Transfer Credits

The number of transfer credits allowed for each degree (Engineer and Ph.D.) is delineated in the "Residency Requirements" section of this bulletin; transfer credit is not accepted for the master's degree. Transfer credit is allowed only for courses taken as a graduate student, after receiving a bachelor's degree, in which equivalence to Stanford courses is established and for which a grade of 'B' or better has been awarded. Transfer credits, if approved, reduce the total number of Stanford units required for a degree.

Fellowships and Assistantships

Fellowships and course or research assistantships are available to qualified graduate students. Fellowships sponsored by Gift Funds, Stanford University, and Industrial Affiliates of Stanford University in Aeronautics and Astronautics provide grants to several first-year students for up to five quarters to cover tuition and living expenses. Stanford Graduate Fellowships, sponsored by the University, provide grants for up to three full years of study and research; each

year, the department is invited to nominate several outstanding doctoral or predoctoral students for these prestigious awards. Students who have excelled in their course work at Stanford are eligible for course assistantships in the department; those who have demonstrated research capability are eligible for research assistantships from individual faculty members. Students may also hold assistantships in other departments if the work is related to their academic progress; the criteria for selecting course or research assistants are determined by each hiring department. A standard, 20 hours/week course or research assistantship provides a semi-monthly salary and an 8-10 unit tuition grant per quarter. Research assistants may be given the opportunity of additional summer employment. They may use their work as the basis for a dissertation or Engineer's thesis.

Aeronautics and Astronautics Facilities

The work of the department is centered in the William F. Durand Building for Space Engineering and Science. This 120,000 square foot building houses advanced research and teaching facilities and concentrates in one complex the Department of Aeronautics and Astronautics. The Durand Building also houses faculty and staff offices and conference rooms.

Through the department's close relations with nearby NASA-Ames Research Center, students and faculty have access to one of the best and most extensive collections of experimental aeronautical research facilities in the world, as well as the latest generation of supercomputers.

General Information

Further information about the facilities and programs of the department is available at http://aa.stanford.edu, or from the department's student services office.

The department has a student branch of the American Institute of Aeronautics and Astronautics, which sponsors programs and speakers covering aerospace topics and social events. It also conducts visits to nearby research, government, and industrial facilities, and sponsors a Young Astronauts Program in the local schools.

Faculty

Emeriti: (Professors) Arthur E. Bryson, Richard Christensen, Daniel B. DeBra, Antony Jameson, Robert W. MacCormack, Bradford W. Parkinson*, J. David Powell*, George S. Springer, Charles Steele, Stephen W. Tsai*

Chair: Charbel Farhat

Director of Graduate Studies: Stephen Rock

Director of Undergraduate Studies: Marco Pavone

Professors: Juan Alonso, Brian J. Cantwell, Fu-Kuo Chang, Charbel Farhat, Ilan Kroo, Sanjiva Lele, Stephen Rock

Professor (Research): Todd Walter

Associate Professor: Sigrid Close, Mykel Kochenderfer, Marco Pavone, Debbie Senesky

Assistant Professors: Simone D'Amico, Grace Gao, Ken Hara, Mac Schwager

Adjunct Professors: Andrew Barrows, G. Scott Hubbard

Lecturers: Abid Kemal, Sherman Lo

* Recalled to active duty

Graduate Advising Expectations

The Department of Aeronautics and Astronautics is committed to providing academic advising in support of graduate student education and professional development. The advising relationship should entail collaborative engagement by both the adviser and the advisee. As a best practice, advising expectations should be discussed and reviewed to ensure mutual understanding. Both the adviser and the advisee are expected to maintain professionalism and integrity.

Graduate students are active contributors to the advising relationship, proactively seeking academic and professional guidance and taking responsibility for informing themselves of policies and degree requirements for their graduate program.

In addition, the faculty Candidacy Chair is available for consultation during the academic year by email and during office hours. The Aero/Astro student services office is also an important part of the advising team. Staff in the office inform students and advisers about university and department requirements, procedures, and opportunities, and maintain the official records of advising assignments and approvals.

For a statement of University policy on graduate advising, see the Graduate Advising section of this bulletin.

Master of Science

At the start of graduate study, each student is assigned a master's program adviser: a member of our faculty who provides guidance in course selection, course planning, and in exploring short and long term academic opportunities and professional pathways. The program adviser serves as the first resource for consultation and advice about a student's academic program. The Guide to Graduate Studies in Aeronautics and Astronautics provides information and suggested timelines for advising meetings. Usually, the same faculty member serves as program adviser for the duration of master's study. In rare instances, a formal adviser change request may be considered. See the Aero/Astro student services office for additional information on this process.

Ph.D. and Engineer

Faculty research advisers guide students in key areas such as selecting courses, designing and conducting research, developing of teaching pedagogy, navigating policies and degree requirements, and exploring academic opportunities and professional pathways. The Guide to Graduate Studies in Aeronautics and Astronautics provides information and suggested timelines for advising meetings in the different stages of the doctoral or engineering program. Each individual program, designed by the student in consultation with the research adviser, should represent a strong and cohesive program reflecting the student's major field of interest. When the research adviser is from outside the Aero/Astro department, the student must also identify a program adviser from departmental primary faculty to provide guidance on departmental requirements and opportunities.

Programs

AerAs-BS
Degree Designation: BS - Bachelor of Science
active for fall 2017/2018 per inc 3972338

AerAs-Eng
Degree Designation: ENG - Engineer

AerAs-Min
Degree Designation:

AerAs-MS
Degree Designation: MS - Master of Science

AerAs-PhD
Degree Designation: PHD - Doctor of Philosophy

AerAs-PMn
Degree Designation:

African and African-American Studies Department

Contacts

Office: 450 Serra Mall, Building 360-362B
Mail Code: 94305-2084
Phone: (650) 723-3782
Email: ctod@stanford.edu
Web Site: http://aaas.stanford.edu

Undergraduate Program in African and African American Studies

The Program in African and African American Studies (AAAS), established in 1969, was the first ethnic studies program developed at Stanford University and the first African and African American Studies program at a private institution in the United States. AAAS promotes an understanding of how history informs the present and inspires an engagement with the past in order to collectively dream a more just and equitable future. The AAAS program provides an interdisciplinary introduction to the study of peoples of African descent as a central component of American culture, offering a course of study that promotes research across disciplinary and departmental boundaries, as well as providing research training and community service-learning opportunities for undergraduates. The program emphasizes rigorous and creative scholarship and research, and fosters close academic advising with a faculty advisor, the AAAS Associate Director, and the Director. The program's faculty, staff, and students value the interrelated nature of the personal and the political and aim to create a community that allows for intellectual and personal flourishing.

Faculty

Director: Allyson Hobbs (History)

Associate Director: Katie Dieter

Advisory Committee: Arnetha Ball (Education), Adam Banks (Education), Ralph Richard Banks (Law), Jonathan Calm (Art & Art History), Matthew Clair (Sociology), Rosalind Conerly (Director, Black Community Services Center),Jan Barker-Alexander (Assistant Vice Provost of Student Affairs & Centers for Equity, Community, and Leadership & Offices of First Generation/Low Income Programs), Jennifer Brody (Drama), Bryan Anthony Brown (Education), James Campbell (History), Clayborne Carson (History), Michele Elam (English), James Ferguson (Anthropology), Allyson Hobbs, (History), A-lan Holt (Director, Institute of Diversity in the Arts), Vaughn Rasberry (English), John R. Rickford (Linguistics), Aileen Robinson (Theater and Performance Studies), Joel Samoff (African Studies)

Affiliated Faculty: R. Lanier Anderson (Philosophy), Arnetha Ball (Education), Adam Banks (Education), Ralph Richard Banks (Law), Jennifer Brody (Drama), Bryan Anthony Brown (Education), Joel Cabrita (History), Albert Camarillo (History), James Campbell (History), Clayborne Carson (History), Gordon Chang (History), Wanda Corn (Art and Art History, emerita), David Degusta (Anthropology), Sandra Drake (Emerita), Jennifer Eberhardt (Psychology), Paulla Ebron (Anthropology), Michele Elam (English), James Ferguson (Anthropology), Aleta Hayes (Drama), Allyson Hobbs (History), Hakeem Jefferson (Political Science), Terry Karl (Political Science), Anthony Kramer (Drama), Teresa LaFromboise (Education), Brian Lowery (Graduate School of Business), Lisa Malkki (Anthropology), Hazel Markus (Psychology), Barbaro Martinez-Ruiz (Art and Art History), Paula Moya (English), Elisabeth Mudimbe-Boyi (French and Comparative Literature), Susan Olzak (Sociology), David Palumbo-Liu (Comparative Literature), Arnold Rampersad (English), Vaughn Rasberry (English), John R. Rickford (Linguistics), Richard Roberts (History), Aileen Robinson (Theater & Perfomance Studies), Sonia Rocha (Sociology), Michael Rosenfeld (Sociology), José David Saldívar (English), Ramón Saldívar (English), Rose Salseda (Art History), Joel Samoff (African Studies), Gary Segura (Political Science), Paul Sniderman (Political Science), Forrest Stuart (Sociology), Ewart Thomas (Psychology), Jeane Tsai (Psychology), Jeremy Weinstein (Political Science), Bryan Wolf (American Art and Culture), Yvonne Yarbo-Bejarno (Spanish and Portuguese), Grant Parker (Classics), Alvan Ikoku (Comparative Literature and Medicine), Lauren Davenport (Political Science) Jonathan Calm (Art & Art History), Ato Quayson (English)

Programs

AfrAm-BA
Degree Designation: BA - Bachelor of Arts

AfrAm-Min
Degree Designation:
-

African Studies Department

Contacts

Office: 127 Encina Commons, 615 Crothers Way
Mail Code: 94305-6045
Phone: (650) 497-7688
Email: africanstudies@stanford.edu
Web Site: http://africanstudies.stanford.edu

Courses offered by the Center for African Studies (CAS) are listed under the subject code AFRICAST on the Stanford Bulletin's ExploreCourses web site.

The Center for African Studies coordinates an interdisciplinary minor in African Studies for undergraduates. The program seeks to enrich understanding of the interactions among the social, economic, cultural, historical, linguistic, genetic, geopolitical, ecological, and biomedical factors that shape and have shaped African societies.

Courses in African Studies are offered by departments and programs throughout the University. Each year CAS sponsors a range of seminars and workshops to demonstrate to advanced undergraduates and graduate students how topics of current interest in African Studies are approached from different disciplinary perspectives.

Course offerings in African languages are also coordinated by the Center for African Studies. Along with regular courses in several levels of Arabic and Swahili, the center arranges with the African and Middle Eastern Languages and Literatures Program in the Stanford Language Center to offer instruction in other African languages; in recent years, it has offered courses in Afrikaans, Amharic, Igbo, Kinyarwanda, Twi, and Yoruba.

Graduate Study in African Studies

For those who wish to specialize in Africa at the graduate level, African Studies can be designated a field of concentration within the master's and doctoral programs of some academic departments. Students in such departments as Anthropology, History, Political Science, and Sociology, and in the School of Education, may declare African Studies as the area of specialization for their master's and Ph.D. thesis work. Some other departments, programs, and institutes such as the International Comparative Education Program also permit students to specialize in African Studies.

Faculty

Emeriti: David B. Abernethy, Ellen Jo Baron, John Baugh, Joan Bresnan, Joel Samoff, Susan Cashion, Sandra E. Drake, Peter Egbert, James. L. Gibbs, Jr., William B. Gould, Bruce F. Johnston, William R. Leben, Bruce Lusignan, Elisabeth Mudimbe-Boyi, Mary Polan, Hans N. Weiler, Sylvia Wynter, Jean-Marie Apostolidès, Joel Beinin, Shelley Goldman, Terry Lynn Karl, John Rickford

Director: Joel Cabrita

Professors: Michele Barry (Medicine), John Boothroyd (Microbiology and Immunology), James T. Campbell (History), Martin Carnoy (Education), William H. Durham (Anthropology), James Fearon (Political Science), James Ferguson (Anthropology), Gabrielle Hecht (History), Richard Klein (Anthropology), David Laitin (Political Science), Yvonne

Maldonado (Pediatrics), Lynn Meskell (Anthropology), Julie Parsonnet (Medicine and Health Research and Policy), Richard Roberts (History) Oliver Fringer (Civil and Environmental Engineering) Liisa Malkki (Anthropology), Pascaline Dupas (Economics), Ato Quayson (English)

Associate Professors: Vincent Barletta (Comparative Literature and Iberian and Latin American Cultures), Alexandria B. Boehm (Civil and Environmental Engineering), Jenna Davis (Civil and Environmental Engineering), Paulla A. Ebron (Anthropology), Duana Fullwiley (Anthropology), Grant Parker (Classics), Jeremy Weinstein (Political Science), Eran Bendavid (General Internal Medicine), Katherine Casey (Political Economy), Vaughn Rasberry (English),

Assistant Professors: Steven Press (History), Krish Seetah (Anthropology), Joel Cabrita (History), Fatoumata Seck (French and Italian)

Professor (Research): David Katzenstein (School of Medicine)

Professor (Teaching): Robert Siegel (Microbiology and Immunology)

Associate Professor (Clinical): Brian Blackburn (Infectious Diseases), Daryn Reicherter (Psychiatry and Behavioral Sciences), Hugh Brent Solvason (Psychiatry and Behavioral Sciences)

Senior Lecturers: Khalil Barhoum (African and Middle Eastern Languages)

Lecturers: Byron Bland (Law), Jonathan Greenberg (Law), Samuel Mukoma (African and Middle Eastern Languages), Ramzi Salti (African and Middle Eastern Languages) Samuel Nkansah (Twi), Adeyinka Fashonkun (Yoroba), Gladys Ajelo (Igbo), Issayas Tesfamarian (Amharic)

Consulting Professors: Anne Firth-Murray (Human Biology), Joel Samoff (Center for African Studies)

Curators: Karen Fung (African Collection Curator, Green Library), Regina Roberts (Bibliographer, Green Library)

Senior Research Fellows: Coit Blacker (Freeman Spogli Institute), Larry Diamond (Freeman Spogli Institute, Hoover Institution), Marcel Fafchamps (Freeman Spogli Institute), Stephen Stedman (Freeman Spogli Institute, Center for International Security and Cooperation)

American Studies Department

Contacts

Office: Building 460, Room 216
Mail Code: 94305-2022
Phone: (650) 723-3413
Web Site: http://amstudies.stanford.edu

Courses offered by American Studies Program are listed under the subject code AMSTUD on the Stanford Bulletin's ExploreCourses website.

Mission of the Undergraduate Program in American Studies

The mission of the undergraduate program in American Studies is to provide students with a broad understanding of American culture and society. Building on a foundation of courses in history and institutions, literature and the arts, and race and ethnicity, students learn to analyze and interpret America's past and present, forging fresh and creative syntheses along the way. The program is an interdisciplinary major and, beyond the core requirements of the major, students may define and pursue their own interests from fields such as history, literature, art, communication, theater, African American studies, feminist, gender & sexuality studies, economics, anthropology, religious studies, Chicana/o-

Latina/o studies, law, sociology, education, Native American studies, music, and film. The program is designed to provide students majoring in American Studies with excellent preparation for further study in graduate or professional schools as well as careers in government, business, journalism, entertainment, public service, the arts, and other fields.

Learning Outcomes (Undergraduate)

The program expects undergraduate majors to be able to demonstrate the following learning outcomes. These learning outcomes are used in evaluating students and the undergraduate program. Students are expected to demonstrate:

1. ability to think about American culture and society in sophisticated, interdisciplinary, historically-informed ways, drawing on coursework in: history and institutions; literature, art, and culture; comparative race and ethnicity; and each student's individualized thematic focus
2. ability to identify and critically to assess different disciplinary, methodological, and interpretive approaches to the study of Americans and their past
3. ability to produce their own persuasive, nuanced, fact-based interpretations reflecting a close critical reading and analysis of relevant primary or secondary sources
4. ability to express their interpretive and analytical arguments in clear, effective prose.
5. ability to listen actively and to contribute to productive intellectual discussion in class

Faculty

Director: Shelley Fisher Fishkin

Director of Undergraduate Studies: Judith Richardson

Program Coordinators: Elizabeth Kessler, Judith Richardson

Lecturers: Faye Wang

Committee in Charge: Shelley Fisher Fishkin (English), Judith Richardson (English), Jennifer DeVere Brody (Drama), Scott Bukatman (Art and Art History), Bruce Cain (Political Science), James T. Campbell (History), Gordon H. Chang (History), Matthew Clair (Sociology), Michele B. Elam (English), James Fishkin (Communication, and by courtesy, Political Science), Estelle Freedman (History), Jonathan Gienapp (History), Allyson Hobbs (History), Gavin Jones (English), Ari Kelman (Education), Elizabeth Kessler (American Studies), Charles Kronengold (Music), Marci Kwon (Art and Art History), Kathryn Gin Lum (Religious Studies), Doug McAdam (Sociology), Richard Meyer (Art and Art History), Ana Minian (History), Paula Moya (English), Alexander Nemerov (Art and Art History), Kathryn Olivarius (History), Vaughn Rasberry (English), Ramón Saldívar (English, Comparative Literature), Forrest Stuart (Sociology), Fred Turner (Communication), Sam Wineburg (Education), Caroline Winterer (History), Gavin Wright (Economics), Amy Beth Zegart (Hoover Senior Fellow)

Programs

AmStu-BA
Degree Designation: BA - Bachelor of Arts

AmStu-Min
Degree Designation:

Anthropology Department

Contacts

Office: Building 50, Main Quadrangle, 450 Jane Stanford Way
Mail Code: 94305-2034
Phone: (650) 723-3421
Email: anthropology@stanford.edu
Web Site: Stanford Anthropology

Courses offered by the Department of Anthropology are listed under the subject code ANTHRO.

Mission of the Department of Anthropology

The courses offered by the Department of Anthropology are designed to: provide undergraduates with instruction in anthropology; provide undergraduate majors in Anthropology with a program of work leading to the bachelor's degree; and prepare graduate candidates for advanced degrees in Anthropology. Anthropology is devoted to the study of human beings and human societies as they exist across time and space. It is distinct from other social sciences in that it gives central attention to the full time span of human history, and to the full range of human societies and cultures, including those located in historically marginalized parts of the world. It is therefore especially attuned to questions of social, cultural, and biological diversity, to issues of power, identity, and inequality, and to understanding the dynamic processes of social, historical, ecological, and biological change over time. Education in Anthropology provides excellent preparation for living in a multicultural and globally-interconnected world, and helps to equip students for careers in fields including law, medicine, business, public service, research, ecological sustainability, and resource management. Students may pursue degrees in Anthropology at the bachelor's, master's, and doctoral levels.

The Department of Anthropology offers a wide range of approaches to the topics and area studies within the field, including archaeology, ecology, environmental anthropology, evolution, linguistics, medical anthropology, political economy, science and technology studies, and sociocultural anthropology. Methodologies for the study of micro- and macro-social processes are taught through the use of qualitative and quantitative approaches. The department provides students with excellent training in theory and methods to enable them to pursue graduate study in any of the above mentioned subfields of Anthropology.

Undergraduate Programs in Anthropology

Undergraduate training in the Anthropology major at Stanford is designed for students who seek the Bachelor (B.A.) degree. Eligible students may also pursue a Bachelor of Art with Honors (B.A.H.). In addition, the department offers a minor in Anthropology. To declare a major or minor in Anthropology, students must apply for the following B.A. degree options in Axess:

- Bachelor of Arts (B.A.)
- Bachelor of Arts with Honors (B.A.H.)
- Anthropology Minor

Graduate Programs in Anthropology

Graduate training in Anthropology at Stanford is designed for students who seek the Doctoral (Ph.D.) degree. Eligible Ph.D. students may also pursue a Ph.D. Minor in Anthropology. In addition, graduate training in Anthropology is designed for students who seek the Master of Arts (M.A.) degree. The Master's program in Anthropology offers the following options for students who seek a Master of Arts (M.A.) degree:

1. Coterminal degree program for current Stanford undergraduates seeking to obtain a Master's degree while completing their bachelor's degree in the same or different department.

2. Stanford graduate students taking advanced degrees in other departments or schools at Stanford, who are admitted to the terminal M.A. program in Anthropology.
3. Anthropology Ph.D. students at Stanford University who fulfill the M.A. degree requirements on the way to the Ph.D. degree in Anthropology.

Field School and Research Opportunities in Anthropology

Students majoring in Anthropology are encouraged to develop field research projects under the supervision of a department faculty member. The department offers research grants to support individually-designed and other summer field research in Anthropology. The department research grants are intended to support field research as a supplement to other field research grants such as the VPUE Undergraduate Research Student Grants and through other area studies centers. The department also offers opportunities to participate in faculty-led research projects.

The department's summer research opportunities, include: Franz Boas summer scholars programs and Michelle Z. Rosaldo Summer Field Research Grant program. *Note*: Applicants must have been previously enrolled in ANTHRO 92A or ANTHRO 92B, Undergraduate Research Proposal Writing Workshop, prior to application for a summer research grant. Writing Required courses for the Franz Boas summer scholars program and the Michelle Z. Rosaldo grant program also include:

		UNITS
ANTHRO93 PRE-FIELD RESEARCH	Prefield Research Seminar	5
ANTHRO94 POST-FIELD RESEARCH	Postfield Research Seminar	5

For more information about research opportunities and deadlines, see the department's website.

Faculty

Emeriti: (Professors) Harumi Befu, George A. Collier, Jane F. Collier, Carol Delaney, William H. Durham, Penelope Eckert (by courtesy), Charles O. Frake, James L. Gibbs, Ian Hodder, Raymond McDermott, Jr. (by courtesy), John W. Rick, Renato I. Rosaldo

Chair: Thomas B. Hansen

Director of Graduate Studies: Andrew Bauer

Director of Undergraduate Studies: Kabir Tambar

Professors: Lisa Curran, James Ferguson, Thomas Blom Hansen, S. Lochlann Jain, Liisa Malkki, Richard G. Klein, Tanya Luhrmann, Barbara Voss, Sylvia J. Yanagisako

Associate Professors: Andrew Bauer, Paulla Ebron, Duana Fullwiley, Angela Garcia, Miyako Inoue, Matthew Kohrman, Krish Seetah, Kabir Tambar, Sharika Thiranagama

Assistant Professors: Mudit Trivedi, Serkan Yolocan

Courtesy Professors: Jonathan Daniel Rosa, Gabrielle Hecht

Visiting Associate Professor: Maria Trinidad Rico

Lecturer: Claudia Engel, Grace Alexandrino Ocana, Paul Christians, Allison Kendra

Teaching Affiliates: Elix Colon, Aaron Neiman

Graduate Advising Expectations

The Department of Anthropology is committed to providing academic advising supportive of graduate student scholarly and professional development. When most effective, this advising entails collaborative and sustained engagement by both the advisor and the advisee. As a best practice, advising expectations should be periodically discussed and reviewed to ensure mutual understanding. Both the advisor and the advisee are expected to maintain professionalism and integrity. The department strongly encourages Ph.D. students to work with a variety of faculty throughout their degree program at Stanford. This expectation begins with the entering first-year Ph.D. student. First-year Ph.D. students are encouraged to meet with a number of faculty including those who work outside of the student's proposed area of geographic/topical foci. This 'big tent' style of advising should include faculty members, both within and outside of the department.

Entering first-year Ph.D. students are assigned one or more first-year Ph.D. faculty mentor(s). Faculty mentors serve as guides by suggesting academic and research training, providing feedback for development of a (pre)dissertation proposal, making referrals, writing letters of recommendation, and reminding students of their academic and administrative responsibilities. Entering M.A. students are assigned a primary faculty advisor.

At the end of the first year and no later than the end of the Autumn Quarter in the second year, Ph.D. students are expected to select a primary faculty advisor: someone who will thereafter serve as a confidant and sounding board in numerous ways, such as when it comes to selecting courses, designing and conducting research, developing of teaching pedagogy, navigating policies and degree requirements, and exploring academic opportunities and professional pathways.

Graduate students should be active contributors to advising relationships, proactively seeking academic and professional guidance and taking responsibility to the best of their ability for informing themselves of academic policies and degree requirements for their graduate program. For additional information, please see the department reference, Best Practice Reference for Academic Advising: Guidelines for Graduate Students and Faculty.

For a statement of University policy on professional conduct, see the section of the bulletin, guidelines for addressing graduate student professional conduct.

For a statement of University policy on graduate advising, see the Graduate Advising section of the bulletin.

Programs

Anthr-BA
Degree Designation: BA - Bachelor of Arts
-

Anthr-MA
Degree Designation: MA - Master of Arts

Anthr-Min
Degree Designation:
-

Anthr-PhD
Degree Designation: PHD - Doctor of Philosophy

Anthr-PMn
Degree Designation:

Applied Physics Department

Contacts

Office: 348 Via Pueblo Mall - Applied Physics Room 116-118
Mail Code: 94305-4090
Phone: (650) 723-4027

Web Site: http://appliedphysics.stanford.edu/

Courses offered by the Department of Applied Physics are listed under the subject code APPPHYS on the Stanford Bulletin's ExploreCourses web site.

The Department of Applied Physics offers qualified students with backgrounds in physics or engineering the opportunity to do graduate course work and research in the physics relevant to technical applications and natural phenomena. These areas include accelerator physics, biophysics, condensed matter physics, nanostructured materials, quantum electronics and photonics, quantum optics and quantum information, space science and astrophysics, synchrotron radiation and applications.

Student research is supervised by the faculty members and also by various members of other departments such as Biology, Chemistry, Electrical Engineering, Materials Science and Engineering, Physics, the SLAC National Accelerator Laboratory, and faculty of the Medical School who are engaged in related research fields.

Research activities are carried out in laboratories including the Geballe Laboratory for Advanced Materials (GLAM), the Edward L. Ginzton Laboratory (GINZTON), the Hansen Experimental Physics Laboratory (HEPL), the SLAC National Accelerator Laboratory, the Center for Probing the Nanoscale, and the Stanford Institute for Materials and Energy Science (SIMES).

The number of graduate students admitted to Applied Physics is limited. Applications to the Master of Science and Ph.D. programs should be received by December 14, 2021. M.S. and PhD. students normally enter the department the following Autumn Quarter. Joint applicants for the Knight-Hennessy Scholars Program must submit their Knight-Hennessy Scholars application by October 6, 2021 by 1:00pm Pacific Time and Applied Physics application by December 14, 2021. The general and subject GREs are optional for both the Ph.D. and master's programs. Applicants may submit scores, but they are not required.

Stanford undergraduates, regardless of undergraduate major, who are interested in a M.S. degree at the intersection of applied physics and engineering may choose to apply for the coterminal Master of Science program in Applied and Engineering Physics. The program is designed to be completed in the fifth year at Stanford. Students with accelerated undergraduate programs may be able to complete their B.S. and coterminal M.S. in four years.

Undergraduates must be admitted to the program and enrolled as a graduate student for at least one quarter prior to B.S. conferral. Applications are due on the last day of class of the Spring Quarter (June 4, 2021) for Autumn 2021 matriculation and at least four weeks before the last day of class in the previous quarter for Winter or Spring matriculation (November 3, 2021 for Winter matriculation, February 11, 2022 for Spring matriculation, and June 1, 2022 for Autumn 2022 matriculation). All application materials must be submitted directly to the Applied Physics department office by the deadlines. To apply for admission to the Applied and Engineering Physics coterminal M.S. program, students must submit the coterminal application which consists of the following:

- Application for Admission to Coterminal Master's Program
- Statement of Purpose
- Unofficial Transcript
- Two Letters of Recommendation from members of the Stanford faculty

Graduate Programs in Applied Physics

The Department of Applied Physics offers three types of advanced degrees:

- the Doctor of Philosophy
- the coterminal Master of Science in Applied and Engineering Physics

- the Master of Science in Applied Physics, either as a terminal degree or an en route degree to the Ph.D. for students already enrolled in the Applied Physics Ph.D. program.

Admission requirements for graduate work in the Master of Science and Ph.D. programs in Applied Physics include a bachelor's degree in Physics or an equivalent engineering degree. Students entering the program from an engineering curriculum should expect to spend at least an additional quarter of study acquiring the background to meet the requirements for the M.S. and Ph.D. degrees in Applied Physics.

Learning Outcomes (Graduate)

The purpose of the master's program is to further develop knowledge and skills in Applied Physics and to prepare students for a professional career or doctoral studies. This is achieved through completion of courses, in the primary field as well as related areas, and experience with independent work and specialization.

The Ph.D. is conferred upon candidates who have demonstrated substantial scholarship and the ability to conduct independent research and analysis in Applied Physics. Through completion of advanced course work and rigorous skills training, the doctoral program prepares students to make original contributions to the knowledge of Applied Physics and to interpret and present the results of such research.

Faculty

Emeriti: (Professors) Malcolm R. Beasley, Arthur Bienenstock, Steven M. Block, Sebastian Doniach, Alexander L. Fetter, Theodore H. Geballe, Stephen E. Harris, Walter A. Harrison, Peter A. Sturrock, Yoshihisa Yamamoto; (Professors, Research) Helmut Wiedemann, Herman Winick; (Courtesy) Douglas D. Osheroff

Chair: Martin M. Fejer

Chair of Graduate Studies Committee: Philip H. Bucksbaum

Professors: Philip H. Bucksbaum, Robert L. Byer, Martin M. Fejer, Daniel S. Fisher, Ian R. Fisher, Tony F. Heinz, Harold Y. Hwang, Aharon Kapitulnik, Mark A. Kasevich, Young S. Lee, Hideo Mabuchi, Kathryn A. Moler, Vahé Petrosian, Stephen R. Quake, Zhi-Xun Shen, Yuri Suzuki

Associate Professors: Benjamin L. Lev, David A. Reis, Amir H. Safavi-Naeini, Mark J. Schnitzer

Assistant Professors: Surya Ganguli, Benjamin Good

Professor (Research): Michel J-F. Digonnet

Courtesy Professors: Mark L. Brongersma, Bruce M. Clemens, Shanhui Fan, David Goldhaber-Gordon, James S. Harris, Lambertus Hesselink, David A. B. Miller, W. E. Moerner, Jelena Vuckovic

Courtesy Associate Professors: Willlliam J. Greenleaf, Zhirong Huang, Andrew J. Spakowitz

Adjunct Professors: Thomas M. Baer, Raymond G. Beausoleil, John D. Fox, Richard M. Martin

Graduate Advising Expectations

The Department of Applied Physics is committed to providing academic advising in support of graduate student scholarly and professional development. When most effective, this advising relationship entails collaborative and sustained engagement by both the advisor and the advisee. As a best practice, advising expectations should be periodically discussed and reviewed to ensure mutual understanding. Both the advisor and the advisee are expected to maintain professionalism and integrity.

In addition, the Faculty Candidacy Chair, Professor Philip Bucksbaum, is available for consultation during the academic year by email and during office hours. The Applied Physics student services office is also an important part of the advising team. Staff in the office inform students and advisors about University and department requirements, procedures, and opportunities, and maintain the official records of advising assignments and approvals.

Faculty advisors guide students in key areas such as selecting courses, designing and conducting research, developing of teaching pedagogy, navigating policies and degree requirements, and exploring academic opportunities and professional pathways.

Graduate students are active contributors to the advising relationship, proactively seeking academic and professional guidance and taking responsibility for informing themselves of policies and degree requirements for their graduate program.

For a statement of University policy on graduate advising, see the "Graduate Advising" section of this bulletin.

Master of Science Advising

At the start of graduate study, each student is assigned a master's program advisor: a member of our faculty who provides guidance in course selection, course planning, and in exploring short and long term academic opportunities and professional pathways. The program advisor serves as the first resource for consultation and advice about a student's academic program. Usually, the same faculty member serves as program advisor for the duration of master's study. In rare instances, a formal advisor change request may be considered. See the Applied Physics student services office for additional information on this process.

Ph.D. Advising

Academic advisors are assigned to incoming first year students by the graduate study committee based on their interest of studies. Faculty academic advisors guide students in key areas such as selecting courses, designing and conducting research, developing of teaching pedagogy, navigating policies and degree requirements, and exploring academic opportunities and professional pathways. Each individual program, designed by the student in consultation with the academic advisor, should represent a strong and cohesive program reflecting the student's major field of interest. Based on the research interest, students and research advisors mutually agree to work on the research together and establish a collaborative relationship. When the research advisor is from outside the Applied Physics department, the student must also identify a co-advisor from departmental primary faculty to provide guidance on departmental requirements and opportunities.

Programs

AePhy-MS
Degree Designation: MS - Master of Science
-

AplPh-MS
Degree Designation: MS - Master of Science

AplPh-PhD
Degree Designation: PHD - Doctor of Philosophy

Archaeology Department

Contacts

Office: Building 500, 488 Escondido Mall
Mail Code: 94305-2170
Phone: (650) 723-5731

Email: archaeology@stanford.edu

Web Site: http://archaeology.stanford.edu/

Courses offered by the Archaeology Program are listed under the subject code ARCHLGY on the Stanford Bulletin's ExploreCourses website.

Archaeology is the study of the past through its material remains that survive into the present. Archaeology is a discipline that offers direct access to the experiences of a wide range of people in numerous cultures across the globe. Increasingly, archaeology bridges past and present societies through the study of the human heritage and its role in contemporary societies. Stanford's Archaeology Program provides students with an interdisciplinary approach to the material remains of past societies, drawing in equal parts on the humanities, social sciences, and natural sciences.

The Archaeology curriculum draws on faculty from a wide range of University departments and schools. To complete the requirements for the major, students must take courses from the offerings of the program and from the listings of other University departments. The program culminates in a Bachelor of Arts (B.A.) in Archaeology.

Mission of the Undergraduate Program in Archaeology

The mission of the undergraduate program in Archaeology is to provide students with a broad and rigorous introduction to the analysis of the material culture of past societies, drawing on the questions and methods of the humanities, social sciences, and natural sciences. Students in the major learn to relate these analyses to the practice of archaeology in the contemporary world. The program seeks to help each student achieve a high level of understanding through concentrated study of a particular research area. Courses in the major complete a comprehensive curriculum that draws on faculty from a wide range of University departments and programs. Archaeology majors are well prepared for advanced training in professional schools such as education, law, and journalism and, depending upon their choice of upper-division course, graduate programs in the humanities, social sciences, and natural sciences.

Faculty

Director: Barbara Voss (Anthropology)

Director of Undergraduate Studies: Barbara Voss (Anthropology)

Department Faculty:

Professors: Li Liu (East Asian Languages and Cultures), Ian Morris (Classics), Michael Shanks (Classics, on leave 21-22)

Associate Professors: Andrew Bauer (Anthropology), Giovanna Ceserani (Classics), Justin Leidwanger (Classics), Jody Maxmin (Art and Art History, Classics), Krish Seetah (Anthropology), Jennifer Trimble (Classics), Barbara Voss (Anthropology)

Assistant Professors: Mudit Trivedi (Anthropology)

Academic Staff: Christina Hodge (Academic Curator & Collections Manager), Laura Jones (Campus Archaeologist)

Postdoctoral Fellows: Matthew Chastain, Kacey Grauer, Denise Lim, Brendan Weaver

Affiliated Faculty:

Professors: Rob Dunbar (Earth Sciences), Mark Lewis (Chinese Culture, Religious Studies), J. Moldowan (Geological and Environmental Sciences), Amos Nur (Earth Sciences), Peter Vitousek (Earth System Science)

Associate Professors: Paulla Ebron (Anthropology), James A. Fox (Anthropology, Iberian and Latin American Cultures, Linguistics), Grant Parker (Classics)

Programs

Archa-BA
Degree Designation: BA - Bachelor of Arts
-

Archa-Min
Degree Designation:
-

Art & Art History Department

Contacts

Office: McMurtry Building, Room 107, 355 Roth Way
Mail Code: 94305-2018
Phone: (650) 723-3404
Web Site: http://art.stanford.edu

Courses offered by the Department of Art & Art History are listed on the Stanford Bulletin's ExploreCourses web site under the subject codes ARTHIST (Art History), ARTSTUDI (Art Practice), FILMSTUD (Film Studies), and FILMPROD (Film Practice).

Mission of the Department of Art & Art History

The department offers courses of study in:

1. Art History
2. Art Practice
3. Film and Media Studies
4. Film Production

leading to the following degrees: B.A. degree in Art History; B.A. degree in Art Practice; B.A. degree in Film and Media Studies; M.F.A. degree in Art Practice; M.F.A. degree in Documentary Film and Video; Ph.D. degree in Art History.

The undergraduate program is designed to help students think critically about the visual arts and visual culture. Courses focus on the meaning of images and media, and their historical development, roles in society, and relationships to disciplines such as literature, music, and philosophy. Work performed in the classroom, studio, and screening room is designed to develop a student's powers of perception, capacity for visual analysis, and knowledge of technical processes.

Learning Outcomes (Undergraduates)

The department expects undergraduate majors in the program to be able to demonstrate the following learning outcomes. These learning outcomes are used in evaluating students and the department's undergraduate program.

Students in historical studies are expected to demonstrate:

1. knowledge and awareness of art and/or film terminology and concepts;
2. ability to develop effective and nuanced lines of interpretation;
3. improved critical thinking skills using primary and secondary source materials;
4. improvement in analytical writing skills and close reading skills;

5. ability to form and validate their own and others' opinions through knowledge of artistic movements and sociohistorical events.

Students in creative art are expected to demonstrate:

1. enhanced awareness of the role of art in intellectual and cultural life;
2. problem solving skills to organize, analyze and interpret visual information;
3. mastery of techniques and materials of a discipline with awareness of historical and current practices;
4. selection of materials, processes, form, and content to achieve poetic and expressive relationships to artistic media;
5. ability to apply critical analysis to the student's own work and the work of others;
6. effective techniques for the preparation and presentation of work consistent with professional practices in the field.

Learning Outcomes (Graduate)

The purpose of the master's programs is to further develop knowledge and skills and to prepare students for a professional career. This is achieved through completion of courses, in the primary field as well as related areas, and experience with independent work and specialization.

The Ph.D. is conferred upon candidates in Art History (including Film and Media Studies) who have demonstrated substantial scholarship and the ability to conduct independent research and analysis in their respective disciplines. Through completion of advanced course work and rigorous skills training, the doctoral program prepares students to make original contributions to knowledge in their fields and to interpret and present the results of their research.

Art History

Undergraduate Program in Art History

The discipline of Art History teaches students how to analyze and interpret works of fine art (paintings, drawings, prints, and sculpture), photography and moving image media (film, video, television, and digital art), material culture (ritual objects, fashion, advertisements, and the decorative, applied, and industrial arts), and the built environment (architecture, urbanism, and design). The department takes it as axiomatic that the skills of visual literacy and analysis are not innate but may be acquired through training and practice. Objects of study are drawn from the cultures of Africa, Asia, the Americas, from the Middle East; from Western, Central, and Eastern Europe; and from antiquity to the present.

Art History is a historical discipline that seeks to reintegrate the work of art into the original context of its making and reception, foregrounding its significant status as both historical document and act of social communication. At the same time, Art History seeks to understand the ways in which the work of art transcends the historical moment of its production, taking on different meanings in later historical periods, including the present. As part of their visual training, students of Art History become proficient in cultural analysis and historical interpretation. Art History thus envisions itself as uniquely well positioned to train students from a variety of disciplines in the light of the dramatic visual turn that has gripped the humanities and the sciences over the course of the last decade, with more and more disciplines becoming vitally interested in visual forms and modes of communication.

Graduate Program in Art History

The doctoral program in Art History at Stanford is relatively small and affords the graduate student the opportunity to work intensively with individual members of the faculty. The Doctor of Philosophy degree is taken in a particular field, supported by a background in the general history of art. Doctoral candidates also undertake collateral studies in other graduate departments or in one of the University's interdisciplinary programs.

Art Practice

Undergraduate Program in Art Practice

The Art Practice program offers production-based courses founded on the concepts, skills and cultural viewpoints that characterize contemporary art practice. The goal is to educate students, both majors and minors, in the craft, culture, and theory of current fine art practices to prepare them for successful careers as artists. The art practice program is designed to develop in-depth skills in more than one area of the visual arts. It emphasizes the expressive potential of an integration of media, often via a cross-disciplinary, interactive path. Through collaboration and connections with scientists, engineers, and humanities scholars, the program addresses a breadth of topical and artistic concerns central to a vital undergraduate education.

Graduate Program in Art Practice

The program provides a demanding course of study designed to challenge advanced students. Participants are chosen for the program on the basis of work that indicates high artistic individuality, achievement, and promise. Candidates should embody the intellectual curiosity and broad interests appropriate to, and best served by, work and study within the University context.

Film and Media Studies

Undergraduate Program in Film and Media Studies

The Bachelor of Arts in Film and Media Studies provides an introduction to film aesthetics, history, national cinematic traditions, modes of production in narrative, documentary, and experimental films, the incorporation of moving image media by contemporary artists, and the proliferation of new forms of digital media. The program is designed to develop the critical vocabulary and intellectual framework for understanding the role of cinema and related media within broad cultural and historical concepts.

Graduate Program in Documentary Film and Video

The Master of Fine Arts program in documentary film and video production provides a historical, theoretical, and critical framework within which students master the conceptual and practical skills for producing nonfiction film and video. The M.F.A. is a terminal degree program with a two-year, full-time curriculum representing a synthesis of film praxis and film and media history, theory, and criticism. Courses provide an intellectual and theoretical framework within which students' creative work is developed. Students proceed through the program as a cohort. The program does not permit leaves of absence.

The M.F.A. degree is designed to prepare graduate students for professional careers in film, video, and digital media. Graduates are qualified to teach at the university level. The philosophy of the program is predicated on a paradigm of independent media that values artistic expression, social awareness, and an articulated perspective. Students become conversant with the documentary tradition as well as with alternative media and new directions in documentary. Training in documentary production is combined with the development of research skills in film criticism and analysis. Electives in film studies, art history, and studio art provide an intellectual and theoretical framework within which creative work is realized. The parallel focus on production and studies prepares students for an academic position that may require teaching both film studies and production.

Art & Art History Department Course Catalog Numbering System

The first digit of the ARTHIST and FILMSTUD course number indicates its general level of sophistication.

DIGIT	**AREA**
001-099	Introductory
100-199	Undergraduate level lectures
200-299	Undergraduate seminars/individual work
300-399	Graduate level lectures
400-599	Graduate seminars/individual work

Art History

DIGIT	**AREA**
001-099	Introductory
100-104	Ancient
105-109	Medieval
110-119	Renaissance
120-139	Early Modern
140-159	Modern
160-179	Contemporary
180-189	Asia
190-195	Africa and the Americas
200-299	Seminars and Colloquia
410-499	Historical Studies
500-599	Critical Studies
600-699	Graduate Research

Art Practice

DIGIT	**AREA**
001-099	Courses for Non-Major (Lower Level)
100-199	Lower Level Undergraduate Courses
200-299	Upper Level Undergraduate Courses
300-399	Graduate Seminars

Film and Media Studies

DIGIT	**AREA**
004-103	Introductory
111-118	Genre
130-139	National Cinemas
140-149	Aesthetics
150-159	Other
220-299	Undergraduate Seminars
400-660	Graduate Seminars

Film Production

DIGIT	**AREA**
001-199	Undergraduate Courses
300-399	Graduate Courses
400-499	Graduate Courses for MFA Doc Film Students Only

Faculty

Emeriti: (Professors) Kristina Branch, Wanda M. Corn, David Hannah, Joel Leivick, Suzanne Lewis, Michael Marrinan, Dwight C. Miller, Kristine Samuelson, Paul V. Turner, Bryan Wolf

Chair: Pavle Levi

Area Director for Art History: Bissera Pentcheva

Area Director for Film and Media Studies: Jean Ma

Area Director for Art Practice: : Camille Utterback

Director of Undergraduate Studies in Art History: Emanuele Lugli

Director of Undergraduate Studies in Art Practice: Terry Berlier

Director of Undergraduate Studies in Film and Media Studies: Shane Denson

Director of Graduate Studies in Art History: Richard Meyer

Director of Graduate Studies in Art Practice: Paul DeMarinis

Director of Graduate Studies in Documentary Film: Jamie Meltzer

Director of Honors Program: Adam Tobin

Professors: Scott Bukatman (Film and Media Studies), Enrique Chagoya (Art Practice), Paul DeMarinis (Art Practice), Jan Krawitz (Documentary Film), Pavle Levi (Film and Media Studies), Richard Meyer (Art History), Alexander Nemerov (Art History), Bissera Pentcheva (Art History), Nancy J. Troy (Art History), Richard Vinograd (Art History), Gail Wight (Art Practice), Xiaoze Xie (Art Practice)

Associate Professors: Terry Berlier (Art Practice), Shane Denson (Film and Media Studies), Jean Ma (Film and Media Studies), Jody Maxmin (Art History), Jamie Meltzer (Documentary Film), Karla Oeler (Film and Media Studies), Camille Utterback (Art Practice)

Assistant Professors: Jonathan Calm (Art Practice), Usha Iyer (Film and Media Studies), Srdan Keca (Documentary Film), Marci Kwon (Art History), Emanuele Lugli (Art History), Rose Salseda (Art History)

Senior Lecturer: Adam Tobin (Film and Media Studies)

Lecturers: Jamil Hellu (Art Practice), Sarah Peck (Art Practice), Leila Weefur (Art Practice)

Graduate Advising Expectations

The Department of Art and Art History is committed to providing academic advising in support of graduate student scholarly and professional development. When most effective, this advising relationship entails collaborative and sustained engagement by both the adviser and the advisee. As a best practice, advising expectations should be periodically discussed and reviewed to ensure mutual understanding. Both the adviser and the advisee are expected to maintain professionalism and integrity. Should serious challenges arise in the advising relationship, advisee and adviser (together or individually) should confer with the DGS and/or Department Chair.

Faculty advisers guide students in key areas such as selecting courses, designing and conducting research, developing of teaching pedagogy, navigating policies and degree requirements, and exploring academic opportunities and professional pathways.

Graduate students are active contributors to the advising relationship, proactively seeking academic and professional guidance and taking responsibility for informing themselves of policies and degree requirements for their graduate program.

For a statement of University policy on graduate advising, see the "Graduate Advising" section of this bulletin.

Programs

ArtHis-Min
Degree Designation:

ARTHS-BA
Degree Designation: BA - Bachelor of Arts
-

ARTHS-MA
Degree Designation: MA - Master of Arts
-

ARTHS-PHD
Degree Designation: PHD - Doctor of Philosophy
-

ART-PMN
Degree Designation:
-

ARTP-BA
Degree Designation: BA - Bachelor of Arts
-

ARTP-MFA
Degree Designation: MFA - Master of Fine Arts
-

ARTP-MIN
Degree Designation:
-

FilmSt-BA
Degree Designation: BA - Bachelor of Arts
-

Film-MFA
Degree Designation: MFA - Master of Fine Arts
-

FilmStudMn
Degree Designation:
-

Biochemistry Department

Contacts

Office: Beckman Center, B400
Mail Code: 94305-5307
Phone: (650) 723-6161
Web Site: https://biochemistry.stanford.edu/

Courses offered by the Department of Biochemistry are listed under the subject code BIOC on the Stanford Bulletin's ExploreCourses web site.

Biochemistry is a department within the School of Medicine, with offices and labs located in the Beckman Center for Molecular and Genetic Medicine at the Stanford Medical Center, the Shriram Center for Bioengineering and Chemical Engineering, and the Stanford Genome Technology Center. Courses offered by the department may be taken by undergraduates as well as graduate and medical school students.

Advanced courses offered in more specialized areas emphasize recent developments in biochemistry, cell biology, and molecular biology. These courses include the physical and chemical principles of biochemistry, enzyme reaction mechanisms, membrane trafficking and biochemistry, molecular motors and the cytoskeleton, mechanisms and regulation of nucleic acid replication and recombination, the biochemistry of bacterial and animal viruses, the molecular basis of morphogenesis, the molecular and cell biology of yeast, and the structure and function of both eukaryotic and prokaryotic chromosomes.

Opportunities exist for directed reading and research in biochemistry and molecular biology, using the most advanced research facilities, including those for light and electron microscopy, chromatography and electrophoresis, protein and nucleic acid purification, rapid kinetic analysis, synthesis and analysis, single molecule analyses using laser light traps, microarray generation and analysis, and computer graphic workstation facilities for protein and nucleic acid structural analysis. Ongoing research uses a variety of organisms from bacteria to animal cells.

Faculty

Emeriti: (Professors): Robert L. Baldwin, Paul Berg, Patrick O. Brown, Douglas L. Brutlag, David S. Hogness, A. Dale Kaiser, I. Robert Lehman

Chair: Aaron F. Straight

Director of Graduate Studies: Daniel Herschlag

Professors: Steven Artandi, Gilbert Chu, Ronald W. Davis, James E. Ferrell, Jr., Daniel Herschlag, Peter Kim, Mark A. Krasnow, Suzanne R. Pfeffer, James A. Spudich, Aaron F. Straight

Associate Professors: Onn Brandman, Rhiju Das, Pehr A. B. Harbury, Rajat Rohatgi

Assistant Professors: Silvana Konermann, Lingyin Li, Julia Salzman

Courtesy Professors: Chaitan S. Khosla, Sharon Long, Karlene Cimprich

Graduate Advising

The Department of Biochemistry is committed to providing academic advising in support of graduate student scholarly and professional development. When most effective, this advising relationship entails collaborative and sustained engagement by both the adviser and the advisee. As a best practice, advising expectations should be periodically discussed and reviewed to ensure mutual understanding. Both the adviser and the advisee are expected to maintain professionalism and integrity.

Faculty advisers guide students in key areas such as selecting courses, designing and conducting research, developing of teaching pedagogy, navigating policies and degree requirements, and exploring academic opportunities and professional pathways.

Graduate students are active contributors to the advising relationship, proactively seeking academic and professional guidance and taking responsibility for informing themselves of policies and degree requirements for their graduate program.

For a statement of University policy on graduate advising, see the "Graduate Advising" section of this bulletin.

Programs

Bioch-MS
Degree Designation: MS - Master of Science
-

Bioch-PhD
Degree Designation: PHD - Doctor of Philosophy

Bioengineering Department

Contacts

Office: 443 Via Ortega, Shriram Center, Room 121
Mail Code: 94305-4125
Phone: Graduate students: (650) 498-3224; Undergraduates: (650) 497-3135
Web Site: http://bioengineering.stanford.edu

Courses offered by the Department of Bioengineering are listed under the subject code BIOE on the *Stanford Bulletin's* ExploreCourses web site.

Bioengineering is jointly supported by the School of Engineering and the School of Medicine. The facilities and personnel of the Department of Bioengineering are housed in the Shriram Center, James H. Clark Center, the William F. Durand Building for Space Engineering and Science, the William M. Keck Science Building, the Jerry Yang and Akiko

Yamazaki Environment and Energy Building, and the Richard M. Lucas Center for Magnetic Resonance Spectroscopy and Imaging. The departmental headquarters is in the Shriram Center for Bioengineering and Chemical Engineering.

Courses in the teaching program lead to the degrees of Bachelor of Science in Bioengineering, Master of Science and Doctor of Philosophy. The department collaborates in research and teaching programs with faculty members in Chemical Engineering, Mechanical Engineering, Electrical Engineering, and departments in the School of Medicine. Quantitative biology is the core science base of the department. The research and educational thrusts are in biomedical computation, biomedical imaging, biomedical devices, regenerative medicine, and cell/molecular engineering. The clinical dimension of the department includes cardiovascular medicine, neuroscience, orthopedics, cancer care, neurology, and the environment.

Mission of the Undergraduate Program in Bioengineering

The Stanford Bioengineering (BIOE) major enables students to combine engineering and the life sciences in ways that advance scientific discovery, healthcare and medicine, manufacturing, environmental quality, culture, education, and policy. Students who major in bioengineering earn a fundamental engineering degree for which the raw materials, underlying basic sciences, fundamental toolkit, and future frontiers are all defined by the unique properties of living systems.

The department offers an undergraduate major in Bioengineering leading to the B.S. degree in Bioengineering.

Graduate Programs in Bioengineering

The University's requirements for the M.S. and Ph.D. degrees are outlined in the "Graduate Degrees" section of this bulletin.

Admission

Students are expected to enter with a series of core competencies in mathematics, biology, chemistry, physics, computing, and engineering. Students entering the program are assessed by the examination of their undergraduate transcripts and research experiences. Specifically, the department requires that students have completed mathematics through multivariable calculus and differential equations, completed a series of undergraduate biology courses and completed physics, chemistry, and computer sciences courses required of all undergraduate majors in engineering.

Qualified applicants are encouraged to apply for predoctoral national competitive fellowships, especially those from the National Science Foundation. Applicants to the Ph.D. program should consult with their financial aid officers for information and applications.

The Graduate Record Examination (GRE) is not required for admission to the M.S. or Ph.D. program in Bioengineering.

Further information and application instructions for all graduate degree programs may be obtained from Graduate Admissions.

Faculty

Chair: Jennifer R. Cochran

Director of Undergraduate Studies: Karl Deisseroth

Director of Graduate Studies: Markus Willard Covert

Professors: Russ B. Altman, Kwabena Boahen, Wah Chiu, Jennifer R. Cochran, Markus Willard Covert, Karl Deisseroth, Scott L. Delp, Norbert J. Pelc, Stephen R. Quake, Christina D. Smolke, James R. Swartz, Paul Yock

Associate Professors: Annelise E. Barron, Zev David Bryant, David B. Camarillo, Andrew Endy, Michael Fischbach, Kerwyn C. Huang, Jin Hyung Lee, Michael Z. Lin, Jan T. Liphardt, Alison Lesley Marsden, Manu Prakash, Fan Yang

Assistant Professors: Lacramioara Bintu, Polly M. Fordyce, Possu Huang, Paul Nuyujukian, Lei Stanley Qi, Mark Skylar-Scott, Bo Wang

Professors, by courtesy: Bruce L. Daniel, James Dunn, Jeffrey A. Feinstein, Daniel S. Fisher, Garry E. Gold, Stuart B. Goodman, Geoffrey C. Gurtner, Brian Hargreaves, Thomas M. Krummel, Ellen Kuhl, Craig Levin, Michael T. Longaker, David Magnus, Lloyd B. Minor, Kim Butts Pauly, Krishna Shenoy, Paul J. Wang, Yiping Joseph Woo

Associate Professors, by courtesy: Sarah Heilshorn, Marc E. Levenston, Sakti Srivastava, Yunzhi Peter Yang

Assistant Professors, by courtesy: Eric Appel, Mary Frances Nunez Teruel, James K. Wall

Adjunct Professors: Uday Kumar, John Linehan, Vijay Pande, Marc L. Salit, Gordon Saul, Charles A. Taylor

Lecturers: Megan Palmer, Michael Specter, Joseph Towles, Ross D. Venook, Paul Vorster

Graduate Advising

The Department of Bioengineering is committed to providing academic advising in support of graduate student scholarly and professional development. When most effective, this advising relationship entails collaborative and sustained engagement by both the adviser and the advisee. As a best practice, advising expectations should be periodically discussed and reviewed to ensure mutual understanding. Both the adviser and the advisee are expected to maintain professionalism and integrity.

Graduate students are active contributors to the advising relationship, proactively seeking academic and professional guidance and taking responsibility for informing themselves of policies and degree requirements for their graduate program.

For a statement of University policy on graduate advising, see the "Graduate Advising" section of this bulletin.

Master's Advising

At the start of graduate study, each student is assigned a master's program adviser: a member of our faculty who provide guidance in course selection and in exploring academic opportunities and professional pathways. The department's graduate handbook provides information and suggested timelines for advising meetings. Usually, the same faculty member serves as a program adviser for the duration of master's study, but the handbook does describe a process for formal adviser changes.

In addition, the faculty Director of Graduate Studies (DGS) is available during the academic year by email and during office hours.

The department's student services office is also an important part of the master's advising team. They inform students and advisers about University and department requirements, procedures, and opportunities, and they maintain the official records of advising assignments and approvals.

Doctoral Advising

Faculty advisers guide students in key areas such as selecting courses, designing and conducting research, developing of teaching pedagogy, navigating policies and degree requirements, and exploring academic opportunities and professional pathways. The department's graduate handbook provides information and suggested timelines for advising meetings in the different stages of the doctoral program.

Ph.D. students are initially assigned a program adviser on the basis of the interests expressed in their application. This faculty member provides initial guidance in course selection, in exploring academic opportunities and professional pathways, and in identifying doctoral research opportunities.

Students identify their doctoral research/thesis adviser prior to the end of the first year of study. The research adviser assumes primary responsibility for the future direction of the student, taking on the roles previously filled by the program adviser, and ultimately directs the student's dissertation. Most students find an adviser from among the primary faculty members of our department. However, the research adviser may be a faculty member from another Stanford department who is a member of the Academic Council, familiar with supervising doctoral students, and able to provide both advising and funding for the duration of the doctoral program. When the research adviser is from outside our department, the student must identify reading committee members from the BioE faculty.

MCL faculty may not be the primary advisers of students. Although a co-adviser from the MCL line is permissible in some situations, the primary adviser must provide at least 50% of the mentoring for the student. Evidence that a student is receiving greater than 50% of mentoring from the primary adviser include: full attendance of lab meetings, regular one-on-one meetings, dedicated space in the primary adviser's lab, funding provided by the primary adviser, and research being performed in an area that is of current relevance to the primary adviser. Advising situations that do not meet these criteria are subject to review by the graduate studies committee.

Throughout the Ph.D., each student is required to fill out an annual Individual Developmental Plan (IDP), usually in the Summer. The IDP is then discussed with the research adviser, as a way to facilitate: advising the student, both during and beyond the PhD; establishing clear expectations on both sides with respect to degree progress and timely graduation; and emphasizing the importance of wellness in graduate school, together with access to University wellness resources.

The Faculty Director of Graduate Studies (DGS) is also available during the academic year by email and during office hours. The department's student services office is also an important part of the doctoral advising team: they inform students and advisers about University and department requirements, procedures, and opportunities, and they maintain the official records of advising assignments and approvals. Students are encouraged to talk with the DGS and the student services office as they consider adviser selection or for guidance in working with their adviser(s).

Programs

Bioeng-BS
Degree Designation: BS - Bachelor of Science
-

Bioeng-MS
Degree Designation: MS - Master of Science
-

Bioeng-PhD
Degree Designation: PHD - Doctor of Philosophy
-

BIOE-PMn
Degree Designation:
-

Biology Department

Contacts

Office: Main Department, Gilbert Building, Room 109
Mail Code: 94305-5020
Phone: (650) 723-2413
Web Site: http://biology.stanford.edu

Office: Student Services, Gilbert Building, Room 108
Mail Code: 94305-5020
Phone: (650) 498-2404 (graduate students); (650) 723-5060 (undergraduates); (650) 723-1826 (postdoctoral scholars)

Web Site: http://biology.stanford.edu

Courses offered by the Department of Biology are listed under the subject code BIO on the Stanford Bulletin's ExploreCourses web site.

The department provides:

- a major program leading to the B.S. degree
- a minor program
- a coterminal program leading to the M.S. degree
- a doctoral program leading to the Ph.D. degree, and
- courses designed for the non-major.

Mission of the Undergraduate Program in Biology

The mission of the undergraduate program in Biology is to provide students with in-depth knowledge in the discipline, from molecular biology to ecology. Students in the program learn to think and analyze information critically, to draw connections among the different areas of biology, and to communicate their ideas effectively to the scientific community. The major exposes students to the scientific process through a set of core courses and electives from a range of subdisciplines. The Biology major serves as preparation for professional careers, including medicine, dentistry, veterinary sciences, teaching, consulting, research, and field studies.

Mission of the Graduate Program in Biology

For graduate-level students, the department offers resources and experience learning from and working with world-renowned faculty involved in research on ecology, neurobiology, population biology, plant and animal physiology, biochemistry, immunology, cell and developmental biology, genetics, and molecular biology.

The M.S. degree program offers general or specialized study to individuals seeking biologically oriented course work, and to undergraduate science majors wishing to increase or update their science background or obtain advanced research experience.

The training for a Ph.D. in Biology is focused on learning skills required to be a successful research scientist and teacher, including how to ask important questions and then devise and carry out experiments to answer these questions. Students work closely with an established advisor and meet regularly with a committee of faculty members to ensure that they understand the importance of diverse perspectives on experimental questions and approaches. Students learn how to evaluate critically pertinent original literature in order to stay abreast of scientific progress in their areas of interest. They also learn how to make professional presentations, write manuscripts for publication, and become effective teachers.

Facilities

The offices, labs, and personnel of the Department of Biology are located in the Anne T. and Robert M. Bass Biology Research, Gilbert Biological Sciences, James H. Clark Center, ChEM-H and the Wu Tsai Neurosciences Institute, and Jerry Yang and Akiko Yamazaki Environment and Energy (Y2E2) buildings. Along with the Carnegie Institution of Washington all are on the main campus. Jasper Ridge Biological Preserve (JRBP) is located near Stanford University's campus in the eastern foothills of the Santa Cruz Mountains. Hopkins Marine Station is on Monterey Bay in Pacific Grove.

Jasper Ridge Biological Preserve encompasses geologic, topographic, and biotic diversity within its 1,189 acres and provides a natural laboratory for researchers from around the world, educational experiences for students and docent-led visitors, and refuge for native plants and animals. See the JRBP web site.

Hopkins Marine Station, located 90 miles from the main University campus in Pacific Grove, was founded in 1892 as the first marine laboratory on the west coast of North America. For more information, including courses taught at Hopkins Marine Station with the subject code BIOHOPK, see the "Hopkins Marine Station" section of this bulletin.

The Robin Li and Melissa Ma Science Library, located in the Sapp Center for Science Teaching and Learning, supports research and teaching for the Department of Biology and other related disciplines. The Harold A. Miller Library focuses primarily on marine biology to support the research and teaching needs of the Hopkins Marine Station, but it also collects materials on oceanography, fisheries, and other aquatic sciences.

Biology Course Numbering System

The department uses the following course numbering system:

	Biology Course Numbering System
NUMBER	**LEVEL**
000-099	Introductory and Foundations
100-199	Undergraduate
200-299	Advanced Undergraduate, Coterminal and PhD
300+	PhD

Faculty

Emeriti Professors: Paul R. Ehrlich, David Epel, Philip C. Hanawalt, Patricia P. Jones, Donald Kennedy, Harold A. Mooney, W. James Nelson, Peter Ray, Joan Roughgarden, Robert D. Simoni, George N. Somero, Ward B. Watt, Norman K. Wessells, Dow O. Woodward

Emeritus Professor (Teaching): Carol L. Boggs

Chair: Martha S. Cyert

Director of Graduate Studies: Jose R. Dinneny

Director of Undergraduate Studies: Tadashi Fukami

Professors: Dominique Bergmann, Barbara A. Block, Steven M. Block, Larry B. Crowder, Martha S. Cyert, Gretchen C. Daily, Giulio De Leo, Mark W. Denny, Rodolfo Dirzo, Marcus W. Feldman, Russell D. Fernald, Christopher B. Field, Judith Frydman, William F. Gilly, Deborah M. Gordon, Or Gozani, Elizabeth A. Hadly, H. Craig Heller, Christine Jacobs-Wagner, Richard G. Klein, Ron R. Kopito, Sharon R. Long, Liqun Luo, Susan K. McConnell, Fiorenza Micheli, Mary Beth Mudgett, Stephen R. Palumbi, Dmitri Petrov, Jonathan Pritchard, Noah A. Rosenberg, Robert M. Sapolsky, Mark J. Schnitzer, Carla J. Shatz, Kang Shen, Michael A. Simon, Tim P. Stearns, Marc Tessier-Lavigne, Stuart H. Thompson, Alice Ting, Shripad Tuljapurkar, Peter Vitousek, Virginia Walbot

Professor (Research): Anthony Barnosky

Associate Professors: Xiaoke Chen, Jose R. Dinneny, Hunter B. Fraser, Tadashi Fukami, Christopher Lowe, Ashby Morrison, Kabir Peay, M. Kristy Red-Horse, Jan M. Skotheim

Associate Professor (Research): Mary Hynes

Assistant Professors: Jonas B. Cremer, Scott J. Dixon, Jessica L. Feldman, Jeremy A. Goldbogen, Erin Mordecai, Lauren O'Connell, Molly Schumer

Courtesy Emeritus Professor: Kathryn Barton

Courtesy Professors: Joseph Berry, Devaki Bhaya, Carlos D. Bustamante, Daniel Fisher, Arthur R. Grossman, Joseph S. Lipsick, Alfred Spormann, Irving Weissman

Courtesy Associate Professors: David Ehrhardt, Jonathan Payne, Sue Rhee, Zhiyong Wang

Courtesy Assistant Professor: Paula V. Welander

Lecturers: Robin Elahi, Daria Hekmat-Scafe, Jamie Imam, Waheeda Khalfan, Shyamala D. Malladi, Jesse E. D. Miller, Andrew Todhunter

Librarians: Michael Newman, Robin Li and Melissa Ma Science Library; Amanda Whitmire, Miller Library

Graduate Advising Expectations

The Department of Biology is committed to providing academic advising in support of graduate student scholarly and professional development. When most effective, this advising relationship entails collaborative and sustained engagement by both the advisor and the advisee.

All first-year Biology graduate students have an assigned a Biology First-Year Facilitator (BFF). Faculty mentorship in the BFF program is focused on helping students integrate into the department culture through non-judgmental advocacy. BFFs support students as they manage their lab rotations and chose appropriate coursework. Emphasis is placed on cultivating a supportive relationship between faculty and student during what is often a stressful period of transition. The student services office (SSO) and the Director of Graduate Studies (DGS) have primary responsibility for ensuring students fulfill departmental requirements (coursework, TAships) and submit the appropriate forms on time.

Course Advising Workshops are organized to assist students in the selection of classes for the next quarter. The workshop consists of student, faculty, and SSO representatives who can advise on appropriate coursework to take. Students and faculty establish a course of study, taking into consideration: (1) area of specialization; (2) training in accessory areas such as language, math, physical sciences and computer science; and (3) breadth in biology.

Graduate students are expected to select a thesis advisor before the end of the first year of the program. Students are encouraged to work collaboratively with their advisors to establish a dissertation project and form a Dissertation Reading Committee. Advancement to doctoral candidacy is expected to occur during the second year of the program.

Thesis advisers are expected to meet with graduate students at least once each year to discuss and help develop the students' Individual Development Plans (IDP). Additionally, advisers and students should meet on a regular basis throughout the year to discuss the student's professional development in key areas such as selecting courses, designing and conducting research, developing teaching pedagogy, navigating policies and degree requirements, and exploring academic opportunities and professional pathways.

Graduate students are active contributors to the advising relationship. They should proactively seek academic and professional guidance and take responsibility for informing themselves of policies and degree requirements for the Biology Ph.D. program.

As a best practice, advising expectations should be periodically discussed and reviewed to ensure mutual understanding. Both the advisor and the advisee are expected to maintain professionalism and integrity.

Academic progress and student completion of program requirements and milestones are monitored by the program director and staff, and are discussed by faculty at an annual meeting devoted to assessing graduate student progress. A detailed description of the program's requirements, milestones, and advising expectations are listed in the Biology Ph.D. Student Handbook, found on the program web site.

The Director of Graduate Studies (DGS) is available during office hours and by appointment. In addition, each Autumn the DGS meets with each cohort of graduate students to discuss what aspects of the Ph.D. program areas warrant improvement. Together with the DGS, the Graduate Studies Committee acts as a mechanism to address these concerns and update advising policies. The committee is formed from faculty and student representatives of CMOB, EcoEvo, and Hopkins tracks.

Additionally, the program adheres to the advising guidelines and responsibilities listed by the Office of the Vice Provost for Graduate Education (VPGE) and in the Graduate Academic Policies (GAP), and the Graduate Advising section of this Bulletin.

Programs

Bio-BS
Degree Designation: BS - Bachelor of Science
-

Bio-Min
Degree Designation:
-

Bio-MS
Degree Designation: MS - Master of Science
-

Bio-PhD
Degree Designation: PHD - Doctor of Philosophy
-

Biomedical Informatics Department

Contacts

Office: Medical School Office Building (MSOB), room X- 343, 1265 Welch Road
Mail Code: 94305-5479
Phone: (650) 723-1398 Fax: (650) 725-7944
Email: bmi-contact@lists.stanford.edu
Web Site: http://bmi.stanford.edu

Courses offered by the Program in Biomedical Informatics are listed under the subject code BIOMEDIN on the Stanford Bulletin's ExploreCourses web site.

The program in Biomedical Informatics emphasizes research to develop novel computational methods that can advance biomedicine. Students receive training in the investigation of new approaches to conceptual modeling and to development of new algorithms that address challenging problems in the biological sciences and clinical medicine. Students with a primary interest in developing new informatics methods and knowledge are best suited for this program. Students with a primary interest in the biological or medical application of existing informatics techniques may be better suited for training in the application areas themselves.

Graduate Programs in Biomedical Informatics

The Biomedical Informatics Program is interdepartmental and offers instruction and research opportunities leading to M.S. and Ph.D. degrees in Biomedical Informatics. All students are required to complete the core curriculum requirements, and also to complete additional course work to fulfill degree requirements and pursue their technical interests and goals as specified for each degree program.

The program can provide flexibility and can complement other opportunities in applied medical research at Stanford. Special arrangements may be made for those with unusual needs or those simultaneously enrolled in other degree programs within the University. Similarly, students with prior relevant training may have the curriculum adjusted to eliminate requirements met as part of prior training.

The GRE is not required for admission.

Faculty

Program Director and Chair: Sylvia Plevritis

Director of Graduate Studies: Sylvia Plevritis

BMI Executive Committee: Sylvia Plevritis (Program Director and Chair), Steven Bagley (Interim Executive Director), Russ B. Altman, Manisha Desai, Ying Lu, Stephen Montgomery, Mark A. Musen, Daniel L. Rubin, Chiara Sabatti, Nigam Shah, Lu Tian, Robert Tibshirani, Dennis P. Wall

*Participating Faculty and Staff by Department**

Anesthesiology: Nima Aghaeepour (Assistant Professor)

Biochemistry: Douglas Brutlag (Professor Emeritus), Rhiju Das (Associate Professor), Ronald Davis (Professor), James Ferrell (Professor), Julia Salzman (Assistant Professor), Julie Theriot (Professor)

Bioengineering: Russ B. Altman (Professor), Kwabena Boahen (Professor), Markus Covert (Associate Professor), Scott Delp (Professor), Ingmar Riedel-Kruse (Consulting Assistant Professor), Vijay Pande (Adjunct Professor)

Biology: Hunter Fraser (Associate Professor), Dmitri Petrov (Professor), Jonathan Pritchard (Professor)

Biomedical Data Science: Russ B. Altman (Professor), Euan Ashley (Professor), Gill Bejerano (Associate Professor), Manisha Desai (Professor), Bradley Efron (Professor), Andrew Gentles (Assistant Professor), Olivier Gevaert (Assistant Professor), Trevor Hastie (Professor), Tina Hernandez-Boussard (Associate Professor), Iain Johnstone (Professor), Purvesh Khatri (Associate Professor), Teri Klein (Professor), Ying Lu (Professor), Mark A. Musen (Professor), Aaron Newman (Assistant Professor), Richard Olshen (Professor Emeritus), Julia Palacios (Assistant Professor), Sylvia Plevritis (Professor), Manuel Rivas (Assistant Professor), Daniel L. Rubin (Associate Professor), Chiara Sabatti (Professor), Julia Salzman (Assistant Professor), Nigam Shah (Associate Professor), Lu Tian (Professor), Robert Tibshirani (Professor), Dennis P. Wall (Associate Professor), Wing H Wong (Professor), James Zou (Assistant Professor)

Richard Olshen (Professor), Chiara Sabatti (Associate Professor), Robert Tibshirani (Professor), Dennis P. Wall (Associate Professor)

Chemical and Systems Biology: Joshua Elias (Assistant Professor), James Ferrell (Professor)

Chemistry: Vijay Pande (Professor)

Computer Science: Gill Bejerano (Associate Professor), David Dill (Professor Emeritus), Ronald Dror (Associate Professor), Leonidas Guibas (Professor), Anshul Kundaje (Assistant Professor), Terry Winograd (Professor Emeritus)

Dermatology: Paul Khavari (Professor)

Developmental Biology: Gill Bejerano (Associate Professor)

Electrical Engineering: Kwabena Boahen (Professor)

Energy Resources Engineering: Margot Gerritsen (Professor)

Genetics: Russ B. Altman (Professor), Euan Ashley (Professor), Michael Bassik (Assistant Professor), Ami Bhatt (Assistant Professor), J. Michael Cherry (Professor, Research), Stanley N. Cohen (Professor), Christina Curtis (Assistant Professor), Ronald Davis (Professor), William Greenleaf (Associate Professor), Karla Kirkegaard (Professor), Teri E. Klein (Senior Research Scientist), Anshul Kundaje (Assistant Professor), Jin Billy Li (Associate Professor), Stephen B. Montgomery (Assistant Professor), Jonathan Pritchard (Professor), Gavin Sherlock (Associate Professor), Arend Sidow (Professor), Michael P. Snyder (Professor), Hua Tang (Professor)

Health Research and Policy: Trevor Hastie (Professor), Mark Hlatky (Professor)

Management Science and Engineering: Margaret Brandeau (Professor), Ross D. Shachter (Associate Professor)

Mechanical Engineering: Scott Delp (Professor)

Medicine: Russ B. Altman (Professor), Euan Ashley (Professor), Mike Baiocchi (Assistant Professor), Sanjay Basu (Assistant Professor), Ami Bhatt (Assistant Professor), Jayanta Bhattacharya (Professor), Catherine Blish (Associate Professor), Carol Cain (Adjunct Assistant Professor), Jonathan Chen (Assistant Professor), Stanley Cohen (Professor), Christina Curtis (Assistant Professor), Manisha Desai (Professor), Michel Dumontier (Associate Professor), Andrew Gentles (Assistant Professor), Olivier Gevaert (Assistant Professor), Mary Goldstein (Professor), Summer Han (Assistant Professor), Tina Hernandez-Boussard (Associate Professor), Michael Higgins (Adjunct Associate Professor), Mark Hlatky (Professor), Hanlee P. Ji (Associate Professor), Purvesh Khatri (Associate Professor), Teri Klein (Professor), Lianne Kurina (Associate Professor, Teaching), Curtis Langlotz (Professor), Henry Lowe (Associate Professor), Mark A. Musen (Professor), Douglas K. Owens (Professor), Natalie Pageler (Clinical Associate Professor), David Relman (Professor), Daniel L. Rubin (Associate Professor), Robert W. Shafer (Professor, Research), Nigam Shah (Associate Professor), Samson Tu (Senior Research Engineer), P.J. Utz (Professor), Steven Bagley (Sr. Research Engineer), Eran Bendavid (Associate Professor), Zihuai He (Assistant Professor, Research)

Microbiology and Immunology: Karla Kirkegaard (Professor), Garry Nolan (Professor), David Relman (Professor), Julie Theriot (Professor)

Neurology: Zihuai He (Assistant Professor, Research)

Neurosurgery: Summer Han (Assistant Professor)

Operations, Information and Technology: Mohsen Bayati (Associate Professor)

Pathology: Stephen B. Montgomery (Associate Professor), Arend Sidow (Professor)

Pediatrics: Gill Bejerano (Associate Professor), Natalie Pageler (Clinical Associate Professor), Jonathan Palma (Clinical Associate Professor), Dennis P. Wall (Associate Professor)

Psychiatry and Behavioral Sciences: Vinod Menon (Professor, Research), Manish Saggar (Assistant Professor)

Psychology: Russell Poldrack (Professor)

Radiation Oncology: Ruijiang Li (Assistant Professor), Lei Xing (Professor)

Radiology: Sam (Sanjiv) Gambhir (Professor), Curtis Langlotz (Professor), Matt Lungren (Assistant Professor), Parag Mallick (Associate Professor, Research), Sandy A. Napel (Professor), David Paik (Adjunct Assistant Professor), Sylvia Plevritis (Professor/ Program Director), Daniel L. Rubin (Professor), Greg Zaharchuk (Professor)

Statistics: Bradley Efron (Professor), Trevor J. Hastie (Professor), Susan Holmes (Professor), Iain Johnstone (Professor), Art Owen (Professor), Julia Palacios (Assistant Professor), Chiara Sabatti (Professor), Robert Tibshirani (Professor), Wing H Wong (Professor)

Structural Biology: Michael Levitt (Professor)

Surgery: Tina Hernandez-Boussard (Associate Professor), Thomas Krumel (Professor)*)*

* Research opportunities are not limited to faculty and departments listed.

Graduate Advising

The Program in Biomedical Informatics is committed to providing academic and research advising in support of graduate student scholarly and professional development. When most effective, this advising relationship entails collaborative and sustained engagement by both the adviser and the advisee. As a best practice, advising expectations should be periodically discussed and reviewed to ensure mutual understanding. Both the adviser and the advisee are expected to maintain professionalism and integrity.

Graduate students are active contributors to the advising relationship, proactively seeking academic and professional guidance and taking responsibility for informing themselves of policies and degree requirements for their graduate program. The program's student services staff is also an important part of the student's advising team. They inform students and advisers about University and department requirements, procedures, and opportunities, and they maintain the official records of advising assignments and approvals.

Academic Adviser—Each new student in the Program in Biomedical Informatics is assigned an academic adviser (a member of the core or advising faculty or Executive Committee of the program). Academic advisers guide students in key areas such as selecting courses, discussing research rotations, developing of teaching pedagogy, navigating policies and degree requirements, and exploring academic opportunities and professional pathways. Usually, the academic adviser serves for the duration of the student's study; the BMI Student Handbook describes a process for formal adviser changes. In addition, the program director is available during the academic year by email and during office hours.

Academic progress and student completion of program requirements and milestones are monitored by the program director and student services staff, and are discussed by faculty during periodic meetings devoted to assessing graduate student progress. A detailed description of the program's requirements, milestones, and advising expectations are listed in the Biomedical Informatics Training Program Student Handbook, found on the program website, as well as in the section on the Biomedical Informatics Program (BiomInf-MS or BiomIn-PhD).

Research Adviser—Each student in the academic M.S. and Ph.D. degree programs must also have a research adviser, chosen by mutual agreement at the end of their research rotations (typically by the end of their first year in the program). This research adviser is a member of the core or advising faculty for the BMI program. The research adviser may not be the same person as the academic adviser. Research advisers and the students should have a clear, shared understanding of the scientific objectives of the student's work, and how it fits into a research program that will lead to an M.S. degree or Ph.D. degree. They should focus on the development of methods that are novel, generally applicable, and well-grounded in the informatics literature. In select cases, the research adviser may be a member of the collaborating faculty, in which case the student must have a co-adviser from the BMI core or advising faculty. When there is a secondary or co-adviser, the primary adviser and co-adviser should have a clear understanding of their mentorship roles.

Each Ph.D. student is required to fill out an annual Individual Developmental Plan (IDP), usually in the Summer. The IDP is then discussed with the research adviser, as a way to facilitate: advising the student, both during and beyond the Ph.D.; establishing clear expectations on both sides with respect to degree progress and timely graduation; and emphasizing the importance of wellness in graduate school, together with access to University wellness resources.

Each Ph.D. candidate is required to establish a reading committee for the doctoral dissertation by late third year or early fourth year. Students should consult frequently with all members of the committee about the direction and progress of the dissertation research and are required to meet annually with their whole committee. The detailed process, including Stanford and BMI policies such as composition of the committee, process toward dissertation, defense, submission of the final dissertation, and readiness to graduate, are described in the BMI Student Handbook.

Additionally, the program adheres to the University policies, guidelines, and responsibilities that apply to all faculty-student advising relationships. For a statement of University policy on graduate advising, see the Graduate Advising section of this bulletin.

Programs

BiomInf-MS
Degree Designation: MS - Master of Science
-

BiomIn-PhD
Degree Designation: PHD - Doctor of Philosophy
-

BIOM-PMN
Degree Designation:
-

Biophysics Department

Contact

Office: Alway Building, Room M116I
Mail Code:
Phone: (650) 723-7576; (650) 498-8179
Email: biophys-ssa@lists.stanford.edu
Web Site: http://med.stanford.edu/biophysics

Overview

Courses offered by the Biophysics Program are listed under the subject code BIOPHYS on the Stanford Bulletin's ExploreCourses web site.

The Biophysics Program offers instruction and research opportunities leading to the Ph.D. in Biophysics. Students admitted to the program may perform their graduate research in any appropriate department.

The Stanford Biophysics Program is an interdisciplinary, interdepartmental training program leading to the Ph.D. Degree in biophysics. The program centers on understanding biological function in terms of physical and chemical principles. The Program comprises faculty from 16 departments in the Schools of Humanities and Sciences, Medicine, Engineering, and the Stanford Synchrotron Radiation Laboratory. Research in the Program involves two overlapping branches of biophysics: the application of physical and chemical principles and methods to solving biological problems, and the development of new methods.

The Biophysics Program aims to train students in quantitative approaches to biological problems, while also developing their perspective in choosing forefront biological problems. A balanced academic program is tailored to the diverse backgrounds of the students. The program requires graduate-level coursework in physical and biological sciences, participation in seminar series, and most importantly achievement of a high level of proficiency in independent research.

Learning Outcomes (Graduate)

The Ph.D. is conferred upon candidates who have demonstrated substantial scholarship and the ability to conduct independent research and analysis in Biophysics. Through completion of advanced course work and rigorous skills training, the doctoral program prepares students to make original contributions to the knowledge of Biophysics and to interpret and present the results of such research.

Doctoral

Graduate Program in Biophysics

For information on the University's basic requirements for the Ph.D. degree, see the "Graduate Degrees" section of this bulletin.

Admissions

For more information, please refer to the Program Curriculum page.

Course Requirements

For more information, please refer to the Program Curriculum page.

Lab Rotation and Settlement

During the first year of graduate school in Biophysics, students are encouraged to complete a minimum two quarters of rotations in any faculty labs of their choice, a third rotation is allowed if necessary. Once the students finish their rotations, they make an official decision on which faculty's lab to settle in. If the faculty is not part of Biophysics, then the student needs to have an additional co-advising faculty member on their committee who is in Biophysics. Once the student settles in a lab, s/he is required to complete the first Individual Development Plan (IDP) and begin forming the reading committee.

Individual Development Plan (IDP)

In light of the benefits to trainee development and the likelihood that the IDP program will be a factor in NIH funding decisions, the Committee on Graduate Admissions and Policy (CGAP) has adopted a new policy requiring all Biosciences Ph.D. candidates and their mentors in the Schools of Medicine and H&S to create and discuss the Individual Development Plan (IDP) on an annual basis.

1. Complete the first IDP meeting with the adviser within 30 days of joining the thesis lab.
2. IDP meetings are required annually, in addition to and separate from thesis committee meetings (see below).

Reading Committee

See the "Degree-Specific Requirements (Doctoral Degrees)" section of this bulletin for University rules concerning doctoral degrees. See GAP 4.8, for further details on the Doctoral Dissertation Reading Committee.

Once a student have chosen a research adviser and begun thesis-related research, s/he is required to select a reading committee. The student's reading committee should be in place no later than Autumn Quarter of the third year in the program. The individuals selected by the student serve as an advising and consultative group for the duration of their graduate studies. They evaluate the student's dissertation proposal and constitute the core of their the defense committee. Students should consult with their research adviser on the selection of their reading committee.

The doctoral dissertation reading committee consists of the principal dissertation adviser and, typically, two other readers. The doctoral dissertation reading committee must have at least three members and may not have more than five members. All members of the reading committee approve the dissertation. At least one member must be from the student's major department. Normally, all committee members are members of the Stanford University Academic Council or are emeritus Academic Council members.

The reading committee, as proposed by the student and agreed to by the prospective members, is endorsed by the chair of the major department on this Doctoral Dissertation Reading Committee form. The student's department chair may, in some cases, approve the appointment of a reader who is not a current or emeritus member of the Academic Council (via the Petition for Non-Academic Council Doctoral Committee Members form), if that person is particularly well

qualified to consult on the dissertation topic and holds a Ph.D. or equivalent foreign degree). All examiners must hold a Ph.D. degree (or foreign equivalent). Former Stanford Academic Council members and non-Academic Council members may thus on occasion serve on a reading committee.

Any member of the Academic Council may serve as the principal dissertation adviser. If former Academic Council members, emeritus Academic Council members, or non-Academic Council members are to serve as the principal dissertation adviser, the appointment of a co-adviser who is currently on the Academic Council is required. This is to ensure representation for the student in the department by someone playing a major adviser role in completion of the dissertation. However, a co-adviser is not required during the first two years following retirement for emeritus Academic Council members who are recalled to active service. If the reading committee has four or five members, at least three members (comprising the majority) must be current or emeritus members of the Academic Council.

Qualifying Exam

Once students enter their third year of graduate studies, they are required to arrange a meeting with their committee to present to them a proposed thesis related research project (dissertation proposal). The meeting is called the qualifying exam, and should be completed no later than the end of Autumn Quarter of the student's third year. In anticipation of the exam, the student should prepare an approximately 10-page summary of their proposed research and/or any progress they have made at that time. The precise format (e.g., inclusion of a timeline, methods section, etc.) is flexible, and naturally can conform to the particular style of papers or proposals coming from their thesis lab. The main goal of the written portion is to briefly summarize the student's progress so far and carefully plan out their future thesis research plans with committee feedback and advice.

At the meeting, the student should be prepared to make a 30-45 minute presentation of their research where they discuss their results to date and propose further experiments. Audiovisual aids are not required, but may be useful if available. After completing the qualifying exam, students need to arrange annual thesis committee meetings with their committee members to review academic progress each year. Completing the qualifying exam serves to meet the student's first thesis committee meeting requirement. The thesis committee meetings should be completed once a year during the student's 3rd and 4th years, and twice a year past their fifth year and above.

Candidacy

Admission to candidacy for the doctoral degree is granted by the major department following a student's successful completion of qualifying procedures. Students are expected to be admitted to candidacy by the end of the second year of doctoral study. Candidacy is valid for five years, subject to satisfactory academic progress.

Terminal Graduate Registration (TGR)

Doctoral students who have been admitted to candidacy, completed all required courses and degree requirements other than the University oral exam and dissertation, completed 135 units or 10.5 quarters of residency (if under the old residency policy), and submitted a Doctoral Dissertation Reading Committee form, may request Terminal Graduate Registration (TGR) status to complete their dissertations. Students with more than one active graduate degree program must complete residency units between all active/completed degree programs in order to apply for TGR status. See the "Residency Policy for Graduate Students" section of this bulletin for additional information.

Dissertation/Oral Exam

The student must prepare a dissertation proposal defining the research to be undertaken, including methods of procedure. This proposal should be submitted by Autumn Quarter of the third year, and it must be approved by a committee of at least three members, including the principal research adviser, and at least one member from the Biophysics Program. The candidate must defend the dissertation proposal in an oral examination. The dissertation reading committee normally evolves from the dissertation proposal review committee.

The student must present a Ph.D. dissertation as the result of independent investigation that expresses a contribution to knowledge in the field of biophysics. The student must pass the University oral exam, taken only after the student has substantially completed the dissertation research. The examination is preceded by a public seminar in which the research is presented by the candidate.

COVID-19 Policies

COVID-19 Policies

On July 30, the Academic Senate adopted grading policies effective for all undergraduate and graduate programs, excepting the professional Graduate School of Business, School of Law, and the School of Medicine M.D. Program. For a complete list of those and other academic policies relating to the pandemic, see the "COVID-19 and Academic Continuity" section of this bulletin.

The Senate decided that all undergraduate and graduate courses offered for a letter grade must also offer students the option of taking the course for a “credit” or “no credit” grade and recommended that deans, departments, and programs consider adopting local policies to count courses taken for a “credit” or “satisfactory” grade toward the fulfillment of degree-program requirements and/or alter program requirements as appropriate.

Graduate Degree Requirements

Grading

The Program of Biophysics counts all courses taken in academic year 2020-21 with a grade of 'CR' (credit) or 'S' (satisfactory) towards satisfaction of graduate degree requirements that otherwise require a letter grade provided that the instructor affirms that the work was done at a 'B-' or better level.

Graduate Advising

Graduate Advising

Academic advising by our faculty is a critical component of our graduate students’ education. The Biophysics Program is committed to providing academic advising in support of graduate student scholarly and professional development. When most effective, this advising relationship entails collaborative and sustained engagement by both the adviser and the advisee. Both the adviser and the advisee are expected to maintain professionalism and integrity.

All matriculating students are assigned the program director as a faculty adviser to help them design their academic program. Before advancing to candidacy for the degree, students are expected to identify a group of at least three thesis advisers (also known as the dissertation reading committee), including a primary thesis adviser. The thesis advisers are selected by the student on the basis of expertise relevant to the thesis project, after undertaking two to three rotations of approximately one quarter in length each.

Thesis advisers meet with students at least once each year to discuss students’ Individual Development Plan(s) (IDPs). Additionally, students should meet with their adviser(s) on a regular basis throughout each year for guidance in key areas such as selecting courses, designing and conducting research, developing of teaching pedagogy, navigating policies and degree requirements, and exploring academic opportunities and professional pathways.

As a best practice, advising expectations should be periodically discussed and reviewed to ensure mutual understanding. Graduate students are active contributors to the advising relationship, proactively seeking academic and professional guidance and taking responsibility for informing themselves of policies and degree requirements for

their graduate program.

Academic progress and student completion of program requirements and milestones are monitored by the program staff and director, and are discussed at meetings of the executive committee.

Requirements and milestones, as well as more detailed descriptions of the program's expectations of advisers and students, are listed in the Student Handbook, found on the program website.

Additionally, the program adheres to the advising guidelines and responsibilities listed by the Office of the Vice Provost for Graduate Education and in the Graduate Academic Policies.

For a statement of University policy on graduate advising, see the "Graduate Advising" section of this bulletin.

Faculty

Faculty

Director of Graduate Studies:

- KC Huang (Bioengineering)

Emeritus:

- Philip C. Hanawalt (Biology, Dermatology)
- Harden M. McConnell (Chemistry)
- Stephen J. Smith (Molecular & Cellular Physiology)
- Norbert Pelc (Bioengineering, Radiology)

Professors:

- Russ Altman (Bioengineering, Genetics, Medicine - Biomedical Informatics)
- Manuel Amieva (Microbiology & Immunology, Pediatrics)
- Steve M. Block (Applied Physics, Biology)
- Steven Boxer (Chemistry)
- Anne Brunet (Genetics)
- Axel Brunger (Molecular & Cellular Physiology)
- Wah Chiu (Bioengineering)
- Gilbert Chu (Oncology, Biochemistry)
- Steven Chu (Physics, Molecular & Cellular Physiology)
- Jennifer Cochran (Bioengineering)
- Bianxiao Cui (Chemistry)
- Hongjie Dai (Chemistry)
- Mark Davis (Microbiology & Immunology)
- Sebastian Doniach (Physics, Applied Physics)

Stanford University

- James Ferrell (Chemical & Systems Biology, Biochemistry)
- Daniel Fisher (Applied Physics)
- Judith Frydman (Biology, Genetics)
- Chris Garcia (Molecular & Cellular Physiology, Structural Biology)
- Gary H. Glover (Radiology)
- Miriam Goodman (Molecular & Cellular Physiology)
- Daniel Herschlag (Biochemistry)
- Keith O. Hodgson (Chemistry)
- KC Huang (Bioengineering)
- Theodore Jardetzky (Structural Biology)
- Shamit Kachru (Physics)
- Peter S. Kim (Biochemistry)
- Brian Kobilka (Molecular & Cellular Physiology)
- Eric Kool (Chemistry)
- Ron Kopito (Biology)
- Roger D. Kornberg (Structural Biology)
- Craig Levin (Radiology)
- Michael Levitt (Structural Biology)
- Richard Lewis (Molecular & Cellular Physiology)
- Sharon Long (Biology)
- Crystal Mackall (Pediatrics, Medicine)
- Todd Martinez (Chemistry)
- Tobias Meyer (Chemical & Systems Biology)
- W. E. Moerner (Chemistry)
- Vijay Pande (Chemistry)
- Joseph D. Puglisi (Structural Biology)
- Stephen Quake (Bioengineering, Applied Physics)
- Jianghong Rao (Radiology)
- Mark Schnitzer (Biology, Applied Physics)
- Jan Skotheim (Biology)
- Edward I. Solomon (Chemistry)
- Andrew Spakowitz (Chemical Engineering)

- James A. Spudich (Biochemistry)
- Alice Y. Ting (Genetics)
- Shreyas Vasanawala (Radiology)
- Anthony Wagner (Psychology)
- Soichi Wakatsuki (Photon Science, Structural Biology)
- Thomas Wandless (Chemical & Systems Biology)
- William I. Weis (Structural Biology, Molecular & Cellular Physiology)
- Richard Zare (Chemistry)

Associate Professors:

- Annelise Barron (Bioengineering)
- Onn Brandman (Biochemistry)
- Zev Bryant (Bioengineering)
- David Camarillo (Bioengineering)
- Ovijit Chaudhuri (Mechanical Engineering)
- Jose R. Dinneny (Biology)
- Lynette Cegelski (Chemistry)
- Rhiju Das (Biochemistry)
- Adam de la Zerda (Structural Biology)
- Ron Dror (Computer Science)
- Alexander Dunn (Chemical Engineering)
- Liang Feng (Molecular & Cellular Physiology)
- William Greenleaf (Genetics)
- Pehr Harbury (Biochemistry)
- Michael Kapiloff (Ophthalmology)
- Jin Billy Li (Genetics)
- Jan Liphardt (Bioengineering)
- Merritt Maduke (Molecular & Cellular Physiology)
- Ashby Morrison (Biology)Mo
- Manu Prakash (Bioengineering)
- Julia Salzman (Biochemistry)
- Sindy Tang (Mechanical Engineering)
- Roseanna Zia (Chemical Engineering)

Stanford University

Assistant Professors:

- Monther Abu-Remaileh (Chemical Engineering)
- Raag Airan (Radiology)
- Lacramioara Bintu (Bioengineering)
- Alistair Boettiger (Developmental Biology)
- Gheorghe Chistol (Chemical & Systems Biology)
- Shaul Druckmann (Neurobiology, Psychiatry & Behavioral Sciences)
- Polly Fordyce (Genetics)
- Xiaojing Gao (Chemical Engineering)
- Olivier Gevaert (Biomedical Informatics, Biomedical Data Science)
- Benjamin Good (Applied Physics)
- Keren Haroush (Neurobiology)
- Possu Huang (Bioengineering)
- Anshul Kundaje (Genetics, Computer Science)
- Lingyin Li (Biochemistry)
- Jonathan Long (Pathology)
- Julia Palacios (Biomedical Data Sciences, Statistics)
- Johannes Reiter (Radiology, Biomedical Data Science)
- Grant M. Rotskoff (Chemistry)
- Manish Saggar (Psychiatry & Behavioral Sciences)
- Mary Teruel (Chemical & Systems Biology)
- Bo Wang (Bioengineering)
- Brad Zuchero (Neurosurgery)

Courses

Courses

Stanford Course Catalog website: https://explorecourses.stanford.edu/

Programs

BioPh-MS
Degree Designation: MS - Master of Science
-

BioPh-PhD
Degree Designation: PHD - Doctor of Philosophy

Cancer Biology Department

Contacts

Office: 265 Campus Drive, Suite G2103
Mail Code: 94305-5456
Phone: (650) 723-6198
Email: gracebatoon@stanford.edu
Web Site: https://med.stanford.edu/cancerbiology.html

Courses offered by the Cancer Biology Program are listed under the subject code CBIO on the Stanford Bulletin's ExploreCourses website.

The Cancer Biology Ph.D. program was established in 1978 at Stanford University. During the past four decades, the understanding of cancer has increased dramatically with the discovery of oncogenes and tumor suppressor genes, pathways of DNA damage and repair, cell cycle regulation, angiogenesis and responses to hypoxia, and the molecular basis of metastasis, among others. In addition, methods of parallel analysis including genomic and proteomic approaches have begun to refine and redefine the taxonomy of cancer diagnosis. This explosion of basic and clinical science has, in turn, resulted in the first successful cancer chemotherapies and immunotherapies based on knowledge of specific molecular targets. Stanford presents a unique environment to pursue interdisciplinary cancer research because the School of Medicine, the School of Humanities and Sciences, and the School of Engineering are located on a single campus, all within walking distance of one another.

The goal of the Cancer Biology Ph.D. program is to provide students with education and training that will enable them to make significant contributions to this remarkable field. Coursework during the first year is designed to provide a broad understanding of the molecular, genetic, cell biological, and pathobiological aspects of cancer. Students also learn about the current state of clinical diagnosis and treatment of human cancers. Equally important during the first year is a series of three rotations in research laboratories chosen by each student. By the end of the first year, each student has chosen his/her research advisor and has begun work on his/her dissertation project. A qualifying examination must be completed before the end of December of the second year. An annual Cancer Biology Conference provides students with an opportunity to present their research to one another and to the faculty in the program. The expected time to degree is four to five years.

Students are not limited to a single department in choosing their research advisors. The Cancer Biology Ph.D. program currently has approximately 65 graduate students located in a variety of basic science and clinical departments throughout the School of Medicine and School of Humanities and Sciences. Many students are supported by a training grant from the National Cancer Institute.

The Cancer Biology Ph.D. program is committed to fostering a diverse community of students. The program welcomes all individuals and strives to support them so they achieve their full potential. It values the diversity of its students because culture, socioeconomic and educational background, race, ethnicity, gender, sexual orientation, physical ability, life experiences, hobbies, and interests allow the program as a group to reach a greater level of innovation in cancer research.

Faculty

Program Co-Directors: Laura Attardi (Radiation Oncology and Genetics) and Julien Sage (Pediatrics and Genetics)

Executive Committee on Cancer Biology: Laura Attardi (Radiation Oncology and Genetics), Erinn Rankin (Radiation Oncology, Obstetrics, and Gynecology), Julien Sage (Pediatrics and Genetics), Kevin Wang (Dermatology), Monte Winslow (Genetics)

Admissions Committee on Cancer Biology: Laura Attardi (Radiation Oncology and Genetics), Brooks Benard (Ph.D.

Student), Nidhi Bhutani (Orthopedic Surgery), Matthew Bogyo (Pathology and Microbiology and Immunology), Gheorghe Chistol (Chemical and Systems Biology), Scott Dixon (Biology), Paul Khavari (Dermatology), Quynh-Thu Le (Radiation Oncology), Brianna McIntosh (Ph.D. Student), Everett Moding (Radiation Oncology), Jason Rodencal (Ph.D. Student), Julien Sage (Pediatrics and Genetics), Tanya Stoyanova (Radiology), Kevin Wang (Dermatology), Monte Winslow (Genetics)

Participating Departments and Faculty

Biochemistry: Philip Beachy (Professor), Mark Krasnow (Professor), Julia Salzman (Associate Professor)

Bioengineering: Jennifer Cochran (Professor)

Biology (School of Humanities and Sciences): Scott J. Dixon (Assistant Professor), Judith Frydman (Professor), Or Gozani (Professor), Ashby Morrison (Associate Professor), Dmitri Petrov (Professor), Jan M Skotheim (Professor), Tim Stearns (Professor)

Biomedical Data Science: Andrew Gentles (Assistant Professor), Purvesh Khatri (Associate Professor), Aaron Newman (Assistant Professor)

Chemical And Systems Biology: James K. Chen (Professor), Gheorghe Chistol (Assistant Professor), Karlene Cimprich (Professor)

Chemical Engineering and Genetics: Monther Abu-Remaileh (Assistant Professor), Xiaojing Gao (Assistant Professor)

Dermatology: Howard Y. Chang (Professor), Paul A. Khavari (Professor), Carolyn Lee (Assistant Professor), Anthony Oro (Professor), Kevin Wang (Assistant Professor)

Developmental Biology: Margaret Fuller (Professor), Roeland Nusse (Professor)

Genetics: Michael Bassik (Assistant Professor), Anne Brunet (Professor), Christina Curtis (Associate Professor), Livnat Jerby (Assistant Professor), Julien Sage (Professor; Co-Director of Stanford Cancer Biology Program), Serena Sanulli (Assistant Professor), Alice Ting (Professor), Monte Winslow (Associate Professor)

Medicine/Endocrinology/Gerontology/Metabolism: Justin Annes (Associate Professor), Katrin Chua (Associate Professor)

Medicine/Gastroenterology and Hepatology: Anson Lowe (Associate Professor)

Medicine/Hematology: Steven Artandi (Professor; Director, Stanford Cancer Institute), Calvin Kuo (Professor), Ravindra Majeti (Professor)

Medicine/Oncology: Ash Alizadeh (Professor), Gilbert Chu (Professor), Michael Clarke (Professor), Dean Felsher (Professor), Ronald Levy (Professor)

Microbiology and Immunology: Peter Jackson (Professor), Garry Nolan (Professor)

Neurology and Neurosurgery: Michelle Monje (Associate Professor)

Neurosurgery: Albert J. Wong (Professor)

Orthopedic Surgery: Nidhi Bhutani (Associate Professor)

Otolaryngology: John Sunwoo (Professor)

Pathology: Robert Angelo (Assistant Professor), Matthew Bogyo (Professor), Gerald Crabtree (Professor), Edgar Engleman (Professor), Andrew Fire (Professor), Bingwei Lu (Professor), Jonathan Long (Assistant Professor), Paul Salomon Mischel (Professor), Jonathan Pollack (Professor), Capucine van Rechem (Assistant Professor), Ansuman

Satpathy (Assistant Professor), Katrin Svensson (Assistant Professor), Irving Weissman (Professor; Virginia & D.K. Ludwig Professor for Clinical Investigation in Cancer Research, Professor of Developmental Biology), Marius Wernig (Professor)

Pediatrics/Hematology/Oncology: Charles Gawad (Associate Professor), Matthew Porteus (Professor), Kathleen Sakamoto (Professor)

Psychiatry and Behavioral Sciences: Erin Gibson (Assistant Professor)

Radiation Oncology/Radiation and Cancer Biology: Laura Attardi (Professor; Co-Director of Stanford Cancer Biology Program), Richard Frock (Assistant Professor), Edward Graves (Associate Professor), Everett Moding (Assistant Professor), Sharon Pitteri (Associate Professor), Erinn Rankin (Assistant Professor), Jiangbin Ye (Assistant Professor)

Radiation Oncology/Radiation Therapy: Max Diehn (Associate Professor), Quynh-Thu Le (Professor)

Radiology/Diagnostic Radiology: Parag Mallick (Associate Professor, Research), Sylvia Plevritis (Professor), Tanya Stoyanova (Assistant Professor)

Graduate Advising

Advising Expectations

The mission of the Cancer Biology Ph.D. program is to train graduate students so that they may ultimately launch careers related to the study and treatment of cancer. A major goal of the program is to assist students in their growth and development by constructing meaningful educational plans. The program believes that students will become outstanding cancer researchers through frequent and collegial personal contacts with their primary research advisors, members of their thesis committee, and other faculty in the program. Scientific interactions between students and faculty foster the development of motivated students who are independent thinkers and responsible decision makers. The program expects faculty thesis advisors to have an active role in the advising process, including by monitoring progress frequently and by helping define and develop realistic educational career plans through regular interactions with the advisee. Faculty thesis advisors should refer students to other institutional resources as needed. The program expects students to clarify their academic and career goals with their advisors and to be equal partners in the advising process, including by scheduling regular meetings with their advisors and by adhering to institutional policies, procedures, and requirements. These expectations, which are detailed in the program handbook, ensure the successful completion of degree requirements and timely graduation.

For a statement of University policy on graduate advising, see the "Graduate Advising" section of this bulletin.

Programs

CanBi-MS
Degree Designation: MS - Master of Science
-

CanBi-PhD
Degree Designation: PHD - Doctor of Philosophy
-

Chemical Engineering Department

Contacts

Office: Shriram Center for Bioengineering & Chemical Engineering, 443 Via Ortega, Room 129
Mail Code: MC 4300
Email: chemicalengineering@stanford.edu
Web Site: http://cheme.stanford.edu

Courses offered by the Department of Chemical Engineering are listed under the subject code CHEMENG on the *Stanford Bulletin's* ExploreCourses web site.

Research investigations are currently being carried out in the following fields: applied statistical mechanics, biocatalysis, bioengineering, biophysics, colloid science, computational materials science, electronic materials, hydrodynamic stability, kinetics and catalysis, Newtonian and non-Newtonian fluid mechanics, polymer science, renewable energy, rheo-optics of polymeric systems, and surface and interface science. Additional information may be found at http://cheme.stanford.edu.

The Department of Chemical Engineering offers opportunities for both undergraduates and graduate students to pursue course work and research in energy sciences and technology, which include the chemical, physical, mathematical, and engineering sciences.

In addition, both undergraduates and graduate students can pursue work in interdisciplinary biosciences, which include the chemical, biological, physical, mathematical, and engineering sciences. Students are encouraged to review course offerings in all departments of the School of Engineering and to seek academic advising with individual chemical engineering faculty. Students wishing assistance should talk with student services staff in the department.

Further information about the department also may be found on the department's website. Undergraduates considering majoring in Chemical Engineering are encouraged to talk with faculty and to meet with student services' staff in Shriram room 129. Students interested in pursuing advanced work in chemical engineering, including coterminal degrees, should contact the student services manager. Admission to an advanced degree program for an active Stanford graduate student is by approval of a Graduate Authorization Petition. All other interested applicants should go to the Graduate Admissions website for general and departmental information about the requirements and processes for applying for admission to a graduate degree program.

Mission of the Undergraduate Program in Chemical Engineering

Chemical engineers are responsible for the conception and design of processes for the purpose of production, transformation, and transportation of materials. This activity begins with experimentation in the laboratory and is followed by implementation of the technology in full-scale production. The mission of the undergraduate program in Chemical Engineering is to develop students' understanding of the core scientific, mathematical, and engineering principles that serve as the foundation underlying these technological processes. The program's core mission is reflected in its curriculum which is built on a foundation in the sciences of chemistry, physics, and biology. Course work includes the study of applied mathematics, material and energy balances, thermodynamics, fluid mechanics, energy and mass transfer, separations technologies, chemical reaction kinetics and reactor design, and process design. The program provides students with excellent preparation for careers in the corporate sector and government or for advanced study.

Graduate Programs in Chemical Engineering

The University’s requirements, including residency requirements, for the M.S., Engineer, and Ph.D. degrees are summarized in the Graduate Degrees section of this bulletin.

Current research and teaching activities cover a number of advanced topics in chemical engineering, including applied statistical mechanics, biocatalysis, biochemical engineering, bioengineering, biophysics, computational materials science, colloid science, dynamics of complex fluids, energy conversion, functional genomics, hydrodynamic stability, kinetics and catalysis, microrheology, molecular assemblies, nanoscience and technology, Newtonian and non-Newtonian fluid mechanics, polymer physics, protein biotechnology, renewable fuels, semiconductor processing, soft materials science, solar utilization, surface and interface science, and transport mechanics.

Fellowships and Assistantships

Qualified predoctoral applicants are encouraged to apply for nationally competitive fellowships, for example, those from the National Science Foundation. Applicants to the Ph.D. program should consult with their financial aid officers for application information and advice. In the absence of other awards, incoming Ph.D. students normally are awarded departmental fellowships. Matriculated Ph.D. students are supported primarily by fellowship awards and assistantship research or teaching appointments. All students are encouraged to apply for external competitive fellowships and may obtain information about various awarding agencies from faculty advisers and student services. Assistantships are paid positions for graduate students that, in addition to a salary, provide the benefit of a tuition allocation. Individual faculty members appoint students to research assistantships; the department chair appoints doctoral students to teaching assistantships. Contact departmental student services for additional information.

Faculty

Emeriti: (Professors) Andreas Acrivos, George M. Homsy, Robert J. Madix, Channing R. Robertson

Chair: Zhenan Bao

Professors: Zhenan Bao, Stacey F. Bent, Curtis W. Frank, Gerald G. Fuller, Chaitan Khosla, Eric S. G. Shaqfeh, Andrew J. Spakowitz, Alfred M. Spormann, James R. Swartz

Associate Professors: Alexander R. Dunn, Thomas F. Jaramillo, Elizabeth S. Sattely

Assistant Professors: Monther Abu-Remaileh, Matteo Cargnello, Xiaojing Gao, Danielle J. Mai, Jian Qin, William A. Tarpeh, Roseanna N. Zia

Courtesy Professors: Lynette S. Cegelski, Jennifer R. Cochran, Sarah C. Heilshorn, Daniel Herschlag, Meagen Mauter, David Myung, H. Tom Soh, Robert M. Waymouth

Senior Lecturer: Lisa Y. Hwang

Lecturers: Ricardo B. Levy, Howard B. Rosen

Adjunct Lecturer: Sara Loesch-Frank

Adjunct Professors: Ying-Chih Chang, Shari B. Libicki, John Moalli, Do Y. Yoon

Graduate Advising

For a statement of University policy on graduate advising, see the Graduate Advising section of this bulletin.

Master's Student Advising

The Department of Chemical Engineering is committed to providing academic advising in support of our M.S. students' education and professional development. When most effective, this advising relationship entails collaborative engagement by both the adviser and the advisee. As a best practice, advising expectations should be discussed and reviewed to ensure mutual understanding. Both the adviser and the advisee are expected to maintain professionalism and integrity.

At the start of graduate study, normally at the beginning of the Fall quarter, each student is assigned a master's program adviser: a member of our faculty who will provide guidance in course selection and in exploring academic opportunities and professional pathways. The department's graduate handbook provides information and suggested timelines for advising meetings. Usually, the same faculty member serves as program adviser for the duration of master's study, but the handbook does describe a process for formal adviser changes.

In addition, the Director of Graduate Studies (DGS) and the Graduate Committee meets with all the master's students at the start of the first year, and are available during the academic year by email and during office hours.

Our department's student services office is also an important part of the master's advising team. They inform students and advisers about university and department requirements, procedures, and opportunities, and they maintain the official records of advising assignments and approvals.

Finally, graduate students are active contributors to the advising relationship, proactively seeking academic and professional guidance and taking responsibility for informing themselves of policies and degree requirements for their graduate program.

For a statement of University policy on graduate advising, see the Graduate Advising section of this bulletin.

Ph.D. Student Advising

The Department of Chemical Engineering is committed to providing academic advising in support of doctoral student scholarly and professional development. When most effective, this advising relationship entails collaborative and sustained engagement by both the adviser and the advisee. As a best practice, advising expectations should be periodically discussed and reviewed to ensure mutual understanding. Both the adviser and the advisee are expected to maintain professionalism and integrity.

Faculty advisers guide students in key areas such as selecting courses, designing and conducting research, developing of teaching pedagogy, navigating policies and degree requirements, and exploring academic opportunities and professional pathways. The department's graduate handbook provides information and suggested timelines for advising meetings in the different stages of the doctoral program.

Ph.D. students are initially assigned a program adviser at the outset of their matriculation at Stanford. This faculty member will provide initial guidance in course selection, in exploring academic opportunities and professional pathways, and in identifying doctoral research opportunities. The department does require formal lab rotations during two quarters prior to selecting a doctoral research/thesis adviser.

Graduate students are expected to select a thesis adviser before the end of the first year of the program. Students are encouraged to work collaboratively with their adviser to establish a dissertation project and form a Dissertation Reading Committee. Advancement to doctoral candidacy is expected to occur prior to the end of the fourth quarter of the program. The process and timing of adviser selection is described in the Graduate Academic Policies and Procedures (GAP). The research supervisor assumes primary responsibility for the future direction of the student, taking on the roles previously filled by the program adviser, and will ultimately direct the student's dissertation. Most students find an adviser from among the primary faculty members of our department. However, the research adviser may be a faculty member from another Stanford department who is familiar with supervising doctoral students and able to provide both advising and funding for the duration of the doctoral program. When the research adviser is from outside our department, the student will also identify a program adviser from our primary faculty, to provide guidance on departmental requirements and opportunities. Thesis advisers are expected to meet with graduate students at least once each year to discuss and help develop the student's program plan. Additionally, advisers and students should meet on a regular basis throughout the year to discuss the student's professional development in key areas such as selecting courses, designing and conducting research, developing teaching pedagogy, navigating policies and degree requirements, and exploring academic opportunities and professional pathways.

The Director of Graduate Studies (DGS) meets with all the doctoral students at the start of the first year, and is available during the academic year by email and during office hours. Our department's student services office is also an important part of the doctoral advising team: they inform students and advisers about university and department requirements, procedures, and opportunities, and they maintain the official records of advising assignments and approvals. Students are encouraged to talk with the DGS and the student services office as they consider adviser selection, or for guidance in working with their adviser(s).

Our doctoral students are active contributors to the advising relationship, proactively seeking academic and professional guidance and taking responsibility for informing themselves of policies and degree requirements for their graduate program.

Additionally, the program adheres to the advising guidelines and responsibilities listed by the Office of the Vice Provost for Graduate Education (VPGE) and in the Graduate Academic Policies (GAP).

Programs

ChemE-BS
Degree Designation: BS - Bachelor of Science
-

ChemE-Eng
Degree Designation: ENG - Engineer

ChemE-Min
Degree Designation:
-

ChemE-MS
Degree Designation: MS - Master of Science

ChemE-PhD
Degree Designation: PHD - Doctor of Philosophy

ChemE-PMn
Degree Designation:
-

Chemical and Systems Biology Department

Contacts

Office: CCSR 4145
Mail Code: 5174
Phone: 650-497-9485
Email: ekay@stanford.edu
Web Site: https://chemsysbio.stanford.edu/

Courses offered by the Department of Chemical and Systems Biology are listed under the subject code CSB on the Stanford Bulletin's ExploreCourses web site.

The department emphasizes individualized training at the interface of physical science and biomedical science. The program encourages students to draw upon a variety of modern scientific techniques, ranging from recent advances in molecular biology and protein biochemistry to synthetic organic chemistry and single cell imaging. Graduate students in the department take courses in signal transduction networks, chemical biology, and other areas of importance to their research goals.

Faculty

Emeriti: (Professors) Robert H. Dreisbach, Stuart Kim, Richard A. Roth, James P. Whitlock

Chair: James K. Chen

Director of Graduate Studies: Daniel F. Jarosz

Professors: James K. Chen, Karlene A. Cimprich, James E. Ferrell, Jr., Nathanael Gray, Tobias Meyer, Daria Mochly-Rosen, Thomas J. Wandless, Joanna K. Wysocka

Professor (Teaching): Kevin Grimes

Associate Professor: Daniel F. Jarosz

Assistant Professors: Gheorghe Chistol, Lei Stanley Qi

Courtesy Professors: Philip Beachy, Carolyn Bertozzi, Matthew Bogyo, Justin Du Bois, Beverly S. Mitchell, Paul A. Wender

Courtesy Associate Professors: Markus W. Covert, Michael Z. Lin, Jan M. Skotheim, Aaron F. Straight, Marius Wernig

Graduate Advising

Graduate Advising Expectations

The Department of Chemical and Systems Biology is committed to providing academic advising in support of graduate student scholarly and professional development. When most effective, this advising relationship entails collaborative and sustained engagement by both the advisor and the advisee. As a best practice, advising expectations should be periodically discussed and reviewed to ensure mutual understanding. Both the advisor and the advisee are expected to maintain professionalism and integrity.

Faculty advisors guide students in key areas such as selecting courses, designing and conducting research, developing of teaching pedagogy, navigating policies and degree requirements, and exploring academic opportunities and professional pathways.

Graduate students are active contributors to the advising relationship, proactively seeking academic and professional guidance and taking responsibility for informing themselves of policies and degree requirements for their graduate program.

For a statement of University policy on graduate advising, see the "Graduate Advising" section of this bulletin.

What is the overall purpose of faculty advising in this program?

The Department of Chemical and Systems Biology is committed to providing advising to ensure graduate student personal, academic, and professional development. Both the advisor and advisee are key players in sustaining a collaborative relationship with integrity and professionalism.

How are advisors initially assigned to or selected by incoming graduate students?

Graduate students select a thesis advisor generally at the end of Spring Quarter of their first year. Before selecting an advisor, students rotate in one lab per quarter during Autumn through Spring quarters of their first academic year. Students may opt for a fourth lab rotation and select an advisor in the Summer Quarter before their second year. After each rotation, students meet with the CSB Advisory Committee to discuss how the rotation went and whether the next rotation is a good match for the student's educational and professional goals. With the guidance of the CSB Advisory Committee and assistance from the student services staff, if needed, the student and thesis advisor mutually agree to work together.

What is the process by which students can change advisors and when should this happen?

The student should approach the CSB student services office and the CSB Advisory Committee to discuss the reasoning and proposal to change advisors. The student should work with the student services office and CSB Advisory Committee to try to find a suitable advisor. This process should happen as soon as issues start to arise and/or as soon as the student would like to change advisors.

How frequently should students meet with their advisors and how are those meetings set up? How does meeting frequency change as the student progresses?

As mentioned above, at the end of each quarter, first-year students meet with the CSB Advisory Committee to discuss potential issues with the program, issues with host laboratories, classes, the qualifying exam, and career planning. The topics that are discussed include ideas about student activities as well as additions or changes to the program. Students are also encouraged to meet with the CSB Advisory Committee members or the Department Chair individually if any issues come up throughout the year.

Committee meetings are held once a year after the qualifying exam. When a student is in their fifth year, the committee meetings should be held twice a year. From the sixth year and on, the meetings should be held every quarter.

What topics might be discussed at advising or committee meetings?

Committee meetings are the best opportunity for the student to get feedback about the progress and to get second opinions about which types of experiments should be pursued to help answer the questions being addressed in the student's thesis. The committee should include four faculty members counting the thesis advisor (faculty on the committee do not need to be tenure track). At least one of the four faculty members has to be a primary faculty in the CSB department, but the composition can be different from that in the qualifying exam and can also change during the student's thesis work as they may need to pursue different directions. The structure and format of the meetings are listed below. The committee should provide advice on future directions, attendance of conferences, career plans and more personal laboratory issues. Each meeting should include a time plan to ensure that the thesis project can be completed within five-and-a-half years.

At the beginning of each meeting, the student exits the room to allow for a discussion between the advisor and the rest of the committee. A few minutes before the end of the meeting, the advisor is asked to leave the room to allow for the student and the rest of the committee to discuss issues about the lab, potential personal issues, training opportunities and to discuss possible differences in research goals or issues relating to authorship.

If a committee meeting is not completed by the end of Summer Quarter, an enrollment hold is placed on the student's account and may delay graduate funding.

Are there any forms to complete or deliverables associated with any of those meetings?

Following the committee meeting, the student is required to summarize the discussion and formulate a revised plan for subsequent work. This summary should be discussed with the advisor and sent to the committee members within one week for comment. A final copy of the report must be submitted to the CSB Student Services Manager.

How and when does a student select and convene their dissertation reading or thesis committee? What is the purpose of the committee? And, how often should the committee meet?

Students select their reading committee when they go TGR, which is usually towards the end of their fourth year in Spring Quarter. The purpose of the committee is to further discuss the student's thesis and provide feedback. As mentioned above, committee meetings are held once a year after the qualifying exam. When a student is in their fifth year, the committee meetings should be held twice a year. From the sixth year and on, the meetings should be held every quarter.

How does the department or program, advisor, and student decide when a student is ready to graduate?

The decision to schedule an oral defense requires the support of each member on the committee including the thesis advisor. The department also expects that each student complete for the thesis at least one peer-reviewed, first-author paper that is accepted for publication by the time the oral thesis exam is being scheduled.

Who else might a student consult for help or guidance, e.g., department chair, DGS, student services staff?

At any time, students may consult with CSB student services staff, the Director of Graduate Studies and the Department Chair. Students may reach out to any of these parties by email to set up a meeting and/or stop by the student services office.

Programs

ChSBio-MS
Degree Designation: MS - Master of Science
-

ChSBio-PhD
Degree Designation: PHD - Doctor of Philosophy
-

MolPh-MS
Degree Designation: MS - Master of Science
-

Chemistry Department

Contacts

Office: Central Chemistry Office, 337 Campus Drive West
Mail Code: 94305-4401
Phone: (650) 723-2501
Web Site: https://chemistry.stanford.edu/

Courses offered by the Department are listed under the subject code CHEM on the Stanford Bulletin's ExploreCourses web site.

For further information about the Department of Chemistry, see the department's website.

Chemistry is about the nature of matter, how to make it, how to measure it, how to model it. In that sense chemistry really matters; it is essential to explaining all the real world. It holds the key to making new drugs, creating new materials, and understanding and controlling material properties of all sorts. It is no wonder then that chemistry is called the "Central Science." Traditionally, it is divided into subdisciplines, such as organic, inorganic, physical, biological, theoretical, and analytical, but these distinctions blur as it is increasingly appreciated how all of science, let alone chemistry, is interconnected.

A deeper understanding of chemistry enables students to participate in research and studies involving biotechnology, nanotechnology, catalysis, human health, materials, earth and environmental sciences, and more. Together, faculty, postdoctoral scholars, graduate and undergraduate students actively work side by side developing new probes of biological molecules, modeling protein folding and reactivity, manipulating carbon nanotubes, developing new oxidation and polymerization catalysts, and synthesizing organic molecules to probe ion-channels. The overarching theme of these pursuits is a focus at the atomic and molecular levels, whether this concerns probing the electronic structure and reactivity of molecules as small as dihydrogen or synthesizing large polymer assemblies. The ability to synthesize new molecules and materials and to modify existing biological structures allows the properties of complex systems to be analyzed and harnessed with huge benefit to both the scientific community and society at large.

Undergraduate Program

Mission

The mission of the undergraduate program in Chemistry is to provide students with foundational knowledge in the subdisciplines of chemistry as well as depth in one or more advanced areas, including cutting-edge research. Introductory course work allows students to gain hands-on experience with chemical phenomena, gather data, and propose models and explanations for their observations, thus participating in the scientific process from the start. In advanced labs and lectures, students build an in-depth knowledge of the molecular principles of chemistry empowering them to become molecular engineers comfortable with the methodologies necessary to solve complex problems and effectively articulate their ideas to the scientific community. Ultimately the analytical thinking and problem solving skills developed within the chemistry major make students successful candidates for a wide range of careers in chemistry and beyond, including engineering, teaching, consulting, medicine, law, science writing, and science policy.

Placement Test for First-Year Undergraduates

All students who are interested in taking general chemistry at Stanford must take the Autumn 2021 General Chemistry Placement Test before Autumn quarter begins, regardless of chemistry background. See How To Choose Your First Class for further details on the Placement Test.

Graduate Program

The University's basic requirements for the M.S. and Ph.D. degrees are discussed in the "Graduate Degrees" section of this bulletin.

GRE Admissions Requirement

The general GRE and subject test in Chemistry are optional for 2021, but strongly recommended as part of the admissions application for the Ph.D. in Chemistry.

Fellowships and Scholarships

In addition to University and school fellowships and scholarships open to properly qualified students, there are several department fellowships in chemistry awarded based on merit. Teaching assistantships and research assistantships are provided to eligible graduate students. Teaching assistantships beyond the required quarters are available for those interested. Graduate fellowships, scholarships, and teaching assistantships are administered through the Department of Chemistry student services office.

Teaching Credentials

The requirements for certification to teach chemistry in the secondary schools of California may be ascertained by consulting the section on credentials under the "Graduate School of Education, Masters, Stanford Teacher Education Program (STEP)" section of this bulletin and the credential administrator of the School of Education.

Chemical Physics

Students with an exceptionally strong background in physics and mathematics may, with special arrangement, pursue a program of studies in chemical physics.

Faculty

Emeriti: (Professors) Hans C. Andersen, John I. Brauman, Christopher E. D. Chidsey, James P. Collman, Wray H. Huestis, Robert Pecora, Barry M. Trost

Chair: Steven G. Boxer

Vice Chair: T. Daniel P. Stack

Director of Graduate Studies: Lynette Cegelski

Director of Undergraduate Studies: Christopher E. D. Chidsey

Professors: Steven G. Boxer, Carolyn R. Bertozzi, James K. Chen, Bianxiao Cui, Hongjie Dai, Justin Du Bois, Michael D. Fayer, Keith O. Hodgson, Chaitan Khosla, Eric T. Kool, Todd J. Martínez, W. E. Moerner, Edward I. Solomon, Robert M. Waymouth, Paul A. Wender, Richard N. Zare

Associate Professors: Noah Z. Burns, Lynette Cegelski, Matthew Kanan, Hemamala Karunadasa, Thomas E. Markland, T. Daniel P. Stack, Yan Xia

Assistant Professors: Steven M. Banik, Laura Dassama, Fang Liu, Grant Rotskoff

Courtesy Professors: Zhenan Bao, Stacey F. Bent, Yi Cui, Joseph M. DeSimone, Kelly Gaffney, Jianghong Rao, Andrew Spakowitz, Alice Y. Ting

Adjunct Professors: Christopher Walsh

Lecturers: Megan K. Brennan, Nathaniel Brown, Jennifer Schwartz Poehlmann, Kevin Sibucao, Joshua Visser

Graduate Advising Expectations

The Department of Chemistry is committed to providing academic advising in support of graduate student scholarly and professional development. This advising relationship entails collaborative and sustained engagement with mutual respect by both the advisor and advisee.

1. The advisor is expected to meet at least monthly with the graduate student to discuss on-going research.
2. There should be a yearly independent development plan (IDP) meeting between the graduate student and advisor. Topics include research progress, expectations for completion of Ph.D., areas for both the student and advisor to improve in their joint research effort.
3. A research advisor should provide timely feedback on manuscripts and thesis chapters.
4. Graduate students are active contributors to the advising relationship, proactively seeking academic and professional guidance and taking responsibility for informing themselves of policies and degree requirements for their graduate program.
5. If there is a significant issue concerning the graduate student's progress in research, the advisor must communicate this to the student and to the Graduate Studies Committee in writing. This feedback should include the issues, what needs to be done to overcome these issues, and by when.

For a statement of University policy on graduate advising, see the Graduate Advising section of this bulletin. Academic advising by Stanford faculty is a critical component of all graduate students' education and additional resources can be found in the Policies and Best Practices for Advising Relationships at Stanford and the Guidelines for Faculty-Student Advising at Stanford.

Programs

Chem-BS
Degree Designation: BS - Bachelor of Science

Chem-MS
Degree Designation: MS - Master of Science

Chem-PMn
Degree Designation:

Chem-Min
Degree Designation:

Chem-PhD
Degree Designation: PHD - Doctor of Philosophy

Civil and Environmental Engineering Department

Contacts

Office: Yang and Yamazaki Building (Y2E2), Rooms 314/316
Mail Code: 94305-4020
Phone: (650) 723-3074; Fax: (650) 725-8662

Web Site: https://cee.stanford.edu/

Courses offered by the Department of Civil and Environmental Engineering are listed under the subject code CEE on the *Stanford Bulletin's* ExploreCourses website.

The Department of Civil and Environmental Engineering (CEE) at Stanford conducts fundamental and applied research to advance the civil and environmental engineering professions, educates future academic and industry leaders, and prepares students for careers in professional practice. Civil and environmental engineers work to protect and sustain the natural environment while creating and maintaining a resilient, sustainable built environment. Civil and environmental engineers are essential to providing the necessities of human life, including water, air, shelter, infrastructure, and energy, in increasingly more efficient and renewable ways.

Research and teaching in the department focus on the theme of engineering for sustainability, including three core areas: built environment, environmental and water studies, and atmosphere/energy. In the area of sustainable built environments, the focus is on processes, techniques, materials, and monitoring technologies for planning, design, construction and operation of environmentally sensitive, economically efficient, performance-based buildings and infrastructure, and managing associated risks from natural and man-made hazards. In the area of environmental and water studies, the focus is on creating plans, policies, science-based assessment models and engineered systems to manage water in ways that protect human health, promote human welfare, and provide freshwater and coastal ecosystem services. In the atmosphere/energy area, research and teaching focus on fundamental energy and atmospheric engineering and science, assessment of energy-use effects on atmospheric processes and air quality, and analysis and design of energy-efficient generation and use systems with minimal environmental impact.

The department oversees undergraduate programs in Civil Engineering and in Environmental Systems Engineering. The department also hosts the School of Engineering undergraduate major in Architectural Design and the undergraduate major in Atmosphere/Energy - both of which lead to a B.S. in Engineering.

Mission of the Undergraduate Program in Civil Engineering

The mission of the undergraduate program in Civil Engineering is to equip students with the knowledge and skills needed for world-class civil engineering practice. This pre-professional program balances the fundamentals common to many specialties in civil engineering and allows for concentration in any of seven areas: structures, construction, environmental, energy/climate, fluid mechanics/hydrology, urban systems, or sensors/analytics. Students in the major learn to apply knowledge of mathematics, science, and civil engineering to conduct experiments, design structures and systems to creatively solve engineering problems, and communicate their ideas effectively. The major prepares students for careers in consulting, industry and government, as well as for graduate studies in science and engineering.

Mission of the Undergraduate Program in Environmental Systems Engineering

The mission of the undergraduate program in Environmental Systems Engineering is to prepare students for incorporating environmentally sustainable design, strategies and practices into natural and built systems and infrastructure involving buildings, water supply, and urban coastal regions. Courses in the program are multidisciplinary in nature, combining math/science/engineering fundamentals, and tools and skills considered essential for an engineer, along with a choice of one of three focus areas for more in-depth study: coastal environments, freshwater environments, or urban environments. This major offers somewhat more flexibility in the curriculum than the Civil Engineering degree program, and requires fewer units. The program of study, which includes a capstone experience, aims to equip engineering students to take on the complex challenges of the twenty-first century involving natural and built environments, in consulting and industry as well as in graduate school.

Graduate Programs in Civil and Environmental Engineering

The Department of Civil and Environmental Engineering (CEE) offers graduate degrees structured in three areas of study.

- The Atmosphere/Energy Program offers degrees with the designation of Atmosphere/Energy.
- The Sustainable Built Environment Program offers degrees with two designations:
  - Structural Engineering and Geomechanics
  - Sustainable Design and Construction
- The Environmental Engineering Program offers degrees with the designation of Environmental Engineering

For detailed information on these programs and degree designations, see the "Programs of Graduate Study in Civil and Environmental Engineering" section of this bulletin.

Admissions and Financial Aid

Applications require online submission of the application form and statement of purpose, followed by three letters of recommendation and transcripts of all courses taken at colleges and universities. See https://gradadmissions.stanford.edu/. Policies for each of the programs in the department are available on the department website. See: https://cee.stanford.edu/. Successful applicants are advised as to the degree and program for which they are admitted. If students wish to transfer from one CEE program to another after being accepted, an application for the intradepartmental change must be filed within the department. If, after enrollment at Stanford, students wish to continue toward a degree beyond that for which they were originally admitted, a written application must be made to the Department of Civil and Environmental Engineering.

The department maintains a continuing program of merit-based financial aid for graduate students. Merit-based financial aid consists of teaching assistantships and/or research assistantships for up to half-time work, with the assumption that students spend the rest of their time on coursework and research required for completion of the degree. Fellowship and scholarship awards or loans may supplement assistantships and other basic support. Continued support is generally provided for further study toward the Engineer or Ph.D. degree based on the student's performance, the availability of research funds, and requisite staffing of current research projects.

Research Centers and Facilities

Environmental engineering research in the department is conducted primarily in the Bob and Norma Street Environmental Fluid Mechanics Laboratory (EFML) and the Environmental Engineering and Science Laboratory (EESL). The EESL is home to the National Science Foundation (NSF) supported Engineering Research Center for Re-inventing the Nation's Urban Water Infrastructure (ReNUWIt), a four-university consortium that seeks more sustainable solutions to urban water challenges in the arid west; the William and Cloy Codiga Resource Recovery Center (CR2C), a new facility for pilot-scale testing of resource recovery technology; and one of the sites for the U.S. Department of Energy supported Energy-Water Desalination Hub entitled the National Alliance for Water Innovation. Other centers and groups in the department related to environmental engineering include the Environmental Informatics Group, the National Performance of Dams Program (NPDP), and the center for Sustainable Development and Global Competitiveness (SDGC). There is also extensive collaboration with research centers and groups throughout the university, including the Stanford Woods Institute for the Environment, the Stanford Program on Water, Health & Development, the Bill Lane Center for the American West, the Carnegie Institution, the Center for Innovation in Global Health, Stanford Bio-X, the Environmental and Natural Resources Law and Policy Program, the Freeman Spogli Institute for International Studies, and the Precourt Institute for Energy.

Several research centers in the department focus on improving the sustainability of the built environment. The John A. Blume Earthquake Engineering Center conducts research on earthquake engineering including advanced sensing and control, innovative materials, and risk hazard assessment. Research and advanced global teamwork education is conducted in the Project Based Learning (PBL) Laboratory. The Center for Integrated Facility Engineering (CIFE)

employs advanced information technologies and concepts to integrate the facility development process and enhance the usability, buildability, operability, and sustainability of the built environment. The Global Projects Center (GPC) is a multi-discipline, multi-university research program aimed at improving the performance of global engineering and construction projects, with a special focus on financing and governance of sustainable civil and social infrastructure projects. The Stanford Sustainable Systems Lab (S3L) aims to advance the state of the art in the design, monitoring and management of built environment systems, with a special focus on smart grid, smart buildings and smart infrastructures.

Programs of Graduate Study in Civil and Environmental Engineering

Atmosphere/Energy Program

The Atmosphere/Energy Program in Civil and Environmental Engineering combines atmospheric science with energy science and engineering. The main goals of the program are to educate students and the public, through courses, research, and public outreach, about the causes of climate, air pollution, and weather problems and methods of addressing these problems through renewable and efficient energy systems. In addition, students learn about feedback between the atmosphere and renewable energy systems and the effects of the current energy infrastructure on the atmosphere.

Major focus areas of energy research include examining the resource availability of renewable energies, such as wind, solar, and wave, and studying optimal methods of combining renewable energies together to match energy supply with instantaneous demand. This type of work is generally done through a combination of data analysis, three-dimensional atmospheric computer modeling of wind, solar, wave, and hydroelectric power resources, and transmission load flow computer modeling. Other energy research, performed through three-dimensional computer modeling, focuses on the effects, for example, of hydrogen fuel cell vehicles on air pollution and the ozone layer and the effects of ethanol and diesel vehicles on air quality and climate. Studies also examine the feedback of wind turbines to the atmosphere and the effects of climate change on wind and solar energy resources.

Atmospheric research in the program generally involves laboratory work, field measurements, or three-dimensional computer modeling of the combined atmosphere, ocean, and land surface. An example of laboratory work includes measuring the properties of organic particulate matter that forms in the atmosphere. Examples of fieldwork include measuring exposures to secondhand smoke, allergens, and emissions from building materials.

Computer modeling is performed at a variety of spatial scales, from the globe down to the size of a building or smaller. Some examples of modeling studies include examining the effects of air pollution particles on clouds, rainfall, water supply, ultraviolet radiation, the stratospheric ozone layer, and climate, simulating the dispersion of toxic contaminants in an urban street canyon, studying the effects of aircraft exhaust and biomass burning on climate, studying the effects of carbon dioxide domes over cities on air pollution mortality, and studying the leading causes of global warming and their impacts.

Students interested in the Atmosphere and also Clean Renewable Energy systems would most likely apply to the Atmosphere/Energy Program. Those interested in the Atmosphere and also Water systems would most likely apply to the Environmental Engineering Program. Those interested in Atmospheric topics alone (e.g. weather, climate, pollution and its impacts) could apply to either, depending on the courses of interest.

Environmental Engineering Program

The mission of the Environmental Engineering program is to develop state-of-the-art knowledge, models, and processes which form the core of environmental engineering practice, and to train and educate current and future academic and professional environmental leaders. We do this by synthesizing physical, biological, and chemical facets of engineering and science along with elements of the social sciences into our research and teaching. Ultimately, the

goal is to protect and sustain our natural resources and human health and contribute to the sustainable development of physical infrastructure, including systems for wastewater treatment, water supply, renewable energy, and resilient coastal environments.

Research and coursework in the Environmental Engineering program are centered around five focus areas:

- Aquatic Chemistry & Biology, and Process Engineering
- Environmental and Geophysical Fluid Mechanics
- Environmental Data, Statistics, and Modeling
- Human Health and the Environment
- Hydrology and Water Resources

Research in the program spans the physical, chemical, and biological dimensions of Environmental Engineering. The physical aspects are the primary focus of research in the Bob and Norma Street Environmental Fluid Mechanics Laboratory (EFML), whereas research on the chemical and biological aspects is conducted in the Environmental Engineering and Science Laboratory (EESL). The EESL is home to the National Science Foundation (NSF) supported Engineering Research Center for Re-inventing the Nation's Urban Water Infrastructure (ReNUWIt), a four-university consortium that seeks more sustainable solutions to urban water challenges in the arid west, the William and Cloy Codiga Resource Recovery Center (CR2C), a facility for pilot-scale testing of resource recovery technology, and one of the sites for the U.S. Department of Energy supported Energy-Water Desalination Hub entitled the National Alliance for Water Innovation. There is extensive crossover between the EFML and the EESL, reflecting the interdisciplinary nature of environmental engineering that seeks to quantify physical, biological, and chemical processes in the environment in an integrated way. Environmental research is also conducted in numerous centers and groups in the department including the Environmental Informatics Group, the National Performance of Dams Program (NPDP), and the center for Sustainable Development and Global Competitiveness (SDGC). There is also extensive collaboration with research centers and groups throughout the university, including the Stanford Woods Institute for the Environment, the Bill Lane Center for the American West, the Carnegie Institution, the Center for Innovation in Global Health, Stanford Bio-X, the Environmental and Natural Resources Law and Policy Program, the Freeman Spogli Institute for International Studies, and the Precourt Institute for Energy.

Courses in the Environmental Data, Statistics and Modeling, Environmental and Geophysical Fluid Mechanics, and Hydrology and Water Resources focus areas concentrate on developing an understanding of the physical processes controlling the movement of mass, energy, and momentum in aquatic environments and the atmosphere. Specific course topics include experimental methods, fluid transport and mixing processes, the fluid mechanics of stratified flows, natural flows in coastal waters, estuaries, lakes, and open channels, turbulence and its modeling, flow and transport in porous media, stochastic methods in both surface and subsurface hydrology, watershed hydrology and modeling, water resources infrastructure and systems, global atmospheric circulation, the atmospheric boundary layer, air pollution from global to indoor scales, and wind energy.

Courses in the Aquatic Chemistry, Biology, and Process Engineering and Human Health and the Environment focus areas emphasize the chemical, biological, and engineering aspects of air and water quality and pollution fate and transport, along with characterizing human health risks and developing testing strategies to protect public health. Specific course topics include chemical principles and their application to the analysis and solution of problems in aqueous environments, biochemical and biophysical principles of biochemical reactions, physical and chemical unit operations for water treatment, microbial processes for the transformation of environmental contaminants, microbial metabolic pathways in microbial bioenergy systems, the movement and survival of pathogens in the environment, use of microbial bioreactors for degradation of contaminants and recovery of clean water, quantification of human exposure to toxic chemicals and pathogens in the environment, methods to enumerate and isolate organisms used to assess risk of enteric illnesses in drinking and recreational waters, and the impacts of water supply and wastewater management approaches on public health around the globe.

Sustainable Built Environment Program

The Sustainable Built Environment program includes subprograms in Structural Engineering and Geomechanics, and Sustainable Design and Construction. These programs focus on educating practitioners and researchers to plan, design, build, and operate more sustainable buildings and infrastructure.

The Structural Engineering and Geomechanics (SEG) subprogram educates designers and researchers who want to progress beyond traditional life safety code-based design, to develop and disseminate performance-based structural and geotechnical engineering methods and tools that maximize the lifecycle economic value of facilities.

The Sustainable Design and Construction (SDC) subprogram provides courses in sustainable, multi-stakeholder design methods and tools that incorporate lifecycle assessment, project planning and entitlement, green architectural design, lighting, and energy analysis, power systems, transportation, water supply and wastewater treatment to educate students interested in promoting more sustainable development of buildings and infrastructure.

Admission is managed separately for these two subprograms; prospective students should indicate their preference on their application.

Structural Engineering and Geomechanics

The Structural Engineering and Geomechanics (SEG) subprogram encompasses teaching and research in structural design and analysis, structural materials, earthquake engineering and structural dynamics, advanced sensing and structural health monitoring, data science for smart structures and cities, risk and reliability analysis, disaster resilience, computational science and engineering, solid mechanics, computational mechanics, and geomechanics. The SEG subprogram prepares students for industrial or academic careers.

Students can balance engineering fundamentals with modern computational and experimental methods to customize programs to launch careers as consultants on large and small projects, designers, and engineering analysts.

Structural design and analysis focuses on the conceptual design of structural systems and on computational methods for predicting the static and dynamic, linear and nonlinear responses of structures.

Structural materials research and teaching focuses on the design and analysis of high-performance as well as low-environmental impact materials.

Earthquake engineering and structural dynamics addresses earthquake phenomena, ground shaking, and the behavior, analysis, and design of structures under seismic and other dynamic forces.

Advanced sensing and data science focuses on development and application of sensing, signal processing, and machine learning for structural systems. The goal is to better understand those systems and improve their performance as well as user experience. Applications include structural health monitoring, intelligent transportation system, occupant activity/health monitoring, and interactive space.

Reliability and risk analysis focuses on assessing damage and losses to structures and lifeline systems under earthquakes, wind and other hazards; insights from these assessments are used to engineer more sustainable structures and more resilient communities.

Computational science and engineering emphasizes the application of modern computing methods to structural engineering and geomechanics, and encompasses numerical, structural, and geotechnical analysis.

In the area of geomechanics, students focus on the application of the principles of computational and applied mechanics to problems involving geologic materials including soil and rock, as well as on the use of computational methods for analysis and design of foundations and earth structures.

Sustainable Design and Construction

The Sustainable Design and Construction (SDC) subprogram prepares students for careers in managing the planning, design, construction, and operation of sustainable buildings and infrastructure so that their lifecycle economic value, their net contribution to environmental functions and services, and their social equity are maximized. To give students the breadth and depth necessary to become leaders in practice or research in sustainable design and construction, the SDC program offers four tracks of study: construction, energy, structures, water and sustainable urban systems. In addition to providing critical skills and the necessary industry context, each track offers courses in the following areas of competency: Construction engineering and management; building and infrastructure development; structural performance, design, and analysis; infrastructure systems; energy systems, energy efficiency, and atmosphere.

Classes address advanced topics like modern company and project management methods; cutting-edge information technology, metrics and tools to enhance lifecycle sustainability of the built environment; sensor networks embedded in intelligent buildings and infrastructure; strategy, economics, entrepreneurship and organization design for new businesses; and corporate or governmental initiatives aimed at enhancing the sustainability of buildings and infrastructure.

The SDC subprogram is intended for students with undergraduate degrees in architecture, engineering, science, construction management, economics, or business who wish to pursue careers that enhance the sustainability of the built environment.

Employers of past SDC graduates include: architectural and engineering design firms, constructors, design-build firms, and developers focused on delivering green buildings and infrastructure; energy and sustainability consultants; facility management or sustainability departments within large companies; clean-tech start ups, and venture funds.

SDC Construction (SDC-C)

The SDC-C track includes courses in construction engineering and management and introduces advanced modeling and visualization methods and tools - including artificial intelligence and data science applications - known as virtual design and construction. This track prepares technically qualified students for leadership roles in engineering and management in all phases of the development of major constructed facilities. It emphasizes management techniques useful in organizing, planning, and controlling the activities of diverse specialists working within the unique project environment of the construction industry, and it covers construction engineering aspects of heavy, industrial, and building construction. Additional related course work is available from other programs within the department, from other engineering departments, and from other schools in the University such as Earth Sciences and the Graduate School of Business. SDC-C allows students substantial flexibility to tailor their program of study for careers with general contractors, specialty contractors, real estate or infrastructure developers, or facility owners and operators.

SDC-Energy (SDC-E)

The SDC-Energy (SDC-E) track includes courses on design and construction of buildings and infrastructure systems to produce, distribute, and consume energy sustainably. SDC-E prepares students for careers in design and construction of building energy systems, renewable power generating systems, and smart power grids connected to smart buildings and infrastructure, cleantech venture capital, sustainability-focused public policy, green real estate development, and sustainability management positions.

SDC-E includes courses from the CEE department and several other departments at Stanford on sustainable HVAC design and construction of small scale and large structures, the planning, design and construction of renewable power systems, and sensing and control technologies to link integrated smart grids with intelligent buildings, data centers and infrastructure systems.

SDC-Structures (SDC-S)

The SDC-Structures (SDC-S) track includes courses from construction engineering and management and Structural Engineering and Geomechanics (SEG) to prepare students for careers in design and construction firms that provide integrated design-build project delivery, construction management, and pre-construction services.

This track prepares students for multidisciplinary collaborative teamwork in an integrated design and construction process. The subprogram extends a student's design or construction background with core courses in each of these areas and develops the background needed to understand the concerns and expertise of the many project stakeholders. It includes a comprehensive project-based learning experience.

The SDC-S track is intended for applicants with backgrounds in engineering and science. Applicants should also have a background in the planning, design, or construction of built structures by virtue of work experience and/or their undergraduate education. Knowledge in subjects from the traditional areas of civil engineering is necessary for students to receive the degree and to satisfy prerequisite requirements for some of the required graduate courses. Students with an undergraduate degree in Civil Engineering, and who expect to pursue careers with design or construction firms that emphasize design-build, EPC, or turnkey projects should consider SDC-S.

SDC-Sustainable Urban Systems (SDC-SUS)

The SDC-Sustainable Urban Systems (SDC-SUS) track combines courses by several faculty from the Department of Civil and Environmental Engineering with courses on sustainable design and construction to focus on the urban scale of the built environment. The SDC-SUS track prepares students for careers in sustainable design, construction, and operation of infrastructure systems and communities.

This track offers courses in frameworks for urban-scale planning of infrastructure systems, technologies to model, simulate, analyze, and visualize the built environment at the urban scale, urban planning, and data analysis. The track includes a significant project-based experience on an actual project in a community.

This track is intended for students with a background in urban planning and systems-level understanding of the built environment from economic, environmental, or social perspectives with an interest to enhance the sustainability of the built environment through leadership roles in public agencies, city government, financial institutions, engineering firms, or technology providers.

Faculty

Emeriti: (Professors) James O. Leckie, Raymond E. Levitt, Gilbert M. Masters, Perry L. McCarty, Leonard Ortolano, Henry W. Parker, Martin Reinhard, Haresh C. Shah, Robert L. Street, Clyde B. Tatum, Paul M. Teicholz

Chair: Sarah L. Billington

Associate Chairs: Michael D. Lepech, Nicholas T. Ouellette

Co-Directors of Graduate Studies: David L. Freyberg, Christian Linder

Professors: Jack W. Baker, Sarah L. Billington, Alexandria B. Boehm, Ronaldo I. Borja, Craig S. Criddle, Jennifer Davis, Gregory G. Deierlein (on sabbatical Spring Quarter), Martin A. Fischer, Oliver B. Fringer, Lynn M. Hildemann (on sabbatical Autumn and Spring Quarter), Mark Z. Jacobson, Anne S. Kiremidjian, Peter K. Kitanidis (on sabbatical Autumn and Winter Quarter), Jeffrey R. Koseff (on sabbatical Winter Quarter), Kincho H. Law, Michael D. Lepech, Richard G. Luthy (on sabbatical Spring Quarter), Eduardo Miranda, William A. Mitch, Stephen G. Monismith, Nicholas T. Ouellette, Alfred M. Spormann

Associate Professors: David L. Freyberg, Christian Linder, Meagan Mauter, Haeyoung Noh, Ram Rajagopal

Assistant Professors: Sarah Fletcher, Catherine Gorlé, Rishee Jain

Emeritus Courtesy Professor: Peter M. Pinsky

Courtesy Professor: Margot G. Gerritsen

Courtesy Associate Professor: Leif Thomas

Courtesy Assistant Professor: Jenny Suckale

Senior Lecturer: John Barton

Lecturers: Michael Bennon, Stanley Christensen, Daniel Colvard, Kyle Douglas, Derek Fong, Renate Fruchter, Diana Gragg, Darryl Goodson, Robert Groves, Glenn Katz, Nelson Koen Cohen, Royal Kopperud, Amy Larimer, Michael Lyons, Renë Morkos, Jose Luis Moscovich, Andrew Peterman, Alexander (Sandy) Robertson, Peter Rumsey, Anand Subramani, Sebastien Tilmans, Jon Wren, Jiaona Zhang

Adjunct Lecturers: Thomas Beischer, Annalisa Boslough, Beverly Choe Harris, Charles Debbas, Dimitris Farmakis, Kenneth Hayes, David Kleiman, Erik Kolderup, Drew Krafcik, Ashby Monk, Peter Rumsey, Kristen Stasio, Christopher Wasney, Allison Williams, Ethen J. Wood

Adjunct Professors: Howard Ashcraft, Vladimir Bazjanac, Terry Beaubois, James Cloern, Angelos Findikakis, Robert Groves, Robert Hickey, Jeremy Isenberg, Calvin Kam, Michael Kavanaugh, Gloria Lau, Mike Lyons, Andrew Manning, Martin McCann Jr, Paul Meyer, Pedram Mokrian, Piotr Moncarz, Jose Luis Moscovitch, Colin Ong, Wayne Ott, Benedict Schwegler, Brian Sedar, Patrick Shiel, Michael Steep, Avram Tucker, Jie Wang, Jane Woodward, Jon Wren

Visiting Professor:

* Recalled to active duty.

Graduate Advising Expectations

Faculty advisers serve as intellectual and professional mentors to their graduate students. They are expected to provide knowledgeable support concerning policies for graduate studies, help prepare their students to be competitive for employment, maintain a high level of professionalism, and establish expectations concerning adviser/advisee relationship consistent with University and department standards. General University policies on advising and the conduct of research can be found at VPGE's Advising and Mentoring website.

It is important to distinguish between master's and doctoral advising. Master's students are assigned academic program advisers randomly, unless they explicitly request a specific faculty to advise them. The process by which a master's student can change advisers is flexible and can be done without any paperwork, provided that the change of adviser is made within the same program. The student, however, is expected to inform their old and new academic advisers, as well as the department's students services office, of such a change. Doctoral students, on the other hand, are expected to be advised by the faculty who admitted them throughout the duration of their doctoral studies. Any change in adviser requires a formal admit letter from the new adviser that includes an explicit commitment to support the student financially throughout the duration of their doctoral studies.

Master's students are expected to meet with their academic program advisers at the beginning of the school year to discuss their courses and proposed year-long academic plans. They are empowered to request an appointment with their adviser at any time throughout the school year to discuss any problems that arise with their studies, or changes with their academic plans.

Doctoral students and their faculty advisers are expected to discuss and agree on how regular meetings will be set up within a day or two of the student's start as a Ph.D. student. The discussion should include meeting frequency and deliverables associated with any of those meetings. They should discuss and agree on how the degree progress will be monitored, for example, through a department annual review process or regular meetings with adviser and thesis committees. They should also discuss all the requirements of the Ph.D. degree, including expectations for the General Qualifying Examination, how and when to select and convene the dissertation reading or thesis committee, when and how to decide when a student is ready to graduate, and when to take the University Oral Examination.

For a statement of University policy on graduate advising, see the Graduate Advising section of this bulletin.

Programs

CE-BS
Degree Designation: BS - Bachelor of Science

CE-Min
Degree Designation:

CEE-Eng
Degree Designation: ENG - Engineer

CEE-MS
Degree Designation: MS - Master of Science

CEE-PhD
Degree Designation: PHD - Doctor of Philosophy

CEE-PMn
Degree Designation:

EnvEn-Min
Degree Designation:
-

ENVSE-BS
Degree Designation: BS - Bachelor of Science
-

ENVSE-MIN
Degree Designation:
-

Classics Department

Contacts

Office: Building 110, Main Quad
Mail Code: 2145
Phone: (650) 723-0479
Email: classics@stanford.edu
Web Site: http://classics.stanford.edu

Courses offered by the Department of Classics are listed on the *Stanford Bulletin's* ExploreCourses web site under the subject code CLASSICS.

The study of Classics has traditionally centered on the literature and material culture of ancient Greece and Rome, including Greek and Latin language, literature, philosophy, history, art, and archaeology. At Stanford, Classics also explores connections with other ancient cultures and with the modern world, as well as specialized fields such as ancient economics, law, papyrology, and science. The department's faculty approaches Classics from an interdisciplinary perspective that crosses geographical, temporal, and thematic territories. Studying ancient epic poetry can lead to looking at modern cinema afresh; ancient Athenian politics opens new perspectives on modern politics; and the study of Rome presents parallels with other empires just as Latin illuminates the history of English and the Romance languages. In short, Classics at Stanford is an interdisciplinary subject concerned not only with Greek and Roman civilization but also with the interaction of cultures and societies that influenced the ancient Mediterranean basin and continue to influence human society across the globe.

Mission of the Undergraduate Program in Classics

The mission of the undergraduate program in Classics is to provide students with a broad background centered on the literature and material culture of ancient Greece and Rome, including Greek and Latin language, literature, philosophy, history, art, and archaeology. At Stanford, students in the Classics program also explore the connections between ancient cultures and the modern world as well as specialized fields such as ancient economics, law, papyrology, and science. The program's faculty approaches Classics from an interdisciplinary perspective that crosses

geographical, temporal and thematic territories. The program is concerned not only with Greek and Roman civilization but also with the interaction of cultures and societies that influenced the ancient Mediterranean basin and continue to influence human society across the globe.

Course Numbering

CLASSICS courses are numbered according to level and area of study.

	Art History and Film Studies Course Catalog Numbering System
DIGIT	**AREA**
001-099	Introductory Courses
100-199	Undergraduate Language, Core, Electives and Independent Study
200-299	Advanced Undergraduate, Coterminal, MA and PhD
300-399	Graduate Seminars and Dissertation Research

Faculty

Emeriti (Professors): Marsh H. McCall, Jr., Susan A. Stephens, Susan Treggiari

Chair: Richard Saller

Director of Graduate Studies: David Cohen

Director of Undergraduate Studies: Reviel Netz

Professors: David Cohen, Andrew M. Devine, Richard P. Martin, Ian Morris, Reviel Netz, Andrea Nightingale, Josiah Ober, Anastasia-Erasmia Peponi, M. Rush Rehm, Richard Saller, Walter Scheidel, Michael Shanks

Associate Professors: Giovanna Ceserani, Christopher B. Krebs, Justin Leidwanger, Jody Maxmin, Grant Parker, Jennifer Trimble

Assistant Professors: Hans Bork, Sarah Derbew

Courtesy Professors: Fabio Barry, Chris Bobonich, Alan Code, Charlotte Fonrobert, Michael Penn, Bissera Pentcheva, Caroline Winterer, Yiqun Zhou

Lecturers: Kilian Mallon, Kelly Nguyen, David Pickel, Elizabeth Ten-Hove, John Tennant

Adjunct Lecturer: Maud Gleason

Graduate Advising Expectations

The Department of Classics is committed to providing academic advising in support of graduate student scholarly and professional development. When most effective, this advising relationship entails collaborative and sustained engagement by both the adviser and the advisee.

The goal of advising in the graduate program is to help students in selecting courses that best suit their intellectual goals, in designing and conducting research, navigating degree requirements, exploring academic and professional opportunities, and preparing for their post-graduate careers.

Graduate students are expected to be active collaborators in the advising relationship. They are responsible for seeking academic and professional guidance and for informing themselves of policies and degree requirements for the Ph.D. or M.A. program.

An important part of the advisee-advisor relationship is for students to discuss their own expectations for the adviser-advisee relationship with the adviser and revisiting these expectations periodically.

Director of Graduate Studies (DGS)

A Department faculty member serves as the Director of Graduate Studies (DGS). The DGS monitors the degree progress of all M.A. and Ph.D. students, offers advice on meeting Department and University requirements, coordinates Departmental advising and TA assignments, and approves petitions for funding or other needs before submission to the Graduate Committee (see below).

Track Adviser

Ph.D. and M.A. students are admitted to one of four tracks within the Classics Department, each with its own requirements (Archaeology, History, Literature, and Philosophy). Each track also has an individual adviser in the pre-dissertation stage, who advises on track-specific coursework and training in research methodologies, and professional development. Entering students should meet routinely (at least once per quarter) with both the DGS and with the track adviser, who approve a course of study, monitor progress, and provide advice about funding opportunities, strategies for scheduling general and other exams required for degree progress, and to provide support in the event that difficulties arise.

Student Services Officer (SSO)

In addition, the Department's Student Services Officer serves as the student's primary contact regarding Department and University procedures and can provide information, assistance, and the appropriate forms and procedures for academic and financial matters.

Academic progress and student completion of program requirements and milestones are monitored by the SSO, which is reviewed as necessary by the DGS and are discussed by faculty at an annual meeting devoted to assessing graduate student progress. Students who have made satisfactory academic progress are normally advanced to candidacy at the end of their second year in residency by faculty vote at this annual review meeting.

Graduate Studies Committee

The DGS, the track advisers (the DGS typically serves as track adviser for their track), and the SSO constitute the Graduate Studies Committee. All requests for funding that fall outside of allowed discretionary spending, extraordinary travel away from campus, petitions for leave of absence, and any disciplinary issues that may arise must be reviewed and, as necessary, approved by the Graduate Studies Committee.

Dissertation Adviser and Reading Committee

In the course of their second year, if not sooner, Ph.D. students choose a faculty member who serves as their dissertation proposal adviser who helps guide the writing of the dissertation. The student and the proposal adviser work together to begin defining a topic and determining what preliminary reading or other work needs to be done. The student must choose the two other faculty members who, with the dissertation proposal adviser, form the dissertation proposal defense committee (typically the Reading Committee). At the time that the student has successfully defended his or her dissertation proposal (normally at the beginning of the fourth year), the dissertation proposal adviser typically assumes the responsibilities of the dissertation adviser. Dissertation advisers and students should meet on a regular

basis throughout the year to discuss the student's professional development in key areas such as designing and conducting research, developing teaching pedagogy, navigating policies and degree requirements, and exploring academic opportunities and professional pathways.

Students are encouraged to work closely with at least two or three faculty members early in the Ph.D. program to benefit from their various perspectives and to learn which faculty members might be particularly appropriate as their dissertation adviser and other members of their Reading Committee.

Expectations

Ph.D. and M.A. students are expected to meet regularly with their advisers and to keep them informed about their academic progress. To facilitate this, each student must meet with the DGS and the Track Adviser at the beginning of Autumn Quarter and again in Winter Quarter and in early in Spring Quarter during their first two years in the program. DGS and Track Advisers are available at the beginning of each quarter for these meetings.

Once Ph.D. students have successfully defended their dissertation proposals (normally at the beginning of the fourth year in residence) and have completed all of their required teaching assignments, with the consent of their advisers and the Graduate Studies Committee, they may petition to conduct research away from campus for one or more quarters (typically in Greece, Italy, or other regions of the Mediterranean). Students doing so are required to be in regular contact with their dissertation adviser and reading committee. Students must have a written schedule for communicating regularly. In addition, all students must respond promptly to all communications from their advisers and the SSO.

If the dissertation adviser relationship is not conducive to academic progress or is in some other way problematic, the student is responsible for contacting the DGS and/or the SSO and/or the Chair to discuss the issues. The DGS and SSO work with the student to address any concerns; in some instances, this might lead to a change of adviser. Students are encouraged to voice concerns sooner rather than later, in order for any potential issues to be addressed as early as possible.

Additional Resources

A detailed description of the program's requirements, milestones, and advising expectations are listed in the Classics Ph.D. Handbook found on the program website. Additionally, the program adheres to the advising guidelines and responsibilities listed by the Office of the Vice Provost for Graduate Education (VPGE) and in the Graduate Academic Policies (GAP).

For a statement of University policy on graduate advising, see the "Graduate Advising" section of this bulletin.

Programs

Class-BA
Degree Designation: BA - Bachelor of Arts
-

Class-MA
Degree Designation: MA - Master of Arts
-

Class-Min
Degree Designation:
-

Class-PhD
Degree Designation: PHD - Doctor of Philosophy
-

Class-PMn
Degree Designation:
-

Communication Department

Contacts

Office: McClatchy Hall, Building 120, Room 110
Mail Code: 94305-2050
Phone: (650) 723-1941
Web Site: http://comm.stanford.edu

Courses offered by the Department of Communication are listed under the subject code COMM on the Stanford Bulletin's ExploreCourses web site.

Stanford's Department of Communication focuses on media in all its forms. The department studies the processes and effects of mass communication: the nature and social role of the various media; their structure, function, and ethics; and their impact on the political system, culture, and society. In this context, it considers not only traditional mass media, such as newspapers, magazines, radio, television, and film, but also information technology, online media, virtual reality, and the Internet. Students are trained as social scientists who can study the media and as potential practitioners in the use of the media in journalism, mass communications, and digital media. The department combines theory and practice and fosters individual research opportunities for its students, employing both quantitative and qualitative approaches.

The Department of Communication engages in research in communication and offers curricula leading to the B.A., M.A., and Ph.D. degrees. The M.A. degree prepares students for a career in journalism. The department also offers current Stanford University undergraduates a coterminal program with an M.A. emphasis in Media Studies. The Ph.D. degree leads to careers in university teaching and research-related specialties.

The John S. Knight Journalism (JSK) Fellowships champions innovators and entrepreneurs from around the world as they reinvent journalism. Each year, the program gives up to 20 fellows the resources to test their ideas for improving the quality of news and information reaching the public, while challenging misinformation and disinformation; holding the powerful accountable; strengthening local news; and fighting bias, intolerance and injustice.

Mission of the Undergraduate Program in Communication

The mission of the undergraduate program in Communication is to expose students to a broad-based understanding of communication theory and research. Students in this major are expected to become familiar with the fundamental concerns, theoretical approaches, and methods of the field, and to acquire advanced knowledge in one or more sub-areas of the discipline. This is accomplished by several levels of study: a core curriculum; intermediate-level electives; and optional internships. Majors also have the opportunity to do advanced research projects. The department is committed to providing students with analytical and critical skills needed for success in graduate programs, professional schools, or immediate career entry.

Learning Outcomes (Undergraduate)

The department expects undergraduate majors in the program to be able to demonstrate the following learning outcomes. These learning outcomes are used in evaluating students and the department's undergraduate program. Students are expected to demonstrate:

1. an understanding of core knowledge within the discipline of communication.
2. the ability to communicate ideas clearly and persuasively in writing.
3. the ability to analyze a problem and draw correct inferences using qualitative and/or quantitative analysis.
4. the ability to evaluate theory and critique research within the discipline of communication.

Learning Outcomes (Graduate)

The purpose of the master's program is to further develop knowledge and skills in communication and to prepare students for professional careers or doctoral studies. This is achieved through completion of courses in the primary field, as well as related areas, and experience with independent work and specialization.

The Ph.D. is conferred upon candidates who have demonstrated substantial scholarship and the ability to conduct independent research and analysis in communication. Through completion of advanced coursework and rigorous training in research, the doctoral program prepares students to make original contributions to the knowledge of communication and to interpret and present the results of such research.

Admission

Prospective Undergraduates: Applications are available at Undergraduate Admissions.

Prospective Coterminal Students: See the University Registrar's web site for information on how to apply.

Prospective Graduate Students: Applications are available online at Graduate Admissions.

Submission of Graduate Record Examination (GRE) scores is optional for applicants to the Ph.D. Program in Communication, and not required for applicants to the master's program. Admission to each graduate degree program is competitive and based on the pool of applicants each year rather than on standard criteria that can be stated in advance. See Communication Department admission procedures and requirements for detailed information about admission to the department.

Stanford students who are completing an M.A. degree and who desire entry into the Ph.D. program must file a Graduate Program Authorization Petition in Axess. Such students are considered alongside all other doctoral applicants.

Faculty

Emeriti: (Professor) Theodore L. Glasser, Donald F. Roberts; (Professor, Teaching)

Chair: James T. Hamilton

Director, Doctoral Program in Communication: Jeremy Bailenson

Director, John S. Knight Journalism Fellowships: Dawn E. Garcia

Director, Graduate Program in Journalism: James T. Hamilton

Director, Graduate Program in Coterminal Media Studies: Byron Reeves

Director, Undergraduate Studies: Fred Turner

Professors: Jeremy Bailenson, James S. Fishkin, James T. Hamilton, Jeffrey T. Hancock, Shanto Iyengar, Jon Krosnick, Jennifer Pan, Nilam Ram, Byron B. Reeves, Fred Turner

Assistant Professors: Angèle Christin, Gabriella Harari, Xiaochang Li

Courtesy Professors: Nathaniel Persily, Walter Powell

Lorry I. Lokey Visiting Professor in Professional Journalism: Cheryl Phillips, Serdar Tumgoren

Hearst Professionals in Residence: Geralyn Migielicz

Carlos Kelly McClatchy Visiting Lecturer: Janine Zacharia

Lecturers: R.B. Brenner, Gary Pomerantz, James Wheaton

Graduate Advising Expectations

The Department of Communication is committed to providing academic advising in support of graduate student scholarly and professional development. When most effective, this advising relationship entails collaborative and sustained engagement by both the advisor and the advisee. As a best practice, advising expectations should be periodically discussed and reviewed to ensure mutual understanding. Both the advisor and the advisee are expected to maintain professionalism and integrity.

Faculty advisors guide students in key areas such as selecting courses, designing and conducting research, developing of teaching pedagogy, navigating policies and degree requirements, and exploring academic opportunities and professional pathways.

Graduate students are active contributors to the advising relationship, proactively seeking academic and professional guidance and taking responsibility for informing themselves of policies and degree requirements for their graduate program.

For a statement of University policy on graduate advising, see the "Graduate Advising" section of this bulletin.

Ph.D. in Communication

Students are assigned a temporary advisor upon admission to the department. By the end of the third quarter of the first year, students confirm in writing that they will remain with or change their advisor. The faculty advisor must be an Academic Council member and a member of the Communication department.

Faculty advisors guide students in key areas such as selecting courses, designing and conducting research, developing teaching pedagogy, navigating policies and degree requirements, and exploring academic opportunities and professional pathways.

It is the responsibility of the student to meet with their advisor at least once per quarter during the academic year to discuss academic standing and graduate degree progress.

In addition, the Director of Graduate Studies is always available to Ph.D. students for consultation.

Requirements and milestones, as well as more detailed descriptions of the program's expectations of advisors and students, are listed in the "Degree Requirements and Department Procedures for Ph.D. Students and Ph.D. Advisors" available on the department website.

Master's Program in Communication—Journalism Track

Before the start of graduate study, normally during Summer Quarter, each student is assigned an academic advisor: a member of our journalism faculty who provides guidance in course selection, course planning, and exploring short- and long-term career opportunities and professional pathways. The advisor serves as the first resource for consultation and advice about a student's academic program.

The Director of the Graduate Program in Journalism initially serves as the advisor for all coterminal journalism master's students until a final academic advisor is assigned.

In addition, the Director of the Graduate Program in Journalism is always available to journalism master's students for consultation.

Master's Program in Communication—Media Studies Track

To be accepted to the coterminal master's program in Communication, Media Studies track, students must find a professor in the Department of Communication to serve as coterminal advisor.

The coterminal advisor provides extensive guidance on a research project proposed in the student's statement of purpose, helping students go through the process of conceptualization, study planning, data collection, analysis, and writing. The coterminal advisor also assists the student with course selection and course planning and serves as the first resource for consultation and advice about a student's academic program.

In addition, the Director of the Graduate Program in Coterminal Media Studies is always available for consultation.

Programs

Commu-BA
Degree Designation: BA - Bachelor of Arts
-

Commu-MA
Degree Designation: MA - Master of Arts
-

Commu-Min
Degree Designation:
-

Commu-PhD
Degree Designation: PHD - Doctor of Philosophy
-

Commu-PMn
Degree Designation:
-

Comparative Studies in Race and Ethnicity Department

Contacts

Office: Building 360, Room 361F
Mail Code: 2152
Phone: (650) 724-2088
Email: bdbaraho@stanford.edu
Web Site: http://ccsre.stanford.edu

The Undergraduate Program in Comparative Studies in Race and Ethnicity is home to five areas of study:

- Asian American Studies (courses listed as ASNAMST on ExploreCourses)
- Chicana/o-Latina/o Studies (courses listed as CHILATST on ExploreCourses)
- Comparative Studies (courses listed as CSRE on ExploreCourses)
- Jewish Studies (courses listed as JEWISHST on ExploreCourses)
- Native American Studies (courses listed as NATIVEAM on ExploreCourses)

Students can pursue a major or minor in any of these five areas, and are encouraged to build their interdisciplinary study around a focus or issue area. Students can then select from more than 150 course options from across many departments and schools to put together a curriculum, in consultation with our staff and faculty. The major requires 60 units of study and a culminating research project (either a senior paper or honors thesis).

Bachelor of Arts

In order to earn a B.A. in any of the five CSRE programs, students must complete at least 60 units toward the major.

Minor

In order to earn a minor in any of the five CSRE programs, students must complete at least 30 units toward the minor.

Ph.D. Minor

The Ph.D. minor in Comparative Studies in Race & Ethnicity provides graduate students pursuing Doctoral Degree's broad interdisciplinary knowledge in the field and prepares them to teach courses in the subject. The goal of the program is to bring together graduate students and faculty from different departments, programs, and schools who analyze race and ethnicity in their research.

Special Programs

CSRE majors have several unique opportunities available to them. The program offers students an opportunity for support of full-time paid summer research internships for those who apply to the Community Based Research Fellowship and complete a self-designed research project in collaboration with a community agency. The Public Policy Institute is a two week, pre-Autumn Quarter seminar that provides exposure to critical public policy issues. The residence-based institute provides room and board and all seminar materials for participants. CSRE also sponsors quarterly luncheons and community programs for all majors and minors, and has a number of service learning courses that couple academic work with work in communities.

Faculty

Asian American Studies

Director: Stephen Sano (Music)

Affiliated Faculty and Teaching Staff: Jeanne Tsai (Psychology), Gordon Chang (History), Hien Do (Asian American Studies), Marci Kwon (Art History), Kathryn Gin Lum (Religious Studies), Pamela Lee (Art and Art History), Jean Ma (Art and Art History), David Palumbo-Liu (Comparative Literature), Stephen Murphy-Shigematsu (Asian American Studies), Anthony Lising Antonio (Education), Linda Uyechi (Music), Barbara Voss (Anthropology), Christine Min Wotipka (Education), Sylvia Yanagisako (Anthropology)

Chicana/o-Latina/o Studies

Director: Jonathan Rosa (Education)

Affiliated Faculty and Teaching Staff: Albert Camarillo (History), Susana Gallardo (Chicana/o-Latina/o Studies), Angela Garcia (Anthropology), Kenji Hakuta (Education), Tomás Jiménez (Sociology), Ramón Martínez (Education), Melissa Michaelson (Chicana/o-Latina/o Studies), Ana Minian (History), Cherríe Moraga (Drama), Paula Moya (English), Amado Padilla (Education), José David Saldívar (Comparative Literature), Ramón Saldívar (English), Gary Segura (Political Science), Guadalupe Valdés (Education), Yvonne Yarbro-Bejarano (Iberian and Latin American Cultures)

Comparative Studies in Race & Ethnicity

Director: Vaughn Rasberry (English)

Core Affiliated Faculty:

- Anthropology: Duana Fullwiley, Angela Garcia, Barbara Voss, Sylvia Yanagisako
- Art & Art History: Jonathan Calm, Marci Kwon
- Comparative Literature: David Palumbo-Liu, José David Saldívar, Alexander Key

- Drama: Jennifer Brody, Harry Elam
- English: Michele Elam, Chang-rae Lee, Paula Moya, Vaughn Rasberry, Ramón Saldívar
- History: Al Camarillo, James Campbell, Gordon Chang, Allyson Hobbs, Ana Minian
- Iberian and Latin American Cultures: Lisa Surwillo, Hector Hoyos
- Linguistics: John Rickford
- Music: Stephen Sano, Charlie Kronengold
- Political Science: Lauren Davenport
- Psychology: Jennifer Eberhardt, Hazel Markus, Jeanne Tsai, Steven Roberts
- Religious Studies: Kathryn Gin Lum, Charlotte Fonrobert
- Sociology: Tomás Jiménez, Matthew Snipp, Aliya Saperstein, Jackelyn Hwang, Matthew Clair, Asad Asad
- Theater & Performance Studies: Jennifer DeVere Brody, Samer Al-Saber
- Taube Center for Jewish Studies: Vered Shemtov
- Graduate School Education: Anthony Antonio, Prudence Carter, Teresa LaFromboise, Guadalupe Valdés, Christine Min Wotipka, Ari Kelman, Jonathan Rosa, Ramón Martínez
- School of Law: Richard Banks, Richard Ford, Joan Petersilia

Affiliated Faculty and Teaching Staff: David Abernethy (Political Science, emeritus), Samer Al-Saber (Theater & Performance Studies), Asad Asad (Sociology), Arnetha Ball (Education), Lucius Barker (Political Science, emeritus), Donald Barr (Pediatrics), Bryan Brown (Education), Cheryl Brown (African and African American Studies), Martin Carnoy (Education), Clayborne Carson (History), Jeff Chang (Comparative Studies in Race and Ethnicity), Matthew Clair (Sociology), Karen Cook (Sociology), Michele Dauber (Law), Linda Darling-Hammond (Education), Carolyn Duffey (American Studies), Jennifer Eberhardt (Psychology), Ala Ebtekar (Comparative Studies in Race and Ethnicity), Paulla Ebron (Anthropology), Penny Eckert (Linguistics), James Ferguson (Anthropology), Shelley Fisher Fishkin (English), James Fishkin (Communication), Estelle Freedman (History), Susana Gallardo (Chicana/o Studies), Gabriel Garcia (Medicine), Kathryn Gin Lum (Religious Studies), Leah Gordon (Education), David Grusky (Sociology), Sean Hanretta (History), Gina Hernandez-Clarke (Comparative Studies in Race and Ethnicity), Miyako Inoue (Anthropology), Shanto Iyengar (Communication), Tomás Jiménez (Sociology), Gavin Jones (English), Terry Karl (Political Science), Pamela Karlan (Law), Matthew Kohrman (Anthropology), Jan Krawitz (Art and Art History), Jon Krosnick (Communication), Charlie Kronengold (Music), Teresa LaFromboise (Education), David Laitin (Political Science), Liisa Malkki (Anthropology), Hazel Markus (Psychology), Ramón Martínez (Education), Ruben Martinéz (Comparative Studies in Race and Ethnicity), Barbaro Martinez-Ruiz (Art and Art History), Douglas McAdam (Sociology), Jisha Menon (Theater and Performance Studies), Ana Minian (History), Elisabeth Mudimbe-Boyi (French and Italian), Thomas S. Mullaney (History), Stephen Murphy-Shigematsu (Asian American Studies), Hilton Obenzinger (American Studies), Susan Olzak (Sociology), Amado Padilla (Education), Arnold Rampersad (English), Vaughn Rasberry (English), Robert Reich (Political Science), Cecilia Ridgeway (Sociology), Richard Roberts (History), Aron Rodrigue (History), Jonathan Rosa (Education), Michael Rosenfeld (Sociology), Joel Samoff (History), Debra Satz (Philosophy), Vered Shemtov (Division of Literatures, Cultures and Languages), C. Matthew Snipp (Sociology), Paul Sniderman (Political Science), Jayashiri Srikantiah (Law), Ewart Thomas (Psychology), Jeanne L. Tsai (Psychology), Linda Uyechi (Music), Gregory Walton (Psychology), Richard White (History), Jeremy Weinstein (Political Science), Michael Wilcox (Anthropology), Bryan Wolf (Art and Art History), Sylvia Yanagisako (Anthropology), Yvonne Yarbro-Bejarano (Iberian and Latin American Cultures), Steven Zipperstein (History)

Teaching Fellows: Kyle Beckham, Maxwell Suechting

Senior Seminar Coordinator: Takuya Sawaoka

Jewish Studies

Director: Charlotte Fonrobert (Religious Studies)

Affiliated Faculty and Teaching Staff: Zachary Baker (Stanford University Libraries), Joel Beinin (History), Jonathan Berger (Music), Arnold Eisen (Religious Studies, emeritus), Amir Eshel (German Studies), John Felstiner (English, emeritus), Shelley Fisher Fishkin (English), Charlotte Fonrobert (Religious Studies), Avner Greif (Economics), Katherine Jolluck (History), Ari Kelman (Education), Jon Levitow (Language Center), Mark Mancall (History, emeritus), Norman Naimark (History), Reviel Netz (Classics), Jack Rakove (History), Aron Rodrigue (History), Noah Rosenberg (Biology), Gabriella Safran (Slavic Languages and Literatures), Vered Karti Shemtov (Language Center, Comparative Literature), Lee Shulman (Education, emeritus), Peter Stansky (History, emeritus), Marie-Pierre Ulloa (French), Amir Weiner (History), Sam Wineburg (Education), Steven Zipperstein (History)

Writer in Residence: Maya Arad

Native American Studies

Director: Teresa LaFromboise (Education)

Affiliated Faculty and Teaching Staff: JoEllen Anderson (Native American Studies), Jared Aldern (Native American Studies), Karen Biestman (Native American Studies), Kenneth Fields (English), Teresa LaFromboise (Education), Samantha Peralto (Language Center), Delphine Red Shirt Shaw (Native American Studies), C. Matthew Snipp (Sociology), Michael Wilcox (Anthropology)

Programs

AsAm-BA
Degree Designation: BA - Bachelor of Arts

AsAm-Min
Degree Designation:

CHILT-BA
Degree Designation: BA - Bachelor of Arts
-

CHILT-MIN
Degree Designation:
-

CSRE-BA
Degree Designation: BA - Bachelor of Arts

CSRE-IHN
Degree Designation:
-

CSRE-Min
Degree Designation:

JEWSH-BA
Degree Designation: BA - Bachelor of Arts
-

Jewsh-Min
Degree Designation:
-

NatAm-BA
Degree Designation: BA - Bachelor of Arts

NatAm-Min
Degree Designation:

Comparative Literature Department

Contacts

Office: Building 260, Rooms 127-128
Mail Code: 94305-2031
Phone: (650) 723-3566
Email: dlcl@stanford.edu
Web Site: http://complit.stanford.edu

Courses offered by the Department of Comparative Literature are listed under the subject code COMPLIT on the Stanford Bulletin's ExploreCourses web site.

The Department of Comparative Literature offers courses in the history and theory of literature through comparative approaches. The department accepts candidates for the degrees of Bachelor of Arts and Doctor of Philosophy. The department is a part of the Division of Literatures, Cultures, and Languages.

The field of Comparative Literature provides students the opportunity to study imaginative literature in a wide array of contexts: historical, formal, theoretical, and more. While other literary disciplines focus on works of literature within national or linguistic traditions, Comparative Literature draws on multiple contexts in order to examine the nature of literary phenomena from around the globe and from different historical moments, while exploring how literature interacts with other elements of culture and society. We study fictional narratives, performance, and poetry as well as cinema, music, and emerging aesthetic media.

Along with the traditional models of comparative literature that compare two or more national literary cultures and examine literary phenomena in light of literary theory, the department encourages study of the relationship between literature and philosophy and the enrichment of literary study with other disciplinary methodologies. Comparative Literature also embraces the study of aspects of literature that overgo national boundaries, such as transnational literary movements or the creative adaptation of particular genres to local cultures. In each case, students emerge from the program with enhanced verbal and writing skills, a command of literary studies, the ability to read analytically and critically, and a more global knowledge of literature.

Mission of the Undergraduate Program in Comparative Literature

The mission of the undergraduate program in Comparative Literature is to develop students' verbal and written communication skills, their ability to read analytically and critically, and their global knowledge of literary cultures and the specific properties of literary texts. The program provides students with the opportunity to study imaginative literature with several methods and a consciousness of methodology.

A Comparative Literature major prepares a student as a reader and interpreter of literature through sophisticated examination of texts and the development of a critical vocabulary with which to discuss them. Along with providing core courses that introduce students to major literary phenomena in a comparative frame, the program of study accommodates the interests of students in areas such as specific regions, historical periods, and interdisciplinary connections between literature and other fields such as philosophy, music, the visual arts, gender and queer theory, and race and ethnicity. Attention to verbal expression and interpretive argument serves students who will proceed into careers requiring strong language and communication skills and cross-cultural knowledge of the world.

Learning Outcomes (Undergraduate)

The department expects undergraduate majors in the program to be able to demonstrate the following learning outcomes. These learning outcomes are used in evaluating students and the department's undergraduate program. Students are expected to demonstrate:

1. the ability to interpret a literary text in a non-native language or to compare literary texts from different linguistic traditions, which may be read in translation.
2. a self-reflective understanding of the critical process necessary to read and understand texts.

3. skills in writing effectively about literature.
4. skills in oral communication and public speaking about literature.

Graduate Programs in Comparative Literature

The department offers a Doctor of Philosophy and a Ph.D. minor in Comparative Literature.

Learning Outcomes (Graduate)

Through completion of advanced course work and rigorous skills training, the doctoral program prepares students to

1. make original contributions to the knowledge of Comparative Literature and to interpret and present the results of such research,
2. teach literary analysis and interpretation at all levels with broad historical, cultural and linguistic understanding, and
3. apply such analysis, interpretation and understanding to a range of fields and vocations.

Faculty in Comparative Literature

Director: Amir Eshel

Director of Graduate Studies: David Palumbo-Liu

Director of Undergraduate Studies: Alexander Key

Professors: Russell Berman (also German Studies, on leave Winter), Adrian Daub (also German Studies), Amir Eshel (also German Studies), Roland Greene (also English), Joshua Landy (also French and Italian), Haiyan Lee (also East Asian Languages and Cultures), David Palumbo-Liu, Patricia Parker (also English), Joan Ramon Resina (also Iberian and Latin American Cultures), José David Saldívar, Ramón Saldívar (also English), Ban Wang (also East Asian Languages and Cultures, on leave Winter and Spring)

Associate Professors: Vincent Barletta (also Iberian and Latin American Cultures), Monika Greenleaf (also Slavic Languages and Literatures), Alexander Key, Indra Levy (also East Asian Languages and Cultures)

Assistant Professor: Marie Huber

Senior Lecturers: Cintia Santana, Vered K. Shemtov

Lecturers: Burcu Karahan, Margarita Rosario (Mellon Fellow), Marie-Pierre Ulloa, Nathan Wainstein (Dean's Fellow)

Courtesy Professors: Margaret Cohen, Marisa Galvez, Bernadette Meyler, Ato Quayson, Jonathan Rosa, Nancy Ruttenburg, Gabriella Safran, Kathryn Starkey, Elaine Treharne, Alex Woloch

Courtesy Associate Professors: Mark Greif, Héctor Hoyos, Christopher Krebs, Jisha Menon, Grant Parker, Dafna Zur

Courtesy Assistant Professors: Roanne Kantor, Fatoumata Seck

Emeriti: (Professors) John Bender (also English), John Freccero (also French and Italian), Hans U. Gumbrecht (also French and Italian), Elisabeth Mudimbe-Boyi (also French and Italian), Mary Pratt (also Iberian and Latin American Cultures)

Graduate Advising Expectations

The Department of Comparative Literature is committed to providing academic advising in support of graduate student scholarly and professional development. The overall goal of advising, both in the DLCL and the department, is to help graduate students make academic and career choices wisely, and think ahead, in order to craft a long-term plan for their graduate student career and beyond. When most effective, the advising relationship entails collaborative and sustained engagement by both the advisor and the advisee. As a best practice, advising expectations should be periodically discussed and reviewed to ensure mutual understanding. Both the advisor and the advisee are expected to maintain professionalism and integrity. Advising is both an academically invaluable form for the transmission of expertise, as well as a key aspect of creating a strong departmental and Stanford community.

Faculty Advisors

Faculty advisors guide students in key areas such as selecting courses, designing and conducting research, developing of teaching pedagogy, navigating policies and degree requirements, and exploring academic opportunities and professional pathways.

- Upon enrolling, students plan their work under the direction of the Director of Graduate Studies or a faculty member designated by the program. When the student selects a more specialized advisor, the transition should involve oral or written communication between both advisors and the student concerning the student's progress, goals, and expectations. It is possible for doctoral students to choose two main advisors at the dissertation stage, provided all agree this is academically sound.
- Faculty advisors should meet with assigned students to discuss their selection of courses and to plan from a broader, longer-term perspective, including: discussion of program milestones and a basic timeline; an overview of Department and DLCL offerings beyond courses; student goals and interests and DLCL or Stanford programs that may be relevant; and (for doctoral students) how to transfer previous graduate coursework.
- Faculty advisors and graduate students should meet at least once per quarter to assess the advisee's course of study, performance over the past quarter, and plans for the next quarter, as well as longer term plans. If a student has two advisors, the student should meet at least once per quarter with each advisor and at least once per year with both advisors at the same time.
- For doctoral students, faculty should help their advisees plan for exams, research grant applications, develop research projects, and plan ahead for both the academic job market and the job search beyond academia.
- Faculty advisors should provide feedback about the student's progress to the department during the annual review process. For more information about the annual review, see the Graduate Handbook.

Graduate Students

Graduate students are active contributors to the advising relationship, proactively seeking academic and professional guidance and taking responsibility for informing themselves of policies and degree requirements for their graduate program.

- Upon enrolling, students plan their work under the direction of the Director of Graduate Studies or a faculty member designated by the program. As the student develops a field of expertise, the student chooses a program advisor to replace the Director of Graduate Studies role. The transition should involve oral or written communication between both advisors and the student concerning the student's progress, goals, and expectations.
- Graduate students and faculty advisors should meet at least once per quarter to assess the advisee's course of study, performance over the past quarter, and plans for the next quarter, as well as longer term plans. If a student has two advisors, the student should meet at least once per quarter with each advisor and at least once per year with both advisors at the same time.
- Students should consult with their advisors on all academic matters, including coursework, conference presentations and publications, research travel, and teaching plans.

- Students should provide a thorough self-evaluation each year for the annual review. For more information about the annual review, see the Graduate Handbook.

For a statement of University policy on graduate advising, see the Graduate Advising section of this bulletin.

Programs

CpLit-BA
Degree Designation: BA - Bachelor of Arts
-

CpLit-MA
Degree Designation: MA - Master of Arts
-

CpLit-Min
Degree Designation:
-

CpLit-PhD
Degree Designation: PHD - Doctor of Philosophy
-

CpLit-PMn
Degree Designation:
-

Comparative Medicine Department

Contacts

Office: Edwards Building, Room R321
Mail Code: 94305-5342
Phone: (650) 498-5080
Web Site: http://med.stanford.edu/compmed

The Department of Comparative Medicine at Stanford is an academic, basic science department, the department is comprised of fourteen faculty, eleven of whom are veterinarians. All faculty members are immersed in laboratory animal science and translational research. They teach at the undergraduate, graduate, professional, and postgraduate levels. The department's clinical and basic science faculty welcome, review, and accept student candidates for participation in research projects. The Department of Comparative Medicine was established at Stanford in 1990.

The department's faculty is also engaged in collaborative and comparative research, with animal model expertise and programs in veterinary pathology, pain and anesthesia, rodent reproductive biology, infectious disease, cancer, bioengineering, animal welfare, and neuroscience. In addition, the veterinary faculty in the Department of Comparative Medicine has oversight responsibility for the campus-wide animal research program and provides clinical service in the Veterinary Service Center (VSC). The mission of the department is to advance human and animal health through outstanding research, veterinary care and training.

To learn more about the Veterinary Service Center core and services provided, see the Veterinary Service Center (VSC) web site.

To learn more about Animal Research at Stanford, see the Animal Research at Stanford web site.

Faculty

Emeriti: (Professors) Donna M. Bouley, Linda C. Cork

Chair: Sherril Green

Director of Graduate Studies: Sherril Green

Co-Director of Graduate Studies: Corinna Darian-Smith

Professors: David Bentzel (Clinical), Paul S. Buckmaster, Joseph Garner, Stephen Felt, Sherril Green, Shaul Hestrin

Associate Professors: Megan Albertelli, Corinna Darian-Smith, Claude Nagamine

Assistant Professors: Kerriann Casey (Clinical), Monika Huss (Clinical), Sam Baker (Clinical), Cholawat Pacharinsak, Jose Vilches-Moure

By Courtesy: Hannes Vogel (Professor), Karen Parker (Associate Professor)

Graduate Advising

The Department of Comparative Medicine (DCM) is committed to providing academic advising in support of graduate student scholarly and professional development. When most effective, this advising relationship entails collaborative and sustained engagement by both the advisor and the advisee. The Department's Student Services Officer, Tom Albert, also serves as a resource for students and can provide assistance with degree progress, policy requirements, program requirements, and more.

Graduate students are expected to have selected a faculty mentor by their second quarter in the program.

Faculty mentors are expected to meet with graduate students at least once a quarter to discuss and to assist with development of the student's Individual Development Plans. Additionally, the department encourages advisors and students to meet on a regular basis throughout the year to discuss the student's professional development in key areas such as selecting courses, designing and conducting research, and exploring academic opportunities and professional pathways.

Graduate students are active contributors to the advising relationship. They should proactively seek academic and professional guidance and take responsibility for informing themselves of policies and degree requirements for the M.S. in Laboratory Animal Science (MLAS) program.

As a best practice, advising expectations should be periodically discussed and reviewed to ensure mutual understanding. Both the advisor and the advisee are expected to maintain professionalism and integrity.

Academic progress and student completion of program requirements and milestones are monitored by the program director and staff, and are reviewed during the Masters of Laboratory Animal Science Faculty Advisory Committee each quarter. A detailed description of the program's requirements, milestones, and advising expectations (for students and for their advisors) can be found on the program web site.

Graduate students and their faculty mentors are encouraged to collaborate with the department's student services officer, Tom Albert, for referrals to campus resources, which include Biosci Careers Center, Vaden Health, etc.

Additionally, the program adheres to the advising guidelines and responsibilities listed by the Office of the Vice Provost for Graduate Education (VPGE) and in the Graduate Academic Policies (GAP), and the Graduate Advising section of this Bulletin.

For more information regarding Graduate Student Advising and Postdoctoral/Resident Mentoring, contact the following people:

- Graduate Student Advising: Tom Albert (Student Services Officer), tom.albert@stanford.edu.
- Program Director: Sherril Green (Comparative Medicine Chair), sherril@stanford.edu.
- Postdoctoral Student/Residents: Megan Albertelli (Laboratory Animal Medicine Residency Director), megan.albertelli@stanford.edu.
- Postdoctoral/Resident: Monika Huss (Resident and Trainee Wellness Advisor), monikag@stanford.edu.

Programs

Animalsci
Degree Designation: MS - Master of Science
-

Computer Science Department

Contacts

Office: Gates Computer Science Building
Phone: (650) 723-2300
Website: cs.stanford.edu

Courses offered by the Department of Computer Science are listed under the subject code CS on the *Stanford Bulletin's* ExploreCourses web site.

The Department of Computer Science (CS) operates and supports computing facilities for departmental education, research, and administration needs. Current CS students have access to a departmental student machine for general use and computer labs located in the Gates Building. In addition, most students have access to systems located in their research areas.

Each research group in Computer Science has systems specific to its research needs. These systems include workstations, computer clusters, GPU clusters, and local file servers. Servers and workstations running Linux , MacOS, or various versions of Windows are commonplace. Support for course work and instruction is provided on systems available through University IT (UIT) and the School of Engineering (SoE).

Mission of the Undergraduate Program in Computer Science

The mission of the undergraduate program in Computer Science is to develop students' breadth of knowledge across the subject areas of computer science, including their ability to apply the defining processes of computer science theory, abstraction, design, and implementation to solve problems in the discipline. Students take a set of core courses. After learning the essential programming techniques and the mathematical foundations of computer science, students take courses in areas such as programming techniques, automata and complexity theory, systems programming, computer architecture, analysis of algorithms, artificial intelligence, and applications. The program prepares students for careers in government, law, and the corporate sector, and for graduate study.

Computer Science Course Catalog Numbering System

The first digit of a CS course number indicates its general level of sophistication:

	Computer Science Course Catalog Numbering System
DIGIT	**DESCRIPTION**
001-099	Service courses for nontechnical majors
100-199	Other service courses, basic undergraduate
200-299	Advanced undergraduate/beginning graduate
300-399	Advanced graduate
400-499	Experimental
500-599	Graduate seminars

The tens digit indicates the area of Computer Science it addresses:

	Computer Science Course Catalog Numbering System
DIGIT	**DESCRIPTION**
00-09	Introductory, miscellaneous
10-19	Hardware and Software Systems
20-39	Artificial Intelligence
40-49	Software Systems
50-59	Mathematical Foundations of Computing
60-69	Analysis of Algorithms
70-79	Computational Biology and Interdisciplinary Topics
90-99	Independent Study and Practicum

Faculty

Emeriti (Professors): Tom Binford, David Cheriton, David Dill, Edward Feigenbaum, Richard Fikes, Donald E. Knuth, Jean-Claude Latombe, Marc Levoy, Teresa Meng, Serge Plotkin, Vaughan Pratt, Eric Roberts, Ken Salisbury, Yoav Shoham, Jeffrey D. Ullman, Gio Wiederhold, Terry Winograd

Chair: John Mitchell

Associate Chair for Education: Mehran Sahami

Director of Ph.D. Program: John Ousterhout

Director of M.S. Program: Omer Reingold

Director of B.S. Program: Gerald Cain

Professors: Maneesh Agrawala, Alex Aiken, Dan Boneh, Moses Charikar, Ronald P. Fedkiw, Leonidas J. Guibas, Patrick Hanrahan, John Hennessy, Mark A. Horowitz, Doug James, Dan Jurafsky, Oussama Khatib, Christoforos Kozyrakis, Monica Lam, James Landay, Fei-Fei Li, Christopher Manning, David Mazieres, Nick McKeown, John Mitchell, Subhasish Mitra, Kunle Olukotun, John Ousterhout, Balaji Prabhakar, Omer Reingold, Mendel Rosenblum, Jennifer Widom

Associate Professors: Gill Bejerano, Michael Bernstein, Ron Dror, Dawson Engler, Michael Genesereth, Noah Goodman, Sachin Katti, Jure Leskovec, Karen Liu, Percy Liang, Philip Levis, Christopher Re, Silvio Savarese, Gregory Valiant

Assistant Professors: Nima Anari, Jeannette Bogh, Emma Brunskill, Zakir Durumeric, Stefano Ermon, Kayvon Fatahalian, Chelsea Finn, Tatsu Hashimoto, Fredrik Kjolstad, Anshul Kundaje, Tengyu Ma, Chris Piech, Aviad Rubinstein, Dorsa Sadigh, Li-Yang Tan, Caroline Trippel, Keith Winstein, Mary Wootters, Daniel Yamins, Matei Zaharia

Professors (Research): Clark Barrett, William J. Dally

Professor (Teaching): Mehran Sahami

Courtesy Professors: Russ Altman, Kwabena Boahen, Stephen Boyd, Jacob Fox, Patrick Hayden, Michael Levitt, Roy Pea, Daniel Rubin

Courtesy Associate Professors: Ashish Goel, Mykel Kochenderfer, Marco Pavone, Chris Potts, Ge Wang

Courtesy Assistant Professors: Mohammad Akbarpour, John Duchi, Sean Follmer, Surya Ganguli, Sharad Goel, Thomas Icard, Ramesh Johari, Scott Linderman, Stephen Montgomery, Priyanka Raina, Aaron Sidford, Gordon Wetzstein, Serena Yeung, James Zou

Senior Lecturers: Gerald Cain, Cynthia Lee, Nicholas J. Parlante, Keith Schwarz, Julie Zelenski

Lecturers: Jay Borenstein, Chris Gregg, Julie Stanford, Nick Troccoli, Christina Wodtke, Lisa Yan, Patrick Young

Adjunct Professors: Peter Bailis, Edward Chang, Changhoom Kim, Daphne Koller, Bill MacCartney, Andrew Ng, Sebastian Thrun

Visiting Assistant Professors: Lucjan Hanzlik, Kamil Kluczniak, Marco Patrignani, Atri Rudra

Secondary Appointment in CS: Anshul Kundaje

*recalled to active duty

Graduate Advising Expectations

The Department of Computer Science is committed to providing academic advising in support of graduate student scholarly and professional development. When most effective, this advising relationship entails collaborative and sustained engagement by both the adviser and the advisee. As a best practice, advising expectations should be periodically discussed and reviewed to ensure mutual understanding. Both the adviser and the advisee are expected to maintain professionalism and integrity.

Faculty advisers guide students in key areas such as selecting courses, designing and conducting research, developing of teaching pedagogy, navigating policies and degree requirements, and exploring academic opportunities and professional pathways.

Graduate students are active contributors to the advising relationship, proactively seeking academic and professional guidance and taking responsibility for informing themselves of policies and degree requirements for their graduate program.

For a statement of Computer Science policy on graduate advising, see the Computer Science Graduate Advising link. For a statement of University policy on graduate advising, see the Graduate Graduate Advising section of this bulletin.

Stanford University

Programs

CS-BS
Degree Designation: BS - Bachelor of Science
-

CS-Min
Degree Designation:
-

CS-MS
Degree Designation: MS - Master of Science

CS-PhD
Degree Designation: PHD - Doctor of Philosophy

CS-PMn
Degree Designation:

Medicine Department

Contacts

Office: Medical School Office Building (MSOB), 1265 Welch Road, Ste. 100
Mail Code: 94305-5404
Web Site: https://med.stanford.edu/
Office: MS in Medicine
Web Site: http://msm.stanford.edu/
Office: MS in Medicine in Biomedical Investigation
Web Site: http://med.stanford.edu/md/discovery-curriculum/BergScholarsProgram.html
Office: Doctor of Medicine (M.D.)
Web Site: http://med.stanford.edu/md.html
Office: Medical Scientist Training Program (MSTP)
Web Site: http://med.stanford.edu/mstp.html

The School of Medicine seeks to attract students who are passionate about scholarship and wish to improve the health of the world's people through research, innovation, and leadership.

Mission of the Degree Programs in Medicine

The mission of the degree programs in Medicine is to educate and inspire leaders in medicine and science who will improve human health through discovery, innovation, scholarship, education, and the delivery of outstanding patient-centered care.

Stanford is committed to representing the diversity of the U.S. and California populations by seeking a diverse body of students who are interested in the intellectual substance of medicine and committed to advancing the field of health care, broadly defined. Provided an applicant to the school has completed basic courses in physics, chemistry, and biology, the choice of an undergraduate major may reflect other interests, including the arts and humanities. Course work in advanced biology such as biochemistry, molecular biology, or genetics and the behavioral sciences is recommended because of their importance in understanding health care. Breadth of interests and depth of experiences play an important role in the selection of students from among those applicants having superior academic records.

Learning Outcomes

The following competencies serve as a guide for curriculum development and evaluation of the success of the training program and its graduates.

For additional information on the associated educational objectives please refer to the MD Program Handbook and Policy Manual Section 2.1 Competencies and Objectives for Medical Student Education.

1. *Patient Care:* Provide patient-centered care that is compassionate, appropriate, and effective for the treatment of health problems and the promotion of health
2. *Knowledge for Practice:* Demonstrate knowledge of established and evolving biomedical, clinical, epidemiological and social-behavioral sciences, as well as the application of this knowledge to patient care
3. *Practice-Based Learning and Improvement:* Demonstrate the ability to investigate and evaluate one's care of patients, to appraise and assimilate scientific evidence, and to continuously improve patient care based on constant self-evaluation and life-long learning
4. *Interpersonal and Communication Skills:* Demonstrate interpersonal and communication skills that result in the effective exchange of information and collaboration with patients, their families, and health professionals
5. *Professionalism:* Demonstrate a commitment to carrying out professional responsibilities and an adherence to ethical principles
6. *Systems-Based Practice:* Demonstrate an awareness of and responsiveness to the larger context and system of health care, as well as the ability to call effectively on other resources in the system to provide optimal health care
7. *Interprofessional Collaboration:* Demonstrate the ability to engage in an interprofessional team in a manner that optimizes safe, effective patient- and population-centered care
8. *Personal and Professional Development:* Demonstrate the qualities required to sustain lifelong personal and professional growth
9. *Discovery:* Explore scientific discovery and self-discovery

Degree Programs in Medicine

The School of Medicine offers a professional degree in Medicine (MD), a Masters in Medicine (MSM), a Masters in Medicine in Biomedical Investigation, and oversees a dual-degree Medical Scientist Training Program (MD-PhD). Additional School of Medicine graduate degree programs are available on the School of Medicine Education website.

The Master of Science in Medicine program admits current Stanford Ph.D. students who have a commitment to translational research, but are not interested in becoming clinicians. The goal of the program is to train researchers in human biology and disease to be better equipped to translate new scientific discoveries into useful medical advances. Students offered admission into any Ph.D. program at Stanford may apply for admission to the master's program.

The Master of Science in Medicine in Biomedical Investigation program admits current Stanford M.D. students who have a commitment to becoming physician-scientists. A major goal of the program is to address decreasing numbers of physician- scientists by shortening the training period without compromising quality of research – focusing instead on individualized career development of M.D.-only Physician-Scientists by placing them in outstanding research groups led by experienced faculty.

The Doctor of Medicine (M.D.) program provides education in biomedical and clinical sciences along with study and independent research through scholarly concentrations. Emphasis is placed on interdisciplinary learning, with streamlined content, interactive approaches, and melding of basic science and clinical instruction across the curriculum. Blocks of unscheduled time allow for individual or group study, participation in elective courses, research, and reflection. The flexible Discovery Curriculum supports student's scientific discovery and self-discovery by offering multiple learning pathways at a more individualized pace and opportunities for pursuing a second degree, such as an M.P.H., M.B.A., Master's of Science in Epidemiology or Health Services Research, a Ph.D., or participating in longitudinal and global health research experiences.

The Medical Scientist Training Program (MSTP) M.D.-Ph.D. program provides a select group of medical students with an opportunity to pursue a training program designed to equip them for careers in academic investigative medicine. Individualization of the curricular and research programs of each trainee is the hallmark of the Program. Training for a

combined MD-PhD includes the same content encountered by students who pursue each degree separately, but the total time of training should be less than the sum of the time normally taken for each degree. To this end, students must plan their training carefully and commit to a rigorous and intensive period of study. The flexible curriculum at Stanford Medical School allows each student to satisfy the requirements for the MD degree and to pursue an independent research program.
In addition to a variety of other dual degree opportunities, Stanford also collaborates with the University of California, Berkeley, to offer students opportunities for M.D./M.P.H. training. Details about these programs may be found at Stanford's Dual Degree and Multi-Degree Programs web site.

The M.D. degree requires 12 quarters of registration at full Med-M.D. tuition; the joint M.D./Ph.D. degree requires 15 quarters. Completion of the M.D. degree must be achieved within six years, unless a petition is granted to extend this time frame. For further details on the M.D. degree, including admission requirements, see the Stanford M.D. Program website.

Fellowships and Assistantships

Teaching Assistantships

The Office of Medical Education manages the Teaching Assistantships for the required M.D. courses. TAships provide medical students with an opportunity to develop teaching skills and enhance understanding of specific areas of the M.D. curriculum through teaching. Additionally, the work done by TAs enriches the overall curriculum and is an invaluable resource to the school.

In selecting TAs, all course directors consider each applicant's expertise in the subject matter, prior teaching experience, academic performance, and overall enthusiasm and participation throughout the course. Past performance in the course is a factor in selecting most TAs. Please note that some course directors may decide to interview potential candidates while others may not; the interview process varies from course to course. Some course directors may also require their TAs to participate in additional training; that will be noted in this document. TAs are expected to be and remain in good academic standing. However, all first-time TAs in the M.D. program are required to attend the training hosted by the Office of Medical Education. This training is mandatory and cannot be made up. Students may be asked to re-take this training if they have not taken it within the last 3 academic years.

Medical Scholars Research Program

Since 1980, the Stanford Medical Scholars Research Program has supported medical student research, both locally and off-site. Students carry out research in an academic setting under the direction of faculty members here at the medical school, hospital and clinics, and throughout the University. The fellowships provide funding and units as Medical Scholars Research 370.

M.D. students enrolled at Stanford are eligible.

M.D. students who obtained a Ph.D. prior to matriculation may apply for a fellowship only for research that has focus substantially different from that of their prior doctoral studies.
Students who are pursuing a dual degree (e.g.. M.D./M.B.A.) are not eligible when they "step out" to pursue the dual degree. Stepping out means that they are no longer paying tuition under the School of Medicine for that period of time, and any Financial Aid support is handled through the other degree program. When you "step back in" to the M.D. program, you resume eligibility for MedScholars.

Programs

CommHealth
Degree Designation: MS - Master of Science
-

Clinical I
Degree Designation: MS - Master of Science
-

Developmental Biology Department

Contacts

Office: Beckman Center, 279 W. Campus Drive, B300
Phone: (650) 723-2300
Email: Stanford Developmental Biology

Courses offered by the Department of Development Biology are listed under the subject code DBIO on the Stanford Bulletin's ExploreCourses web site.

A fundamental problem in biology is how the complex set of multicellular structures that characterize an adult animal is generated from the fertilized egg. Recent advances at the molecular level, particularly with respect to the genetic control of development, have been explosive. These advances represent the beginning of a major movement in the biological sciences toward the understanding of the molecular mechanisms underlying developmental decisions and the resulting morphogenetic processes. This new thrust in developmental biology derives from the extraordinary methodological advances of the past decade in molecular genetics, immunology, and biochemistry. However, it also derives from groundwork laid by the classical developmental studies, the rapid advances in cell biology and animal virology, and from models borrowed from prokaryotic systems. Increasingly, the work is directly related to human diseases, including oncogene function and inherited genetic disease.

The Department of Developmental Biology includes a critical mass of scientists who are leading the thrust in developmental biology and who can train new leaders in the attack on the fundamental problems of development. Department labs work on a wide variety of organisms from microbes to worms, flies, and mice. The dramatic evolutionary conservation of genes that regulate development makes the comparative approach of the research particularly effective. Scientists in the department labs have a very high level of interaction and collaboration. The discipline of developmental biology draws on biochemistry, cell biology, genetics, molecular biology, and genomics. People in the department have a major interest in regenerative medicine and stem cell biology.

The department is located in the Beckman Center for Molecular and Genetic Medicine within the Stanford University Medical Center.

Faculty

Emeriti: (Professors) Stuart Kim, Harley McAdams, Ellen Porzig

Chair: Anne Villeneuve

Associate Chair: David Kingsley

Professors: Philip Beachy, Gill Bejerano, Gerald Crabtree, James Chen, Margaret Fuller, Seung Kim, David Kingsley, Roeland Nusse, Lucy Shapiro, William Talbot, Anne Villeneuve, Irving Weissman, Joanna Wysocka

Associate Professor: Daniel Jarosz

Assistant Professors: Alistair Boettiger, Kyle Loh, Nicole Martinez, Bo Wang

Graduate Advising

The Department of Developmental Biology is committed to providing academic advising in support of graduate student scholarly and professional development. When most effective, this advising relationship entails collaborative and sustained engagement by both the advisor and the advisee. As a best practice, advising expectations should be periodically discussed and reviewed to ensure mutual understanding. Both the advisor and the advisee are expected to maintain professionalism and integrity.

Faculty advisors guide students in key areas such as selecting courses, designing and conducting research, developing of teaching pedagogy, navigating policies and degree requirements, and exploring academic opportunities and professional pathways.

Graduate students are active contributors to the advising relationship, proactively seeking academic and professional guidance and taking responsibility for informing themselves of policies and degree requirements for their graduate program.

For a statement of University policy on graduate advising, see the Graduate Advising section of this bulletin.

Programs

DBio-MS
Degree Designation: MS - Master of Science
-

DBio-PhD
Degree Designation: PHD - Doctor of Philosophy
-

Emmett Interdisciplinary Prog in Environ and Res Department

Contacts

Office: Y2E2 Building, Suite 226, 473 Via Ortega, Stanford, CA 94305-4210
Web Site: https://earth.stanford.edu/eiper

Courses offered by the Emmett Interdisciplinary Program in Environment and Resources are listed under the subject code ENVRES on the Stanford Bulletin's ExploreCourses website.

Mission of the Program

The Emmett Interdisciplinary Program in Environment and Resources develops the knowledge, skills, perspectives, and ways of thinking needed to understand and help solve the world's most significant environmental and resources sustainability challenges. E-IPER strives to be a model for interdisciplinary graduate education. E-IPER offers a Ph.D. in Environment and Resources, a Joint M.S. exclusively for students in Stanford's Graduate School of Business or Stanford Law School, and a Dual M.S. for students in the Ford Dorsey Master's in International Policy program, School of Medicine, or a Ph.D. program in another Stanford department. E-IPER's home is the School of Earth, Energy & Environmental Sciences; affiliated faculty come from all seven Stanford schools.

Faculty

Faculty Director: Nicole M. Ardoin

Director of Graduate Studies: Nicole M. Ardoin

Associate Director: Ann Marie Pettigrew

Anthropology: Lisa Curran, William H. Durham, James Ferguson, Lynn Meskell, Krish Seetah

Biology: Barbara Block, Larry B. Crowder, Gretchen C. Daily, Giulio De Leo, Rodolfo Dirzo, Anne Ehrlich (emerita), Paul Ehrlich (emeritus), Tadashi Fukami, Elizabeth Hadly, Fiorenza Micheli, Harold Mooney (emeritus), Erin Mordecai, Stephen Palumbi, Kabir Peay, Robert Sapolsky, Shripad Tuljapurkar, Peter Vitousek

Business: William Barnett, Jonathan Bendor, Steve Comello, Dan Iancu, Hau Lee, Dale T. Miller, Erica Plambeck, Hayagreeva Rao, Stefan J. Reichelstein, Baba Shiv, Itamar Simonson, Sarah A. Soule

Center for Comparative Studies in Race and Ethnicity: Michael Wilcox

Chemical Engineering: William Tarpeh

Civil and Environmental Engineering: Sarah L. Billington, Alexandria Boehm, Craig S. Criddle, John Dabiri, Jennifer Davis, Martin Fischer, David Freyberg, Olivier Fringer, Mark Jacobson, Rishee Jain, Jeffrey Koseff, Michael Lepech, Raymond Levitt (emeritus), Richard Luthy, Gilbert M. Masters (emeritus), Stephen Monismith, Leonard Ortolano (emeritus), Ram Rajagopal

Communications: Jon A. Krosnick

Earth System Science: Kevin Arrigo, Marshall Burke, Karen Casciotti, Noah Diffenbaugh, Robert B. Dunbar, Scott Fendorf, Christopher Field, Christopher Francis, Steven Gorelick, Rob Jackson, James Holland Jones, Julie Kennedy (emerita), Eric Lambin, David Lobell, Pamela Matson, Anna Michalak, Rosamond Naylor, Morgan O'Neill, Leif Thomas, Gabrielle Wong-Parodi

Earth Systems Program: Patrick Archie, Sibyl Diver, Tom Hayden, Suki Hoagland, Richard Nevle

Economics: Lawrence Goulder, Charles Kolstad

Education: Nicole M. Ardoin, Daniel McFarland, Walter W. Powell

Energy Resources Engineering: Ines M. Azevedo, Sally M. Benson, Adam Brandt, Jef Caers, Margot Gerritsen, Anthony Kovscek

English: Mark Algee-Hewitt

Freeman Spogli Institute for International Studies: Walter Falcon (emeritus), Francis Fukuyama, Stephen Stedman

Geological Sciences: Page Chamberlain, Gary Ernst (emeritus), Stephan Graham

Geophysics: Jenny Suckale, Mark Zoback

History: Zephyr Frank, David Kennedy, Richard White, Mikael Wolfe

Law: Michelle Anderson, Jeffrey Ball, Daniel E. Ho, Janet Martinez, Alicia Seiger, Deborah Sivas, Barton Thompson

Management Science and Engineering: Dariush Rafinejad, James Sweeney, John Weyant

Materials Science and Engineering: Michael D. McGehee

Mechanical Engineering: Arun Majumdar

Medicine: Jason Andrews, Michele Barry, Eran Bendavid, Mark Cullen, Christopher Gardner, Jeremy D Goldhaber-Fiebert, Desiree LaBeaud, Stephen P. Luby, Grant Miller, David Rehkopf, Thomas N. Robinson, Gary Schoolnik, Gary Shaw

Philosophy: Debra Satz

Physics: Leo Hollberg

Political Science: Bruce E. Cain, Terry Karl, Clayton Nall, Kenneth Schultz, Jeremy Weinstein

Program in Writing and Rhetoric: Emily Polk

Psychology: Brian Knutson

Sociology: Mark Granovetter, Douglas McAdam, Richard Scott (emeritus), Robb Willer

Statistics: Susan Holmes

Woods Institute for the Environment: Newsha Ajami, Shilajeet Banerjee, Jim Leape, Katharine Mach, Michael Wara

Outside Stanford: Greg Asner, Leon Szeptycki

Carnegie Institution: Ken Caldeira

Graduate Advising

The Emmett Interdisciplinary Program in Environment and Resources is committed to providing academic advising in support of graduate student scholarly and professional development. Through the open discussions of scholarly ideas during regular interactions with their advisers, graduate students identify areas of focus, and more generally develop their creative and intellectual potential.

Faculty advisers guide students in designing and conducting research, selecting courses, exploring academic opportunities and professional pathways, developing teaching skills, and navigating policies and degree requirements. At the same time, they are aware and respectful of work-life balance and wellness considerations. Graduate students are proactive in seeking academic and professional guidance, and take responsibility for learning about their program's policies and degree requirements.

Incoming students are assigned faculty adviser(s) in advance of their matriculation to the program; after further development of their research and professional interests, students may select different advisers.

As a best practice, adviser and advisee should agree upon advising expectations and then, periodically, discuss and review them in order to ensure mutual understanding.

Students should also take advantage of the larger advising network, consulting such resources as the E-IPER program staff, Stanford's institutional resources (VPGE, Office of Graduate Life, CAPS, etc.), and individuals and networks in the broader community of scholars. While student academic progress is reviewed annually, students are expected to be active in tracking their own progress, and raising concerns in a timely manner.

The E-IPER website provides more detailed information about E-IPER advising procedures and expectations in the Joint- and Dual-M.S. programs and in the Ph.D. program.

In the event that a student has a formal concern or complaint about their advising experience, they are encouraged to contact the E-IPER Associate Director, the E-IPER Faculty Director, the School Associate Dean for Educational Affairs, or the School Associate Dean for Human Resources and Faculty Affairs.

For a statement of University policy on graduate advising, see the Graduate Advising section of this bulletin.

Programs

ENVRES-MS
Degree Designation: MS - Master of Science
-

ENVRES-PHD
Degree Designation: PHD - Doctor of Philosophy
-

Earth Systems Department

Contacts

Office: Yang and Yamazaki Environment and Energy (Y2E2) Building, Room 131
Mail Code: 94305-4215
Phone: (650) 725-3183
Email: deana@stanford.edu
Web Site: https://earth.stanford.edu/esys

Courses offered by the Earth Systems Program are listed under the subject code EARTHSYS on the Stanford Bulletin's Explore Courses web site.

Mission of the Undergraduate Program in Earth Systems

The Earth Systems Program is an interdisciplinary environmental science major. Students learn about and independently investigate complex environmental problems caused by human activities in conjunction with natural changes in the Earth system. Earth Systems majors become skilled in those areas of science, economics, and policy needed to tackle the world's most pressing social-environmental problems, becoming part of a generation of scientists, professionals, and citizens who approach and solve problems in a systematic, interdisciplinary way.

For students to be effective contributors to solutions for such problems, their training and understanding must be both broad and deep. To this end, Earth Systems students take fundamental courses in ecology, calculus, chemistry, geology, and physics, as well as economics, policy, and statistics. After completing breadth training, they concentrate on advanced work in one of six focus areas: biology, energy, environmental economics and policy, land systems, sustainable food and agriculture, or oceanography and climate. Tracks are designed to support focus and rigor but include flexibility for specialization. Examples of specialized foci have included but are not limited to environment and human health, sustainable agriculture, energy economics, sustainable development, business and the environment, and marine policy. Along with formal course requirements, Earth Systems students complete a 1-unit (270-hour) internship. The internship provides a hands-on academic experience working on a supervised field, laboratory, government, or private sector project.

The Earth Systems Program provides an advising network that includes faculty, staff, and student peer advisers.

Faculty

Director: Karen Casciotti

Deputy Director: Richard Nevle

Associate Director: Deana Fabbro-Johnston

Director of Graduate Studies: Karen Casciotti

Director of Undergraduate Studies: Richard Nevle

Affiliated Faculty and Lecturers: Michelle Anderson (Law), Patrick Archie (Earth Systems, Earth System Science), Nicole Ardoin (School of Education, Woods Institute for the Environment), Kevin Arrigo (Earth System Science), Gregory Asner (Department of Global Ecology, Carnegie Institution), Greg Beroza (Geophysics), Barbara Block (Biology, Hopkins Marine Station, Woods Institute for the Environment), Alexandria Boehm (Civil and Environmental Engineering), Gordon Brown (Geological Sciences, emeritus), Marshall Burke (Earth System Science), Ken Caldeira (Earth System Science), Liz Carlisle (Earth Systems), Karen Casciotti (Earth System Science), Page Chamberlain (Geological Sciences), Larry Crowder (Biology, Woods Institute for the Environment), Danny Cullenward (Earth Systems), Lisa Curran (Anthropology, Woods Institute for the Environment), Gretchen Daily (Biology, Woods Institute for the Environment), Jenna Davis (Civil and Environmental Engineering, Woods Institute for the Environment), Anne Dekas (Earth System Science), Mark Denny (Biology, Hopkins Marine Station), Noah Diffenbaugh (Earth System Science, Woods Institute for the Environment), Rodolfo Dirzo (Biology, Woods Institute for the Environment), Robert Dunbar (Earth System Science, Woods Institute for the Environment), Debra Dunn (Earth Systems, Hasso Plattner Institute of Design), William

Durham (Anthropology, Woods Institute for the Environment), Louis Durlofsky (Energy Resources Engineering), Stefano Ermon (Computer Science), Gary Ernst (Geological Sciences, emeritus), Walter Falcon (Freeman Spogli Institute for International Studies, emeritus, Woods Institute for the Environment), Scott Fendorf (Earth System Science, Woods Institute for the Environment, Precourt Institute for Energy), Christopher Field (Woods Institute for the Environment), Christopher Francis (Earth System Science, Woods Institute for the Environment), Zephyr Frank (History, Woods Institute for the Environment), David Freyberg (Civil and Environmental Engineering, Woods Institute for the Environment), Tad Fukami (Biology), Margot Gerritsen (Energy Resources Engineering), Elizabeth Hadly (Biology, Woods Institute for the Environment), Thomas Hayden (Earth Systems), George Hilley (Geological Sciences), Suki Hoagland (Earth Systems), Robert Jackson (Earth System Science, Woods Institute for the Environment), Michael Kahan (Urban Studies), David Kennedy (History, emeritus, Woods Institute for the Environment), Alexandra Konings (Earth System Science), Karl Knapp (Atmosphere and Energy Operations), Rosemary Knight (Geophysics, Woods Institute for the Environment), Jeffrey Koseff (Civil and Environmental Engineering), Anthony Kovscek (Energy Resources Engineering), Eric Lambin (Earth System Science, Woods Institute for the Environment), Jim Leape (Center for Ocean Solutions), David Lobell (Earth System Science, Woods Institute for the Environment), Evan Lyons (Earth System Science), Gilbert Masters (Civil and Environmental Engineering), Pamela Matson (Earth System Science, Freeman Spogli Institute for International Studies, Woods Institute for the Environment), Anna Michalak (Earth System Science), Fiorenza Micheli (Hopkins Marine Station, Center for Ocean Solutions), Stephen Monismith (Civil and Environmental Engineering, Woods Institute for the Environment), Harold Mooney (Biology, emeritus, Woods Institute for the Environment), Rosamond Naylor (Earth System Science, Freeman Spogli Institute for International Studies, Woods Institute for the Environment), Richard Nevle (Earth Systems), Julia Novy-Hildesley (Sustainability Science and Practice), Stephen Palumbi (Biology, Hopkins Marine Station, Woods Institute for the Environment), Jonathan Payne (Geological Sciences), Kabir Peay (Biology), Emily Polk (Program in Writing and Rhetoric), Thomas Robinson (Medicine), Matt Rothe (Earth Systems, Hasso Plattner Institute of Design, Graduate School of Business), Jennifer Saltzman (Geological Sciences), Dustin Schroeder (Geophysics), Paul Segall (Geophysics), Deborah Sivas (Law), George Somero (Biology, Hopkins Marine Station), Jenny Suckale (Geophysics), James Sweeney (Management Science and Engineering, Woods Institute for the Environment), Leif Thomas (Earth System Science), Barton Thompson, Junior (Law, Woods Institute for the Environment), Tiziana Vanorio (Geophysics), Peter Vitousek (Biology, Woods Institute for the Environment), Virginia Walbot (Biology), Paula Welander (Earth System Science), Cindy Wilber (Jasper Ridge), Michael Wilcox (Anthropology), Mikael Wolfe (History), Jane Woodward (Atmosphere and Energy Operations), Mark Zoback (Geophysics).

Graduate Advising

Purpose of Advising

The primary purpose of the faculty adviser in the Earth Systems coterminal M.S. and M.A. programs is to help guide the academic development of their advisees. Faculty advisers help advisees design comprehensive, rigorous, interdisciplinary curricula that enable each student to acquire mastery of their chosen field(s). A small number of coterm students may also choose to conduct research and write a master's thesis under the guidance of their adviser. Earth Systems staff members can provide additional guidance on the selection of courses, navigating policies and degree requirements, and preparation for future employment and exploration of professional pathways.

Expectations

All candidates for coterminal master's programs in Earth Systems (M.S. and M.A.) are required to secure an academic adviser prior to applying to the coterm program. Coterm advisers must be members of the Academic Council. Each student is expected to meet with their adviser at least once per quarter to discuss degree progress and new course selections. Students must obtain their adviser's signed approval on their course plan each quarter as courses taken may differ from the original course plan submitted with the coterm application. The final curriculum must stay true to the scope and rigor of the originally approved curriculum even if some of the individual courses change.

Because Earth Systems is an interdisciplinary program, and does not have its own faculty, the program relies upon faculty in related departments to advise its students. This is particularly important for coterm students who are embarking on advanced studies and need the expertise of their advisers for curriculum planning and academic development. The program greatly appreciates this advising support, and the Earth Systems staff is available for any questions and to help in whatever way we can.

For a statement of University policy on graduate advising, see the Graduate Advising section of this bulletin.

Programs

EaSys-BS
Degree Designation: BS - Bachelor of Science
-

EASYS-MA
Degree Designation: MA - Master of Arts
-

EASYS-MIN
Degree Designation:
-

EaSys-MS
Degree Designation: MS - Master of Science
-

East Asian Languages and Cultures Department

Contacts

Office: Knight Building, 521 Memorial Way, Stanford, CA 94305
Mail Code: 2000
Phone: (650) 725-1730
Email: asianlanguages@stanford.edu

Website: http://ealc.stanford.edu

Courses offered by the Department of East Asian Languages and Cultures are listed on the Stanford Bulletin's ExploreCourses website under the subject codes:

- CHINA
- JAPAN
- KOREA
- EALC (East Asian Languages and Cultures)

Language courses offered by the Language Center are listed on the Stanford Bulletin's ExploreCourses website under the subject codes:

- CHINLANG (Chinese Language)
- JAPANLNG (Japanese Language)
- KORLANG (Korean Language)

The Department of East Asian Languages and Cultures offers programs for students who wish to engage with the cultures of China, Japan, and Korea as articulated in language, linguistics, literature, film, cultural studies, and visual arts. Students emerge with a sophisticated understanding of culture as a dynamic process embodied in language and other representational media, especially the verbal and visual forms that are central to humanistic study. Department faculty represent a broad range of research interests and specialties, and visiting scholars and postdoctoral fellows from

the Stanford Humanities Center, the Andrew W. Mellon Fellowship of Scholars in the Humanities, the Freeman Spogli Institute for International Studies, and the Center for East Asian Studies add to the intellectual vitality of the department.

East Asian Languages and Cultures offers a full range of courses at the undergraduate and graduate levels. Undergraduate courses concentrate on language, literature, and other cultural forms from the earliest times to the present, covering traditional and contemporary topics from Confucian conceptions of self and society to inflections of gender in the twentieth century. Classes emphasize developing powers of critical thinking and expression that will serve students well no matter what their ultimate career goals. Graduate programs offer courses of study involving advanced language training, engagement with primary texts and other materials, literary history, and training in research methodologies and critical approaches.

East Asian language skills provide a foundation for advanced academic training and professional careers in fields such as business, diplomacy, education, and law. The department also offers opportunities for students who choose to double-major or minor in other academic disciplines, including anthropology, art history, economics, education, history, linguistics, philosophy, political science, religious studies, and sociology.

The department accepts candidates for the degrees of Bachelor of Arts, Master of Arts, and Doctor of Philosophy. It also offers undergraduate minors.

For information concerning other opportunities for the study about Asian history, societies, and cultures, see the following departments and programs: Anthropology, Art and Art History, Business, Comparative Literature, East Asian Studies, Economics, History, Law, Linguistics, Philosophy, Political Science, Religious Studies, and Sociology.

Undergraduate Programs in East Asian Languages and Cultures

The mission of the programs in East Asian Studies, Chinese studies, Japanese studies, and Korean studies is to enable students to obtain a comprehensive understanding of East Asia broadly conceived, which is the area stretching from Japan through Korea and China to the contiguous areas of the Central Asian landmass, by providing them with training in writing and communication, literature, and civilization. Students are expected to have a good mastery of an East Asian language and focus on a particular sub-region or a substantive issue involving the region as a whole. The classes emphasize the developing powers of critical thinking and expression, which serve students well no matter what their ultimate career goals in business, government service, academia, or the professions.

Learning Outcomes (Undergraduate)

The department expects undergraduate majors in the program to be able to demonstrate the following learning outcomes. These learning outcomes are used in evaluating students and the department's undergraduate program. Students are expected to demonstrate:

1. effective and nuanced skills interpreting primary and secondary source materials.
2. a good grasp on their own work of the course material and methodologies in East Asian studies, Chinese studies, Japan studies, or Korean studies.
3. analytical writing skills and close reading skills.
4. effective oral communication skills.

Study Abroad

There are several exciting opportunities for Stanford students interested in Japan and China. The Kyoto Consortium for Japanese Studies (KCJS), is designed for undergraduates wishing to do advanced work in Japanese language and Japanese studies. The language requirement is two years of Japanese. Students may attend either one or two semesters.

The BOSP Kyoto program combines academic study with an optional internship in Japan. Founded in collaboration with the School of Engineering, it provides students with the opportunity to fit language immersion and practical classroom experience into their busy schedules. It also welcomes students in the sciences, social sciences, and humanities. Autumn Quarter participants must have completed JAPANLNG1 1ST YR JAPANESE LNG CULT & COM First-Year Japanese Language, Culture, and Communication, First Quarter. Spring Quarter participants must have completed JAPANLNG2 1ST YR JAPANESE LNG CULT & COM First-Year Japanese Language, Culture, and Communication, Second Quarter. Preference is given to students with additional language study, as well as those who have taken courses in Japanese literature and culture, or in Japanese linguistics. It is hosted on the Doshisha University campus in the heart of Kyoto. For information about either program in Kyoto, students should contact the Bing Overseas Studies Program.

Undergraduates interested in studying Chinese language, history, culture, and society are encouraged to apply to the BOSP Hong Kong Program offered in partnership with the Chinese University of Hong Kong (CUHK). There are no prerequisites for the Hong Kong Program. In addition to Mandarin, Stanford students may choose to enroll in "survival" Cantonese and Putonghua elective courses.

The Inter-University Center for Japanese Language Studies (IUC), located in Yokohama, is designed for students who seek the most advanced level of training in Japanese. This program accepts students with high intermediate Japanese language skills who seek Japan-related careers. Students should take note of the Inter-University Program for Chinese Language Studies (IUP) at Tsinghua University and the Inter-University Center (IUC) for Japanese Language Studies in Yokohama. Stanford is a member of these consortia. Graduate students interested in the graduate exchange program with the Department of Chinese at Peking University in Beijing should consult with the department chair early in the academic year.

Currently, Stanford University does not offer a study abroad program for students to study Korean in South Korea. Students interested in opportunities in South Korea should contact Professor Dafna Zur (dzur@stanford.edu) to discuss different Korean language immersion programs offered by other universities.

Graduate Programs in East Asian Languages and Cultures

Learning Outcomes (Graduate)

The purpose of the master's program is to further develop knowledge and skills in East Asian Languages and Cultures and to prepare students for a professional career or doctoral studies. This is achieved through the completion of courses, in the primary field as well as related areas, and experience with independent work and specialization.

The Ph.D. is conferred upon candidates who have demonstrated substantial scholarship and the ability to conduct independent research and analysis in East Asian Languages and Cultures. Through completion of advanced course work and rigorous skills training, the doctoral program prepares students to make original contributions to the knowledge of East Asian Languages and Cultures and to interpret and present the results of such research.

Admission

All students contemplating application for admission to graduate study must have a creditable undergraduate record. The applicant need not have majored in Chinese or Japanese as an undergraduate but must have had the equivalent of at least three years of training in the language in which he or she intends to specialize, and must also demonstrate a command of English adequate for the pursuit of graduate study. Applicants should not wish merely to acquire or

improve language skills, but to pursue study in one of the following fields: Chinese archaeology, Chinese linguistics, Chinese literature, Chinese philosophy, Japanese cultural history, Japanese literature, Japanese linguistics, and Japanese visual culture.

All interested students are required to submit their application via Stanford's Graduate Admissions website. EALC requires students to submit official transcripts, writing samples, personal statements, and letters of recommendation. GRE scores are optional and international students must also submit TOEFL scores. For a full list of requirements, please check the Graduate Admissions website.

Graduate Advising Expectations

The Department of East Asian Languages and Cultures is committed to providing academic advising in support of graduate student scholarly and professional development. When most effective, this advising relationship entails collaborative and sustained engagement by both the advisor and the advisee. As a best practice, advising expectations should be periodically discussed and reviewed to ensure mutual understanding. Both the advisor and the advisee are expected to maintain professionalism and integrity.

Faculty advisors and department staff guide students in key areas such as selecting courses, designing and conducting research, developing of teaching pedagogy, navigating policies and degree requirements, and exploring academic opportunities and professional pathways.

Graduate students are active contributors to the advising relationship, proactively seeking academic and professional guidance and taking responsibility for informing themselves of policies and degree requirements for their graduate program.

For a statement of University policy on graduate advising, see the "Graduate Advising" section of the Stanford Bulletin.

Graduate Student Advising

Effective academic advising is a critical component of a successful graduate degree program. At Stanford, all matriculated graduate students are to be advised by a member of the faculty. The nature of academic advising may differ for different programs, students, and at different stages in a degree program. During your time as a graduate student, you will have access to the department staff (in particular the Student Services Officer), the Directors of Graduate Studies (EALC generally has two DGS, one for Chinese and Japanese studies), and the Department Chair, to whom you can refer to for degree progress and policy clarification.

In order to meet the department’s advising expectations, each student and their advisor meet must meet at least once per quarter for a holistic, structured discussion of the student’s recent progress, short-term plans, and longer-term academic and professional goals and to discuss the steps that the student should take to meet these objectives.

Students are expected to meet regularly with their advisors and to keep them informed about their academic progress. Each student and their advisor should mutually agree on the frequency of these meetings when the advising relation begins and reassess their frequency at the start of every quarter.

Doctoral Students

No later than by the end of the second academic year, the student is assigned a faculty advisor. Until the University Oral Exam (Dissertation Defense) has been submitted and the student has graduated, the student and advisor must meet at the beginning of each quarter to discuss intended courses as well as other academic matters. The advisor's suggestions regarding professional issues are especially valuable, as they offer insight into the academic environment beyond one's particular intellectual interests. During the quarters before the University Oral Examination (Dissertation Defense), the student should decide on a faculty member with whom they want to work most closely and approach that person about

becoming their advisor; they will serve as the primary advisor until the exam. Once the University Oral Exam (Dissertation Defense) has been passed, the primary advisor will be the person chosen to supervise and direct the dissertation.

Master's Students

No later than by the end of the first academic year, the student is assigned a faculty advisor. Until the Master's Thesis has been submitted and the student has graduated, the student and advisor must meet at the beginning of each quarter to discuss intended courses as well as other academic matters. The advisor's suggestions regarding professional issues are especially valuable, as they offer insight into the academic environment beyond one's particular intellectual interests.

Faculty

Emeriti: (Professors) Albert E. Dien, Makoto Ueda, Melinda Takeuchi, Steven D. Carter; (Associate Professor) Susan Matisoff; (Senior Lecturer) Yin Chuang

Chair: Haiyan Lee

Directors of Graduate Studies: Ronald Egan (Chinese), Indra Levy (Japanese)

Director of Undergraduate Studies: Dafna Zur

Professors: Ronald Egan, Haiyan Lee, Li Liu, Yoshiko Matsumoto, Chao Fen Sun, Ban Wang

Associate Professors: Indra Levy, James Reichert, Yiqun Zhou, Dafna Zur

Assistant Professor: Ariel Stilerman

Consulting Professor: Richard Dasher

Lecturers: Thomas Bartlett, Seungyeon Gabrielle Jung

Chinese-Japanese Area Studies Faculty:

Professors: Gordon Chang (History), Mark E. Lewis (History), Paul Harrison (Religious Studies), John Kieschnick (Religious Studies), Thomas Mullaney (History), Jean Oi (Political Science), David Palumbo-Liu (Comparative Literature), Gi-Wook Shin (Sociology), Matthew Sommer (History), Richard Vinograd (Art and Art History), Andrew Walder (Sociology), Kären Wigen (History), Lee H. Yearley (Religious Studies), Xueguang Zhou (Sociology)

Associate Professors: Miyako Inoue (Anthropology), Matthew Kohrman (Anthropology), Yumi Moon (History), Jun Uchida (History), Jean Ma (Art and Art History)

Assistant Professors: Phillip Lipscy (Political Science), Marci Kwon (Art and Art History), Michaela Mross (Religious Studies)

Programs

Chine-MA
Degree Designation: MA - Master of Arts

Chine-PhD
Degree Designation: PHD - Doctor of Philosophy

EasSt-BA
Degree Designation: BA - Bachelor of Arts

EasSt-Min
Degree Designation:

Japan-BA
Degree Designation: BA - Bachelor of Arts

Japan-MA
Degree Designation: MA - Master of Arts

Japan-Min
Degree Designation:

Japan-PhD
Degree Designation: PHD - Doctor of Philosophy

Japan-PMn
Degree Designation:

East Asian Studies Department

Contacts

Office: Knight Building, 521 Memorial Way, Stanford, CA 94305-5001
Mail Code: 6023
Phone: (650) 736-1759, 723-3362; fax: (650) 725-3350
Email: CEAS-Admissions@stanford.edu
Web Site: http://ceas.stanford.edu

Courses offered by the Center for East Asian Studies are listed under the subject code EASTASN on the Stanford Bulletin's Explore Courses website. The EASTASN courses listed on ExploreCourses deal primarily with China, Japan, and Korea. Literature courses are listed with the subject codes of CHINA, JAPAN, KOREA and EALC in ExploreCourses.

Courses in Chinese, Japanese, and Korean language instruction use the subject codes CHINLANG, JAPANLNG, and KORLANG.

Mission

The Center for East Asian Studies (CEAS) supports teaching and research on East Asia-related topics across all disciplines; disseminates knowledge about East Asia through projects of local, regional, national, and international scope; and serves as the intellectual gathering point for a collaborative and innovative community of scholars and students of East Asia. CEAS works with all schools, departments, research centers, and student groups to facilitate and enhance all aspects of East Asia-related research, teaching, outreach and exchange across the Stanford campus.

CEAS is part of Stanford Global Studies in the School of Humanities and Sciences. As an East Asia National Resource Center (NRC), supported by the U.S. Department of Education, CEAS serves to strengthen access to and training in the major languages of East Asia, and to broaden East Asia area studies training across all disciplines.

Many other theoretical and methodological courses within various departments at Stanford are taught by faculty who are East Asian specialists; these courses often have a substantial East Asian component and a list of current applicable courses from outside departments may be found on the "Approved Courses" tab of this bulletin.

Undergraduate Programs in East Asian Studies

Undergraduates interested in East Asia can become involved by attending CEAS events, taking courses in the subject codes listed above, or earning a Minor or Bachelor of Arts degree in East Asian Studies. These undergraduate degrees in East Asian Studies are administered by the Department of East Asian Languages and Cultures. Stanford Global Studies offers internship opportunities in East Asia, and the Bing Overseas Studies Program offers study abroad opportunities in East Asia.

For language study, CEAS provides undergraduate fellowships for language study in China, Japan, or Korea; students must simultaneously apply to a pre-approved language program abroad. Applications are due in February each year. Deadlines and application information can be found on the CEAS website. In addition, undergraduates can obtain a

coterminal M.A. degree in East Asian Studies while concurrently working on their undergraduate major by applying during the regular admissions cycle no later than their senior year.

Graduate Programs in East Asian Studies

Master's Program

Stanford's interdisciplinary M.A. program in East Asian Studies is designed both for students who plan to complete a Ph.D. but who have not yet decided on the particular discipline in which they prefer to work, and for students who wish to gain a background in East Asian Studies in connection with a career in nonacademic fields such as business, law, education, journalism, or government service. The program permits the student to construct a course of study suited to individual intellectual interests and career needs, and is typically completed in two years; the program may be completed within one year, depending on the course load taken and the amount of foreign language training required. Advanced language students or students who are native speakers of Chinese, Japanese, or Korean can potentially complete the program within one year. Students interested in pursuing professional careers are encouraged to plan for additional training through internships or additional graduate professional programs, in conjunction with obtaining an M.A. in East Asian Studies.

The M.A. program allows students a great deal of flexibility in combining language training, interdisciplinary area studies, and a disciplinary concentration. Students are required to demonstrate third year level proficiency in Chinese, Korean or Japanese, according to their research-area focus (either through coursework at Stanford or testing at the 4th year or higher in Stanford language-placement exams), to enroll in a 3-unit core course in East Asian Studies in autumn quarter of the first year, and to complete at least eight additional graduate-level area studies courses. Of the nine required content courses, three must be in a single department or in the same thematic focus. An M.A. thesis, usually an expansion of a paper written for a graduate seminar or colloquium, is required.

Learning Outcomes

The purpose of the master's program is to further develop specialized knowledge and skills in East Asian Studies, and to prepare students for a professional career or doctoral studies. This is achieved through the completion of East Asia content courses, language training as necessary, and experience with independent research.

Postdoctoral Programs

The Center for East Asian Studies offers a postdoctoral fellowship in Chinese Studies each year. Postdoctoral fellowships in other areas are available from campus units including but not limited to the Freeman-Spogli Institute for International Studies, the Walter H. Shorenstein Asia-Pacific Research Center, and the Stanford Humanities Center.

Financial Aid

CEAS offers various types of funding for new and continuing students. See the fellowships page of the CEAS web site for the most up-to-date offerings.

Faculty

Director: Dafna Zur

Director of Graduate Studies: Dafna Zur

Affiliated Faculty and Staff:

Anthropology: Lisa M. Curran, Miyako Inoue, James Holland Jones, Matthew Kohrman, Stephen Murphy-Shigematsu, Barbara Voss, Sylvia J. Yanagisako

Art and Art History: Marci Kwon, Jean Ma, Richard Vinograd, Xiaoze Xie

Biology: Marcus W. Feldman, Peter Vitousek

Business: William Barnett, Charles M. Lee, Hau Lee, Joseph Piotroski, Kenneth Singleton, David W. Brady, Condoleezza Rice

Center for International Security and Cooperation: Chaim Braun

Civil and Environmental Engineering: David Freyberg, Renate Fruchter, Leonard Ortolano

Communication: James Fishkin, Jennifer Pan

Comparative Literature: David Palumbo-Liu

Earth System Science: Page Chamberlain, Eric F. B. Lambin, Rosamond L. Naylor

East Asian Languages and Cultures: Richard Dasher, Ronald Egan, Haiyan Lee, Indra Levy, Li Liu, Yoshiko Matsumoto, James Reichert, Ariel Stilerman, Chao Fen Sun, Ban Wang, Yiqun Zhou, Dafna Zur

East Asian Studies: Alice L. Miller

Education: Anthony L. Antonio, Martin Carnoy, Francisco O. Ramirez, Christine M. Wotipka

Freeman Spogli Institute for International Studies: Michael H. Armacost, Jennifer Choo, Donald K. Emmerson (emeritus), Thomas Fingar, Francis Fukuyama, Yong Suk Lee, Oriana Mastro, Scott D. Rozelle, Daniel C. Sneider, Mark Thurber, Kiyoteru Tsutsui, Li-Tai Xue

Geological Sciences: Stephan A. Graham, Jonathan Payne

Geophysics: Simon L. Klemperer

History: Gordon Chang, Mark E. Lewis, Martin Lewis, Yumi Moon, Thomas Mullaney, Matthew Sommer, Jun Uchida, Kären Wigen, Mikael D. Wolfe

Ho Center for Buddhist Studies: John Kieschnick, Irene H. Lin

Hoover Institution: Jeremy Carl, Larry Diamond, Tai-Chun Kuo, Hsiao-ting Lin, Toshio Nishi, William J. Perry (emeritus)

Law: Jeffrey Ball, Mei Gechlik, Thomas Heller (emeritus), Erik Jenson, Curtis Milhaupt

Linguistics: Daniel Jurafsky

Management Science and Engineering: Siegfried S. Hecker (emeritus), Pamela Hinds, Edison Tse, Yinyu Ye

Music: Jaroslaw Kapuscinski, Joo-Mee Lee, Stephen Sano, Linda Uyechi, Hui Daisy You

Political Science: Jean C. Oi, Terry M. Moe, Yiqing Xu, Barry R. Weingast

Religious Studies: Carl W. Bielefeldt (emeritus), James D. Gentry, Paul M. Harrison, Michaela Mross, Lee H. Yearley

Sociology: Gi-Wook Shin, Andrew Walder, Xueguang Zhou

Stanford Language Center: Marina Chung, Robert Clark, Sik Lee Dennig, Michelle DiBello, Hee-sun Kim, Nina Yuhsun Lin, Momoyo Kubo Lowdermilk, Emiko Yasumoto Magnani, Yasuko Matsumoto, May Miao, Emi Mukai, Momoe Saito Fu, Le Tang, Yoshiko Tomiyama, Huazhi Wang, Hannah Yoon, Hong Zeng, Youping Zhang, Xiaofang Zhou

Graduate Advising Expectations

The Center for East Asian Studies is committed to providing academic advising in support of graduate student scholarly and professional development. When most effective, this advising relationship entails collaborative and sustained engagement by both the adviser and the advisee. As a best practice, advising expectations should be periodically

discussed and reviewed to ensure mutual understanding. Both the adviser and the advisee are expected to maintain professionalism and integrity.

Faculty advisers guide students in key areas such as selecting courses, designing and conducting research, and exploring academic opportunities and professional pathways. Program administrative staff are available for advising students on program policies and degree requirements, as well as course selection.

Graduate students are active contributors to the advising relationship; they should proactively seek academic and professional guidance, take responsibility for informing themselves of policies and degree requirements for their graduate program, and remain aware of all program-specific and University-wide deadlines.

At or before the start of graduate study, normally at the beginning of Autumn Quarter, each student is assigned an adviser: a member of the program's faculty who provides research advice and guidance in course selection and in exploring academic opportunities and professional pathways. Usually, the same faculty member serves as program adviser for the duration of the Master's study; however, formal adviser change requests are possible in consultation with CEAS staff.

CEAS students are required to meet with their adviser at least twice per quarter and they must submit adviser meeting forms to the program office as proof. Students are expected to have a discussion with their adviser during or before the first week of each quarter to agree upon the courses that the student plans to take that quarter.

The department's student services office is also an important part of the advising team. It informs students and advisers about University and department requirements, procedures, and opportunities, and it maintains the official records of advising assignments and approvals. In addition, the center Associate Director and student services officer meet with all students each quarter, and are available during the academic year by email and during office hours.

For a statement of University policy on graduate advising, see the "Graduate Advising" section of this bulletin. Academic advising by Stanford faculty is a critical component of all graduate students' education and additional resources can be found on the VPGE webpage regarding Advising Practices & Resources.

Programs

EasSt-MA
Degree Designation: MA - Master of Arts

Economics Department

Contacts

Office: Landau Economics Building, 579 Jane Stanford Way
Mail Code: 94305-6072
Phone: (650) 725-3266
Web Site: http://economics.stanford.edu

Courses offered by the Department of Economics are listed under the subject code ECON on the Stanford Bulletin's ExploreCourses web site.

The department's purpose is to acquaint students with the economic aspects of modern society, to familiarize them with techniques for the analysis of contemporary economic problems, and to develop in them an ability to exercise judgment in evaluating public policy. There is training for the general student as well as for those who plan careers as economists in civil service, private enterprise, teaching, or research.

The department's curriculum is an integral part of Stanford's programs in International Relations, Public Policy, and Urban Studies.

The faculty interests and research cover a wide spectrum of topics in most fields of economics, including behavioral economics, comparative institutional analysis, econometrics, economic development, economic history, experimental economics, industrial organization, international trade, labor, macro- and microeconomic theory, mathematical economics, environmental economics, and public finance.

Mission of the Undergraduate Program in Economics

The mission of the undergraduate program in Economics is to acquaint students with the economic aspects of modern society, to familiarize them with techniques for the analysis of contemporary economic problems, and to develop in them an ability to exercise judgment in evaluating public policy. The program introduces students to macro- and microeconomic theory, teaches them to think and write clearly about economic problems and policy issues and to apply the basic tools of economic analysis. The undergraduate major provides an excellent background for those who plan careers in government and private enterprise as well as those pursuing graduate degrees in professional schools or in the field of economics.

Learning Outcomes (Undergraduate)

The department expects undergraduate majors in the program to be able to demonstrate the following learning outcomes. These learning outcomes are used in evaluating students and the department's undergraduate program. Students are expected to demonstrate:

1. understanding of core knowledge within Economics.
2. ability to analyze a problem and draw correct inferences using qualitative and/or quantitative analysis.
3. ability to write clearly and persuasively and communicate ideas clearly.
4. ability to evaluate theory and critique research within the discipline.

Graduate Programs in Economics

The primary objective of the graduate program is to educate students as research economists. In the process, students also acquire the background and skills necessary for careers as university teachers and as practitioners of economics. The curriculum includes a comprehensive treatment of modern theory and empirical techniques. Currently, 20 to 25 students are admitted each year.

Graduate programs in economics are designed to ensure that students receive a thorough grounding in the methodology of theoretical and empirical economics, while at the same time providing specialized training in a wide variety of subfields and a broad understanding of associated institutional structures. Toward these ends, the program is arranged so that the student has little choice in the curriculum at the outset but considerable latitude later on.

Students admitted to graduate standing in the department are expected to have a strong background in college-level economics, mathematics, and statistics. Preparation ordinarily consists of a college major in economics, a year-long calculus sequence that includes multivariate analysis, a course in linear algebra, and a rigorous course in probability and statistics.

Learning Outcomes (Graduate)

The purpose of the master's program is to further develop knowledge and skills in Economics and to prepare students for a professional career or doctoral studies. This is achieved through completion of courses, in the primary field as well as related areas, and experience with independent work and specialization.

The Ph.D. is conferred upon candidates who have demonstrated substantial scholarship and the ability to conduct independent research and analysis in Economics. Through completion of advanced course work and rigorous skills training, the doctoral program prepares students to make original contributions to the knowledge of Economics and and to interpret and present the results of such research.

Fellowships and Assistantships

The department awards a number of fellowships for graduate study. All students whose records justify continuation in the program may be assured support for the second through fifth years in the form of employment as a teaching or research assistant. All first year and a few second or third year students are typically awarded full fellowships, including a stipend and tuition. Second year students who are not on fellowship receive support in their entire second year (and surrounding summers) through a second year RAship. Third and fourth year students typically arrange for RA support directly with a faculty adviser or request TA support through the department. These half-time (20 hours per week) appointments provide a living wage and tuition allowance. Entering students are not eligible for research or teaching assistantships. Students in their final job market year are encouraged to apply for SIEPR dissertation research fellowships.

Faculty

Emeriti: (Professors) Takeshi Amemiya, Timothy F. Bresnahan, Paul A. David, Walter Falcon, Victor R. Fuchs, John G. Gurley, Peter J. Hammond, Donald Harris, Anne O. Krueger, Mordecai Kurz, Lawrence J. Lau, Roger G. Noll, John H. Pencavel, Thomas Sargent, John B. Shoven, David A. Starrett, Joseph E. Stiglitz, Gavin Wright

Chair: B. Douglas Bernheim

Vice Chair: Monika Piazzesi

Director of Graduate Studies: Luigi Pistaferri

Director of Undergraduate Studies: Frank Wolak

Professors: Ran Abramitzky, Kyle Bagwell, B. Douglas Bernheim, Nicholas Bloom, Michael Boskin, Mark Duggan, Pascaline Dupas, Liran Einav, Matthew Gentzkow, Lawrence Goulder, Avner Greif, Robert E. Hall, Han Hong, Caroline Hoxby, Guido Imbens, Matthew Jackson, Patrick Kehoe, Pete Klenow, Jonathan Levin, Thomas E. MaCurdy, Neale Mahoney, Paul R. Milgrom, Muriel Niederle, Monika Piazzesi, Luigi Pistaferri, Joseph Romano, Alvin Roth, K. Martin Schneider, Ilya Segal, John B. Taylor, Alessandra Voena, Heidi L. Williams, Frank Wolak

Associate Professors: Gabriel Carroll, Arun Chandrasekhar

Assistant Professors: Adrien Auclert, Luigi Bocola, Ignacio Cuesta, Daniel Fetter, Bradley Larsen, Melanie Morten, Petra Persson, Isaac Sorkin

Lecturers: Marcelo Clerici-Arias, Gopi Shah Goda, Alexander Gould, Ward Hanson, Gregory La Blanc, Chris Makler, Scott McKeon, Mark Tendall, Ramin Toloui

Postdocs: Ravi Jagadeesan, Øvind Schøyen, Colin Sullivan

Courtesy Professors: Anat Admati, Susan Athey, Jay Bhattacharya, Jeremy Bulow, Steve Callander, Darrell Duffie, Marcel Fafchamps, James D. Fearon, Stephen H. Haber, Charles Kolstad, David M. Kreps, Edward Lazear, Rosamond L. Naylor, Peter C. Reiss, Gregory Rosston, Kenneth Singleton, Andrzej Skrzypacz

Courtesy Associate Professors: Jacob Goldin, Saumitra Jha, Grant Miller, Rebecca Diamond

Visiting Assistant Professors: Assaf Romm

Graduate Advising

For a statement of University policy on graduate advising, see the Graduate Advising section of this bulletin.

The Department of Economics is committed to providing academic advising in support of graduate student scholarly and professional development. When most effective, this advising relationship entails collaborative and sustained engagement by both the adviser and the advisee. As a best practice, advising expectations should be periodically discussed and reviewed to ensure mutual understanding. Both the adviser and the advisee are expected to maintain professionalism and integrity.

Faculty advisers guide students in key areas such as selecting courses, designing and conducting research, developing of teaching pedagogy, navigating policies and degree requirements, and exploring academic opportunities and professional pathways.

Graduate students are active contributors to the advising relationship, proactively seeking academic and professional guidance and taking responsibility for informing themselves of policies and degree requirements for their graduate program. Outlined below are a list of specific responsibilities of the various advising relationships, year by year:

First Year

First-year students are assigned to an adviser in groups of four or five students, so that there are only a handful of first-year advisers. First-year advisers should meet with students early in Autumn Quarter and offer to help with any questions as the year progresses. Including the DGS, Ph.D. administrator, student mentors, study groups, core course instructors, and the first-year seminar series, students have a variety of information sources. The adviser is simply another person to whom the students can turn to for basic and broad advice about the program.

If a first year adviser sees a student struggling academically or personally, please ensure that they are connected to the help that they need, and if unsure of how to help please consult with the DGS.

Second-Year RAship

The second-year RA-ship is an opportunity for students to gain experience with research. The RA-ship is subsidized by the department and averages 15 hours/week (rather than the 20 for standard RAships in later years) for the entire second year (and surrounding summers). Students are advised to ensure that it is as educational as possible. Some students have fellowships and thus do not need RA support, but should still seek advisers and should be given the same attention to ensure that their research is progressing.

Second-Year Paper

The second-year paper is due at the beginning of Autumn Quarter of the third year, and students have to agree with a faculty member to oversee that paper by the end of the Spring Quarter of the second year.

An adviser on a second-year paper should make sure that the student is progressing on the paper during the Summer by setting a timeline and meeting with them at key points. It is essential that this be finished on time so that students can move on to new projects or to further develop it during the third year. Students are encouraged to talk to multiple faculty, but the person who signs their paper should take responsibility. The student also has a responsibility to be seeking advice and communicating regularly with their adviser, both about progress and unexpected setbacks, both of which are inevitable in research. Note that second-year papers can be co-authored with other students and/or faculty.

Third-Year Advising

The third-year seminar helps shepherd students through the transition to dissertation research; however, it is not a substitute for an adviser but rather a complement. Students should clear their slides for their third-year presentations with their advisers before the presentations.

The adviser and student are both responsible for ensuring that they meet regularly and have set a clear a timeline and goals for their research.

At the end of the third year, students meet with the DGS and present a form signed by someone agreeing to advise their dissertation research, and they should have plans for a dissertation and a committee. If a faculty member is advising a student during the third year and does not plan to continue that relationship, the faculty member is responsible for letting the student know early enough so that s/he can find a new adviser going forward. Occasionally, students who are getting substantial advice from more than one person may wish to designate co-primary advisers. This involves a serious commitment in terms of time and attention from all of the primary advisers, and should involve more than window-dressing.

Fourth Year and Beyond

Advisers and students should be meeting regularly and have a clear plan and timeline for completion of a dissertation research and going on the market. The adviser's role includes providing guidance concerning designing, implementing, conducting, writing, presenting, submitting (where, how, etc.), and revising their research. The adviser should meet regularly with the student and inform the DGS if a student is languishing or falling behind in their research.

Advisers should be very clear with students about how their research is progressing and what they need to do to improve. Students are responsible for being broadly engaged, keeping their adviser regularly informed of their progress, and seeking advice from several faculty, attending and participating in conferences, regularly attending seminars, talking with other students, and more generally being regularly involved in research-related activities.

Faculty who are on a student's dissertation committee must discuss the student's job market prospects with him or her well in advance of the job market. It is essential to calibrate students' expectations appropriately. If the student aspires to jobs for which a committee member feels s/he cannot write supportive letters, that faculty must make that fact absolutely clear to the student well in advance. The faculty member must also confer with other committee members to determine whether they are in agreement concerning the student's progress, job market plans, and likely prospects. A dissertation committee member whose assessment of a student is out of line with the rest of the committee has an obligation to make their views known to the committee well before the student enters to job market, and should be willing to withdraw from the committee if it is in the student's best interest. Committee members should therefore compare their assessments, at the latest, by the start of the Autumn Quarter during which the student enters the job market.

Students need to become self-sufficient; most of these aspects of conducting and disseminating research are not learned via courses or readings, but by doing coupled with timely advice. It is the most important, and rewarding, part of the Ph.D. program.

An extensive and detailed guide to the adviser/advisee relationship and responsibilities appears on the department's website.

Programs

Econ-BA
Degree Designation: BA - Bachelor of Arts

Econ-MA
Degree Designation: MA - Master of Arts
-

Econ-Min
Degree Designation:

Econ-PhD
Degree Designation: PHD - Doctor of Philosophy

Econ-PMn
Degree Designation:

Electrical Engineering Department

Contacts

Office: Packard Electrical Engineering Building
Mail Code: 94305-9505
Phone: 650-723-3931; Fax: (650) 723-1882
Web Site: http://ee.stanford.edu

Courses offered by the Department of Electrical Engineering are listed under the subject code EE on the *Stanford Bulletin's* ExploreCourses website.

The Department of Electrical Engineering (EE) at Stanford innovates by conducting fundamental and applied research to develop physical technologies, hardware and software systems, and information technologies; it educates future academic and industry leaders; and it prepares students for careers in industry, academia, and research labs.

Electrical Engineering has effected societal changes at the heart of the information revolution. Electrical and electronic devices—realized in both hardware and software—are integral to daily life, whether in the home, in health care, in recreation, or in the infrastructure for communication and computation. Electrical engineers use theories and tools from mathematics and physics to develop systems ranging from smart electric grids, wired and wireless communications and networking, embedded systems, integrated electronics, imaging and sensing devices, to Internet-based information technology.

The Electrical Engineering Department offers the following degrees: Bachelor of Science, Master of Science, and Doctor of Philosophy. The department also offers joint degrees in Electrical Engineering and Law (M.S./J.D.) and Electrical Engineering and Business Administration (M.S./M.B.A.). A minor can be obtained for the Bachelor of Science and Doctor of Philosophy.

Disciplinary Areas in Electrical Engineering

Research in Electrical Engineering spans a diverse set of intellectual disciplines and applications. The disciplines can be grouped into three overlapping and interrelated areas:

Hardware/Software Systems

- Data Science
- Embedded Systems
- Energy-Efficient Hardware Systems
- Integrated Circuits and Power Electronics
- Mobile Networking
- Secure Distributed Systems
- Software Defined Networking

Information Systems and Science

- Biomedical Imaging
- Communications Systems
- Control and Optimization
- Data Science
- Information Theory and Applications

- Machine Learning
- Societal Networks
- Signal Processing and Multimedia

Physical Technology and Science

- Biomedical Devices, Sensors and Systems
- Energy Harvesting and Conversion
- Integrated Circuits and Power Electronics
- Nanoelectronic Devices and Nanosystems
- Nanotechnology and NEMS/MEMS
- Photonics, Nanoscience and Quantum Technology

Multidisciplinary Research

EE faculty collaborate with researchers from other departments and schools across campus. More than a quarter of our faculty are joint with other departments, and a similar fraction of our PhD students have advisors outside EE. While the main applications of electrical engineering in the past four decades have been in information technology, EE tools and techniques are being increasingly applied more broadly to address major societal problems in areas such as:

Biomedical

Research in the biomedical area utilizes engineering approaches to address the unmet needs in diagnosis, staging, treatment, and mitigation of illnesses including cancer, diabetes, heart diseases, as well as brain disorders. Lower-cost, prevention-oriented health care delivery is critically needed, as well as new approaches to previously untreatable health conditions. Addressing these challenges requires discovering fundamentally new approaches and creating new devices and systems for critical diagnostics (sensors, imaging), therapeutics (lasers, pacemakers, and neural interfaces), and analytics (high-throughput sequencing, healthcare IT) technologies.

Energy

Research in energy is motivated on the macro level by the rapid rise in worldwide demand for electricity and the threat of global climate change, and on the micro level by the explosion in the number of mobile devices and sensors whose performance and lifetimes are limited by energy.

On the macro level, electronic loads, such as data centers, smart appliances, and electric vehicles, are poised to overtake traditional industrial loads in consumption share. Renewable energy will make up at least half of the generation mix and drive adoption of novel technologies such as storage, fuel cells, waste-to-power and distributed generation. Our research investigates techniques such as demand response and the use of energy storage to reduce peak demand and address variability of renewable energy.

On the micro level, we are exploring energy efficient devices, power electronics, system architectures, and network protocols, as well as ways to harvest energy from the environment for wearable devices and the Internet of things.

For additional information, see the Department of Electrical Engineering's Research website.

Electrical Engineering Course Catalog Numbering System

Electrical Engineering courses are typically numbered according to the year in which the courses are normally taken.

	Electrical Engineering Course Catalog Numbering System
NUMBER	**YEAR**
010-099	first or second year undergraduate
100-199	second through fourth year undergraduate
200-299	mezzanine courses for advanced undergraduate or first-year graduate
300-399	second through fourth year graduate
400-499	specialized courses for advanced graduate
600-799	special summer courses

Faculty

Emeriti: (Professors) Clayton W. Bates, John Cioffi*, Donald C. Cox, Robert W. Dutton, Michael J. Flynn, James F. Gibbons, Andrea G. Goldsmith, Joseph W. Goodman, Robert M. Gray, James Harris, Stephen E. Harris, Martin E. Hellman, Umran S. Inan*, Thomas Kailath*, Gregory T.A. Kovacs*, Marc Levoy, Albert Macovski, Malcolm M. McWhorter, Teresa Meng, R. Fabian W. Pease, Leonard Tyler, Robert L. White, Bernard Widrow, Bruce A. Wooley, Yoshihisa Yamamoto; (Associate Professors) John T. Gill III, Bruce B. Lusignan; (Professors, Research) Antony Fraser-Smith*, C. Robert Helms, Leonid Kazovsky, Butrus Khuri-Yakub*, Ingolf Lindau*, David Luckham, Yoshio Nishi, Arogyaswami J. Paulraj

(**Recalled to active duty*)

Chair: Jelena Vuckovic

Associate Chairs: John Pauly *(Undergraduate Education),* Brad Osgood *(Graduate Education),* Howard Zebker *(Admissions)*

Academic Affairs Committee Chair: Joseph M. Kahn

Director of Graduate Studies: Brad Osgood

Professors: Nicholas Bambos, Kwabena Boahen, Dan Boneh, Stephen P. Boyd, Abbas El Gamal, Shanhui Fan, Bernd Girod, Patrick Hanrahan, John L. Hennessy, Lambertus Hesselink, Mark A. Horowitz, Roger T. Howe, Joseph M. Kahn, Christoforos E. Kozyrakis, Sanjay Lall, Thomas H. Lee, Nick McKeown, David A. B. Miller, Subhasish Mitra, Andrea Montanari, Boris Murmann, Dwight G. Nishimura, Oyekunle Olukotun, Brad G. Osgood, John M. Pauly, James D. Plummer, Eric Pop, Balaji Prabhakar, Mendel Rosenblum, Krishna Saraswat, Krishna V. Shenoy, H. Tom Soh, Olav Solgaard, Fouad A. Tobagi, David Tse, Benjamin Van Roy, Jelena Vuckovic, Shan X. Wang, Tsachy Weissman, Jennifer Widom, H. S. Philip Wong, S. Simon Wong, Howard Zebker

Associate Professors: Amin Arbabian, Srabanti Chowdhury, Dawson Engler, Jonathan Fan, Sachin Katti, Philip Levis, Ayfer Ozgur Aydin, Ada Poon, Juan Rivas-Davila, Gordon Wetzstein*

Assistant Professors: Sara Achour, Daniel Congreve, John Duchi, Chelsea Finn, Mert Pilanci, Priyanka Raina, Dorsa Sadigh, Caroline Trippel, Mary Wootters

Professors (Research): Piero Pianetta

Courtesy Professors: Maneesh Agrawala, Stacey Bent, Kim Butts-Pauly, Emmanuel Candes, E.J. Chichilnisky, Amir Dembo, Utkan Demirci, Gary Glover, Peter Glynn, Leonidas Guibas, Brian Hargreaves, Tony Heinz, Ramesh Johari, Oussama Khatib, Monica S. Lam, Craig Levin, John C. Mitchell, Sandy Napel, John Ousterhout, Daniel Palanker, Amin Saberi, Julius Smith, Dan Spielman, Brian Wandell, Lei Xing, Yinyu Ye

Courtesy Associate Professors: Mohsen Bayati, Sigrid Close, Todd Coleman, Adam de la Zerda, Surya Ganguli, Hanlee Ji, Jin Hyung Lee, Marco Pavone, Ram Rajagopal, Debbie Senesky, Kawin Setsompop, Kuang Xu

Courtesy Assistant Professors: Grace Gao, Scott Linderman, Paul Nuyujukian, Simona Onori, Dustin Schroeder, Adam Wang, Keith Winstein, Serena Yeung, Matei Zaharia, James Zou

Lecturers: Zain Asgar, Raul Camposano, Jonathan Candelaria, Steven Clark, Andrea Di Blas, Antun Domic, Abbas Emami-Naeini, Joyce Farrell, Leslie Field, J., Patrick Groeneveld, My T. Le, Max Yuen

Adjunct Professors: Sherif Ahmed, Ahmad Bahai, Rick Bahr, Fred M. Gibbons, Dimitry Gorinevsky, Bob S. Hu, Waguih Ishak, Theodore Kamins, Ali Keshavarzi, David Leeson, Georgios Michelogiannakis, Fernando Mujica, Narasimha Madihally, Reza Nasiri Mahalati, Dan O'Neill, John Provine, Stephen Ryu, Ronald Schafer, Ashok Srivastava, David Sussillo, James Weaver, John Wenstrand

Visiting Assistant Professor: Jun-Chau Chien

Graduate Advising Expectations

For a statement of University policy on graduate advising, see the Graduate Advising section of this bulletin.

Master's Students

The Department of Electrical Engineering is committed to providing academic advising in support of M.S. students' education and professional development. When most effective, this advising relationship entails collaborative engagement by both advisor and advisee. As a best practice, advising expectations should be discussed and reviewed to ensure mutual understanding. Both advisor and advisee are expected to maintain professionalism, respect, and integrity. They should also be responsive to one another in a timely manner.

At the start of graduate study, each student is assigned a master's program advisor: a member of the faculty who provides guidance in course selection and in exploring academic opportunities and professional pathways. Students are expected to meet with the program advisor during the first quarter to discuss their proposed master's plan. Typically, the same faculty member serves as program advisor for the duration of master's study. If a student wishes to change their program advisor, they may contact the Degree Progress Officer to initiate the formal process of changing advisor.

In addition to the program advisor, the Electrical Engineering Graduate Student Teaching Advisor is a peer advisor who is available to advise students on the aspects of course selection and academic opportunities on and off campus.

The Department's student services office is also an important part of the master's advising team. They inform students and advisors about University and Department requirements, procedures, and opportunities, and they maintain the official records of advising assignments and approvals. Their contact information can be found on the Department's Graduate Degree Progress website.

Finally, graduate students are active contributors to the advising relationship, proactively seeking academic and professional guidance and taking responsibility for informing themselves of policies and degree requirements for their graduate program. For more information, see the Electrical Engineering Department Graduate Handbook (pdf).

Ph.D. Students

The Department of Electrical Engineering is committed to providing academic advising in support of doctoral student scholarly and professional development. When most effective, this advising relationship entails collaborative and sustained engagement by both advisor and advisee. Students are expected to meet with their Ph.D. dissertation advisor at least once per year. Students who do not have a dissertation advisor are encouraged to check in with their program advisor. As a best practice, advising expectations should be periodically discussed and reviewed to ensure mutual understanding. Both advisor and advisee are expected to maintain professionalism, respect, and integrity. They should also be responsive to one another in a timely manner.

Faculty advisors guide students in key areas such as selecting courses, designing and conducting research, developing teaching pedagogy, navigating policies and degree requirements, and exploring academic opportunities and professional pathways. The Department's Graduate Handbook provides information and suggested timelines for different stages of the doctoral program. For more information, see the Department's Graduate Degree Progress website.

Ph.D. students are initially assigned a program advisor based on the interests expressed in their application. This faculty member provides initial guidance in course selection, in exploring academic opportunities and professional pathways, and in identifying doctoral research opportunities. The Department does not require formal lab rotations, but students are encouraged to consider exploring research activities in two or three labs during their first academic year.

Students identify their doctoral research/thesis advisor, pass the qualifying exam, and advance to candidacy prior to the end of the second year of study. The research supervisor assumes primary responsibility for the future direction of the student, taking on the roles previously filled by the program advisor, and ultimately directs the student's dissertation. Most students find an advisor from among the primary faculty members of the Department. The research advisor may alternatively be a faculty member from another Stanford department who is familiar with supervising doctoral students and able to provide both advising and funding for the duration of the doctoral program. When the research advisor is from outside the Department, the student still maintains the previous program advisor from the primary faculty, to provide guidance on Departmental requirements and opportunities.

The faculty Associate Chair of Graduate Education is available during the academic year by email and during office hours. The Department's student services office is also an important part of the doctoral advising team: they inform students and advisors about University and Department requirements, procedures, and opportunities, and they maintain the official records of advising assignments and approvals. Students are encouraged to talk with their doctoral program advisor, the Graduate Student Teaching Advisor, and the Degree Progress Officer from the student services office as they consider advisor selection, or for guidance in working with their advisor(s).

The Department's doctoral students are active contributors to the advising relationship, proactively seeking academic and professional guidance and taking responsibility for informing themselves of policies and degree requirements for their graduate program. For more information, see the Electrical Engineering Department Graduate Handbook (pdf).

Programs

EE-BS
Degree Designation: BS - Bachelor of Science

EE-MS
Degree Designation: MS - Master of Science

EE-PMn
Degree Designation:

EE-Min
Degree Designation:

EE-PhD
Degree Designation: PHD - Doctor of Philosophy
-

Energy Resources Engineering Department

Contacts

Office: GESB 050
Mail Code: 94305-2220
Phone: (650) 723-4744
Email: ere@sesmail.stanford.edu
Web Site: https://earth.stanford.edu/ere

Courses offered by the Department of Energy Resources Engineering (ERE) are listed under the subject code ENERGY on the Stanford Bulletin's ExploreCourses web site.

The Department of Energy Resources Engineering (ERE) awards the following degrees: Bachelor of Science, Master of Science, Engineer, and Doctor of Philosophy in Energy Resources Engineering. The department also awards the Master of Science, Engineer, and Doctor of Philosopegrees in Petroleum Engineering. Contact the ERE student services office to determine the relevant program.

Energy Resources Engineering contributes to the engineering science needed to maintain and diversify the energy supply while finding the most rapid pathways toward greater energy sustainability. Energy Resources Engineering is concerned with the production, transformation, and impacts of energy resources including renewables and fossil fuels. Oil and natural gas are important components of the current energy system due to their widespread use, economic importance, and contributions to climate change. The flow of water, oil, and gas in the subsurface are important to quantify accurately for energy recovery, energy storage, environmental assessment, and carbon storage.

The program also has a strong interest in related energy topics such as renewable energy, global climate change, carbon capture and sequestration, energy storage and energy systems. The Energy Resources Engineering curriculum provides a sound background in basic sciences and their application to practical problems to address the complex and changing nature of the field. Course work includes the fundamentals of physics, chemistry, geology, computational physics, numerical analysis, and engineering science. Applied courses cover most aspects of energy resources engineering and some related fields such as geostatistics. The curriculum includes the fundamental aspects of energy transfer and fluid flow in subsurface geologic formations, as well as the storage, transmission and utilization of energy at the surface. These principles apply to the optimization of energy recovery from hydrocarbon and geothermal reservoirs, subsurface sequestration of carbon dioxide, energy storage, and the remediation of groundwater systems.

Faculty, graduate students, and postdoctoral scholars conduct research in areas including: energy system modeling and optimization; energy storage; data assimilation and uncertainty quantification; numerical reservoir simulation; carbon sequestration; enhanced oil recovery; geostatistical reservoir characterization; geothermal engineering; production optimization; power production from wind and wave energy; and well test analysis. Undergraduates are encouraged to participate in research projects.

The department is housed in the Green Earth Sciences Building and operates laboratories for research in batteries and energy storage, enhanced oil recovery processes, geological carbon storage operations, and geothermal engineering. Students have access to a variety of computer platforms and software for research and course work.

Faculty

Emeriti: (Professors) Khalid Aziz, Franklin M. Orr, Jr.

Chair: Hamdi Tchelepi

Director of Graduate Studies: Roland N. Horne

Director of Undergraduate Studies: Anthony R. Kovscek

Professors: Sally M. Benson, Louis J. Durlofsky, Margot Gerritsen, Roland N. Horne, Anthony R. Kovscek, Tapan Mukerji, Daniel M. Tartakovsky, Hamdi Tchelepi

Associate Professors: Inês Azevedo, Adam Brandt

Assistant Professors: Ilenia Battiato, Simona Onori

Courtesy Professors: Stephan A. Graham, Mark Jacobson

Adjunct Faculty: Alan Burnham, David Danielson, Warren K. Kourt, Jonathan Lilien, Robert G. Lindblom, Joel Moxley, Kiran Pande, Richard Sears, Marco R. Thiele, Denis V. Voskov

Graduate Advising

For a statement of University policy on graduate advising, see the "Graduate Advising" section of this bulletin.

Master's Student Advising

The Department of Energy Resources Engineering is committed to providing academic advising in support of our M.S. students' education and professional development. When most effective, this advising relationship entails collaborative engagement by both the advisor and the advisee. As a best practice, advising expectations should be discussed and reviewed to ensure mutual understanding. Both the advisor and the advisee are expected to maintain professionalism and integrity.

At or before the start of graduate study, normally at the beginning of Autumn Quarter, each student is assigned an advisor: a member of our faculty who provides research advice and guidance in course selection and in exploring academic opportunities and professional pathways. A significant advising milestone is the M.S. Program Proposal that each student completes at the end of their first quarter.

The department's graduate handbook provides information and suggested timelines for advising meetings. Typically, research M.S. students meet with their advisor on a twice weekly basis, once individually and once as part of the research group meeting. If a meeting is not possible, the student should send the advisor a brief email highlighting his/her activities for the week. Usually, the same faculty member serves as program advisor for the duration of master's study, but the handbook does describe a process for formal advisor changes.

In addition, the Director of Graduate Studies (DGS) meets with all the master's students at the start of the first year and is available during the academic year by email and during office hours.

Students are expected to have a discussion with their advisor during or before the first week of each quarter to agree upon the courses that the student plans to take that quarter. Advisors formally approve the study list in person or by email.

The department's student services office is also an important part of the master's advising team. The student services office informs students and advisors about University and department requirements, procedures, and opportunities, and it maintains the official records of advising assignments and approvals.

Finally, graduate students are active contributors to the advising relationship, proactively seeking academic and professional guidance and taking responsibility for informing themselves of policies and degree requirements for their graduate program.

Ph.D. Student Advising

The Department of Energy Resources Engineering is committed to providing academic advising in support of doctoral student scholarly and professional development. When most effective, this advising relationship entails collaborative and sustained engagement by both the advisor and the advisee. As a best practice, advising expectations should be periodically discussed and reviewed to ensure mutual understanding. Both the advisor and the advisee are expected to maintain professionalism and integrity.

Faculty advisors guide students in key areas such as selecting courses, designing and conducting research, developing teaching pedagogy, navigating policies and degree requirements, and exploring academic opportunities and professional pathways. The department's graduate handbook provides information and suggested timelines for advising meetings in the different stages of the doctoral program. If a meeting is not possible, the student should send the advisor a brief email highlighting his/her activities for the week. Typically, Ph.D. students meet with their advisor on a twice weekly basis, once individually and once as part of the research group meeting.

At least once per year, either formally or informally, students and advisors are expected to review the student's progress towards completion of their research and their degree. Such discussions may include other members of the student's research committee, either together or individually. A formal meeting of the full committee, which may be useful if the student and advisor differ in their assessment of research progress and goals, can be called by either the student or the advisor.

Ph.D. students are initially assigned a research advisor prior to or on arrival at Stanford. This faculty member provides initial guidance in course selection, in exploring academic opportunities and professional pathways, and in identifying doctoral research opportunities. Ultimately the advisor directs the student's dissertation. Usually, the same faculty member serves as advisor for the duration of Ph.D. study, but the handbook does describe a process for formal advisor changes.

Most students have an advisor from among the primary faculty members of the department. However, the research advisor may be a faculty member from another Stanford department who is familiar with supervising doctoral students and able to provide both advising and funding for the duration of the doctoral program. When the research advisor is from outside the department, the student must also identify a program advisor from the department's primary faculty to provide guidance on departmental requirements and opportunities.

Students are expected to have a discussion with their advisor during or before the first week of each quarter, to agree upon the courses that the student plans to take that quarter. Advisors formally approve the study list in person or by email.

The Director of Graduate Studies (DGS) meets with all doctoral students at the start of the first year, and is available during the academic year by email and during office hours. The department's student services office is also an important part of the doctoral advising team: it informs students and advisors about University and department requirements, procedures, and opportunities, and it maintains the official records of advising assignments and approvals. Students are encouraged to talk with the DGS and the student services office for guidance in working with their advisor(s).

The department's doctoral students are active contributors to the advising relationship, proactively seeking academic and professional guidance and taking responsibility for informing themselves of policies and degree requirements for their graduate program.

Programs

ERE-BS
Degree Designation: BS - Bachelor of Science
-

ERE-MS
Degree Designation: MS - Master of Science
-

PetEn-MS
Degree Designation: MS - Master of Science

PetEn-PMn
Degree Designation:

ERE-Min
Degree Designation:
-

ERE-PHD
Degree Designation: PHD - Doctor of Philosophy
-

PetEn-PhD
Degree Designation: PHD - Doctor of Philosophy

English Department

Contacts

Office: Building 460, Room 201
Mail Code: 94305-2087
Phone: (650) 723-2635
Web Site: http://english.stanford.edu

Courses offered by the Department of English are listed under the subject code ENGLISH on the Stanford Bulletin's ExploreCourses web site.

Mission of the Department of English

To study English at Stanford is to explore, deeply and rewardingly, the rich legacy of literature written in English, past and present. The department offers a wealth of courses on individual authors, the history of literary genres, literary theory, new media, and creative writing. Given the emphasis on critical thinking and interpretation, the English major is in turn an excellent preparation for many professional fields, including teaching, journalism, law, publishing, medicine, and business. The graduate program features rigorous training in the research and analysis of British, American, and global literary histories and texts, preparing students to produce scholarship of originality and importance, and to teach literature at the highest levels.

Learning Outcomes (Undergraduate)

The department expects undergraduate majors in the program to be able to demonstrate the following learning outcomes. These learning outcomes are used in evaluating students and the department's undergraduate program. Students are expected to demonstrate:

1. an understanding of major theories, methods, and concepts of literary study and critical analysis.
2. an awareness of how authors and texts develop in relation to their historical contexts.
3. a comprehension of the formal qualities of key literary genres, forms, and styles.
4. an effective style of writing and a powerful use of language.

Bachelor of Arts in English

In the undergraduate program, students explore the traditions of literature in English. Courses emphasize interpretive thinking and creative writing, examining the dynamics of literary and cultural history, the structures of literary form and genre, and the practices of reading, writing, and critical analysis.

Doctor of Philosophy in English

The graduate program features rigorous training in the research and analysis of British, American and Anglophone literary histories and texts, preparing students to produce scholarship of originality and importance, and to teach literature at advanced levels.

Learning Outcomes (Graduate)

The purpose of the master's program is to further develop knowledge and skills in British, American and Anglophone literary histories and texts and to prepare students for a professional career or doctoral studies. This is achieved through completion of courses, in the primary field as well as related areas, and experience with independent work and specialization.

The Ph.D. is conferred upon candidates who have produced substantial scholarship and demonstrated the ability to conduct independent research and analysis in English. Through completion of advanced course work and rigorous skills training, the doctoral program prepares students to make original contributions to the discipline of English Literature and present the results of such research.

Other Programs in English

Ph.D. in Modern Thought and Literature

Stanford also offers a Ph.D. degree in Modern Thought and Literature. Under this program, students devote approximately half of their time to a modern literature from the Enlightenment to the present, and the other half to interdisciplinary studies. Interested students should see the "Modern Thought and Literature" section of this bulletin and consult the director of the program.

Creative Writing Fellowships

The Creative Writing Program each year offers five two-year fellowships in poetry and five two-year fellowships in fiction. These are not degree-granting fellowships. Information is available in the Creative Writing office, 650-723-0011.

Faculty

Emeriti: (Professors) John B. Bender (English, Comparative Literature), George H. Brown, W. B. Carnochan, W. S. Di Piero, Kenneth W. Fields, Albert J. Gelpi, Barbara C. Gelpi, Shirley Heath, Andrea A. Lunsford, Franco Moretti, Stephen Orgel, Nancy H. Packer, Marjorie G. Perloff, Robert M. Polhemus, Arnold Rampersad, David R. Riggs, Lawrence V. Ryan, Elizabeth C. Traugott, Tobias Wolff; *(Associate Professor)* Sandra Drake; *(Professor, Teaching)* Larry Friedlander; *(Senior Lecturer)* Helen B. Brooks; *(Lecturer)* David MacDonald

Chair: Ato Quayson

Director of Graduate Studies: Mark Algee-Hewitt

Director of Undergraduate Studies: Vaughn Rasberry

Director of Creative Writing Program: Patrick Phillips

Professors: Terry Castle, Margaret Cohen, Michele Elam, Shelley Fisher Fishkin, Denise Gigante, Roland Greene (English, Comparative Literature), Blair Hoxby, Adam Johnson, Gavin Jones, Chang-rae Lee, Mark McGurl, Paula Moya, Patricia A. Parker (English, Comparative Literature), Peggy Phelan (English, Theater and Performance Studies), Patrick Phillips, Ato Quayson, Nancy Ruttenburg, Ramón Saldívar (English, Comparative Literature, Elizabeth Tallent, Elaine Treharne, Blakey Vermeule (on leave), Alex Woloch

Associate Professors: Mark Greif, Nicholas Jenkins (on leave), Vaughn Rasberry

Assistant Professors: Mark Algee-Hewitt, Michaela Bronstein, Roanne Kantor, Ivan Lupić, Thomas Owens, Esther Yu

Senior Lecturer: Judith Richardson, Alice Staveley

Courtesy Professors: Joshua Landy, Bernadette Meyler, David Palumbo-Liu, Kathryn Starkey

Lecturers: Molly Antopol, William Brewer, Kai Carlson-Wee, Keith Ekiss, John Evans, Sarah Frisch, Richard Hofmann, Sterling HolyWhiteMountain, Scott Hutchins, Tom Kealey, Mark Labowskie, Sara Michas-Martin, Brittany Perham, Ryan Perry, Edward Porter, Shannon Pufahl, Nina Schloesser Tarano, Michael Sears, Michael Shewmaker, Monica Sok, Shimon Tanaka, Ruchika Tomar, Jennifer Alandy Trahan, Rose Whitmore

Adjunct Professor: Valerie Miner

Visiting Professors: Louise Glück

Graduate Advising Expectations

The Department of English is committed to providing academic advising in support of graduate student scholarly and professional development. When most effective, this advising relationship entails collaborative and sustained engagement by both the advisor and the advisee. As a best practice, advising expectations should be periodically discussed and reviewed to ensure mutual understanding. Both the advisor and the advisee are expected to maintain professionalism and integrity.

Faculty advisors guide students in key areas such as selecting courses, designing and conducting research, developing of teaching pedagogy, navigating policies and degree requirements, and exploring academic opportunities and professional pathways.

Graduate students are active contributors to the advising relationship, proactively seeking academic and professional guidance and taking responsibility for informing themselves of policies and degree requirements for their graduate program.

For a statement of University policy on graduate advising, see the "Graduate Advising" section of this bulletin.

Programs

CrWrit-Min
Degree Designation:
-

Dighum-Min
Degree Designation:
-

Engl-BA
Degree Designation: BA - Bachelor of Arts

Engl-MA
Degree Designation: MA - Master of Arts

Engl-Min
Degree Designation:

Engl-PhD
Degree Designation: PHD - Doctor of Philosophy

Environmental Earth System Science Department

Contacts

Office: Yang and Yamazaki Environment and Energy Building, Room 140
Mail Code: 94305-4216
Phone: 650-723-6027
Email: essgradprogram@stanford.edu
Web Site: http://earth.stanford.edu/ess

Courses offered by the Department of Earth System Science are listed under the subject code ESS on the Stanford Bulletin's ExploreCourses web site.

On April 16, 2015, the Senate of the Academic Council approved the change of name for the department to become the Department of Earth System Science. Prior to April 16, the department was named the Department of Environmental Earth System Science.

Earth System Science studies the planet's oceans, lands, and atmosphere as an integrated system, with an emphasis on changes occurring during the current period of overwhelming human influence, the Anthropocene. Faculty and students within the department use the principles of biology, chemistry, and physics to study problems involving processes occurring at the Earth's surface, such as climate change and global nutrient cycles, providing a foundation for problem solving related to environmental sustainability and global environmental change.

Graduate Programs in Earth System Science

The University's basic requirements for the M.S. and Ph.D. degrees are discussed in the Graduate Degrees section of this bulletin. The Department of Earth System Science does not offer coterminal admission to the master's in Earth System Science.

Learning Objectives (Graduate)

The objectives of the doctoral program in Earth System Science are to enable students to develop the skills needed to conduct original investigations in environmental and earth system sciences, to interpret the results, and to present the data and conclusions in a publishable manner. Graduates should develop strong communication skills with the ability to teach and communicate effectively with the public.

The objectives of the master's program in Earth System Science is to continue a student's training in one of the earth science disciplines and to prepare students for a professional career or doctoral studies.

Faculty

Chair: Kevin Arrigo

Directors of Graduate Studies: Pamela Matson, Rosamond Naylor

Professors: Kevin Arrigo, Noah Diffenbaugh (3), Robert Dunbar, Scott Fendorf, Christopher Field (1,3), Christopher Francis, Steven Gorelick, Robert Jackson (2,3), Eric Lambin (3), David Lobell (3,4), Pamela Matson, Rosamond Naylor (3,4)

Associate Professors: Marshall Burke (4), Karen Casciotti, James Holland Jones, Kate Maher, Leif Thomas, Paula Welander

Assistant Professors: Anne Dekas, Alison Hoyt, Alexandra Konings, Morgan O'Neill, Aditi Sheshadri, Elliott White Jr, Earle Wilson, Gabrielle Wong-Parodi

Courtesy Professors: Gregory Asner, Ken Caldeira, Anna Michalak, Peter Vitousek

Visiting Professors:

(1)Joint appointment with Biology

(2)Joint appointment with the Precourt Institute for Energy

(3)Joint appointment with the Woods Institute for the Environment

(4)Joint appointment with the Freeman Spogli Institute for International Studies

Graduate Advising Expectations

The Department of Earth System Science is committed to providing academic advising in support of graduate student scholarly and professional development. When most effective, this advising relationship entails collaborative and sustained engagement by both the advisor and the advisee. As a best practice, advising expectations should be periodically discussed and reviewed to ensure mutual understanding. Both the advisor and the advisee are expected to maintain professionalism and integrity.

Purpose of Advising

Faculty advisors guide students in key areas such as selecting courses, designing and conducting research, developing of teaching pedagogy, navigating policies and degree requirements, and exploring academic opportunities and professional pathways.

Graduate students are active contributors to the advising relationship, proactively seeking academic and professional guidance and taking responsibility for informing themselves of policies and degree requirements for their graduate program.

For a statement of University policy on graduate advising, see the Advising and Credentials section of this bulletin.

Expectations

- Students are paired with a primary advisor at the time of admission to the Earth System Science graduate program. A secondary advisor may also be designated at the time of admission.
- Beginning with the first quarter, and at least annually thereafter, a shared expectations conversation occurs. This clarifies educational philosophies and individual responsibilities, and generates a written record for student, advisor, and department. As part of this process, advisors provide clear statements of their expectations, discuss those expectations with the student, and articulate which areas may be open to amendment based on student input. Broad areas in which to align expectations include:
    - Course selection and other academic development
    - Navigating policies and degree requirements
    - Financial support
    - Identifying research opportunities and level of independence
    - Research milestones, publications, co-authorship, outside collaborations, and timeline
    - Frequency of individual and group meetings, expectations for campus and departmental presence, vacations
    - Frequency of and funding for off-campus research and professional development activities (such as conferences, workshops, short courses, and field work)
    - Preparation for future employment and exploration of professional pathways
- There is an annual review of progress that generates a written record. This review is documented by the thesis committee as part of the annual review meeting. In addition, students should be meeting with their advisor frequently enough that if they are not making sufficient progress, they ideally receive such feedback sooner than at an annual meeting.
- Students can expect advisors to:
    - Exercise high professional standards in their academic work, research, and mentoring partnerships
    - Serve as intellectual and professional mentors
    - Understand University and department policies pertinent to graduate students

  - Provide timely, regular, and constructive feedback on progress
  - Provide insights into career options and pathways and/or point students toward relevant career and professional development resources
- Advisors can expect students to:
  - Exercise high professional standards in their academic work, research, and mentoring partnerships
  - Be pro-active in seeking advice and keeping the advisor informed about academic and research progress
  - Consult with the advisor, and others as necessary, to resolve problems
  - Take primary responsibility for meeting timelines, policies, and milestones that impact degree progress

Additional Resources and Pathways

- The thesis committee is convened by the student's second year. Once convened, the thesis committee:
  - Meets annually with the student to discuss research progress, research plans, coursework, and professional/career goals, and to provide verbal and written feedback on degree progress
  - For Ph.D. students, the thesis committee conducts the qualifying exam and the oral exam (i.e., dissertation defense), and approves the written dissertation
  - In some cases, members of the thesis committee may also be research collaborators, and may also serve as mentors and/or letter writers for applications
- As part of their advising network, students are encouraged to consult departmental resources (such as department and school student services staff, the thesis committee, the department Director of Graduate Studies, and the department Chair), Stanford institutional resources (such as VPGE, the Office of Graduate Life, CAPS, and the campus Ombuds), as well as individuals and networks in the broader scientific community (such as the American Geophysical Union and the Earth Sciences Women's Network).
- In the event that a student has a formal concern or complaint about their advising experience, they are encouraged to contact the department Director of Graduate Studies, the department Chair, the school Associate Dean for Educational Affairs, and/or the school Associate Dean for Human Resources and Faculty Affairs.
- In the event that either the student or advisor feels that the advising relationship is not effective, the school process for formally evaluating student/advisor assignments may be activatss

Programs

ESS-MS
Degree Designation: MS - Master of Science
-

ESS-PHD
Degree Designation: PHD - Doctor of Philosophy
-

Epidemiology Department

Contacts

Office: 259 Campus Drive, Suite T152
Mail Code: 5405
Phone: (650) 723-5082

Email: epiadmissions@stanford.edu
Web Site: http://med.stanford.edu/epidemiology-dept/education.html

Effective October 1, 2019, Epidemiology moved from the Department of Health Research and Policy to become an independent department in the School of Medicine, the new Department of Epidemiology and Population Health.

Epidemiology is the study of factors that cause illness and impairment in human populations. It is the cornerstone of population health and clinical research, informing policy, prevention, disease treatment, and understanding of disease mechanisms. A central focus of epidemiology is to go beyond simple prediction to identifying risk factors likely to be causal, upon which interventions and mechanistic understanding can be reliably based.

The Department of Epidemiology and Population Health (E&PH) is Stanford's academic and organizational home for such activities, offering expertise, research, and training on study design, data collection, analysis and proper interpretation of scientific evidence to improve human health in the clinic and in the field.

Faculty

Department Chair: Melissa Bondy

Director: Steven Goodman

Core Faculty and Academic Teaching Staff:

Alyce Adams, Michael Baiocchi, Jade Benjamin-Chung, Melissa Bondy, Lisa Goldman Rosas, Steven Goodman, Victor Henderson, Ann Hsing, John Ioannidis, Esther John, Matthew Kiang, Abby King, Allison Kurian, Yvonne Maldonado, Lorene Nelson, Michelle Odden, Lesley Park, Julie Parsonnet, Rita Popat, David Rehkopf, Patricia Rodriguez Espinosa, Kristin Sainani, Julia Simard, Alice Whittemore, John Witte

Affiliated Faculty by Department:

- Biomedical Data Science: Ying Lu, Tina Hernamdez-Boussard
- Dermatology: Eleni Linos
- Medicine: Jason Andrews, Themistocles Assimes, Glenn Chertow, Mark Hlatky, Lianne Kurina, Jennifer Lee, Stephen Luby, Mitchell Lunn, Mindie Nguyen, Latha Palaniappan, Thomas Robinson, Marcia Stefanick, Holly Tabor
- Obstetrics and Gynecology: Juno Obedin-Maliver
- Pediatrics: Suzan Carmichael, Paul Fisher, Bonnie Halpern-Felsher, Angelle (Desiree) LaBeaud, Mary Leonard, David Maahs, Kari Nadeau, Lee Sanders, Gary Shaw
- Psychiatry: Pablo Paredes

Graduate Advising

Graduate Advising Expectations

The Department of Epidemiology & Population Health is committed to providing academic advising in support of graduate student scholarly and professional development. When most effective, this advising relationship entails collaborative and sustained engagement by both the adviser and the advisee. As a best practice, advising expectations should be periodically discussed and reviewed to ensure mutual understanding. Both the adviser and the advisee are expected to maintain professionalism and integrity.

Faculty advisers guide students in key areas such as selecting courses, designing and conducting research, developing teaching pedagogy, navigating policies and degree requirements, and exploring academic opportunities and professional pathways.

Graduate students are active contributors to the advising relationship, proactively seeking academic and professional guidance and taking responsibility for informing themselves of policies and degree requirements for their graduate program.

E&PH programs adhere to the advising guidelines and responsibilities listed by the Office of the Vice Provost for Graduate Education and in the Graduate Academic Policies and Procedures manual.

For a statement of University policy on graduate advising, see the Graduate Advising section of this bulletin.

Programs

EpidCR-PhD
Degree Designation: PHD - Doctor of Philosophy
-

Epidm-MS
Degree Designation: MS - Master of Science
-

Ethics in Society Department

Contacts

Office: Stanford Law School (Crown Quadrangle), 3rd Floor
Mail Code: 94305-3099
Phone: (650) 736-2629
Email: eisprogram@stanford.edu
Web Site: http://ethicsinsociety.stanford.edu/undergraduate-ethics

The Program in Ethics in Society consists of an interdisciplinary honors program and a minor that are open to undergraduates in all majors.

Mission of the Program in Ethics in Society

The Program in Ethics in Society, which operates under the umbrella of the Bowen H. McCoy Family Center for Ethics in Society, is designed to foster scholarship, teaching, and moral reflection on fundamental issues in personal and public life. The program is grounded in moral and political philosophy, but it extends its concerns across a broad range of traditional disciplinary domains. The program is guided by the idea that ethical thought has application to current social questions and conflicts, and it seeks to encourage moral reflection and practice in areas such as business, technology, international relations, law, medicine, politics, science, and public service.

Ethics in Society Courses

Courses offered by the Program in Ethics in Society are listed under the subject code ETHICSOC on the Stanford Bulletin's ExploreCourses web site. There are many course offerings at Stanford that address moral and political questions, only some of which are crosslisted by the Program in Ethics in Society.

Faculty

Faculty Director: Brent Sockness

Stanford University

Affiliated Faculty:

- Juliana Bidadanure (Philosophy)
- Emilee Chapman (Political Science)
- Jorah Dannenberg (Philosophy)
- Barbara Fried (Law)
- Pam Karlan (Law)
- Joshua Landy (Comparative Literature)
- Margaret Levi (CASBS)
- David Magnus (Biomedical Ethics, Pediatrics)
- Barry Maguire (Philosophy)
- Alison McQueen (Political Science)
- Michelle Mello (Law)
- Benoît Monin (Psychology, Graduate School of Business)
- Josiah Ober (Classics, Political Science)
- Rob Reich (Political Science, Philosophy)
- Debra Satz (Philosophy)
- Mehran Sahami (Computer Science)
- Wendy Salkin (Philosophy)
- Brent Sockness (Religious Studies)
- Fred Turner (Communications)

Programs

EthSo-Min
Degree Designation:
-

Feminist, Gender, and Sexuality Studies Department

Contacts

Office: Building 460, Room 216
Mail Code: 94305-2022
Phone: (650) 723-3413
Email: apotemski@stanford.edu
Web Site: https://feminist.stanford.edu

Courses offered by the Program in Feminist, Gender, and Sexuality Studies are listed under the subject code FEMGEN on Stanford ExploreCourses website.

The Program in Feminist, Gender, and Sexuality Studies offers an undergraduate major and minor, and an interdisciplinary honors program that is open to students in all majors. Each Feminist, Gender, and Sexuality Studies student builds an individual program of study around a self-defined thematic focus, integrating courses from multiple departments. The program encourages work in the arts and supports creative honors theses. Feminist, Gender, and Sexuality Studies majors may declare Arts & Culture, Global Studies, Health, or LGBT/Queer Studies as a subplan, or may design their own thematic focus. Subplans are printed on the diploma; individual thematic foci are not printed on the diploma.

Curriculum guidelines and forms for the undergraduate major, minor, and honors programs are available on the program web site. See the program web site for additional contact information.

The Program in Feminist, Gender, and Sexuality Studies offers the option of a Ph.D. minor to graduate students already enrolled in a Ph.D. program at Stanford University. The Ph.D. minor in Feminist, Gender, and Sexuality Studies provides graduate students pursuing Ph.D.s broad interdisciplinary knowledge in the field and prepares them to teach courses in the subject. The goal of the program is to bring together graduate students and faculty from different departments, programs, and schools who use feminist and queer perspectives in their research.

Mission of the Undergraduate Program in Feminist, Gender, and Sexuality Studies

The interdepartmental Program in Feminist, Gender, and Sexuality Studies provides students with knowledge and skills to investigate the significance of gender and sexuality in all areas of human life. Feminist, Gender, and Sexuality Studies examines how societies structure gender roles, relations, and identities, and how these intersect with other hierarchies of power, such as class, race, nationality, ethnicity, sexuality, ability, and age. The program coordinates courses offered across the University in feminist and lesbian, gay, bisexual, transgender, and queer studies. Students learn to employ critical gender and sexuality studies methodologies to analyze the assumptions about gender and sexuality that inform the study of individuals, cultures, social institutions, policy, and areas of scholarly inquiry. The program prepares majors for graduate study in humanities and social sciences and for professional schools.

Faculty

Program Director

Richard Meyer (Art and Art History)

Associate Director

Maxe Crandall

Director of Undergraduate Studies

Richard Meyer (Art and Art History)

Faculty Affiliates

American Studies: Shelley Fisher Fishkin

Anthropology: Paulla Ebron, Miyako Inoue, Barbara Voss, Sylvia Yanagisako

Art and Art History: Terry Berlier, Jean Ma, Richard Meyer

Comparative Literature: Petra Dierkes-Thrun, Patricia Parker

Developmental Biology: Ellen Porzig (emerita)

East Asian Languages and Cultures: Haiyan Lee, Yoshiko Matsumoto, James Reichert, Melinda Takeuchi (emerita)

Education: Debra Meyerson, Myra Strober (emerita), Christine Min Wotipka

English: Terry Castle, Michele Elam, Shelly Fisher Fishkin, Barbara Gelpi (emerita), Andrea Lunsford (emerita), Paula Moya, Stephen Orgel (emeritus), Ramón Saldívar, Alice Staveley, Elizabeth Tallent

Feminist, Gender, and Sexuality Studies: Ann Atura, Maxe Crandall, Laura Goode, Susan Krieger, Valerie Miner, Rabbi Patricia Karlin-Neumann, Rev. Joanne Sanders

French and Italian: Cecile Alduy, Marisa Galvez, Carolyn Springer (emerita)

German Studies: Russell Berman, Adrian Daub

History: Jennifer Burns, Carolyn Lougee Chappell (emerita), Paula Findlen, Estelle Freedman, Fiona Griffiths, Allyson Hobbs, Katherine Jolluck, Nancy Kollmann, Ana Minian, Paul Robinson (emeritus), Londa Schiebinger, Matthew Sommer, Laura Stokes

Human Biology: Anne Firth Murray

Iberian and Latin American Cultures: Yvonne Yarbro-Bejarano

Law: Michele Dauber, Deborah Rhode, Jane Schacter

Linguistics: Penelope Eckert, Rob Podesva

Medical School: Ann Arvin, Helen Blau, Gabriel Garcia (emeritus), Cheryl Gore-Felton, Roy King, Cheryl Koopman, Iris Litt (emerita), Leah Millheiser, Marcia Stefanick, Lynn Marie Westphal

Music: Heather Hadlock

Philosophy: Helen Longino, Debra Satz

Political Science: Lisa Blaydes, Terry Karl (emerita)

Psychology: Laura Carstensen, Hazel Markus

Religious Studies: Charlotte Fonrobert, Hester Gelber (emerita)

Slavic Languages and Literatures: Monika Greenleaf

Sociology: Shelley Correll, Cecilia Ridgeway (emerita), Michael Rosenfeld, Robb Willer

Theatre and Performance Studies: Jennifer Brody, Harry J. Elam (emeritus), Jisha Menon, Peggy Phelan, Janice Ross

Graduate Advising Expectations

The Department of Feminist, Gender, and Sexuality Studies is committed to providing academic advising in support of graduate student scholarly and professional development. When most effective, this advising relationship entails collaborative and sustained engagement by both the adviser and the advisee for students enrolled in the Ph.D. minor in Feminist, Gender, and Sexuality Studies. Students enrolled in the Ph.D. minor are encouraged to consult their advisers each quarter. As a best practice, advising expectations should be periodically discussed and reviewed to ensure mutual understanding. Both the adviser and the advisee are expected to maintain professionalism and integrity.

Faculty advisers guide students in key areas such as selecting courses, designing and conducting research, developing of teaching pedagogy, navigating policies and degree requirements, and exploring academic opportunities and professional pathways.

Graduate students are active contributors to the advising relationship, proactively seeking academic and professional guidance and taking responsibility for informing themselves of policies and degree requirements for their graduate program.

For a statement of University policy on graduate advising, see the "Graduate Advising" section of this bulletin.

Programs

FGSS-BA
Degree Designation: BA - Bachelor of Arts
-

FGSS-IHn
Degree Designation:
-

FGSS-MIN
Degree Designation:
-

French Department

Contacts

Office: Building 260, Rooms 127-128
Mail Code: 94305-2010
Phone: (650) 723-4183, Fax: (650) 723-0482
Email: fren-ital@stanford.edu
Web Site: https://dlcl.stanford.edu/departments/french-and-italian/about

Courses offered by the Department of French and Italian are listed on the Stanford Bulletin's ExploreCourses web site under the subject codes FRENCH (French General and Literature) and ITALIAN (Italian General and Literature). For courses in French or Italian language instruction with the subject code FRENLANG or ITALLANG, see the Language Center section of this bulletin.

The department is a part of the Division of Literatures, Cultures, and Languages.

French Section

The French section provides students with the opportunity to pursue course work at all levels in French language, literature, cultural and intellectual history, theory, film, and Francophone studies. It understands the domain of French Studies as encompassing the complex of cultural, political, social, scientific, commercial, and intellectual phenomena associated with French-speaking parts of the world, from France and Belgium to Canada, Africa, and the Caribbean.

Three degree programs are available in French: a B.A., a terminal M.A., and a Ph.D. A Ph.D. in French and Italian is also available.

Visiting faculty and instructors contribute regularly to the life of the French section. The section maintains contacts with the Ecole Normale Supérieure, the Institut d'Etudes Politiques, and the Ecole Polytechnique.

A curator for Romance languages oversees the extensive French collection at Green Library. The Hoover Institute on War, Revolution, and Peace also includes materials on 20th-century France and French social and political movements.

Stanford Center for Interdisciplinary Studies

The Stanford Center for Interdisciplinary Studies, founded in partnership with the French Ministry of Foreign Affairs, aims to bridge the disciplines of the humanities, social sciences, sciences, engineering, business, and law, to address historical and contemporary issues. Its programs bring faculty and students from across Stanford's departments and schools in contact with colleagues in France to explore issues of common intellectual concern. The center invites French-speaking scholars to offer courses or give lectures or seminars on campus. It facilitates internships for Stanford students in computer science and engineering in Sophia-Antipolis, France's new high-tech center near Nice.

Stanford in Paris

The Bing Overseas Studies Program in Paris offers undergraduates the opportunity to study in France during Autumn, Winter, and Spring quarters. It provides a wide range of academic options, including course work at the Stanford center and at the University of Paris, independent study projects, and internships. In addition, the program promotes interaction with the local community through volunteer employment, homestays, and internships. The minimum language requirement for admission into Stanford in Paris is one year of French at the college level.

Courses offered in Paris may count toward fulfillment of the requirements of the French major or minor. Students should consult with the Chair of Undergraduate Studies before and after attending the program, in order to ensure that course work and skills acquired abroad can be coordinated appropriately with their degree program. Detailed information, including program requirements and curricular offerings, may be obtained from the "Overseas Studies" section of this bulletin, the Stanford in Paris web site, or the Overseas Studies Program Office in Sweet Hall.

La Maison Française

La Maison Française, 610 Mayfield, is an undergraduate residence that serves as a campus French cultural center, hosting in-house seminars as well as social events, film series, readings, and lectures by distinguished representatives of French and Francophone intellectual, artistic, and political life. Assignment is made through the regular housing draw.

Mission of the Undergraduate Program in French

The mission of the undergraduate in French is to expose students to a variety of perspectives in French language, culture, and history by providing majors and minors with training in writing and communication as well cultural, textual, and historical analysis. Through such skills, students develop into critical and global thinkers prepared for careers in business, social service, journalism, and government, or for graduate study in French.

Learning Outcomes (Undergraduate)

The department expects undergraduate majors in the program to be able to demonstrate the following learning outcomes. These learning outcomes are used in evaluating students and the department's undergraduate program. Students are expected to demonstrate:

1. oral proficiency in French beyond the interpersonal level with presentational language abilities.
2. writing proficiency in French beyond the interpersonal level with presentational language abilities.
3. close reading skills of authentic texts in French.
4. the ability to develop effective and nuanced lines of interpretation.

Italian Section

The Italian section offers graduate and undergraduate programs in Italian language, literature, culture, and intellectual history. Course offerings range from small, specialized graduate seminars to general courses open to all students on authors such as Dante, Boccaccio, and Machiavelli.

Three degree programs are available in Italian: a B.A., a Ph.D., and Ph.D. in French and Italian. An Italian minor program is available to undergraduates.

Collections in Green Research Library are strong in the medieval, Renaissance, and contemporary periods; the Italian section is one of the larger constituents of the western European collection at the Hoover Institution for the Study of War, Revolution, and Peace; and the Music Library has excellent holdings in Italian opera.

La Casa Italiana

La Casa Italiana, 562 Mayfield, is an undergraduate residence devoted to developing an awareness of Italian language and culture. It works closely with the Italian Cultural Institute in San Francisco and with other local cultural organizations. It hosts visiting representatives of Italian intellectual, artistic, and political life. A number of departmental courses are taught at the Casa, which also offers in-house seminars. Assignment is made through the regular undergraduate housing draw.

Stanford in Florence

The Bing Overseas Studies Program in Florence affords undergraduates with at least three quarters of Italian language the opportunity to take advantage of the unique intellectual and visual resources of the city and to focus on two areas: Renaissance history and art, and contemporary Italian and European studies. The program is structured to help integrate students into Italian culture through homestays, Florence University courses, the Language Partners Program, research, internship and public service opportunities, and by conducting some of the program's classes in Italian. Many courses offered in Florence may count toward the fulfillment of requirements for the Italian major or minor. Students are encouraged to consult with the Italian undergraduate adviser before and after a sojourn in Florence to ensure that their course selections meet Italian section requirements. Information on the Florence program is available in the "Overseas Studies" section of this bulletin, the Stanford in Florence web site, or at the Overseas Studies office in Sweet Hall.

Mission of the Undergraduate Program in Italian

The mission of the undergraduate program in Italian is to expose students to a variety of perspectives in Italian language, culture, and history by providing majors with training in writing and communication as well as cultural, textual, and historical analysis in order to develop students into critical and global thinkers prepared for careers in business, social service, and government, or for graduate study in Italian.

Learning Outcomes (Undergraduate)

The department expects undergraduate majors in the program to be able to demonstrate the following learning outcomes. These learning outcomes are used in evaluating students and the department's undergraduate program. Students are expected to demonstrate:

1. oral proficiency in Italian beyond the interpersonal level with presentational language abilities.
2. writing proficiency in Italian beyond the interpersonal level with presentational language abilities.
3. close reading skills of authentic texts in Italian.
4. the ability to develop effective and nuanced lines of interpretation.

Graduate Programs in French and Italian

The department offers a Ph.D. and terminal M.A. in French, a Ph.D. in Italian, and a Ph.D. in French and Italian.

Learning Outcomes (Graduate)

The purpose of the master's program is to further develop knowledge and skills in French or Italian and to prepare students for a professional career or doctoral studies. This is achieved through completion of courses, in the primary field as well as related areas, and experience with independent work and specialization.

The Ph.D. is conferred upon candidates who have demonstrated substantial scholarship and the ability to conduct independent research and analysis in French, Italian, or French and Italian. Through completion of advanced course work and rigorous skills training, the doctoral program prepares students to make original contributions to the knowledge of French, Italian, or French and Italian and to interpret and present the results of such research.

Faculty in French and Italian

Director: Laura Wittman

Chair of Graduate Studies: Cécile Alduy (French), Laura Wittman (Italian)

Chairs of Undergraduate Studies: Dan Edelstein (French - Autumn), Fatoumata Seck (French - Winter/ Spring), Sarah Prodan (Italian - Autumn, Spring), Laura Wittman (Italian - Winter)

Professors: Cécile Alduy, Jean-Pierre Dupuy, Dan Edelstein, Marisa Galvez, Joshua Landy (also Comparative Literature), Robert Harrison (on leave Spring)

Associate Professors: Laura Wittman

Assistant Professors: Sarah Prodan, Fatoumata Seck

Lecturers: Anna Ilievska (Mellon Fellow), Andrei Pesic

Courtesy Professors: Keith Baker, Margaret Cohen, Paula Findlen

Courtesy Associate Professor: James P. Daughton

Emeriti: (Professors) Jean-Marie Apostolidès (also Theater and Performance Studies), John G. Barson, Robert G. Cohn, John Freccero (also Comparative Literature), Hans U. Gumbrecht (also Comparative Literature), Elisabeth Mudimbe-Boyi (also Comparative Literature), Carolyn Springer

Graduate Advising Expectations

The Department of French and Italian is committed to providing academic advising in support of graduate student scholarly and professional development. The overall goal of advising, both in the DLCL and the department, is to help graduate students make academic and career choices wisely, and think ahead, in order to craft a long-term plan for their graduate student career and beyond. When most effective, the advising relationship entails collaborative and sustained engagement by both the adviser and the advisee. As a best practice, advising expectations should be periodically discussed and reviewed to ensure mutual understanding. Both the adviser and the advisee are expected to maintain professionalism and integrity. Advising is both an academically invaluable form for the transmission of expertise, as well as a key aspect of creating a strong departmental and Stanford community.

Faculty Advisers

Faculty advisers guide students in key areas such as selecting courses, designing and conducting research, developing of teaching pedagogy, navigating policies and degree requirements, and exploring academic opportunities and professional pathways.

- Upon enrolling, students plan their work under the direction of the Chair of Graduate Studies or a faculty member designated by the program. When the student selects a more specialized adviser, the transition should involve oral or written communication between both advisers and the student concerning the student's progress, goals, and expectations. It is possible for doctoral students to choose two main advisers at the dissertation stage, provided all agree this is academically sound.
- Faculty advisers should meet with assigned students to discuss their selection of courses and to plan from a broader, longer-term perspective, including discussion of Program milestones and a basic timeline; an overview of Department and DLCL offerings beyond courses; student goals and interests and DLCL or Stanford programs that may be relevant; and (for doctoral students) how to transfer previous graduate coursework.
- Faculty advisers and graduate students should meet at least once per quarter to assess the advisee's course of study, performance over the past quarter, and plans for the next quarter, as well as longer term plans. If a student has two advisers, the student should meet at least once per quarter with each adviser and at least once per year with both advisers at the same time.
- For doctoral students, faculty should help their advisees plan for exams, research grant applications, develop research projects, and plan ahead for both the academic job market and the job search beyond academia.
- Faculty advisers should provide feedback about the student's progress to the department during the Annual Review process. For more information about the Annual Review, see the Graduate Handbook.

Graduate Students

Graduate students are active contributors to the advising relationship, proactively seeking academic and professional guidance and taking responsibility for informing themselves of policies and degree requirements for their graduate program.

- Upon enrolling, students plan their work under the direction of the Chair of Graduate Studies or a faculty member designated by the program. As the student develops a field of expertise, the student choose a program adviser to replace the Chair of Graduate Studies role. The transition should involve oral or written communication between both advisers and the student concerning the student's progress, goals, and expectations.
- Graduate students and faculty advisers and should meet at least once per quarter to assess the advisee's course of study, performance over the past quarter, and plans for the next quarter, as well as longer term plans. If a student has two advisers, the student should meet at least once per quarter with each adviser and at least once per year with both advisers at the same time.
- Students should consult with their advisers on all academic matters, including coursework, conference presentations and publications, research travel, and teaching plans.
- Students should provide a thorough self-evaluation each year for the annual review. For more information about the Annual Review, see the Graduate Handbook.

For a statement of University policy on graduate advising, see the Graduate Advising section of this bulletin.

Programs

Frenc-BA
Degree Designation: BA - Bachelor of Arts

Frenc-MA
Degree Designation: MA - Master of Arts

Frenc-Min
Degree Designation:

Frenc-PhD
Degree Designation: PHD - Doctor of Philosophy

Frenc-PMn
Degree Designation:

FRNIT-MA
Degree Designation: MA - Master of Arts
-

FRNIT-PHD
Degree Designation: PHD - Doctor of Philosophy
-

Ital-BA
Degree Designation: BA - Bachelor of Arts

Ital-MA
Degree Designation: MA - Master of Arts

Ital-Min
Degree Designation:

Ital-PhD
Degree Designation: PHD - Doctor of Philosophy

Ital-PMn
Degree Designation:

Genetics Department

Contacts

Office: Genetics
Mail Code: 94305-5120
Phone: (650) 723-3335
Email: genetics-info@genome.stanford.edu
Web Site: http://genetics.stanford.edu

Courses offered by the Department of Genetics are listed under the subject code GENE on the Stanford Bulletin's ExploreCourses web site.

An underlying theme in the department is that genetics is not merely a set of tools but a coherent and fruitful way of thinking about biology and medicine. To this end, the department emphasizes a spectrum of approaches based on molecules, organisms, populations, and genomes. It provides training through laboratory rotations, dissertation research, seminar series, didactic and interactive course work, and an annual three-day retreat of nearly 200 students, faculty, postdoctoral fellows, and research staff.

The mission of the department includes education and teaching as well as research; graduates from our program pursue careers in many different venues including research in academic or industrial settings, health care, health policy, and education. The department is especially committed to increasing diversity within the program, and to the training of individuals from traditionally underrepresented minority groups.

Faculty

Emeritus: (Professor) Greg Barsh, Uta Francke

Chair: Michael Snyder

Professors: Russ Altman, Laura Attardi, Julie Baker, Anne Brunet, Carlos Bustamante, Michele Calos, Stanley Cohen, Ronald Davis, Andrew Fire, James Ford, Judith Frydman, Margaret Fuller, Aaron Gitler, Mark Kay, Karla Kirkegaard, Joseph Lipsick, Hiromitsu Nakauchi, Jonathan Pritchard, John Pringle, Julien Sage, Arend Sidow, Tim Stearns, Lars Steinmetz, Hua Tang, Alice Ting , Anne Villeneuve

Professor (Research): Leonore Herzenberg, J. Michael Cherry

Professors (Teaching): Kelly Ormond

Associate Professors: William Greenleaf, Jin Billy Li, Stephen Montgomery, Gavin Sherlock, Douglas Vollrath, Monte Winslow

Associate Professor (Clinical): Mary Ann Campion

Assistant Professors: Maria Barna, Michael Bassik, Ami Bhatt, Le Cong, Christina Curtis, Polly Fordyce, Livnat Jerby-Arnon, Anshul Kundaje, Serena Sanulli, Alex Urban

Assistant Professor (Clinical): Andrea Hanon-Kahn

Graduate Advising

The Department of Genetics is committed to providing academic advising in support of graduate student scholarly and professional development. When most effective, this advising relationship entails collaborative and sustained engagement by both the advisor and the advisee. As a best practice, advising expectations should be periodically discussed and reviewed to ensure mutual understanding. Both the advisor and the advisee are expected to maintain professionalism and integrity.

Faculty advisors guide students in key areas such as selecting courses, designing and conducting research, developing of teaching pedagogy, navigating policies and degree requirements, and exploring academic opportunities and professional pathways.

Graduate students are active contributors to the advising relationship, proactively seeking academic and professional guidance and taking responsibility for informing themselves of policies and degree requirements for their graduate program.

For a statement of University policy on graduate advising, see the Graduate Advising section of this bulletin.

Programs

Gene-MS
Degree Designation: MS - Master of Science
-

Gene-PhD
Degree Designation: PHD - Doctor of Philosophy
-

HmnGen-MS
Degree Designation: MS - Master of Science
-

Geological Sciences Department

Contacts

Office: Geology Corner/Braun Hall, Building 320, Room 118
Mail Code: 94305-2115
Phone: (650) 723-0848
Web Site: http://earth.stanford.edu/gs

Courses offered by the Department of Geological Sciences are listed under the subject code GEOLSCI on the Stanford Bulletin's ExploreCourses web site.

The geological sciences include the study of Earth materials and processes and how those materials and processes have changed over the planet's 4.56-billion-year history and vary across other planets. More specifically, courses and research within the department address: the chemical and physical makeup and properties of minerals, rocks, soils,

sediments, and water; the formation and evolution of Earth and other planets; the processes that shape planetary surfaces and interiors; the stratigraphic, paleobiological, and geochemical records of Earth history including changes in climate, oceans, and atmosphere; the observation and robotic exploration of other planets; present-day, historical, and long-term feedbacks between the geosphere and biosphere; and the origin and occurrence of our natural resources.

Besides the fundamental nature of research performed within the department, it has critical implications for the study and remediation of natural hazards (earthquakes, volcanic eruptions, landslides, and floods); environmental and geological engineering; surface and groundwater management; the assessment, exploration, and extraction of energy, mineral and water resources; ecology and conservation biology; remediation of contaminated water and soil; geological mapping and land use planning; sustainability; human health and the environment; and space exploration.

Faculty

Emeriti: (Professors) Atilla Aydin, Dennis K. Bird, Gordon E. Brown, W. Gary Ernst, James C. Ingle, Jr., Juhn G. Liou, Gail A. Mahood, Jonathan F. Stebbins, David D. Pollard

Chair: C. Kevin Boyce

Associate Chair for Diversity and Inclusion: Jef Caers

Director of Graduate Studies: Wendy Mao

Director of Undergraduate Studies: George Hilley

Professors: C. Kevin Boyce, Jef Caers, Page Chamberlain, Rodney C. Ewing, Stephan A. Graham, George Hilley, Donald R. Lowe, Wendy Mao, Elizabeth L. Miller, Jonathan Payne

Associate Professors: Jane Willenbring

Assistant Professors: Mathieu Lapôtre, Andrew Leslie, Ayla Pamukcu, Laura Schaefer, Erik Sperling

Professors (Research): Martin J. Grove

Courtesy Professors: Elizabeth Hadly, Simon L. Klemperer, Kate Maher, Tapan Mukerji, Sonia Tikoo

Graduate Advising

The Department of Geological Sciences is committed to providing academic advising in support of graduate student scholarly and professional development. The department strives to ensure everyone in the department has a fulfilling experience by creating an inclusive culture. The School of Earth, Energy, and Environmental Sciences shares this commitment as reflected in the Stanford Earth Policy on Respectful and Inclusive Behavior. With respect to the advising relationship, this entails collaborative and sustained engagement by both the advisor and the advisee. Both the advisor and the advisee are expected to maintain professionalism and integrity.

Inclusivity and Diversity

The Department of Geological Sciences strives to ensure that graduate students feel safe, secure, and supported during their graduate experience. It does not tolerate any form of harassment targeting race, gender identity and expression, sexual orientation, physical and mental ability, physical appearance, age and/or religion. Any experience of discrimination, harassment, or inequity in the department will not be tolerated and met with appropriate consequences in accordance to Stanford University's Harassment and Discrimination policy. Students can seek support from the Associate Chair of Diversity and Inclusion, Jef Caers, or the Assistant Director of Student Services, Lauren Mendoza-Tabinas.

Mental Health

Members of the Geological Sciences department recognize that challenges to mental health are real and can come from both inside and outside the academic setting. We support and encourage each other to seek resources towards mental health and well-being. If any event during the graduate experience places a student under undue stress that inhibits their performing to their potential, the department encourages the student to seek support from the Director of Graduate Studies (Wendy Mao), Assistant Director of Student Services (Lauren Mendoza-Tabinas) or University services (Counseling and Psychological Services).

Academic Accommodations

The Office of Accessible Education (OAE) is the campus office designated to work with Stanford students with disabilities. To comply with Stanford's academic accommodations process, faculty should not attempt to arrange accommodations by themselves with the student. Students with questions about accommodations should contact OAE to initiate a disability-related request for accommodations. When a student presents an OAE Accommodation Letter, that letter should be followed or the faculty member should work with the student and OAE to implement and/or modify the recommended accommodations. Students are expected to initiate accommodations requests in a timely manner and to provide prompt notification of changes to approved accommodations. Faculty are responsible for maintaining student confidentiality and treating all disability-related information as confidential.

Establishing Advisor-Advisee Expectations

Both advisor and advisee are expected to take responsibility in actively discussing the nature of the graduate experience. For first year students, the results of the discussion regarding the nature of the graduate experience and the expectations of each party is summarized in a document that is signed by both advisor and advisee. The relationship and expectations evolve as the student progresses through their graduate experience. Regularly scheduled advisor-advisee interactions are an important component of this relationship. Advisors are expected to check in with their students every quarter to discuss how the expectations are met and if any expectations need updating. Students are encouraged to revisit these conversations when the advisor-advisee relationship is not meeting their needs and/or expectations are not met. Additionally, a written review is held in Spring Quarter that covers the student's academic progress with their advisor(s) and committee members.

Graduate students are expected to proactively seek academic and professional guidance and take responsibility for informing themselves of policies and degree requirements for their graduate program. In addition to the primary advisor, students are highly encouraged to seek advice from other faculty in the department, as well as other faculty and researchers (Stanford or external) who align with their research interest. For a statement of University policy on graduate advising, see the "Graduate Advising" section of this bulletin. When needed, students can seek support and assistance from the Assistant Director of Student Services (Lauren Mendoza-Tabinas).

Guidelines for advisor-advisee interactions

The advisor-advisee relationship is mutual. Graduate students and faculty can expect mutual respect, high professional standards, and the sharing of ideas and research. Advisors should strive continuously to improve their mentoring abilities. Group dynamics can be complex; advisors should strive to be equitable in the treatment of students, including the distribution of opportunities in group, classroom, field, and laboratory settings. Further information regarding guidelines and best practices on advising and mentoring is available from the Office of the Vice Provost for Graduate Education and School-wide documents like the Minimum Graduate Advising Guidelines Earth, Energy & Environmental Sciences: School-wide Suggestions. Graduate students are expected to exercise high professional standards in their academic work, research, and mentoring partnerships and to be proactive in seeking advice and keeping the advisor informed about academic and research progress. Students and advisors are expected to both take responsibility for meeting timelines, policies, and milestones that impact degree progress. We expect respect and equity in our department at all levels from one-on-one interactions to department-wide events.

Students in need of assistance should contact the Assistant Director of Student Services, Lauren Mendoza-Tabinas, or the Assistant Dean of Student Services, Alyssa Ferree, to be informed about a clearly articulated path of contacts for their questions, concerns, and challenges around advising that they may experience. Students may also contact any school representatives listed below to discuss issues regarding advisor-advisee interactions:

- Other faculty members of your advisory committee
- Wendy Mao, Director of Graduate Studies in Geological Sciences
- Kevin Boyce, Department Chair of Geological Sciences
- Robyn Dunbar, Associate Dean for Educational Affairs
- Sue Crutcher, Associate Dean for Human Resources and Faculty Affairs
- Graduate Student Advisory Council representatives in Geological Sciences

Programs

GS-BS
Degree Designation: BS - Bachelor of Science
-

GS-ENG
Degree Designation: ENG - Engineer
-

GS-Min
Degree Designation:
-

GS-MS
Degree Designation: MS - Master of Science
-

GS-PHD
Degree Designation: PHD - Doctor of Philosophy
-

GS-PMn
Degree Designation:
-

Geophysics Department

Contacts

Office: Mitchell Building, Third Floor
Mail Code: 94305-2215
Phone: (650) 724-3293
Email: rmadison@stanford.edu
Web Site: https://earth.stanford.edu/geophysics

Courses offered by the Department of Geophysics are listed under the subject code GEOPHYS on the Stanford Bulletin's ExploreCourses web site.

Geophysics is the branch of Earth sciences which explores and analyzes active processes of the Earth through physical measurement. The undergraduate and graduate programs are designed to provide a background of fundamentals in science, and courses to coordinate these fundamentals with the principles of geophysics. The program leading to the Bachelor of Science (B.S.) in Geophysics permits many electives and a high degree of flexibility for each student. Graduate programs provide specialized training for professional work in resource exploration, research, and education, and lead to the degrees of Master of Science and Doctor of Philosophy.

The Department of Geophysics is housed in the Ruth Wattis Mitchell Earth Sciences Building. It has numerous research facilities, among which are a state-of-the-art broadband seismic recording station, high pressure and temperature rock properties and rock deformation laboratories, various instruments for field measurements including seismic recorders, nine dual frequency GPS receivers, and field equipment for measuring in-situ stress at great depth. Current research activities include crustal deformation, earthquake seismology and earthquake mechanics, reflection, refraction, and tomographic seismology, rock mechanics, rock physics, seismic studies of the continental lithosphere, remote sensing, environmental geophysics, and synthetic aperture radar studies.

Mission of the Undergraduate Program in Geophysics

The mission of the undergraduate program in Geophysics is to expose students to a broad spectrum of geophysics, including resource exploration, environmental geophysics, seismology, and tectonics. Students in the major obtain a solid foundation in the essentials of mathematics, physics, and geology, and build upon that foundation with advanced course work in geophysics to develop the in-depth knowledge they need to pursue advanced graduate study and professional careers in government or the private sector.

Learning Outcomes (Undergraduate)

The Geophysics Department expects its undergraduate majors to demonstrate certain learning outcomes. These learning outcomes are used to evaluate students' progress, as well as the undergraduate program itself. Students are expected to:

1. demonstrate a fundamental understanding of the physical processes governing the structure and evolution of Earth and planetary systems, including geophysical fluids, environmental hazards, and energy and freshwater resources.
2. demonstrate the ability to quantitatively describe the behavior of natural systems and the principles of geophysical measurements with physics-based mathematical models.
3. demonstrate the ability to make observations using a variety of geophysical instruments and laboratory experiments and to reduce, model, and interpret their data and uncertainties
4. demonstrate the ability to effectively communicate original scientific results as was as evaluate the published and presented results of others.

Graduate Programs in Geophysics

University requirements for the M.S. and Ph.D. are described in the Graduate Degrees section of this bulletin.

Learning Outcomes (Graduate)

The objective of the graduate program in Geophysics is to prepare students to be leaders in the geophysics industry, academia, and research organizations through completion of fundamental courses in their major field and related sciences, as well as through independent research. Students are expected to:

1. apply skills developed in fundamental courses to geophysical problems.
2. research, analyze, and synthesize solutions to an original and contemporary geophysics problem.
3. work independently and as part of a team to develop and improve geophysics solutions.
4. apply written, visual, and oral presentation skills to communicate scientific knowledge.

5. master's students are expected to develop an in-depth technical understanding of geophysics problems at an advanced level.
6. doctoral students are expected to complete a scientific investigation that is significant, challenging and original.

Faculty

Chair: Biondo Biondi

Associate Chair: Howard Zebker

Director of Graduate Studies: Jerry Harris

Director of Undergraduate Studies: Dustin Schroeder

Professors: Greg Beroza, Biondo Biondi, Simon Klemperer, Rosemary J. Knight, Paul Segall, Norman H. Sleep, Howard Zebker*

Associate Professor: Eric Dunham, Tiziana Vanorio

Assistant Professors: Lucia Gualtieri, Jenny Suckale, Dustin Schroeder, Sonia Tikoo-Schantz

Professor (Research): William Ellsworth

Emeriti: Jon Claerbout, Robert Kovach, Gerald M. Mavko, Amos Nur, Jerry Harris, Mark D. Zoback

Courtesy Professors: Stephan A. Graham, Tapan Mukerji, Alexandra Konings, Mathieu Lapotre, Ayla Pamukcu, Laura Schaefer

* Joint appointment with Electrical Engineering

Graduate Advising Expectations

The Department of Geophysics is committed to providing academic advising in support of graduate student scholarly and professional development. For a statement of University policy on graduate advising, see the Graduate Advising section of this bulletin.

Minimum Advising Expectations for the Department of Geophysics

1. Each adviser meets with each advisee in Autumn or Winter quarter, beginning in the advisee's first year, to develop/update a document entitled "the expectations agreement" that records the agreed upon approach to the following for each individual advisee:

- Courses: the process and responsibility for selecting courses
- Thesis topic: the process and responsibility for selecting the topic
- Members of advising committee: the process and responsibility for selection
- Meetings of adviser and advisee: structure and frequency
- Conducting the research: the level of independence and progress expected, the involvement of the adviser (level of participation, nature of oversight), involvement of other collaborators (both inside and outside of research group)
- Thesis content, including expectations with respect to publications
- Writing of publications: style of interaction, policy on co-authorship, publication costs

- Conference travel/presentations: who attends/presents, frequency, financial support
- Funding (stipend, tuition, research costs): source, responsibilities, requirements for ongoing support
- In-the-office hours
- Vacations and other absences
- Expectations for Summer Quarter
- Preparing for career interests, plans after Stanford

The document, signed by both the adviser and advisee, is submitted to the Assistant Director of Student Services. If the adviser-advisee discussion would benefit from the involvement of an additional person, either the adviser or advisee can request the presence of a faculty or staff member of the school.

The expectations agreement is reviewed by the Assistant Director of Student Services and the Director of Graduate Studies, with follow-up as needed.

If there is change in adviser, the expectations agreement must be completed with the new adviser within the first quarter after the change.

2. A one-hour annual review, focused on academic progress, is held every year; in the first year this is deferred to Autumn of the second year. This meeting includes the advisee, the adviser, and at least two other faculty. Time is designated in every annual review to review the expectations agreement, circulated in advance to all those in attendance at the review.

At any time, a student with questions or concerns can approach any one of the following individuals in the school:

- Other faculty members of advisory committee
- Assistant Director of Student Services in their home department (Rachael Madison in Geophysics) or program
- Director of Graduate Studies in their home department (Jerry Harris in Geophysics) or another department
- Associate Chair for Diversity and Inclusion (Sonia Tikoo in Geophysics)
- Department Chair (Biondo Biondi in Geophysics)
- Alyssa Ferree, Assistant Dean of Student Services
- Robyn Dunbar, Associate Dean for Educational Affairs
- Sue Crutcher, Associate Dean for Human Resources and Faculty AffairsFor a statement of University policy on graduate advising, see the Graduate Advising section of this bulletin.

Programs

GeoPh-BS
Degree Designation: BS - Bachelor of Science

GeoPh-MS
Degree Designation: MS - Master of Science

GeoPh-PMn
Degree Designation:
-

GeoPh-Min
Degree Designation:

GeoPh-PhD
Degree Designation: PHD - Doctor of Philosophy

German Studies Department

Contacts

Office: Building 260, Rooms 127-128
Mail Code: 94305-2030
Phone: (650) 723-3266
Email: germanstudies@stanford.edu
Web Site: German Studies

Courses offered by the Department of German Studies are listed on the *Stanford Bulletin's* ExploreCourses web site under the subject code GERMAN. For courses in German language instruction with the subject code GERLANG, see the "Language Center" section of this bulletin.

The department is a part of the Division of Literatures, Cultures, and Languages.

The department provides students with the linguistic and analytic ability to explore the significance of the cultural traditions and political histories of the German-speaking countries of Central Europe. At the same time, the interdisciplinary study of German culture, which can include art, economics, history, literature, media theory, philosophy, political science, and other fields, encourages students to evaluate broader and contradictory legacies of the German past, the history of rapid modernization and the status of Germany, Austria, and Switzerland today.

The German experience of national identity, political unification, and integration into the European Union sheds light on wider issues of cultural cohesion and difference, as well as on the causes and meaning of phenomena such as racial prejudice, anti-Semitism, and the Holocaust. In general, an education in German Studies not only encourages the student to consider the impact of German-speaking thinkers and artists, but also provides a lens through which the contours of the present and past, in Europe and elsewhere, can be evaluated.

The department offers students the opportunity to pursue course work at all levels in the languages, cultures, literatures, and societies of the German-language traditions. Whether interested in German literature, the influence of German philosophy on other fields in the humanities, or the character of German society and politics, students find a broad range of courses covering language acquisition and refinement, literary history and criticism, cultural history and theory, history of thought, continental philosophy, and linguistics.

By carefully planning their programs, students may fulfill the B.A. requirements for a double major in German Studies and another subject. A coterminal program is offered for the B.A. and M.A. degrees in German Studies. Doctoral students may elect Ph.D. minors in Comparative Literature, Humanities, Linguistics, and Modern Thought and Literature.

Special collections and facilities at Stanford offer possibilities for extensive research in German Studies and related fields pertaining to Central Europe. Facilities include the Stanford University Libraries and the Hoover Institution on War, Revolution, and Peace. Special collections include the Hildebrand Collection (texts and early editions from the 16th to the 19th century), the Austrian Collection (with emphasis on source material to the time of Maria Theresa and Joseph II, the Napoleonic wars, and the Revolution of 1848), and the Stanford Collection of German, Austrian, and Swiss Culture. New collections emphasize culture and cultural politics in the former German Democratic Republic. The Hoover Institution has a unique collection of historical and political documents pertaining to Germany and Central Europe from 1870 to the present. The department also has its own reference library.

Haus Mitteleuropa, the German theme house at 620 Mayfield, is an undergraduate residence devoted to developing an awareness of the culture of Central Europe. A number of department courses are regularly taught at the house, and there are in-house seminars and conversation courses. Assignment is made through the regular undergraduate housing draw.

Mission of the Undergraduate Program in German Studies

The mission of the undergraduate program in German Studies is to provide students with the German language skills, the ability to interpret literature and other cultural material, and the capacity to analyze the societies of the German-speaking countries of Central Europe. In addition, its interdisciplinary component prepares students to understand other cultures from the perspectives of multiple disciplines. The program prepares students for careers in business, social service, and government, and for graduate work in German Studies.

Learning Outcomes (Undergraduate)

The department expects undergraduate majors in the program to be able to demonstrate the following learning outcomes. These learning outcomes are used in evaluating students and the department's undergraduate program. Students are expected to demonstrate:

1. oral proficiency in German beyond the interpersonal level with presentational language abilities.
2. writing proficiency in German beyond the interpersonal level with presentational language abilities.
3. close reading skills of authentic texts in German.
4. the ability to develop effective and nuanced lines of interpretation.

Graduate Programs in German Studies

The University requirements for the M.A. and Ph.D. degrees are described in the "Graduate Degrees" section of this bulletin.

Learning Outcomes (Graduate)

The purpose of the master's program is to further develop knowledge and skills in German Studies and to prepare students for a professional career or doctoral studies. This is achieved through completion of courses, in the primary field as well as related areas, and experience with independent work and specialization.

The Ph.D. is conferred upon candidates who have demonstrated substantial scholarship and the ability to conduct independent research and analysis in German Studies. Through completion of advanced course work and rigorous skills training, the doctoral program prepares students to make original contributions to the knowledge of German Studies and to pursue career tracks in higher education and in other sectors.

German Studies and a Minor Field

Students may work toward a Ph.D. in German Studies with minors in such areas as Comparative Literature, History, Humanities, Linguistics, or Modern Thought and Literature. Students obtaining a Ph.D. in such combinations may require additional training.

Faculty in German Studies

Director: Kathryn Starkey

Chair of Graduate Studies: Kathryn Starkey

Chair of Undergraduate Studies: Elizabeth Bernhardt-Kamil

Professors: Russell A. Berman (also Comparative Literature) (on leave Winter), Elizabeth Bernhardt-Kamil, Adrian Daub (also Comparative Literature), Amir Eshel (also Comparative Literature), Matthew Wilson Smith (also Theater and Performance Studies), Kathryn Starkey

Assistant Professor: Lea Pao (on leave

Courtesy Professors: R. Lanier Anderson, Michael Friedman, Thomas S. Grey, Fiona Griffiths, Stephen Hinton, Norman Naimark, Thomas Sheehan, Elaine Treharne

Courtesy Associate Professors: Shane Denson, Charlotte Fonrobert, Nadeem Hussain, Christopher Krebs, Marisa Galvez, Brent Sockness, Laura Stokes

Emeriti: (Professors) Theodore M. Andersson, Gerald Gillespie, Katharina Mommsen, Orrin W. Robinson III

Graduate Advising Expectations

The Department of German Studies is committed to providing academic advising in support of graduate student scholarly and professional development. The overall goal of advising, both in the DLCL and the department, is to help graduate students make academic and career choices wisely, and think ahead, in order to craft a long-term plan for their graduate student career and beyond. When most effective, the advising relationship entails collaborative and sustained engagement by both the advisor and the advisee. As a best practice, advising expectations should be periodically discussed and reviewed to ensure mutual understanding. Both the advisor and the advisee are expected to maintain professionalism and integrity. Advising is both an academically invaluable form for the transmission of expertise, as well as a key aspect of creating a strong departmental and Stanford community.

Faculty Advisors

Faculty advisors guide students in key areas such as selecting courses, designing and conducting research, developing of teaching pedagogy, navigating policies and degree requirements, and exploring academic opportunities and professional pathways.

- Upon enrolling, students plan their work under the direction of the Chair of Graduate Studies or a faculty member designated by the program. When the student selects a more specialized advisor, the transition should involve oral or written communication between both advisers and the student concerning the student's progress, goals, and expectations. It is possible for doctoral students to choose two main advisers at the dissertation stage, provided all agree this is academically sound.
- Faculty advisors should meet with assigned students to discuss their selection of courses and to plan from a broader, longer-term perspective, including discussion of Program milestones and a basic timeline; an overview of Department and DLCL offerings beyond courses; student goals and interests and DLCL or Stanford programs that may be relevant; and (for doctoral students) how to transfer previous graduate coursework.
- Faculty advisors and graduate students should meet at least once per quarter to assess the advisee's course of study, performance over the past quarter, and plans for the next quarter, as well as longer term plans. If a student has two advisers, the student should meet at least once per quarter with each adviser and at least once per year with both advisers at the same time.
- For doctoral students, faculty should help their advisees plan for exams, research grant applications, develop research projects, and plan ahead for both the academic job market and the job search beyond academia.
- Faculty advisors should provide feedback about the student's progress to the department during the Annual Review process. For more information about the Annual Review, see the Graduate Handbook.

Graduate Students

Graduate students are active contributors to the advising relationship, proactively seeking academic and professional guidance and taking responsibility for informing themselves of policies and degree requirements for their graduate program.

- Upon enrolling, students plan their work under the direction of the Chair of Graduate Studies or a faculty member designated by the program. As the student develops a field of expertise, the student chooses a program advisor to replace the Chair of Graduate Studies role. The transition should involve oral or written communication between both advisers and the student concerning the student's progress, goals, and expectations.
- Graduate students and faculty advisors and should meet at least once per quarter to assess the advisee's course of study, performance over the past quarter, and plans for the next quarter, as well as longer term plans. If a student has two advisers, the student should meet at least once per quarter with each adviser and at least once per year with both advisers at the same time.
- Students should consult with their advisors on all academic matters, including coursework, conference presentations and publications, research travel, and teaching plans.
- Students should provide a thorough self-evaluation each year for the annual review. For more information about the Annual Review, see the Graduate Handbook.

For a statement of University policy on graduate advising, see the Graduate Advising section of this bulletin.

Programs

GerSt-BA
Degree Designation: BA - Bachelor of Arts

GerSt-MA
Degree Designation: MA - Master of Arts

GerSt-Min
Degree Designation:

GerSt-PhD
Degree Designation: PHD - Doctor of Philosophy

GerSt-PMn
Degree Designation:
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Graduate School of Business Department

Faculty

Emeriti: (Professors) David P. Baron, Mary E. Barth, William H. Beaver, Charles P. Bonini, David W. Brady, Paul Brest, *Alain C. Enthoven, Robert J. Flanagan, Michael T. Hannan, J. Michael, Harrison, Chip Heath, Charles A. Holloway, Robert L. Joss*, David M. Kreps, David F. Larcker, *James R. Miller III, David B. Montgomery, Margaret Ann Neale, George G. C. Parker, James Patell, Jerry I. Porras, Evan L. Porteus, Michael L. Ray, Stefan Reichelstein*, D. John Roberts, Myron S. Scholes, William F. Sharpe, Itamar Simonson, *Kenneth J. Singleton*, A. Michael Spence, Venkataraman Srinivasan, James C. VanHorne, Seungjin Whang*, Robert B. Wilson

Dean: Jonathan D. Levin

Senior Associate Deans: Brian Lowery, Paul Oyer, Sarah A. Soule, Jesper Sørensen, Lawrence M. Wein

Senior Associate Dean for Finance and Administration: Rajkumar Chellaraj

Associate Deans: Derrick Bolton, Margaret Hayes, Page Hetzel, David Weinstein

Assistant Deans: Dianne Le, Grace Lyo, Kirsten Moss, Jamie Shein, Charlotte Toksvig, Julie Williamsen

Professors: Jennifer L. Aaker, Anat R. Admati, Susan Athey, William P. Barnett, Jonathan Bendor, Lanier Benkard, Jonathan B. Berk, Jeremy I. Bulow, Robert A. Burgelman, Steven Callander, Glenn R. Carroll, Peter M. DeMarzo, Rebecca Diamond, J. Darrell Duffie, Yossi Feinberg, Francis J. Flynn, George Foster, Michele Gelfand, Steven R. Grenadier, Deborah H. Gruenfeld, Nir Halevy, Wesley Hartmann, Guido Imbens, Charles I. Jones, Ron Kasznik, Daniel P. Kessler, Roderick M. Kramer, Keith Krehbiel, Arvind Krishnamurthy, James M. Lattin, Charles M.C. Lee, Hau L. Lee, Jonathan

Levav, Jonathan D. Levin, Brian S. Lowery, Hanno Lustig, Neil Malhotra, Maureen F. McNichols, Haim Mendelson, Dale T. Miller, Benoît Monin, Harikesh S. Nair, Charles A. O'Reilly III, Michael Ostrovsky, Paul Oyer, Jeffrey Pfeffer, Paul C. Pfleiderer, Joseph D. Piotroski, Erica L. Plambeck, Hayagreeva Rao, Joshua Rauh, Peter C. Reiss, Condoleezza Rice, Garth Saloner, Yuliy Sannikov, Amit Seru, Kathryn L. Shaw, Baba Shiv, Kenneth W. Shotts, Andrzej Skrzypacz, , Sarah A. Soule, Ilya Strebulaev, Jesper Sørensen, Zakary Tormala, Lawrence M. Wein, Gabriel Weintraaub, S. Christian Wheeler, Stefanos Zenios, Jeffrey H. Zwiebel

Associate Professors: Mohammad Akbarpour, Mohsen Bayati, Juliane Begenau, Konstantinos Bimpikis, Katherine Casey, Sebastian Di Tella, Brandon Gipper, Amir Goldberg, Yonatan Gur, Benjamin Hebert, Szu-chi Huang, Dan Iancu, Saumitra Jha, Michal Kosinski, Rebecca Lester, Ivan Marinovic, Sridhar Narayanan, Daniela Saban, Navdeep Sahni, Paulo Somaini, Adina Sterling, Takuo Sugaya, Christopher Tonetti, Stefan Wager, Kuang Xu, Ali Yurukoglu

Assistant Professors: Claudia Allende Santa Cruz, Jonathan Atwell, , Justin Berg, Laura Blattner, Greg Buchak, Jung Ho Choi, Julien Clement, Kwabena Donkor, Octavia D. Foarta, John Kepler, Jinhwan Kim, Yewon Kim, Ashley Martin, Gregory Martin, Suzie Noh, Claudia Robles-Garcia, Kevin Smith, Jann Spiess, Stephanie Tully, Susana (Shosh) Vasserman, , Chenzi Xu, Weijie Zhong

Courtesy Professors: Avidit Acharya, Eric P. Bettinger, Nicholas Bloom, Erik Brynjolfsson, John H. Cochrane, Geoffrey L. Cohen, Shelley J. Correll, Robert M. Daines, Joseph DeSimone, Andrew Hall, Caroline M. Hoxby, Fei-Fei Li, Daniel McFarland, Paul R. Milgrom, Monika Piazzesi, Walter W. Powell, Balaji Prabhakar, Kevin Schulman, Martin Schneider, Ilya Segal, Sara Singer, Robert Sutton, Robb Willer

Lecturers: Matthew Abrahams, Richard Abramson, Burton Alper, Coley Andrews, Federico Antoni, Laura K. Arrillaga-Andreessen, Sven Beiker, Scott Brady, Melissa Briggs, Dikla Carmel-Hurwitz, Safra A. Catz, Leslie Chin, Steve Ciesinski, George Cogan, Andrea Corney, Stuart Coulson, Stephen Davis, David Demarest, Sara Deshpande, Gary Dexter, Collin Dobbs, David M. Dodson, Jennifer Dulski, R. James Ellis, Peter Francis, Richard P. Francisco, Ricki Frankel, Douglas John Galen, Matthew Glickman, Anneka Rupali Gupta, William Guttentag, Kristin Hansen, Keith Hennessey, David Martin Hornik, Charles Hudson, John Hurley, Brian Jacobs, Stephen Johnson, Kim Jonker, Hugh Keelan, Peter B. Kelly, Allison Kluger, Glenn Kramon, Margaret A. Laws, Mark Leslie, Peter Levine, Robert J. Lisbonne, Harpinder Singh Madan, Kevin Mak, Fern Mandelbaum, William L. McLennan, William F. Meehan III, Elizabeth Ann Monzon, Henry Most, Patricia Nakache, Robert Pearl, Anne Raimondi, Alyssa Rapp, Barry Rhein, Gerald Risk, Dennis M. Rohan, Howard Rosen, Alison Rosenthal, Debra Schifrin, Yifat Sharabi Levine, Robert Siegel, Delaney Carolynn Steele, Ilana Stern, Mark Voorsanger, Dareen Walker, John G. Watson, Graham Weaver, Amy Wilkinson, Felicia Williams Cosey, Donald Wood

Adjunct Professors: H. Irving Grousbeck, Joel C. Peterson

Adjunct Lecturers:

Dean's Fellow:

Recalled to active duty. * Emeritus Professor from another SU department recalled to active duty.

Programs

GSB-MA
Degree Designation: MA - Master of Arts

GSB-MBA
Degree Designation: MBA - Master of Business Administration
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Mgmt-MS
Degree Designation: MS - Master of Science
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GSB-PhD
Degree Designation: PHD - Doctor of Philosophy

Bus-PMn
Degree Designation:
-

Graduate School of Education Department

Graduate School of Education

Contacts

Office: Graduate School of Education
Mail Code: 94305-3096
Phone: (650) 723-2109
Email: info@gse.stanford.edu
Web Site: https://ed.stanford.edu/

Courses offered by the Graduate School of Education are listed under the subject code EDUC on the Stanford Bulletin's Explore Courses web site.

The Stanford Graduate School of Education is a leader in pioneering new and better ways to achieve high-quality education for all. Faculty and students engage in groundbreaking and creative interdisciplinary scholarship that informs how people learn and shapes the practice and understanding of education. Through state-of-the-art research and innovative partnerships with educators worldwide, the school develops knowledge, wisdom, and imagination in its diverse and talented students so they can lead efforts to improve education around the globe.

Three graduate degrees with specialization in education are granted by the University: Master of Arts, Master of Science, and Doctor of Philosophy.

While no undergraduate majors are offered, the school offers courses for undergraduates, an undergraduate minor and an undergraduate honors program.

The Graduate School of Education is organized into three area committees: Curriculum Studies and Teacher Education (CTE); Developmental and Psychological Sciences (DAPS); and Social Sciences, Humanities, and Interdisciplinary Policy Studies in Education (SHIPS).

In addition, several cross-area programs are sponsored by faculty from more than one area. These programs include the doctoral program in Learning Sciences and Technology Design (LSTD); the doctoral program in Race, Inequality, and Language in Education (RILE); two master's level programs, the Stanford Teacher Education Program (STEP) and the Learning, Design, and Technology Program (LDT); and the undergraduate honors and minor programs.

These area committees function as administrative units that act on admissions, plan course offerings, assign advisers, monitor student academic progress, and determine program requirements. Various concentrations exist within most of these areas. Faculty members are affiliated primarily with one area but may participate in several programs. While there is a great deal of overlap and interdisciplinary emphasis across areas and programs, students are affiliated with one area committee or program and must meet its degree requirements.

Detailed information about admission and degree requirements, faculty members, and specializations related to these area committees and programs can be found in the Academics section of the School's web site.

The Graduate School of Education offers no correspondence or extension courses, and in accordance with University policy, no part-time enrollment is allowed. Work in an approved internship or as a research assistant is accommodated within the full-time program of study.

Undergraduate Programs in Education

The Graduate School of Education offers a minor and an honors program at the undergraduate level. Further information about these programs can be found at the Graduate School of Education web site.

Regardless of whether they are enrolled in one of these undergraduate programs, undergraduates are also welcome in many graduate-level courses at the GSE.

Graduate Programs in Education

The Graduate School of Education offers Master of Arts, Master of Science, and Doctor of Philosophy degrees in several programs (see "Master's" and "Doctoral" tabs on this page). University and Graduate School of Education requirements must be met for each degree. The University requirements are detailed in the "Graduate Degrees" section of this bulletin. Students are urged to read this section carefully, noting residency, tuition, and registration requirements. A student who wishes to enroll for graduate work in the Graduate School of Education must be admitted to graduate standing by one of the school's area committees and with the approval of the Associate Dean for Student Affairs. All Graduate School of Education courses are intended for matriculated students in degree programs only.

Complete information about admissions procedures and requirements is available from Graduate Admissions, or at the Graduate School of Education web site. Applicants to all programs, except for applicants to the Stanford Teacher Education Program (STEP), must submit scores from the Graduate Record Examination General Test (verbal, quantitative, and analytical or analytical writing areas); TOEFL scores are also required from those whose first language is not English. Applicants to the Stanford Teacher Education Program (STEP) are also required to submit specific test scores or acceptable equivalents as required by the California Commission on Teacher Credentialing; see the section on STEP. Test information is available at the Graduate School of Education web site. The Graduate School of Education takes a holistic approach to admissions by comprehensively evaluating the academic preparation, experiences, and potential of all applicants.

Faculty

Emeriti: (Professors) J. Myron Atkin, Arnetha Ball, John Baugh, Eamonn Callan, Larry Cuban, Linda Darling-Hammond, Claude Goldenberg, Shelley Goldman, Pam Grossman, Edward Haertel, Kenji Hakuta, Connie Juel, Michael Kamil, Michael W. Kirst, David Labaree, Henry M. Levin, Rachel Lotan, William F. Massy, Raymond P. McDermott, Milbrey McLaughlin, Nel Noddings, Jonathan Osborne, Denis C. Phillips, David Plank, Thomas Rohlen, Richard J. Shavelson, Lee S. Shulman, Claude Steele, Deborah Stipek, Myra H. Strober, Guadalupe Valdés, Decker F. Walker, Hans Weiler

Dean: Dan Schwartz

Associate Dean for Student Affairs: John Willinsky

Senior Associate Dean for Finance and Administration: Geoff Cox

Associate Dean for External Relations: Heather Trippel

Associate Dean for Academic Affairs: Shu-Ling Chen

Associate Dean for Faculty Affairs: Amado Padilla

Assistant Dean for Information Technology and CTO: Paul Kim

Professors: Alfredo Artiles, Adam J. Banks, Brigid J. Barron, Eric Bettinger, Jo Boaler, Hilda Borko, Bryan Brown, Martin Carnoy, Anne Charity Hudley, Geoffrey Cohen, William Damon, Tom Dee, Patricia J. Gumport, Teresa D. LaFromboise, Bruce D. McCandliss, Daniel A. McFarland, Amado M. Padilla, Roy Pea, Walter Powell, Francisco O. Ramirez, Sean Reardon, Daniel Schwartz, Guillermo Solano-Flores, Mitchell Stevens, Carl Wieman, John Willinsky, Sam Wineburg

Professors (Teaching): Ira Lit

Associate Professors: Subini Annamma, Anthony L. Antonio, Nicole M. Ardoin, Patricia Bromley, Antero Garcia, Ari Y. Kelman, Jennifer Langer-Osuna, Victor Lee, Chris Lemons, Emily J. Levine, Prashant Loyalka, Jelena Obradović, David Rogosa, Jonathan Rosa, Maria Araceli Ruiz-Primo, Rebecca Silverman

Assistant Professors: Benjamin Domingue, Nick Haber, Michael Hines, Sarah R. Levine, Ramón Antonio Martinez, Alvin Pearman, Farzana Saleem, Jason Yeatman

Associate Professors (Teaching): Peter Williamson, Christine Min Wotipka

Associate Professor (Research): Janet Carlson

Assistant Professor (Research): Shima Salehi, Hariharan Subramonyam

Courtesy Professors: Jeremy Bailenson, Richard Banks, Emma Brunskill, Lisa Chamberlain, Carol Dweck, Eric Hanushek, John C. Mitchell, Terry Moe, Brad Osgood, Christopher Piech, Byron Reeves, Robert Reich, Brian Wandell, Caroline Winterer

Courtesy Professor (Teaching): Don Barr, Shashank Joshi, William Koski

Senior Lecturers: Karin Forssell, Gay Hoagland, Denise Pope, Ann Porteus, Jennifer Wolf

Graduate Advising

Ph.D. Advising

These advising norms started with students entering Autumn 2019.

· A team advising approach allows students to develop working relationships with a greater diversity of faculty members.

· The adoption of team advising creates a distribution of work paired with a dynamic distribution of intellectual expertise.

· The explicit framing of advising expectations and norms supports students and faculty in finding common ground and shared expectations.

· Students and their academic advisors are expected to meet a minimum of two meetings per quarter.

· Students and their support advisors are expected to meet a minimum of one time per quarter.

Advising Structure

First-year Advising Teams

In the first year, students work with an advising team. The lead advisor, a support advisor, and a student mentor serve the role of assisting students in their matriculation into graduate study. Students meet with lead advisors a minimum of twice per quarter, and with support advisors a minimum of once per quarter.

Ph.D. Advising Teams

After year one, students select their advising team. The primary advisor is expected to serve the role of the primary academic mentor for the student. The secondary advisor(s) support students as they progress through their second to fifth year academic milestones. The primary advisor and student are expected to meet twice per quarter. The secondary advisor(s) are expected to meet a minimum of once per quarter. Members of the first-year advising team do not have to be the same as those for the Ph.D. advising team. It is not unusual for students to switch to different advisors.

Advising Guidelines

In an effort to provide students with a high standard of academic advising support, advisors and students work to build a shared expectation of best advising practices. The goal is to establish clearly communicated pathways between students and their faculty advisors.

Faculty advisors are expected to:

Provide intellectual guidance:

· help students develop academic and professional skills expected by the discipline;

· guide students to design research experiences that build on their interests;

· encourage collaboration, where appropriate, that entails the sharing of authorship or rights to intellectual property developed in research or other creative or artistic activity;

· encourage students to be open about any problems in their work relationships, including with an advisor, and actively help to resolve those problems;

· be aware of and direct students to University resources to support students;

· provide students with timely, regular, and constructive feedback on academic products.

Assist students with knowledge of Stanford and GSE policies and practices:

· familiarize themselves with relevant policies; consult with the Student Handbook and Academic Services Office;

· review students' graduate study program and help students with course selection;

· help students understand the degree program's requirements and make timely progress to degree;

· discuss authorship policy in advance of entering into collaborative projects.

Demonstrate care for student wellness:

· check-in with student to see how they are experiencing the program;

· create space for students to share challenges;

· refer students to campus resources as needed.

Assist students in preparation for the job market:

· when possible, discuss the norms and expectations of the academic field students are entering;

· assist students in preparation of research presented at conferences and in professional publications;

· guide students in acquiring the professional skills necessary for conducting high quality research;

· refer students to the EdCareers Office for career exploration and coaching.

Demonstrate professional academic behavior:

· maintain timely communication with advisees;

· set and consistently honor professional commitment and meetings in a timely manner;

· facilitate graduate students' timely academic progress toward degree completion;

· model appropriate interaction with students, staff, and faculty.

Students are expected to:

Understand scope of faculty advisors' role.

· recognize that advisors provide the intellectual environment in which students learn and conduct research;

· understand that faculty advisors are responsible for monitoring the accuracy, validity, and integrity of the students' academic work, and, in the case of research, ensuring that the contributions of all participants are properly acknowledged in publications;

· respect the time constraints and other demands on faculty members and staff;

· publish results of work done under the advisors' direction and/or in the advisors' studio or laboratory only after consultation with advisors;

· arrange meetings or communicate via other mechanisms with faculty advisors as often as necessary to keep the advisors informed of any factors that might affect their academic progress, including research or time to degree.

Be responsible for understanding and adhering to policies, requirements, and practices governing their degree and course requirements, financial support, and research activities.

· consult University and school policies and handbooks for students;

· fulfill the expectations of policies and requirements, seeking clarification from faculty advisors and staff when necessary.

Exercise high professional standards.

· observe and adhere to the University's policies on academic integrity, professional conduct, and the responsible conduct of research;

· acknowledge the contributions of faculty advisors and other members of the research team to students' work in all publications and conference presentations;

· acknowledge sources of financial support;

· maintain the confidentiality of the faculty advisors' professional activities, including research, creation of original works and other creative endeavors, in accordance with existing practices and policies of the discipline;

· informing faculty advisors of conflicts, and work towards a clear resolution;

· interact with students, staff, and faculty colleagues in a professional manner to create a respectful work environment.

EDS Advising

Purpose

Providing assistance and accountability will help students and advisors hold similar expectations about the outcomes, intentions and organization of advisee meetings. Having a system of collective accountability supports overall support and engagement.

Expectations

Meet Regularly

· Year one

o Every student meets with the EDS Program Director once by the end of the third week of Autumn quarter.

o Minimum of one meeting per quarter with the EDS Program Director

o Minimum of one meeting in Spring quarter with the faculty advisor

· Year two

o Every student meets with the EDS Program Director once in September before Autumn quarter starts

o Minimum of three meetings per quarter (one with MS Program Director, faculty advisor, and teaching assistant (TA))

· Additional meetings may be requested as needed.

Accountability Structure

· Students initiate the scheduling of meetings via email or on calendly.

· For those who do not post their office hours sign-ups online, an email response must be provided within two business days in an effort to identify and schedule a mutually agreeable meeting time.

Suggested Meeting Topics

With EDS Program Director

· Autumn I:

1. The advising and meeting structure
2. Goals and expectations for your time in the EDS program
3. Course selection and other opportunities to develop that expertise and experience
4. Internship goals and options
5. People and places to connect with

· Winter I:

1. Capstone Project: Potential topics, readings, and data sources
2. Internship goals and options
3. Course selection and other opportunities to develop expertise and experience
4. Conference(s) identification

· Spring:

1. Capstone Project: Pre-proposal
2. Course selection and other opportunities to develop expertise and experience
3. Conference(s) preparation
4. Building professional network
5. Internship selection

· Summer:

1. First year reflection
2. Capstone Project: Proposal
3. Internship experiences

· Fall II:

1. Capstone Project: Preliminary findings
2. Course selection and other opportunities to develop expertise and experience
3. Building professional network

· Winter II:

1. Capstone Project: Draft report
2. Reflection on program and next steps post-graduation
3. Ways to stay connected with the EDS community

With Faculty Advisor

· Autumn 1:

1. Course selection and other opportunities to develop that expertise and experience
2. People and places to connect with

· Winter 1:

1. Capstone Project: Potential topics, readings, and data sources
2. Course selection and other opportunities to develop expertise and experience
3. Conference(s) identification

· Spring:

1. Capstone Project: Pre-proposal
2. Course selection and other opportunities to develop expertise and experience
3. Conference(s) preparation
4. Building professional network

· Summer

1. Capstone Project: Proposal

· Fall 2

1. Capstone Project: Preliminary findings
2. Course selection and other opportunities to develop expertise and experience
3. Building professional network

· Winter 2

1. Capstone Project: Draft report
2. Next steps post-graduation

With Program Assistant

· Autumn I:

1. How to make the most of the Stanford experience

2. Course selection and other opportunities to develop that expertise and experience
3. People and places to connect with

· Winter I:

1. Capstone Project: Potential topics, readings, and data sources
2. Course selection and other opportunities to develop expertise and experience
3. Conference(s) identification
4. Doctoral students to connect with

· Spring:

1. Capstone Project: Pre-proposal
2. Course selection and other opportunities to develop expertise and experience
3. Conference(s) preparation
4. Building professional network

· Summer:

1. Capstone Project: Proposal
2. First year reflection

· Fall II:

1. Capstone Project: Preliminary findings
2. Course selection and other opportunities to develop expertise and experience
3. Building professional network

· Winter II:

1. Capstone Project: Draft report
2. Reflection on program and next steps post-graduation

ICE/IEPA Master's Advising

Purpose

Providing assistance and accountability helps students and advisors hold similar expectations about the outcomes, intentions and organization of advisee meetings. Having a system of collective accountability supports overall support and engagement.

Expectations

Meeting Regularity

· Every student meets with the Master's (MA) Program Director once by the end of week two of Autumn Quarter.

· A minimum of 3 office hours meetings per quarter (one with the MA Program Director, faculty advisor, and teaching assistant (TA); more are required of those collecting their own data for the MA Paper.

Accountability Structure

· Students are expected to initiate the scheduling of the meetings via email.

· For faculty who do not post their office hours sign-ups online, an email response must be provided within two business days in an effort to identify and schedule a mutually agreeable meeting time.

Suggested Meeting Topics

With MA Director

· Autumn:

1. What expertise do you want to develop? Which experiences do you hope to have while at Stanford?
2. Course selection and other opportunities to develop that expertise and experience
3. Short- and long-term goals and plans (e.g., career, graduate studies)
4. MA Paper (topic ideas, readings, theories, data sources, etc.)

· Winter:

1. MA Paper (feedback on pre-proposal; data and methods; readings and theories, etc.)
2. Preparing for CIES annual conference
3. Course selection and other opportunities to develop that expertise and experience

· Spring:

1. MA Paper (feedback on proposal; data analysis, findings, discussion, etc.)
2. Course selection and other opportunities to develop that expertise and experience
3. Help thinking through post-grad plans; building professional network

· Summer:

1. MA Paper (feedback on drafts; deciding next steps, e.g., publishing)
2. Help thinking through post-grad plans

With Faculty Advisor

· Autumn:

1. What expertise do you want to develop? Which experiences do you hope to have while at Stanford?
2. Course selection and other opportunities to develop that expertise and experience
3. Short- and long-term goals and plans (e.g., career, graduate studies)
4. MA Paper (topic ideas, readings, theories, data sources, etc.)

· Winter:

1. MA Paper (feedback on pre-proposal; data and methods; more readings and theories, etc.)
2. Preparing for CIES annual conference
3. Course selection and other opportunities to develop that expertise and experience

- Spring:

1. MA Paper (feedback on proposal; data analysis, findings, discussion, etc.)
2. Course selection and other opportunities to develop that expertise and experience
3. Help thinking through post-grad plans; building professional network

- Summer:

1. MA Paper (feedback on drafts; deciding next steps, e.g., publishing)
2. Help thinking through post-grad plans

With Teaching Assistant(s)

- Autumn:

1. What expertise do you want to develop? Which experiences do you hope to have while at Stanford?
2. Course selection and other opportunities to develop that expertise and experience
3. Short- and long-term goals and plans (e.g., career, graduate studies)
4. MA Paper (topic ideas, readings, theories, data sources, etc.)

- Winter:

1. MA Paper (feedback on pre-proposal; data and methods; more readings and theories, etc.)
2. Preparing for CIES annual conference
3. Course selection and other opportunities to develop that expertise and experience

- Spring:

1. MA Paper (feedback on proposal; data analysis, findings, discussion, etc.)
2. Course selection and other opportunities to develop that expertise and experience
3. Help thinking through post-grad plans; building professional network

- Summer:

1. MA Paper (feedback on drafts; deciding next steps, e.g., publishing)
2. Help thinking through post-grad plans

LDT Advising

Purpose

Providing assistance and accountability will help students and advisors hold similar expectations about the outcomes, intentions and organization of advisee meetings. Having a system of collective accountability supports overall support and engagement.

Expectations

Meet Regularly

- Every student meets with the LDT Program Director once by the end of the third week of Autumn quarter.

· Minimum of one meeting per quarter each with the LDT Program Director, faculty advisor, and each of the LDT program assistants.

Accountability Structure

· Student initiates the scheduling of the meetings via email or on youcanbook.me.

· For those advisors who do not post their office hours sign-ups online, an email response must be provided within two business days in an effort to identify and schedule a mutually agreeable meeting time.

Suggested Meeting Topics

With LDT Program Director

· Autumn:

1. Discuss the advising and meeting structure
2. What do you want to get out of this program?
3. Course selection and other opportunities to develop that expertise and experience
4. Preliminary thoughts about an internship
5. People and places to connect with

· Winter:

1. How to identify a useful internship?
2. Discuss LDT Project development: Who needs to learn what, and why is this important? How might we use technology to help?
3. What scholarship can be useful in informing the development of your LDT project?
4. Course selection and other opportunities to develop expertise and experience

· Spring:

1. Discuss LDT Project development: How can you build and test your ideas?
2. Course selection and other opportunities to develop expertise and experience
3. Help thinking through post-grad plans
4. How to build your professional network

· Summer:

1. Feedback on draft presentation & report for LDT project
2. Reflection on year and next steps
3. Ways to stay connected with the LDT community

With Faculty Advisor

· Autumn:

1. Discuss the advising and meeting structure. When do we meet? How often do we meet and what are the expected outcomes?

2. What expertise do you want to develop?

3. How do you get specific expertise?

· Winter:

1. How can you develop a greater understanding of the field(s) you're interested in?

2. Discuss LDT Project development: Who needs to learn what, and why is this important? How might we use technology to help?

3. What scholarship can be useful in informing the development of your LDT project?

· Spring:

1. Feedback on written LDT project proposal

2. Discuss LDT Project development: How can you leverage scholarship to inform your designs? How can you test the efficacy of your prototypes?

· Summer:

1. Feedback on draft presentation & report for LDT project

2. Reflection on year and next steps

3. Sign off on project/paper

With Program Assistants

· Autumn:

1. Preliminary thoughts about "Learning Problems": What problems interest the advisee?

2. How to connect with experts and learners?

3. Course selection and other opportunities to learn

4. How to make the most of the Stanford experience

· Winter:

1. How can you develop a greater understanding of a particular issue?

2. What scholarship can be useful in informing the development of your LDT project?

3. How can you connect with doctoral students around your project and interests?

4. How do Stanford students manage stress?

· Spring:

1. Discuss LDT Project development: How can you build and test your ideas?

2. What scholarship can be useful in informing the development of your LDT project?

3. Opportunities to develop expertise and experience

4. Help connecting with the alumni network

· Summer:

1. Feedback on draft presentation & report for LDT project

2. Reflection on year and next steps

POLS M.A. Advising

Purpose

POLS advisors serve two primary purposes: to assist students in designing their program of study and to offer counsel at students' request as students navigate their POLS graduate school experience. All POLS students are advised by both the POLS Program Director and a GSE faculty member.

Expectations

· Every student meets with the POLS Program Director and also with a GSE faculty member. The selection of the faculty advisor is made at the start of the autumn quarter with input from each POLS student.

· Students are encouraged to meet with their advisors once each quarter.

· Students should come to advising meetings prepared with questions and/or topics they would like to discuss.

· Students are expected to initiate the scheduling of advisory meetings.

· The POLS Faculty and Program Advisors will respond promptly to identify and schedule a mutually agreeable time to meet.

Suggested Meeting Topics

· Autumn:

1. Discuss the advising relationship and structure: Purpose, opportunity, and student's goals.

2. What knowledge, skills, and expertise does the student want to develop?

3. What sequence of courses (content and methodological) and graduate school experiences (e.g., POLS field project) might contribute to the student's goals?

4. How do I make the most of my Stanford experience?

· Winter:

1. Check-in on winter and spring course selection. Is there a particular topic/area where the student would like to deepen or expand his/her knowledge/understanding?

2. See how program experience is going? Have student goals changed?

3. What are the student's aims for his/her participation in the field project? How is the project going?

· Spring:

1. Check-in on spring course selection.

2. How will the POLS field project wrap-up? What is the student learning?

3. What are the student's plans for after graduation? What, if any, council would the student like?

Stanford Teacher Education Program Advising

Purpose

Providing assistance and accountability helps students and advisors hold similar expectations about the outcomes, intentions, and organization of the advising relationship and advisee meetings. Having a system of collective accountability supports overall support and engagement.

Advising Norms

Provide Intellectual Guidance

· Help students develop academic and professional skills expected by their discipline and the profession.

· Encourage collaboration and collegial relationships.

· Encourage students to be open about any problems in their work relationships, including with an advisor, and actively help to resolve those problems.

· Be aware of and direct students to University resources to support students.

Assist students with knowledge of Stanford and GSE policies and practices

· Be familiar with relevant policies; consult with the Student Handbook and Academic Services Office.

· Review students' graduate study program and help students with course selection.

· Help students understand the degree program's requirements and timely progress to degree.

Demonstrate care for student wellness

· Check-in with student to see how they are experiencing the program.

· Create space for students to share challenges.

· Refer students to campus resources as needed.

Assist students in preparation for the job market

· Discuss the norms and expectations of the field students are entering.

· Guide students in acquiring the professional skills necessary for expert teaching practice.

Demonstrate professional academic behavior

· Maintain timely communication with advisees.

· Set and consistently honor professional commitment and meetings in a timely manner.

· Support students' progress toward the degree and toward employment.

· Model appropriate interaction with students, staff, and faculty.

Advising Structure

Advising in STEP is structured through a combination of individual meetings with the faculty directors and support provided through the program's supervisory system.

Advising meetings

· Every student meets with the STEP Assistant Director once by the middle of Autumn Quarter. Students schedule their individual meetings using a sign-up sheet in Google Docs.

· Additional advising meetings are scheduled, as needed, during the Assistant Directors' office hours or by appointment.

Supervisory system

· Every student has one to two cooperating teachers and a University supervisor; together they provide ongoing support for the student's development as well as provide information to the faculty directors regarding each student's progress.

· Students work with their cooperating teachers in the field every day for approximately four hours.

· Students are observed by- and receive feedback from- their University supervisors at least three times each quarter. Students meet with their supervisors in small groups for an hour each week.

· Both cooperating teachers and supervisors provide the faculty directors with feedback about each student's progress each quarter on the Quarterly Assessment.

Programs

Educ-MA
Degree Designation: MA - Master of Arts
-

Educ-MS
Degree Designation: MS - Master of Science
-

Educ-PhD
Degree Designation: PHD - Doctor of Philosophy
-

Educ-PMn
Degree Designation:

Education
Degree Designation:
-

H&S Division of Literatures, Cultures, & Languages Department

Contacts

Office: Building 260, Rooms 127-128
Mail Code: 94305-2005
Phone: (650) 724-1333; Fax: (650) 725-9306
Email: dlcl@stanford.edu
Website: http://dlcl.stanford.edu

Courses offered by the Division of Literatures, Cultures, and Languages are listed under the subject code DLCL on the Stanford Bulletin's Explore Courses web site.

The Division of Literatures, Cultures, and Languages consists of:

Five academic departments

- Comparative Literature
- French and Italian
- German Studies
- Iberian and Latin American Cultures
- Slavic Languages and Literatures

Eight focal groups:

- Collaborative Teaching Project
- Humanities Education
- Materia
- PATH+ (Persian, Arabic, Turkish, Hebrew)
- Philosophy and Literature
- Renaissances
- The Contemporary and Workshop in Poetics

And the Language Center, which oversees language instruction at Stanford.

The division brings together scholars and teachers dedicated to the study of literatures, cultures, and languages from humanistic and interdisciplinary perspectives. The departments in the division are distinguished by the quality and versatility of their faculty, a wide variety of approaches to cultural traditions and expressions, and the intense focus on the mastery of languages. This wealth of academic resources, together with small classes and the emphasis on individual advising, creates a superior opportunity for students who wish to be introduced to or develop a deeper understanding of non-English speaking cultures.

The division's departments and the Language Center offer instruction at all levels, including introductory and general courses that do not require knowledge of a language other than English. These courses satisfy a variety of undergraduate requirements and can serve as a basis for developing a minor or a major program in the member departments. The more advanced and specialized courses requiring skills in a particular language are listed under the relevant departments, as are descriptions of the minor and major programs.

Focal Groups

While the five departments in the Division of Literatures, Cultures, and Languages serve common interests in literary and cultural traditions and their languages, the DLCL's Focal Groups bring together faculty members and graduate students who share topics and approaches that range across languages and national literatures. These groups are designed to respond directly to the research interests of the faculty as a community, and reflect long-term commitments by the participants. They are conceived as portals that open from the Division outward to the wider community of literary and humanities scholars at Stanford. The membership may include any member of the Stanford faculty or any Ph.D. student with an interest in the topic. Most Focal Groups include participants from several humanities departments outside the DLCL.

Thus the DLCL is characterized by two axes of intellectual inquiry:

- the departmental axis, which is organized by language, nation, and culture
- the focal axis, which may be organized by genre, period, methodology, or other criteria.

The convergence of the two axes, departments and Focal Groups, locates faculty members and graduate students in at least two intersecting communities. The DLCL believes that this convergence gives institutional form to the intellectual conditions under which many scholars of literature and culture presently work.

Each Focal Group maintains a standing research workshop at which both faculty and graduate student members discuss their work. Several Focal Groups offer formal courses; and all groups are responsible for overseeing research-oriented activities and extracurricular events in the relevant area, including sponsoring conferences, publications, podcasts, and other activities that disseminate the outcomes of their research.

Collaborative Teaching Project

Chair: Laura Wittman (French and Italian)

The Collaborative Teaching Project (CTP) has supported Stanford faculty and graduate students by offering a series of team-taught courses in the humanities, with the goal of preparing graduate students for careers as liberal arts educators. CTP thus facilitates and funds collaborations between one faculty member and 1-2 graduate students in order to co-teach a course. The graduate students and their faculty mentor work together on as many aspects of the course as possible, including syllabus, gathering and choosing materials, preparing assignments, lectures, presentations, class activities, and other in-class events, grading and feedback, evaluation of the course itself, and so on.

Humanities Education

Chair: Russell Berman (Comparative Literature, German Studies)

Faculty Members: Cécile Alduy (French and Italian), Elizabeth Bernhardt (German Studies, Language Center), Eamonn Callan (School of Education), Adrian Daub (German Studies), Thomas Ehrlich (School of Education), Marisa Galvez (French and Italian), Pam Grossman (School of Education), Orrin Robinson (German Studies), Gabriella Safran (Slavic Languages and Literatures), Kathryn Starkey (German Studies), Mitchell Stevens (School of Education), Guadalupe Valdés (School of Education)

Web Site: https://dlcl.stanford.edu/groups/humanities-education-0

The Focal Group on Humanities Education explores issues concerning teaching and learning in the humanities, including research on student learning, innovation in pedagogy, the role of new technologies in humanities instruction, and professional issues for humanities teachers at all educational levels.

Materia

Chair: Héctor Hoyos (Iberian and Latin American Cultures)

Web Site: https://dlcl.stanford.edu/courses/2018-2019-dlcl-221

MATERIA is a new discursive space on campus for sustained intellectual exchange on a central tendency in contemporary criticism: the decentering of humans as “our object of study.” We are an inclusive, interdisciplinary group that finds in the notion of post-anthropocentrism an umbrella for some of the most interesting debates of recent years. These span not only post-humanism and new materialism, but also animal and object studies.

Persian, Arabic, Turkish, and Hebrew Languages, Literatures, and Cultures (PATH+)

Chair: Alexander Key (Comparative Literature)

PATH+ is a DLCL focal group that is considering the future of Persian, Arabic, Turkish, and Hebrew languages, literatures, and cultures in the DLCL. The PATH+ conversation includes scholars, artists, and intellectuals working in and around these languages, literatures, and cultures from across Stanford and from peer institutions internationally.

Philosophy and Literature

Chairs: R. Lanier Anderson (Philosophy), Joshua Landy (French and Italian)

Faculty Members: Keith Baker (History), John Bender (Comparative Literature, English), Russell Berman (Comparative Literature, German Studies), Alexis Burgess (Philosophy), Martón Dornbach (German Studies), Jean-Pierre Dupuy (French and Italian), Amir Eshel (Comparative Literature, German Studies), Gregory Freidin (Slavic Languages and Literatures), Robert Harrison (French and Italian), David Hills (Philosophy), Héctor Hoyos (Iberian and Latin American

Cultures), Michelle Karnes (English), Alexander Key (Comparative Literature), Sianne Ngai (English), Marília Librandi Rocha (Iberian and Latin American Cultures), Joan Ramon Resina (Iberian and Latin American Cultures, Comparative Literature), Nariman Skakov (Slavic Languages and Literatures), Blakey Vermeule (English), Laura Wittman (French and Italian), Lee Yearley (Religious Studies)

Web Site: https://dlcl.stanford.edu/groups/philosophy-and-literature

The Focal Group on Philosophy and Literature brings together faculty and students from nine departments to investigate questions in aesthetics and literary theory, philosophically-inflected literary texts, and the form of philosophical writings. Fields of interest include both continental and analytic philosophy, as well as cognitive science, political philosophy, rational choice theory, and related fields. The group offers undergraduate tracks within eight majors, a graduate workshop, and a lecture series.

Renaissances

Chair: Roland Greene (Comparative Literature, English)

Faculty Members: Cécile Alduy (French and Italian), Shahzad Bashir (Religious Studies), Paula Findlen (History), Tamar Herzog (History), Nicholas Jenkins (English), Alexander Key (Comparative Literature), David Lummus (French and Italian), Bissera Pentcheva (Art and Art History), Morten Steen Hansen (Art and Art History).

Web Site: http://dlcl.stanford.edu/groups/renaissances

The Renaissances Group brings together faculty members and students from over a dozen departments at Stanford to consider the present and future of early modern literary studies (a period spanning the fourteenth through the seventeenth centuries). Taking seriously the plural form of the group's name, we seek to explore the early modern period from a wide range of disciplinary, cultural, linguistic, and geographical perspectives.

The Contemporary

Chair: Amir Eshel (Comparative Literature, German Studies)

Web Site: https://dlcl.stanford.edu/content/contemporary

The Contemporary focal group examines “the contemporary” with a focus on defining moments such as 1945, 1973, 1989, and 2001. Building upon a 3 year body of work as a DLCL research group, The Contemporary focal group has particularly focused on U.S., European, and Middle Eastern cultural and political forces that characterize our “contemporary.” The group employs a comparative and interdisciplinary approach to the hybrid term “contemporary” as it intersects various fields and serves as a heuristic device to understand phenomena in politics, culture, and the arts.

Workshop in Poetics

Chairs: Roland Greene (Comparative Literature, English), Nicholas Jenkins (English)

Faculty Members: Marisa Galvez (French and Italian), Alexander Key (Comparative Literature)

Web Site: http://dlcl.stanford.edu/workshop-poetics-0+

The Workshop in Poetics Focal Group is concerned with the theoretical and practical dimensions of the reading and criticism of poetry. During the five years of its existence, the Workshop has become a central venue at Stanford enabling participants to share their individual projects in a general conversation outside of disciplinary and national confinements. The two dimensions that the workshop sees as urgent are:

- poetics in its specificity as an arena for theory and interpretive practice.
- historical poetics as a particular set of challenges for the reader and scholar.

The core mission is to offer Stanford graduate students a space to develop and critique their current projects.

Faculty

Division Chair: Cécile Alduy

Graduate Advising

For a statement of University policy on graduate advising, see the Graduate Advising section of this bulletin.

Programs

Medst-Min
Degree Designation:
-

MELLC-Min
Degree Designation:
-

ModLan-Min
Degree Designation:
-

PhiLitArts
Degree Designation:
-

Trans-Min
Degree Designation:
-

Health Research and Policy Department

Contacts

Office: Stanford Health Policy - Encina Commons
Phone: (650) 723-0578
Email: hrpadmissions@stanford.edu
Web Site: https://healthpolicy.fsi.stanford.edu

Courses offered by the Department of Health Policy (DHP) and Center for Health Policy (CHP) are listed under the subject code HRP in Explore Courses.

Effective September 1, 2021, the Department of Health Policy (DHP) was formed under the School of Medicine. The DHP was formed from the Center for Primary Care and Outcomes Research (PCOR), Department of Medicine. The Center for Health Policy (CHP) is run under the auspices of the Freeman Spogli Institute for International Studies, and was founded in 1998.

Located in the heart of Stanford's campus, the jointly operated units of the Department of Health Policy (DHP) and the Center for Health Policy (CHP), are run under the auspices of the Freeman Spogli Institute for International Studies (CHP) and the Stanford University School of Medicine (DHP), and together are known as Stanford Health Policy (SHP).

SHP works to engage faculty, staff and students from across Stanford—including medicine, economics, statistics, business, law, engineering and psychology—in research on health policy and clinical practice. This health policy / health services research is concerned with many aspects of health policy analysis in the public and private sectors, and SHP conducts rigorous investigations that lay the foundation for better domestic and international health policy and health care. Drawing upon our multidisciplinary research, the SHP offers innovative educational programs from the undergraduate to the graduate level.

For additional information, please see https://healthpolicy.fsi.stanford.edu/education or https://healthpolicy.fsi.stanford.edu/, or send an email to hrpadmissions@stanford.edu.

Faculty

Director of Graduate Studies and Director of PhD Health Policy: Laurence Baker

Director of M.S. Health Policy and Administrative Director of PhD Health Policy: Corinna Haberland

Core Faculty and Academic Teaching Staff

PhD Program Core Faculty Members: Laurence Baker, PhD, Jayanta Bhattacharya, MD, PhD, David Chan, MD, PhDJeremy Goldhaber-Fiebert, PhD, Michelle Mello, JD, PhD, Grant Miller, PhD, MPP, Douglas Owens, MD, MS, Maria Polyakova, PhD, Sherri Rose, PhD, MA, Maya Rossin-Slater, PhD, Joshua Salomon, PhD, David Studdert, LLD, ScD, MPH

PhD Program Affiliated Faculty

With primary affiliations at Stanford University: Steven Asch, MD, Eran Bendavid, MD, MSMargaret Brandeau, PhD, Mark Duggan, PhD, Bradley Efron, PhD, Karen Eggleston, PhD, Alain Enthoven, PhD, Victor Fuchs, PhD, Pascal Geldsetzer, MD, PhD, MPH, Steven Goodman, MD, PhD, Mary Kane Goldstein, MD, MS, Henry T. Greely, JD, Paul Heidenreich, MD, MS, Tina Hernandez-Boussard, PhD, Mark A. Hlatky, MD, Daniel Kessler, PhD, Alex Macario, MD, MBA, Arden Morris, MD, MPH, Lee Sanders, MD, MPH, Kristin Sainani, PhD, Nigam Shah, PhD, Sara Singer, PhD, Eric Sun, MD, PhD, Robert Tibshirani, PhD, Todd Wagner, PhD, C. Jason Wang, MD, PhD, Paul Wise, MD, MPH

With primary affiliations other than Stanford University: Paul Barnett, PhD, Ciaran Phibbs, PhD, Anita Stewart, PhD

MS Program Core Faculty Members: Alyce Adams, PhD, Steven Asch, MD, Laurence Baker, PhD, Eran Bendavid, MD, MS, Jayanta Bhattacharya, MD, PhD, David Chan, MD, PhD, Pascal Geldsetzer, MD, PhD, Jeremy, Goldhaber-Fiebert, PhD, Corinna Haberland, MD, MS, Mark Hlatky, MD, Michelle Mello, PhD, JD, N. Grant Miller, PhD, Arden Morris, MD, MPH, Douglas Owens, MD, MS, Maria Polyakova, PhD,Sherri Rose, PhD, Maya, Rossin-Slater, PhD, Joshua Salomon, PhD, Lee M Sanders, MD, Sara Singer, PhD, David Studdert, ScD, MPH, C., Jason Wang, MD, PhD, Paul Wise, MD, MPH, Donna Zulman, MD, MS

Affiliated Faculty Members: Margaret Brandeau, PhD, Karen Eggleston, PhD, Mary Kane Goldstein, MD, MS, Steven Goodman, MD, PhD, Paul Heidenreich, MD, MS, Tina Hernandez-Boussard, PhD, Josephine Jacobs, MSc, PhD, Daniel Kessler, JD, PhD, Philip Lavori, PhD, Stephen Luby, MD, Ciaran Phibbs, PhD

Graduate Advising

Stanford Health Policy (SHP) is committed to providing academic advising in support of graduate student scholarly and professional development. When most effective, this advising relationship entails collaborative and sustained engagement by both the advisor and the advisee. As a best practice, advising expectations should be periodically discussed and reviewed to ensure mutual understanding. Both the advisor and the advisee are expected to maintain professionalism and integrity.

Faculty advisors guide students in key areas such as selecting courses, designing and conducting research, developing teaching pedagogy, navigating policies and degree requirements, and exploring academic opportunities and professional pathways.

Graduate students are active contributors to the advising relationship, proactively seeking academic and professional guidance and taking responsibility for informing themselves of policies and degree requirements for their graduate program.

SHP programs adhere to the advising guidelines and responsibilities listed by the Office of the Vice Provost for Graduate Education and in the Graduate Academic Policies and Procedures manual.

For a statement of University policy on graduate advising, see the Graduate Advising section of this bulletin.

Programs

HRP-MS
Degree Designation: MS - Master of Science
-

HRP-PHD
Degree Designation: PHD - Doctor of Philosophy
-

History Department

Contacts

Office: Building 200, Room 113
Mail Code: 94305-2024
Phone: (650) 723-2651
Web Site: http://history.stanford.edu

Courses offered by the Department of History are listed under the subject code History on the Stanford Bulletin's ExploreCourses website.

Mission of the Department of History

We live in a world shaped by the past. To make sense of the past, we must empathize with people who once thought very differently than we do today. We must learn how to see bygone lives and events on their own terms, to render the strange legible and the unfamiliar comprehensible. As a discipline, History teaches the analytical, interpretive, and expressive skills necessary to study the past and to understand social change over time.

It might seem counterintuitive that one of the best ways to understand the present is by studying the past, but that is precisely why History is so important. When we appreciate that History is not, first and foremost, a body of knowledge – that is, a collection of names, dates, and events – but rather a way of seeing and thinking, it becomes a powerful tool for assessing contemporary challenges and promoting social change. Once we know how to penetrate different modes of thought and human behavior and can understand their inner logic, it becomes easier to make sense of the contemporary world, its diverse peoples and ideas. Studying history cultivates a crucial set of skills that help navigate not only the past, but the present as well.

Degrees Offered

The Department of History offers the following degree programs: Bachelor of Arts, Bachelor of Arts and Sciences, Master of Arts, and Doctor of Philosophy.

Graduate Programs in History

The primary goal of the Stanford Department of History's graduate program is the training of scholars. Most students who receive doctorates in the program go on to teach at colleges or universities. Other students have obtained positions in university administration and research.

History Course Catalog Numbering System

					History Course Catalog Numbering System
LOCATION	**INTRODUCTORY SEMINARS:FRESHMAN/SOPHOMORES**	**SOURCES AND METHODS SEMINARS**	**LECTURES**	**COLLOQUIA**	**RESEARCH SEMINARS AND WORKSHOPS**
International, Global, Thematic	4N, 44Q, 95N	3S	1B, 64, 102, 103D,F, 105C, 106A,B, 107	201A, 202A,B,G, 203,B,C, 204,C,E,G, 206,206A, 207C, 208C, 243G, 301A, 302A,B,G, 303,303B,C,F, 304,C,G, 305, 306A, D, 307C,E, 308C, 343G, 399A	306K, 401A
Ancient and Medieval Europe	11N		101	207F, 215K, 307F	
Early Modern and Modern Europe		33S, 38S	110B, C, 131A, 133A, 134A	230C, 231G, 232A, 233, 331G, 332A, 333	326A, 430, 433A, B, 438
Eastern Europe, Russia, Eurasia	20N	20S	125	221B, 224A, 228, 321A, 328	424A, B

History of Science	41Q, 44Q	42S	130A, 140, 144	208A, 232F, 308A, 332F	
Africa	48N, 48Q		145B, 147		445A, B
United States	36N, 41Q, 50K, 60N	71S, 74S, 76S	64, 130A, 150A, B, C, 151, 158C,159, 161, 166, B, 167A	201, 203C, 251G, 252B, 253D, 256, G, 257C, 258, E, 260, 261G, 262A, E, 269, 301, 303C, 351B, C, E, 356, 358, 369	460
Latin America	78N		174	277D	471A, B
Middle East			181B, 182C, 187	281B, 284, F, 288, 381, B, 384, F	481
Jewish History			185B		486A
Asia	98N		191B, 192, 195, C, 196, 198	290E, 292, D, 297, 390E, 391B, 392, D, 396D, 397	491A, B, 494C

Faculty

Emeriti: (Professors) Barton J. Bernstein, Joel Beinin, Albert Camarillo, Clayborne Carson, Peter Duus, Terence Emmons, Estelle Freedman, David M. Kennedy, David Holloway, Carolyn Lougee Chappell, Peter Paret, Jack N. Rakove, Richard L. Roberts, Paul A. Robinson, James J. Sheehan, Peter Stansky, Lyman P. Van Slyke, Richard White; (Senior Lecturer) Joseph J. Corn

Chair: Caroline Winterer

Vice Chair: Jun Uchida

Director of Graduate Studies: Amir Weiner

Director of Graduate Teaching: Zephyr Frank

Director of Undergraduate Studies: Fiona Griffiths

Honors Director: James P. Daughton

Professors: Keith M. Baker, James T. Campbell, Gordon Chang, Robert Crews, David R. Como, Paula Findlen, Zephyr Frank, Estelle Freedman, Fiona Griffiths, Stephen Haber, Gabrielle Hecht, Nancy S. Kollmann, Mark E. Lewis, Thomas S. Mullaney, Norman M. Naimark, Robert Proctor, Jessica Riskin, Richard L. Roberts, Aron Rodrigue, Priya Satia, Walter Scheidel, Londa Schiebinger, Matthew H. Sommer, Kären E. Wigen, Caroline Winterer, Steven J. Zipperstein

Associate Professors: Jennifer Burns, James P. Daughton, Allyson V. Hobbs, Ana Raquel Minian, Yumi Moon, Laura Stokes, Jun Uchida, Amir Weiner, Ali Yaycioglu

Assistant Professors: Nora E. Barakat, Joel Cabrita, Rowan Dorin, Jonathan Gienapp, Destin Jenkins, Kathryn Olivarius, Steven M. Press, Partha Pratim Shil, Mikael D. Wolfe

Courtesy Professors: Gregory Ablavsky, Rabia Belt, Giovanna Ceserani, Daniel Edelstein, Lawrence Friedman, Amalia Kessler, Emily J. Levin, Kathryn Gin Lum, Reviel Netz, Richard P. Saller, Kathryn Starkey, Fred Turner, Sam Wineburg

Senior Lecturers: Katherine Jolluck, Martin W. Lewis

Lecturer: Gil-li Vardi

Graduate Advising Expectations

The Department of History is committed to providing academic advising in support of graduate student scholarly and professional development. When most effective, this advising relationship entails collaborative and sustained engagement by both the adviser and the advisee. As a best practice, advising expectations should be periodically discussed and reviewed to ensure mutual understanding. Both the adviser and the advisee are expected to maintain professionalism and integrity.

Faculty advisers guide students in key areas such as selecting courses, designing and conducting research, developing of teaching pedagogy, navigating policies and degree requirements, and exploring academic opportunities and professional pathways.

Graduate students are active contributors to the advising relationship, proactively seeking academic and professional guidance and taking responsibility for informing themselves of policies and degree requirements for their graduate program.

Upon enrolling, all students plan their work under the direction of a faculty member designated by the Department as their adviser. Entering students should meet with their adviser to discuss the selection of courses, choice of major and secondary fields, and the overall plan of their graduate programs. Faculty advisers and graduate student advisees meet at least once a quarter to assess the advisee's course of study, performance over the past quarter, and plans for the next quarter's program of study. Students should consult with their advisers on all academic matters. Faculty should help their advisees plan for orals, research grant applications, research projects, and the dissertation. Until a student is advanced to candidacy, the Director of Graduate Studies reviews the student's quarterly transcript and the adviser's evaluation.

Normally the original adviser remains in this capacity during a student's period of graduate study. However, in the event that a student wishes to change the admitting adviser, they may do so after consultation with and approval of the two faculty members involved. The necessary forms are available from the Graduate Program Coordinator.

The Director of Graduate Studies supervises the Graduate Program in the Department. The Director's duties include approving the committees for the University oral examination, dissertation prospectus, and dissertation, certifying graduate students' progress to degree and completion of University and Departmental requirements, and chairing the Department's Committee on Graduate Studies.

For a statement of University policy on graduate advising, see the "Graduate Advising" section of this bulletin.

Programs

Hstry-BA
Degree Designation: BA - Bachelor of Arts
-

Hstry-MA
Degree Designation: MA - Master of Arts
-

Hstry-Min
Degree Designation:
-

Hstry-PhD
Degree Designation: PHD - Doctor of Philosophy
-

Hstry-PMn
Degree Designation:
-

Human Biology Department

Contacts

Office: Building 20
Mail Code: 94305-2160
Phone: (650) 725-0336
Email: humbioadvising@lists.stanford.edu
Web Site: https://humanbiology.stanford.edu

Courses offered by the Program in Human Biology are listed under the subject code HUMBIO on the Stanford Bulletin's ExploreCourses web site.

The program offers a Bachelor of Arts and a Bachelor of Science in Human Biology, as well as a minor and an honors program.

Mission of the Undergraduate Program in Human Biology

The mission of the undergraduate program in Human Biology is to provide students with an interdisciplinary approach to understanding human beings from biological, behavioral, social, and cultural perspectives. Core courses train students to approach significant problems from a range of perspectives. As they progress through the major, each student pursues an individualized course of study that draws upon disciplines across the university and promotes a nuanced understanding of a substantive area. The program prepares majors to pursue advanced training in professional or graduate programs and to address issues that influence human welfare.

All Human Biology majors complete a 30-unit core sequence, normally in the sophomore year, which provides the foundation for the major. During the sophomore year, students consult with student advisors, choose a faculty advisor, and complete the declaration process. Together prospective majors and student advisors plan a road map of course work tailored to each student's unique Area of Concentration within Human Biology. Early planning and subsequent refining of an individualized course of study, in consultation with student and faculty advisors, are strengths and requirements of the program. The curriculum draws on faculty from across the University. To complete either a B.A. or B.S. in Human Biology, students must take courses from within the program and from other University departments. Many Human Biology majors go on to advanced training in professional schools or graduate programs in the behavioral, natural, and social sciences, including coterminal master's degree programs in other University departments. Additional information about the major may be obtained from the program's offices or at the Program in Human Biology website.

Student Advisors

Human Biology has a strong student advising program. Before declaring Human Biology as the undergraduate major, each student must meet with student advisors who assist in developing a coherent study plan based on an individualized Area of Concentration, and the selection of breadth, depth, and upper-division courses. The student advisors also assist students in selecting an appropriate faculty advisor and a suitable capstone experience for their Area of Concentration and career goals. Student advisors offer drop-in services during scheduled office hours every weekday.

Faculty

Director: Lianne Kurina

Associate Director: Katherine Preston

Director of Undergraduate Studies: Lianne Kurina

Honors Chair: Katherine Preston

Emeriti: (Professors) Carol Boggs (Biology), Donna Bouley (Comparative Medicine), Doug Brutlag (Biochemistry), William H. Durham (Anthropology), Anne Fernald (Psychology), Russell D. Fernald (Biology), Ronald Garcia (Center for Excellence), Herant Katchadourian (Human Biology), Michael Marmor (Ophthalmology), Gordon Matheson (Orthopaedic Surgery/Sports Medicine), Ellen FitzSimmons Porzig (Developmental Biology), Carol Winograd (Medicine)

Professors: Julie C. Baker (Genetics), Laurence Baker (Health Research and Policy - Health Services Research), Laura Carstensen (Psychology), Rodolfo Dirzo (Biology), Heidi Feldman (Pediatrics/Developmental Behavioral Pediatrics), Paul Fisher (Neurology), Margaret Fuller (Developmental Biology), Christopher Gardner (Medicine - Stanford Prevention Research Center), Garry Gold (Radiology/Musculoskeletal Imaging), Brenda Golianu (Anesthesiology, Perioperative and Pain Medicine - Pediatrics), Lawrence H. Goulder (Economics), James J. Gross (Psychology), Joachim Hallmayer (Psychiatry and Behavioral Sciences - Child and Adolescent Psychiatry and Child Development), H. Craig Heller (Biology), Jill Helms (Surgery - Plastic and Reconstructive Surgery), Richard Klein (Anthropology and Biology), Tanya Luhrmann (Anthropology), Yvonne Maldonado (Pediatrics - Infectious Diseases/Health Research and Policy), N. Grant Miller (Medicine/Primary Care and Outcomes Research), Roeland Nusse (Developmental Biology), Ruth O'Hara (Psychiatry and Behavioral Sciences/Public Mental Health and Population Sciences), Michael Ostacher (Psychiatry and Behavioral Sciences/Public Mental Health and Population Sciences), Amado Padilla (Education), Julie Parsonnet (Medicine/Infectious Diseases),Jonathan Pritchard (Biology and Genetics), Rob Reich (Political Science), Allan Reiss (Psychology and Behavior Sciences - Center for Interdisciplinary Brain Sciences Research/Radiology), Robert Sapolsky (Biology, Neurology and Neurological Sciences, Neurosurgery), Walter Scheidel (Classics and History), Gavin Sherlock (Genetics) Sara Singer (Medicine/Primary Care and Population Health), William Talbot (Developmental Biology), Shripad Tuljapurkar (Biology), Jeffrey Wine (Psychology)

Associate Professors: Jason Andrews (Medicine/Infectious Diseases), Michael C. Frank (Psychology), Duana Fullwiley (Anthropology), Angela Garcia (Anthropology), Jeremy Goldhaber-Fiebert (Medicine/Primary Care and Outcomes Research), Peter Kao (Medicine/Pulmonary and Critical Care Medicine), Michelle Monje-Deisseroth (Neurology), Jelena Obradovic (Education), Karen Parker (Psychiatry and Behavioral Sciences), Lee Sanders (Pediatrics - General Pediatrics), Aliya Saperstein (Sociology), Maya Rossin-Slater (Health Research and Policy - Health Services Research)

Assistant Professors: Geoffrey Abrams (Orthopaedic Surgery), Jorah Dannenberg (Philosophy), Denise Gill (Music – Ethnomusicology), Roanne Kantor (English), Anshul Kundaje (Genetics and Computer Science), Daniel Mason (Psychiatry), Maria Polyakova (Health Research and Policy - Health Services Research)

Professors (Research): David Lyons (Psychiatry and Behavioral Sciences/General Psychiatry and Psychology - Adult), Marcia Stefanick (Medicine - Stanford Prevention Research Center/Obstetrics and Gynecology)

Associate Professors (Research): Philippe Mourrain (Psychiatry and Behavioral Sciences – Sleep Disorder/Stanford Center for Sleep Sciences and Medicine), , Jamie Zeitzer (Psychiatry and Behavioral Sciences - Stanford Center for Sleep Sciences and Medicine)

Assistant Professors (Research): Lisa Goldman Rosas (Epidemiology and Population Health)

Professors (Teaching): Donald Barr (Pediatrics - General Pediatrics), Gary Darmstadt (Pediatrics - Neonatology), Ronald Davis (Biochemistry/Genetics) - On Leave, David Magnus (Pediatrics/SCBE), Robert Siegel (Microbiology and Immunology)

Associate Professors (Teaching): Catherine Heaney (Psychology/Medicine - Stanford Prevention Research Center), Lianne Kurina (Medicine/Primary Care and Population Health), Eunice Rodriguez (Pediatrics - General Pediatrics), Kristin Sainani (Epidemiology and Population Health)

Clinical Associate Professor: Jason Hom (Medicine), Rita Popat (Epidemiology and Population Health), Clea Sarnquist (Pediatics - Infectious Diseases)

Clinical Assistant Professors: Moises Gallegos (Emergency Medicine), Andrea Kussman (Orthopaedic Surgery), Margaret Windy McNerney (VA Palo Alto Health Care Services), John Openshaw (Medicine/Infectious Diseases)

Other Teaching Faculty and Staff: Tamar Brand-Perez, Tiffany Chao (Surgery - General Surgery), David Crane (Public Policy), Judy Chu, Sophia Colamarino (Psychiatry and Behavioral Sciences - Child and Adolescent Psychiatry and Child Development), Anne Friedlander, Renu Heller (Biology), Catherine Ley (Medicine/Infectious Diseases), Mark Mabry, Lisa Medoff, Joe Nation (Public Policy), Katherine Preston, Annette Salmeen, Piya Sorcar (Center for Health Policy and the Center for Primary Care and Outcomes Research), Jennifer Wolf (Education)

Course Associates: John Butchko, Sophia Gamboa, Claire Hillier, Avi Kaye, Spencer Montague-Alamin, Ashley Riley, Allison Schwartz, Vianna Vo

Programs

HumBi-BA
Degree Designation: BA - Bachelor of Arts

HumBi-BS
Degree Designation: BS - Bachelor of Science
-

HumBi-Min
Degree Designation:

Iberian and Latin American Cultures Department

Contacts

Office: Building 260, Room 119
Mail Code: 94305-2014
Phone: (650) 723-4977
Email: ilac@stanford.edu
Web Site: Iberian and Latin American Cultures at Stanford

Courses offered by the Department of Iberian and Latin American Cultures, formerly the Department of Spanish and Portuguese, are listed under the subject code ILAC on the Stanford Bulletin's ExploreCourses web site. For courses in Catalan, Portuguese, and Spanish language instruction with the subject codes CATLANG, PORTLANG and SPANLANG, see the Language Center section of this bulletin.

The Language Center offers a series of second- and third-year courses designed for students who grew up in homes where Spanish is spoken (heritage speakers) and who wish to develop their existing linguistic strengths. See the "Language Center" section of this bulletin.

The department is a part of the Division of Literatures, Cultures, and Languages.

Mission of the Undergraduate Program in Iberian and Latin American Cultures

Studying Iberian and Latin American cultures at Stanford means engaging in a deep and compelling exploration of the languages, literatures, and cultures of the Iberian Peninsula, Latin America (including Brazil), and Latinx communities in the United States. To achieve the goal of training students as experts in these areas, the department balances an emphasis on literary studies with philosophical, historical, and social approaches to cultural issues. Given the focus on critical thinking, open discussion, and close textual analysis, undergraduate majors are provided excellent preparation for a large number of professional fields, including business, education, international relations, law, and medicine. The graduate program provides rigorous and highly individualized advanced training in the analysis of Iberian, Latin American (including Brazil), and Latinx literatures, and students go on to produce innovative original research and find excellent jobs, both in academe and beyond.

Bachelor of Arts in Iberian and Latin American Cultures

In this major, students engage in a thoroughly transnational and cross-linguistic study of Iberian and Latin American (including Brazil) literatures and cultures. Courses emphasize critical thinking and close textual analysis, with a focus on the deep and often understudied intersections between literature written in Catalan, Portuguese, and Spanish from the medieval period to the present day.

Bachelor of Arts in Spanish

This undergraduate program is designed for students who want to move towards fluency in reading, listening, speaking, and writing Spanish while developing a contextualized understanding of the language through linguistic and cultural study. This degree emphasizes critical use of the Spanish language in a global perspective.

Faculty in Iberian and Latin American Cultures

Director: Héctor Hoyos

Chair of Graduate Studies: Héctor Hoyos

Chair of Undergraduate Studies: Vincent Barletta

Professor: Joan Ramon Resina (also Comparative Literature)

Associate Professors: Vincent Barletta (also Comparative Literature), Héctor Hoyos, Lisa Surwillo

Assistant Professor: Nicole Hughes

Lecturers: Ximena Briceño, , Allison Kendra (Dean's Fellow)

Courtesy Professors: Zephyr Frank, Roland Greene, Paula Moya, José David Saldívar, Ramón Saldívar

Emeriti: (Professors) Bernard Gicovate, María-Paz Haro, Mary Pratt, Jorge Ruffinelli, Sylvia Wynter, Yvonne Yarbro-Bejarano; (Professor, Teaching)

Graduate Advising Expectations

The Department of Iberian and Latin American Studies is committed to providing academic advising in support of graduate student scholarly and professional development. The overall goal of advising, both in the DLCL and the department, is to help graduate students make academic and career choices wisely, and think ahead, in order to craft a long-term plan for their graduate student career and beyond. When most effective, the advising relationship entails collaborative and sustained engagement by both the adviser and the advisee. As a best practice, advising expectations should be periodically discussed and reviewed to ensure mutual understanding. Both the adviser and the advisee are expected to maintain professionalism and integrity. Advising is both an academically invaluable form for the transmission of expertise, as well as a key aspect of creating a strong departmental and Stanford community.

Faculty Advisers

Faculty advisers guide students in key areas such as selecting courses, designing and conducting research, developing of teaching pedagogy, navigating policies and degree requirements, and exploring academic opportunities and professional pathways.

- Upon enrolling, students plan their work under the direction of the Chair of Graduate Studies or a faculty member designated by the program. When the student selects a more specialized adviser, the transition should involve oral or written communication between both advisers and the student concerning the student's progress, goals, and expectations. It is possible for doctoral students to choose two main advisers at the dissertation stage, provided all agree this is academically sound.
- Faculty advisers should meet with assigned students to discuss their selection of courses and to plan from a broader, longer-term perspective, including discussion of Program milestones and a basic timeline; an overview of Department and DLCL offerings beyond courses; student goals and interests and DLCL or Stanford programs that may be relevant; and (for doctoral students) how to transfer previous graduate coursework.
- Faculty advisers and graduate students should meet at least once per quarter to assess the advisee's course of study, performance over the past quarter, and plans for the next quarter, as well as longer term plans. If a student has two advisers, the student should meet at least once per quarter with each adviser and at least once per year with both advisers at the same time.
- For doctoral students, faculty should help their advisees plan for exams, research grant applications, develop research projects, and plan ahead for both the academic job market and the job search beyond academia.
- Faculty advisers should provide feedback about the student's progress to the department during the Annual Review process. For more information about the Annual Review, see the Graduate Handbook.

Graduate Students

Graduate students are active contributors to the advising relationship, proactively seeking academic and professional guidance and taking responsibility for informing themselves of policies and degree requirements for their graduate program.

- Upon enrolling, students plan their work under the direction of the Chair of Graduate Studies or a faculty member designated by the program. As the student develops a field of expertise, the student chooses a program adviser to replace the Chair of Graduate Studies role. The transition should involve oral or written communication between both advisers and the student concerning the student's progress, goals, and expectations.
- Graduate students and faculty advisers and should meet at least once per quarter to assess the advisee's course of study, performance over the past quarter, and plans for the next quarter, as well as longer term plans. If a student has two advisers, the student should meet at least once per quarter with each adviser and at least once per year with both advisers at the same time.

- Students should consult with their advisers on all academic matters, including coursework, conference presentations and publications, research travel, and teaching plans.
- Students should provide a thorough self-evaluation each year for the annual review. For more information about the annual review, see the Graduate Handbook.

For a statement of University policy on graduate advising, see the Graduate Advising section of this bulletin.

Programs

ILAC-BA
Degree Designation: BA - Bachelor of Arts
-

ILAC-MA
Degree Designation: MA - Master of Arts
-

ILAC-PhD
Degree Designation: PHD - Doctor of Philosophy
-

ILAC-PMn
Degree Designation:
-

Port-Min
Degree Designation:
-

Span-BA
Degree Designation: BA - Bachelor of Arts

Span-Min
Degree Designation:

Immunology Department

Contacts

Office: Alway Building: 300 Pasteur Drive, M325
Phone: 650.736.1980
Email: lhansen@stanford.edu
Web Site: https://med.stanford.edu/immunol.html
Office: Moving to Biomedical Innovations Building, 240 Pasteur Drive Room 1600

Courses offered by the Immunology Program are listed under the subject code IMMUNOL on the Stanford Bulletin's ExploreCourses web site.

Stanford Immunology is home to faculty, students, postdocs, and staff who work together to produce internationally recognized research in many areas of immunology. The long tradition of collaboration among the immunology laboratories at Stanford fosters productive interdisciplinary research, with an emphasis on the application of current approaches to problems in cellular, molecular and clinical immunology. Faculty research interests include both basic science research and bench-to-bedside research. Graduate students and postdoctoral scholars receive outstanding training through their participation in research, teaching, seminars, journal clubs, and the annual Stanford Immunology Scientific Conference.

Faculty

Director, Stanford Immunology and Chair, Executive Committee for the Immunology Program and Director, Ph.D. Program in Immunology: Olivia Martinez (Professor, Surgery, Abdominal Transplantation)

Director of Graduate Studies: Olivia Martinez (Professor, Surgery, Abdominal Transplantation)

Participating Departments and Faculty (Molecular, Cellular, Translational Immunology Track)

Biochemistry: Peter Kim (Professor), Lingyin Li (Assistant Professor)

Bioengineering: Jennifer Cochran (Professor and Chair, and by courtesy, Chemical Engineering), Stephen Quake (Professor, and Applied Physics and Physics)

Biology: Patricia P. Jones (Professor)

Chemistry: Carolyn Bertozzi (Professor, Director, ChEM-H, and by courtesy, of Radiology and of Chemical and Systems Biology)

Genetics: William Greenleaf (Associate Professor, and by courtesy, Applied Physics), Leonore A. Herzenberg (Professor, Research), Karla Kirkegaard (Professor, and of Microbiology & Immunology), Stephen Montgomery (Associate Professor), Michael Snyder (Professor)

Medicine/Biomedical Informatics Research: Purvesh Khatri (Associate Professor, Research, and of Biomedical Data Science), Andrew Gentles (Assistant Professor, Research, and by courtesy, of Biomedical Data Science)

Medicine/Blood and Bone Marrow Transplantation Program: Everett Meyer (Assistant Professor), David Miklos (Associate Professor), Robert Negrin (Professor), Judith Shizuru (Professor, and of Pedicatrics, Stem Cell Transplantation)

Medicine/Cardiovascular Medicine: Joseph Wu (Professor, Director, Stanford Cardiovascular Institute, and Radiology)

Medicine/Endocrinology, Gerontology, & Metabolism: Joy Wu (Assistant Professor)

Medicine/Gastroenterology and Hepatology: Aida Habtezion (Associate Professor)

Medicine/Hematology: Ravi Majeti (Professor)

Medicine/Immunology and Rheumatology: C. Garrison Fathman (Professor, Emeritus), Jorg Goronzy (Professor), William Robinson (Professor), Samuel Strober (Professor), Paul J. Utz (Professor), Cornelia Weyand (Professor)

Medicine/Infectious Diseases: Catherine Blish (Associate Professor), Paul Bollyky (Assistant Professor, and of Microbiology & Immunology), Prasanna Jagannathan (Assistant Professor, and of Microbiology & Immunology), Taia T. Wang (Assistant Professor, and of Microbiology & Immunology)

Medicine/Oncology: Ash Alizadeh (Associate Professor), Gilbert Chu (Professor, and of Biochemistry), Dean Felsher (Professor, and of Pathology), Michael Khodadoust (Assistant Professor), Ronald Levy (Professor), Shoshana Levy (Professor, Research)

Medicine/Nephrology: Jonathan Maltzman (Associate Professor)

Medicine/Pulmonary and Critical Care Medicine: Mark Nicolls (Professor)

Microbiology and Immunology: John Boothroyd (Professor), Yueh-Hsiu Chien (Professor), Mark M. Davis (Professor, and Director, Institute for Immunity, Transplantation and Infection), Juliana Idoyaga (Assistant Professor), Holden Maecker (Professor, Research), Hugh McDevitt (Professor, Emeritus), Denise Monack (Professor), Garry P. Nolan (Professor), David Schneider (Professor)

Molecular and Cellular Physiology: K. Christopher Garcia (Professor, and of Structural Biology), Richard S. Lewis (Professor)

Neurology and Neurological Sciences: Katrin Andreasson (Professor), May Han (Associate Professor), Lawrence Steinman (Professor, and of Pediatrics), Tony Wyss-Coray (Professor)

Neurosurgery: Theo Palmer (Professor)

Otolaryngology/Head and Neck Surgery (ENT): Jayakar Nayak (Associate Professor, and by courtesy, Neurosurgery), John B. Sunwoo (Professor, and by courtesy, Dermatology)

Pathology: Robert Michael Angelo (Assistant Professor), Sean Bendall (Assistant Professor, Research), Scott Boyd (Associate Professor), Eugene C. Butcher (Professor), Michael Cleary (Professor), Gerald R. Crabtree (Professor, and of Developmental Biology), Edgar G. Engleman (Professor, and of Medicine/Immunology and Rheumatology), Andrew Fire (Professor, and Genetics), Stephen Galli (Professor, and of Microbiology & Immuonlogy), Michael Howitt (Assistant Professor), Siddhartha Jaiswal (Assistant Professor), Sara Michie (Professor), Bali Pulendran (Professor, and of Microbiology & Immunology), Ansuman Satpathy (Assistant Professor), Raymond A. Sobel (Professor), Irving Weissman (Professor, and Director, Stem Cell and Regenerative Medicine Institute, and of Developmental Biology, Biology)

Pediatrics: Rosa Bacchetta (Associate Professor, Research, Stem Cell Transplantation), Alice Bertaina (Associate Professor, Stem Cell Transplantation), Agnieszka Czechowicz (Assistant Professor, Stem Cell Tranplantation), David B. Lewis (Professor, Immunology and Allergy), Crystal Mackall (Professor, Hematology/Oncology, and of Medicine), Maria Grazia Roncarolo (Professor, Stem Cell Transplantation, and of Medicine/Blood and Marrow Transplantation), Elizabeth Mellins (Professor, Human Gene Therapy), Kari Nadeau (Professor, Allergy and Clinical Immunology, and of Otolaryngology, Head & Neck Surgery)

Psychiatry and Behavioral Sciences: Emmanuel Mignot (Professor, Sleep Medicine)

Radiology: Parag Mallick (Assistant Professor, Research, and of Diagnostic Radiology)

Structural Biology: Peter Parham (Professor, and of Microbiology and Immunology), Theodore Jardetzky (Professor)

Surgery/Multi-Organ Transplantation: Charles F. Chan (Assistant Professor, Plastic Surgery and Reconstructive Surgery), Sheri Krams (Professor, Research), Olivia Martinez (Professor)

Participating Departments and Faculty (Computational and Systems Immunology)

Anesthesiology, Perioperative and Pain Medicine: Nima Aghaeepour (Assistant Professor)

Bioengineering: Stephen Quake (Professor, and Applied Physics and Physics)

Genetics: Michael Snyder (Professor), Karla Kirkegaard (Professor, and of Microbiology & Immunology)

Biomedical Data Science: Aaron Newman (Assistant Professor, and of Medicine/Biomedicine Biomedical Informatics)

Medicine/Biomedical Informatics Research: Andrew Gentles (Assistant Professor, Research, and by courtesy, of Biomedical Data Science), Purvesh Khatri (Assistant Professor, Research, and of Biomedical Data Science)

Medicine/Immunology and Rheumatology: Paul J. Utz (Professor)

Medicine/Oncology: Ash Alizadeh (Associate Professor)

Microbiology and Immunology: John Boothroyd (Professor), Mark M. Davis (Professor, and Director, Institute for Immunity, Transplantation and Infection), Holden Maecker (Professor, Research), Garry Nolan (Professor)

Pathology: Sean Bendall (Assistant Professor, Research), Scott Boyd (Associate Professor), Andrew Fire (Professor, and of Genetics)

Radiology: Parag Mallick (Assistant Professor, Research, and of Diagnostic Radiology)

Affiliate Members:

Biochemistry: Ron Davis (Professor, and of Genetics)

Health and Research Policy - Biostatistics: Robert Tibshirani (Professor, and of Statistics)

Graduate Advising

Graduate Advising Expectations

The Immunology Program is committed to providing academic advising in support of graduate student scholarly and professional development. This includes first year advising by the program director and ongoing advising with the research mentor in subsequent years. When most effective, this advising relationship entails collaborative and sustained engagement by both the adviser and the advisee. The Individual Development Plan (IDP) is required to be completed by the adviser and advisee annually and entails an extensive interactive written and personal assessment of trainee goals, accomplishments, coursework, and areas for development. As a best practice, advising expectations should be periodically discussed and reviewed to ensure mutual understanding. Both the adviser and the advisee are expected to maintain professionalism and integrity.

Faculty advisers guide students in key areas such as selecting courses, designing and conducting research, developing of teaching pedagogy, navigating policies and degree requirements, and exploring academic opportunities and professional pathways.

In addition, the advising process includes guidelines and expectations for graduate student professional conduct, which prepares the student to be responsible members of professional communities.

Graduate students are active contributors to the advising relationship, proactively seeking academic and professional guidance and taking responsibility for informing themselves of policies and degree requirements for their graduate program.

For a statement of University policy on graduate advising, see the Graduate Advising section of this bulletin.

Programs

Immun-MS
Degree Designation: MS - Master of Science
-

Immun-PhD
Degree Designation: PHD - Doctor of Philosophy
-

Institute for Computational and Mathematical Engr Department

Contacts

Office: Huang Engineering Center, 475 Via Ortega
Mail Code: 94305-4042
Email: icme-admissions@stanford.edu
Web Site: http://icme.stanford.edu/

Courses offered by the Institute for Computational and Mathematical Engineering are listed under the subject code CME on the *Stanford Bulletin's* ExploreCourses web site.

ICME is a degree granting (M.S./Ph.D.) interdisciplinary institute at the intersection of mathematics, computing, engineering and applied sciences. ICME was founded in 2004, building upon the Scientific Computing and Computational Mathematics Program (est. 1989).

At ICME, we design state-of-the-art mathematical and computational models, methods, and algorithms for engineering and science applications. The program collaborates closely with engineers and scientists in academia and industry to develop improved computational approaches and advance disciplinary fields. In particular, it leverages

Stanford's strength in engineering applications in the physical, biological, mathematical, and information sciences, and has established connections with nearly 20 departments across five schools at Stanford.

The program identifies research areas that would benefit from a multidisciplinary approach in which computational mathematics plays a critical role. This multidisciplinary intellectual environment is a core strength of ICME, with interaction among students and faculty with diverse backgrounds and expertise. Students and faculty are active in many research areas: aerodynamics and space applications, fluid dynamics, protein folding, data science including machine learning and recommender systems, ocean dynamics, climate modeling, reservoir engineering, computer graphics, financial mathematics, and many more.

The program trains students and scholars from across Stanford in mathematical modeling, scientific computing, and advanced computational algorithms at the undergraduate and graduate levels. Courses typically provide strong theoretical foundations for the solution of real world problems and numerical computations to facilitate application of mathematical techniques and theories. Training offered includes matrix computations, computational probability and combinatorial optimization, optimization, stochastics, numerical solution of partial differential equations, parallel computer algorithms, and new computing paradigms, amongst others.

ICME offers service courses for undergraduates and graduate students to fulfill departmental requirements, core courses for master's and doctoral students in Computational and Mathematical Engineering, and specialized electives in various application areas.

The ICME master's program offers both specialized and general tracks. Currently, the program is offering specialized tracks in Computational Geosciences, Data Science, Imaging Science, and Mathematical and Computational Finance.

Graduate Programs in Computational and Mathematical Engineering

University regulations governing the M.S. and Ph.D. degrees are described in the “Graduate Degrees” section of this bulletin.

Programs

CMEngr-MS
Degree Designation: MS - Master of Science
-

CMEngr-PHD
Degree Designation: PHD - Doctor of Philosophy
-

CME-PMn
Degree Designation:
-

Institute for International Studies Department

Contacts

Office: Encina Hall Center, First Floor, 616 Serra Street
Mail Code: 94305-6055
Phone: 650-723-4581 / Fax 650-725-2592
Web Site: http://fsi.stanford.edu/

The Freeman Spogli Institute for International Studies (FSI) provides opportunities for undergraduate research through the CDDRL Undergraduate Honors Program and the CISAC Interschool Honors Program in International Security Studies.

Interschool Honors Program in Democracy, Development, and the Rule of Law

Director: Stephen J. Stedman

The Center on Democracy, Development, and the Rule of Law (CDDRL) Undergraduate Senior Honors Program provides students majoring in any Stanford academic department the opportunity to conduct an independent honors thesis focused on the fields of democracy, development, and the rule of law. Students are required to complete a three quarter long honors research seminar that begins Spring Quarter of the junior year. They will spend the last quarter of the senior year working independently with their faculty adviser to complete and submit their honors thesis ahead of their formal defense in mid-May. Upon fulfilling individual department course requirements and completing the honors program, students graduate with a certificate in Honors in Democracy, Development, and the Rule of Law.

Students interested in the program consult with their prospective honors advisers in their junior year to determine the tentative thesis topic, which should have some degree of policy relevance. Prerequisites for the program include; a 3.5 grade-point average at the time they apply; a strong overall academic record; sufficient depth and breadth in the fields of democracy, economic and social development, rule of law, and human rights course work; and demonstrated skills in writing and conducting independent research.

Students are required to attend honors college in Washington, D.C. in September before Autumn Quarter classes begin. Applicants are discouraged from studying abroad during the duration of the CDDRL Undergraduate Honors program.

Required Course Work

Two courses that explore the areas of democracy, development, and the rule of law to be approved by the faculty director. CDDRL's flagship undergraduate lecture course taught during Autumn Quarter, which ideally should be completed before the student enters the honors program. DDRL Honors Research Methods Seminars meet on a weekly basis to present their project theses and receive feedback.

Typical Schedule for CDDRL Honors Program

JUNIOR	UNITS		
	AUTUMN	WINTER	SPRING
Select one of the following:	5		
Democracy, Development, and the Rule of Law (INTNLREL114D DEMOCRACY, DEVT, RULE OF LAW)			
Democracy, Development, and the Rule of Law (POLISCI114D DEMOCRACY, DEVT, RULE OF LAW)			
DDRL189 RESEARCH METHODS FOR DDRL Honors Research Methods			3
Year Total:	5		3
SENIOR	**UNITS**		
	AUTUMN	**WINTER**	**SPRING**
DDRL190 HONORS PROGRAM ON DDRL Honors Research Workshop	3		
DDRL190 HONORS PROGRAM ON DDRL Honors RResearch Workshop		3	
DDRL191 SENIOR HONORS THESIS RESEARCH Independent Study (Optional)1			
Year Total:	3	3	
Total Units in Sequence:	**14**		

1	Optional any quarter during senior year for 1-5 units, repeatable once for credit.

Admitted students must be able to fulfill all course requirements in their individual majors by the time they graduate, in addition to the units required for the honors program. For more information, contact Kristin Chandler, CDDRL Administrative Manager at kdchandl@stanford.edu or go to http://cddrl.stanford.edu/.

Interschool Honors Program in International Security Studies

Co-Directors: Rod Ewing, Amy Zegart

The Center for International Security and Cooperation (CISAC) coordinates a University-wide Interschool Honors Program in International Security Studies. Students chosen for the honors program intern with a security-related organization (prior to the start of senior year), attend the program's honors college in Washington, D.C., in September, participate in a year-long core seminar, and under the direction of a faculty advisor produce an honors thesis relevant to international security policy. Upon fulfilling individual department course requirements and completing the honors program, students graduate in their major with the award of Honors in International Security Studies. To be considered for the program, students must demonstrate sufficient depth and breadth of international security course work.

- Students must be enrolled at Stanford for all three quarters of the 2020-21 academic year (Autumn, Winter, Spring) to participate in CISAC honors.
- Students who elect to take a leave of absence for any part of the 2020-21 academic year are encouraged to reapply to honors for 2021-22. Given the small size of the program and the large number of applications, the program is unable to offer deferred admissions.
- The deadline for informing the program that a student intends to take a leave of absence and withdraw from CISAC honors is August 1, 2020.

		Course List
		UNITS
Successful applicants to the program are expected to have taken:		
MS&E193 TECHNOLOGY AND NAT'L SECURITY	Technology and National Security: Past, Present, and Future	3-4
POLISCI114S INTL SECURITY IN CHANGING WRLD	International Security in a Changing World	5
and at least one related course such as		4-5
ECON106 WORLD FOOD ECON	World Food Economy	5
HISTORY103F INTRO TO MILITARY HISTORY	The Changing Face of War: Introduction to Military History	5
1117391 - Missing course	Global Public Health	3
INTNLREL114D DEMOCRACY, DEVT, RULE OF LAW	Democracy, Development, and the Rule of Law	5
INTNLREL140A INTL LAW AND INTL RELATIONS	International Law and International Relations	5
LAW5013 INTERNATIONAL LAW	International Law (formerly LAW 479)	4
2025061 - Missing course		3
2053361 - Missing course		3
POLISCI110D WAR & PEACE AMER FOREIGN POL	War and Peace in American Foreign Policy	5
PUBLPOL101 INTRO TO AMERICAN POLITICS/POLISCI102 INTRO TO AMERICAN POLITICS	Introduction to American Politics and Policy: In Defense of Democracy	4-5
SOC160 FORMAL ORGANIZATIONS	Formal Organizations	4

Students in the program enroll in IIS199 HONORS PROGRAM Interschool Honors Program in International Security Studies, in Autumn, Winter, and Spring quarters for 3-5 credits per quarter (9-12 total credits). Information about this program may be obtained from the Center for International Security and Cooperation (CISAC), Encina Hall, cisachonors@stanford.edu, or the CISAC Interschool Honors Program in International Security Studies website.

Faculty

Interschool Honors Program in Democracy, Development, and the Rule of Law

Director: Stephen J. Stedman

Interschool Honors Program in International Security Studies

Co-Directors: Rod Ewing, Amy Zegart

Graduate Advising

For a statement of University policy on graduate advising, see the Graduate Advising section of this bulletin.

Programs

DDRL
Degree Designation:
-

InSSt-IHn
Degree Designation:
-

Interdisciplinary Studies in Humanities Department

Contacts

Office: Student Services, Building 260, Rooms 128
Email: odunlop@stanford.edu
Web Site: https://humanitiescore.stanford.edu/

The undergraduate minor in Humanities provides Stanford students with a broad foundation in the humanities, emphasizing literature, philosophy, and history. The program combines this general knowledge with a focus on the particular cultures of a global region and allows students to reflect on and discuss many of the critical questions that arise everywhere that human beings live together.

Faculty

Faculty Director: Alexander Key (Associate Professor of Arabic and Comparative Literature, Director of Stanford Humanities Core)

Faculty: Vincent Barletta (Associate Professor of Comparative Literature and Iberian and Latin American Cultures), Anna Bigelow (Associate Professor of Religious Studies), Ronald Egan (Professor of East Asian Languages and Cultures), Charlotte Fonrobert (Associate Professor of Religious Studies), Blair Hoxby (Professor of English), Burcu Karahan (Lecturer in Turkish Language and Literature), Christopher B. Krebs (Associate Professor of Classics), Haiyan Lee (Professor of East Asian Languages and Cultures and Comparative Literature), Reviel Netz (Professor of Classics), Grant Parker (Associate Professor of Classics), Vered Karti Shemtov (Senior Lecturer in Hebrew Language and Literature), Eva Chernov Lokey (Senior Lecturer in Hebrew and Comparative Literature), Ariel Stilerman (Assistant Professor of East Asian Languages and Cultures)

Programs

HUMAN-MIN
Degree Designation:
-

International Policy Department

Contacts

Office: Encina Hall, Suite 10
Mail Code: 94305-6055
Phone: 650.498.9583
Email: internationalpolicy@stanford.edu
Web Site: https://fsi.stanford.edu/masters-degree

Courses offered by the Ford Dorsey Master's in International Policy are listed under the subject code INTLPOL on the Stanford Bulletin's ExploreCourses web site.

Mission

The Ford Dorsey Master's in International Policy (MIP), is an interdisciplinary program devoted to rigorous analysis of international policy issues in diplomacy, governance, cyber and international security, global health, and environmental policy. The program is designed to integrate perspectives from political science, law, economics, history, and other disciplines, while also incorporating research opportunities and a focus on implementation and administration of solutions addressing global problems. The MIP program combines a scholarly focus with practical training designed to prepare students for careers in public service and other settings where they can have an impact on international issues.

The program allows students to specialize in cyber policy and security; energy, natural resources, and the environment; governance and development; or international security. Each of the four areas of specialization is guided by one -or more- major research centers at the Freeman Spogli Institute for International Studies at Stanford. This collaboration provides MIP students with exposure to cutting-edge research on global policy issues. Established in 1982, the program was endowed as the Ford Dorsey Program in International Policy Studies (IPS) in 2007.

University requirements for the M.A. degree are described in the "Graduate Degrees" section of this bulletin.

Admission

To apply, or for information on graduate admission, see the Office of Graduate Admissions website. Applications for admission in Autumn Quarter must be filed with supporting credentials by 11:59 pm PST on Tuesday, January 11, 2022.

Applicants who intend to apply to the Knight-Hennessy Scholars (KHS) program must submit two applications: 1) KHS application with deadline of 1:00pm PDT on October 6, 2021; and 2) MIP application with deadline of 11:59 pm PST on December 1, 2021. Note: this earlier MIP application deadline is only for applicants to KHS.

Prerequisite Course Work

The MIP program has a quantitatively rigorous core curriculum and requires University-level courses in microeconomics and macroeconomics taken either as part of a student's undergraduate or graduate education, at another accredited educational institution, or through an approved online course. In addition, while not required, the

program strongly encourages applicants to complete an introductory course in statistics. An understanding of calculus may also be useful in preparation for the Research Methods course sequence. For details on the content each prerequisite course should cover, see Frequently Asked Questions on the MIP website. All prerequisite courses must be completed prior to the start of classes in late September; however, they do not need to be completed at the time of application.

Application Materials

Applicants must submit the following materials as part of the web-based application:

- Statement of purpose on relevant personal, academic, and career plans and goals (2 pages, single-spaced)
- Official Transcripts
    - Upload official transcripts for any institution attended for one year or longer
    - Admitted applicants who accept the offer of admission will be required to submit final official transcripts (paper or e-transcript). See Graduate Admissions for details.
- Three letters of recommendation
    - Please submit recommendations from academic and professional contacts who can effectively speak to your academic skills and/or professional experience, as well as your preparedness for graduate study
- Academic writing sample (written in English, 7-15 pages in length, and double-spaced)
- Resume or curriculum vitae
- Graduate Record Examination (GRE) scores are not required of MIP applicants for matriculation in Autumn Quarter 2022. Therefore, GRE scores will not be considered for applicants who are able to submit them.
    - Stanford University code for ETS is 4704.
- TOEFL scores (only required of applicants who are non-native English speakers and who did not attend undergraduate institutions where English is the language of instruction; please see Graduate Admissions for additional information)

Applicants are expected to have a four-year bachelor's degree from an accredited school. International applicants should review the International Academic Credentials page to determine eligibility to apply.

Applicants should plan to review the Admissions section of the MIP website as well as the Frequently Asked Questions.

Faculty

Director of Graduate Studies:

Francis Fukuyama (Freeman Spogli Institute for International Studies)

Associate Director:

Chonira Aturupane (International Policy)

Executive Committee:

Marshall Burke (Earth System Science)

Andrew Grotto (Freeman Spogli Institute for International Studies)

Michael McFaul (Freeman Spogli Institute for International Studies; Political Science)

Kathryn Stoner (Freeman Spogli Institute for International Studies)

Affiliated Faculty:

Anat Admati (Graduate School of Business)

Michele Barry (Medicine)

Jayanta Battacharya (Medicine)

Coit D. Blacker (Freeman Spogli Institute for International Studies *(Emeritus)*)

Lisa Blaydes (Political Science)

Dan Boneh (Computer Science; Electrical Engineering)

Paul Brest (Law)

David Cohen (Center for Human Rights and International Justice)

Martha Crenshaw (Freeman Spogli Institute for International Studies *(Emeritus)*)

Larry Diamond (Hoover Institution)

Alberto Díaz-Cayeros (Freeman Spogli Institute for International Studies)

Pascaline Dupas (Economics)

Karen Eggleston (Freeman Spogli Institute for International Studies)

Donald Emmerson (Freeman Spogli Institute for International Studies *(Emeritus)*)

Rodney Ewing (Geological and Environmental Sciences)

Marcel Fafchamps (Freeman Spogli Institute for International Studies)

James Fearon (Political Science)

Anna Grzymala-Busse (Political Science)

Garbielle Hecht (History)

Siegfried Hecker (Freeman Spogli Institute for International Studies *(Emeritus)*)

David Holloway (History *(Emeritus)*)

Erik Jensen (Law)

Saumitra Jha (Graduate School of Business)

Tsutsui Kiyoteru (Sociology)

David Lobell (Earth System Science)

Prashant Loyalka (School of Education)

Steve Luby (Medicine)

Stephen Krasner (Political Science)

Beatriz Magaloni (Political Science)

Jennifer Martinez (Law)

Abbas Milani (Iranian Studies)

Grant Miller (School of Medicine)

Norman Naimark (History)

Rosamond Naylor (Freeman Spogli Institute for International Studies)

Jean Oi (Political Science)

Doug Owens (School of Medicine)

Jennifer Pan (Communications)

William J. Perry (Freeman Spogli Institute for International Studies *(Emeritus)*)

Nathaniel Persily (Law)

Condoleezza Rice (Hoover Institution)

Scott Rozelle (Freeman Spogli Institute for International Studies)

Scott Sagan (Political Science)

Gi-Wook Shin (Sociology)

Stephen J. Stedman (Freeman Spogli Institute for International Studies)

Florencia Torche (Sociology)

Andrew Walder (Sociology)

Jeremy Weinstein (Political Science)

Keith Winstein (Computer Science)

Paul Wise (Pediatrics)

Frank Wolak (Economics)

Zhou Xueguang (Sociology)

Amy Zegart (Hoover Institution)

Adjunct Professors:

Thomas Fingar (Freeman Spogli Institute for International Studies)

Steve Pifer (Freeman Spogli Institute for International Studies)

Lecturers, Academic Staff, Scholars, and Fellows:

Steve Blank (Management Science and Engineering)

Dikla Carmel-Hurwitz (Graduate School of Business)

Leslie Chin (Graduate School of Business)

Christophe Crombez (Freeman Spogli Institute for International Studies)

Eileen Donahoe (Freeman Spogli Institute for International Studies)

Paul Edwards (Freeman Spogli Institute for International Studies)

Gregory Falco (Freeman Spogli Institute for International Studies)

Joseph Felter (Freeman Spogli Institute for International Studies)

Miriam González Durántez (Law)

Rose Gottemoeller (Freeman Spogli Institute for International Studies)

Shelby Grossman (Freeman Spogli Institute for International Studies)

Rosanna Guadagno (Freeman Spogli Institute for International Studies)

Medi-Jalalddin Hakimi (Law)

Amr Hamzawy (Freeman Spogli Institute for International Studies)

Jerry Kaplan (Freeman Spogli Institute for International Studies)

Kenji Kushida (Freeman Spogli Institute for International Studies)

Herb Lin (Freeman Spogli Institute for International Studies)

Anja Manuel (International Policy)

Oriana Mastro (Freeman Spogli Institute for International Studies)

Scott McKeon (Economics)

H.R. McMaster (Freeman Spogli Institute for International Studies)

Dinsha Mistree (Law)

Jamie O'Connell (Law)

Megan Palmer (Freeman Spogli Institute for International Studies)

Riana Pfefferkorn (Freeman Spogli Institute for International Studies)

Marietje Schaake (Freeman Spogli Institute for International Studies)

Alain Schläpfer (Political Science)

Daniel Sneider (Center for East Asian Studies)

Julia Spiegel (International Policy)

Alex Stamos (Freeman Spogli Institute for International Studies)

Mark Thurber (Freeman Spogli Institute for International Studies)

Harold Trinkunas (Freeman Spogli Institute for International Studies)

Allen Weiner (Law)

Steve Weinstein (Management Science & Engineering)

Graduate Advising Expectations

International Policy (MIP) is committed to providing academic advising in support of graduate student scholarly and professional development. When most effective, this advising relationship entails collaborative and sustained engagement by both the adviser and the advisee. As a best practice, advising expectations should be periodically discussed and reviewed to ensure mutual understanding. Both the adviser and the advisee are expected to maintain professionalism and integrity. Graduate students are active contributors to the advising relationship, proactively seeking academic and professional guidance and taking responsibility for informing themselves of policies and degree requirements for their graduate program.

Each student in the MIP program is assigned a faculty adviser as well as a program adviser and a career adviser. The faculty adviser, who is assigned in September of the student's first quarter of matriculation, is identified based on a student's interests and area of specialization. The expectation is that students meet with their faculty advisers on a quarterly basis, at minimum. Please note that it is the student's responsibility to schedule the advising meetings. In addition to the faculty adviser, the program adviser (i.e., MIP Assistant Director for Academic and Student Services) advises all students in the program by providing guidance and support on degree requirements and progress, academic policy interpretation and enforcement, degree program support, personal support, and other matters as needed. The career adviser (i.e., MIP Career Services and Alumni Affairs Manager) provides support on internships, careers, and professional development.

To expand, faculty advisers guide students in key areas such as exploring academic opportunities and professional pathways, understanding and interpreting the university ecosystem, and identifying ways to pursue one's interests at Stanford. MIP students should view the faculty adviser as an entry point to their interests, and they are actively encouraged to meet broadly with other faculty as well.

Academic progress and student completion of program requirements and milestones are monitored by MIP Assistant Director for Academic and Student Affairs. MIP students (including coterminal, dual, and joint degree students) are required to submit a program proposal to the department during spring quarter of their first year of enrollment in the program. This time frame is different from general University policy. The program proposal, which is a formal milestone, establishes a student's individual program of study to meet University and department degree requirements. Students are also required to submit a second program proposal no later than the quarter in which they apply to graduate. This graduation program proposal is also a formal milestone that must be completed in order to graduate. The form is available on the MIP website. Additional information on the Master's Program Proposal is available in the "Graduate Degrees" section of this bulletin.

Additionally, the program adheres to the advising guidelines and responsibilities listed by the Office of the Vice Provost for Graduate Education (VPGE) and in the Graduate Academic Policies (GAP).

Programs

INTLPOL-MA
Degree Designation: MA - Master of Arts
-

International Relations Department

Contacts

Office: Encina Hall Central, Suite 30
Mail Code: 94305-6045
Phone: (650) 498-2931
Email: intlrelations@stanford.edu
Web Site: http://internationalrelations.stanford.edu

Courses offered by the Program in International Relations (IR) are listed under the subject code INTNLREL on the Stanford Bulletin's ExploreCourses web site.

Mission of the Program in International Relations

The Program in International Relations (IR) offers an interdisciplinary undergraduate major, minor and honors program allowing students to explore how global, regional and domestic factors influence relations between actors on the world stage. The program equips students with the skills and knowledge necessary to analyze choices and challenges that arise in this arena. IR majors pursue study in world politics, including courses in Political Science, Economics, History, languages, and other fields focusing on issues such as international security, political economy, economic development, and democratization. The major prepares students for careers in government and the corporate sector, and for admission into graduate programs including, but not exclusive to law, business, economics, and political science.

Bachelor of Arts in International Relations

In the undergraduate major program, students focus on political, economic, and cultural relations among peoples and states in the modern world. Students majoring in IR will pursue a course of study that includes classes in Political Science, Economics, History, languages and other fields. IR majors may focus on a range of issues including international security, international trade and finance, political and economic development as well as history, politics and culture of other countries and world regions. All IR majors must spend at least one quarter studying abroad and show proficiency in a foreign language.

Minor in International Relations

In the undergraduate minor program, students will also focus on political, economic, and cultural relations among peoples and states in the modern world. Students minoring in IR will pursue a condensed course of study that includes classes in Political Science, Economics, History, languages, and other fields. IR minors may focus on a range of issues including international security, international trade and finance, political and economic development as well as history, politics and culture of other countries and world regions. IR minors are not required to study abroad or show proficiency in a foreign language.

Honors Program

The International Relations honors program offers qualified students the opportunity to conduct a major independent research project under faculty guidance. Such a project requires a high degree of initiative and dedication, significant amounts of time and energy, and demonstrated skills in research and writing.

In their junior year, students should consult with prospective honors advisors, choose the courses that provide academic background in their areas of inquiry, and demonstrate an ability to conduct independent research. Students can also select to complete an Interdisciplinary honors thesis with other programs on campus.

Prerequisites for participation include a 3.5 grade point average (GPA), a strong overall academic record, good academic standing, successful experience in writing a research paper, and submission of an acceptable thesis proposal. Students should submit their honors thesis proposal late in Winter Quarter of the junior year; please check with the IR office for the exact deadline. Students are required to enroll in INTNLREL200A IR HONORS FIELD RESEARCH International Relations Honors Field Research, in Spring Quarter of their junior year and should consider participating in Bing Honors College. In their senior year, honors students must enroll in INTNLREL200B IR HONORS SEMINAR International Relations Honors Seminar in Autumn Quarter, INTNLREL200C IR HONORS THESIS WRITING IR Honors Thesis Writing in Winter Quarter, and in research units through INTNLREL198 HONORS THESIS Senior Thesis each quarter of

their senior year (Autumn, Winter, and Spring) with their faculty advisor. Honors students present a formal defense of their theses in mid-May. Students must receive at least a grade of 'B+' in order to graduate with honors in International Relations.

Coterminal Programs in Related Fields

It is possible for students majoring in International Relations to work simultaneously for a coterminal master's degree in a number of related fields. Coterminal students should consult advisers in both departments or programs to ensure that they fulfill the degree requirements in both fields. For information on the M.A. program in International Policy, see the International Policy section of this bulletin. University requirements for the coterminal M.A. are described in the Coterminal Master's Degrees section of this bulletin. See also the Registrar's Coterminal Degree Programs pages.

Faculty

Director: Kenneth Schultz (Political Science).

Faculty Committee: Kyle Bagwell (Economics), Judith L. Goldstein (Political Science), Norman Naimark (History), Kenneth Scheve (Political Science), Kenneth Schultz (Political Science), Kathryn Stoner (Freeman Spogli Institute), Michael Tomz (Political Science).

Affiliated Faculty: Lisa Blaydes (Political Science), Gordon Chang (History), David Cohen (Classics), Larry J. Diamond (Hoover Institution), Amir Eshel (German Studies), James Fearon (Political Science), Zephyr Frank (History), Francis Fukuyama (Freeman Spogli Institute for International Studies, Political Science), Lawrence H. Goulder (Economics), Anna Grzymala-Busse (Political Science), Stephen H. Haber (Political Science), Daniel Ho (Stanford Law School, Political Science), David J. Holloway (History, Political Science), Colin Kahl (Freeman Spogli Institute for International Studies), Stephen D. Krasner (Political Science), Beatriz Magaloni (Political Science), Michael McFaul (Freeman Spogli Institute for International Studies, Political Science), Robert McGinn (Management Science and Engineering), Brett McGurk (Freeman Spogli Institute for International Studies), H.R. McMaster (Hoover Institution), Rosamond Naylor (Freeman Spogli Institute for International Studies), Jean C. Oi (Political Science), Richard Roberts (History), Condoleezza Rice (Political Science, Freeman Spogli Institute for International Studies), Jonathan Rodden (Political Science), Scott Sagan (Political Science), Debra M. Satz (Philosophy), Andrew Walder (Sociology), Amir Weiner (History), Jeremy Weinstein (Political Science), Paul Wise (Freeman Spogli Institute for International Studies), Amy Zegart (Freeman Spogli Institute for International Studies, Political Science).

Other Affiliation: Kevin Arrigo (Earth System Science), Chonira Aturupane (Freeman Spogli Institute for International Studies), (Karen Biestman (Native American Cultural Center), Jasmina Bojic (International Relations), Marshall Burke (Earth System Science, Freeman Spogli Institute for International Studies), Robert Crews (History), Christophe Crombez (Freeman Spogli Institute for International Studies), Thomas Fingar (Freeman Spogli Institute for International Studies), Erica Gould (International Relations), Kathleen Janus (Freeman Spogli Institute for Program on Social Entrepreneurship, International Relations), Katherine Jolluck (History), Anjini Kochar (Stanford Institute for Economic Policy Research), Martin W. Lewis (History), Pawel Lutomski (International Relations), Abbas Milani (Hoover Institution, Iranian Studies), Alice Lyman Miller (Hoover Institution), Thomas O'Keefe (International Relations), Bertrand Patenaude (International Relations), Robert Rakove (International Relations), Scott Rozelle (Freeman Spogli Institute for International Studies), Margaret Sena (El Centro Chicano), Beth Van Schaack (Stanford Law School), Stephen Stedman (Political Science), Harold Trinkunas (Freeman Spogli Institute for International Studies), Gil-Li Vardi (International Relations, History)

Graduate Advising

For a statement of University policy on graduate advising, see the Graduate Advising section of this bulletin.

Programs

IntlR-BA
Degree Designation: BA - Bachelor of Arts

IntlR-Min
Degree Designation:

Language Center Department

Contacts

Office: 450 Jane Stanford Way, Building 30
Mail Code: 94305-2015
Phone: (650) 725-9222
Email: languagecenter@stanford.edu
Web Site: http://language.stanford.edu

The Stanford Language Center oversees all language instruction at Stanford. The center's charge is to guarantee that Stanford language programs are of the highest quality; to develop and administer achievement and proficiency tests needed to implement the language requirement; to provide technical assistance and support to the graduate students, lecturers, and faculty who deliver Stanford's language instruction; and to take leadership in research and development efforts in language learning. The Language Center is a unit within the Division of Literatures, Cultures, and Languages.

Courses

Courses offered by the Language Center are listed under the following subject codes on the Stanford Bulletin's ExploreCourses website:

- AMELANG (African and Middle Eastern Languages)
- ARABLANG(Arabic Language)
- CATLANG(Catalan Language)
- CHINLANG(Chinese Language)
- EFSLANG(English for Foreign Students)
- FRENLANG(French Language)
- GERLANG(German Language)
- ITALLANG(Italian Language)
- JAPANLNG(Japanese Language)
- KORLANG(Korean Language)
- PORTLANG(Portuguese Language)
- SLAVLANG(Slavic Language)
- SPANLANG(Spanish Language)
- SPECLANG(Special Language)

Beginning-Level, First-Year Courses

Beginning-level, first-year language courses require no previous knowledge of the language. The beginning-level sequence emphasizes development of the full range of language skills, reading, listening comprehension, the use of grammatical structures, and oral and written communication, through a variety of learning themes. Individual, small group, interactive work and multimedia-based activities reinforce language skills and provide the platform for adapting the curriculum to specific student learning goals. Cultural awareness is a strong component of the curriculum.

Intermediate-Level, Second-Year Courses

Intermediate-level, second-year language courses require completion of the beginning sequence, corresponding placement or consent of the program coordinator. The intermediate-level sequence focuses on continuous mastery and development of skills that help students to converse and present accurately and more fluently, incorporate more advanced grammatical structures in their oral and written work, use idiomatic expressions in the right context, and read and write more sophisticated compositions. Curricular objectives and enhanced cultural understanding are built into the courses through a multimodal approach.

Advanced-Level, Third-Year Courses

Advanced-level, third-year language courses require completion of the intermediate-year sequence, corresponding placement, or consent of the program coordinator. The advanced-level sequence focuses on accurate understanding and use of structures through authentic texts and multimedia materials, and readings from various genres. Individual learning goals and student proficiency are taken into account to provide a learning environment that helps students become more autonomous learners.

Proficiency in Foreign Language Notation

A student who demonstrates levels of achievement equivalent to those expected at the end of the third quarter of the third year of study in a language may be awarded the notation "proficiency in" that language on the official transcript. Successful candidates tend to have completed the third year or beyond of language study at Stanford and spent considerable time studying abroad in the foreign language.

In order to receive the proficiency notation and for it to appear on the official transcript, the student must complete the following oral and written requirements according to the timeline below. The notation is available only for languages where external assessment is offered through Language Testing International. Successful completion of the oral component is required before proceeding with the written component.

Both oral and written components must be completed no later than the quarter preceding the graduating quarter.

For more information visit http://language.stanford.edu or contact languagecenter@stanford.edu.

Application and Oral Component: Two quarters prior to graduation

1. Notify the Language Center via email of the intent to pursue the notation and request an official Oral Proficiency Interview (OPI). Since this is a formal interview conducted according to national academic and professional standards, at least two quarters of lead time are essential for scheduling.
2. Complete the 30-minute Oral Proficiency Interview as scheduled through the Language Center and conducted by a certified OPI tester. The interview must take place no later than one quarter prior to graduation and be administered on campus
3. Receive an official rating of Advanced Low or higher on the Foreign Service Institute/American Council on the Teaching of Foreign Languages (FSI/ACTFL) scale of oral proficiency, except in the non-cognate languages which require a minimum rating of Intermediate High. Students who do not meet the minimum level for the notation will nonetheless receive an official OPI rating, which carries national recognition of their oral proficiency.

Writing Component: One quarter prior to graduation

1. Once approved to continue with the writing component, schedule a Writing Proficiency Test (WPT) through the Language Center. As an official writing assessment, the 90-minute exam must take place no later than one quarter prior to graduation and as soon as possible after the interview. The WPT is administered on campus and rated by a certified WPT rater.
2. Receive an official rating of Advanced Low or higher on the Foreign Service Institute/American Council on the Teaching of Foreign Languages (FSI/ACTFL) scale of writing proficiency, except in the non-cognate languages which require a minimum rating of Intermediate High. Students who do not meet the minimum level for the notation will nonetheless receive an official WPT rating, which carries national recognition of their writing proficiency.

Proficiency Notation Timetable

1. Graduating Spring/Summer: Apply Autumn; interview Autumn/Winter; writing Winter.
2. Graduating Autumn: Apply Winter; interview Winter/Spring; writing Spring.
3. Graduating Winter: Apply Spring; interview Spring/Autumn; writing Autumn.

Overseas Studies Courses in the Language Center

For course descriptions and additional offerings, see the listings in the Stanford Bulletin's ExploreCourses website or the Bing Overseas Studies website. Students should consult their department or program's student services office for applicability of Overseas Studies courses to a major or minor program.

African and Middle Eastern Languages and Literatures Program

The African and Middle Eastern Languages and Literatures Program offers classes in Hebrew, Persian, Swahili, Turkish, and African languages not regularly taught at Stanford. Based on current funding and student requests, the courses planned for the 2020-21 academic year are listed in the ExploreCourses section of this Bulletin under the AMELANG program. Additional languages may still be offered upon request, provided funding is available. Requests for the 2021-22 academic year should be made by Spring Quarter of this year to the AME program office by email to khalil@stanford.edu.

First-, second-, and third-year each refer to the yearly sequence of language study. Letter suffixes refer to the quarter within the sequence: "A" courses (1st Quarter) are typically taught in Autumn; "B" courses (2nd Quarter), in Winter; and "C" courses (3rd Quarter) in Spring. Courses are 4 or 5 units as listed. In some circumstances, a beginning or intermediate course may be offered in alternate years. Language courses may not be repeated for credit, and must be taken in sequence.

Fulfilling the Language Requirement in AME

Students can fulfill the language requirement by taking an African or Middle Eastern language. At least 12 units are needed to complete the requirement. Students who have taken courses in the relevant language at another institution, or have previous knowledge of the language, can request to be tested. Tests are comprised of two parts, written and oral. Students must display completion of first-year level proficiency in the requested language to fulfill the requirement. Testing is guaranteed only for languages currently offered. Students planning to take a test must contact the AME program coordinator no later than the Spring Quarter of their sophomore year. To submit a request for language testing, or to request that a language be taught, and for further information on the program, see the African and Middle Eastern Language Program website.

Special Language Program

The Special Language Program (SLP) offers foreign languages not otherwise taught at Stanford. Based on current funding and student requests, the courses planned for the 2021-22 academic year are listed in the ExploreCourses section of this Bulletin under the Special Languages (SPECLANG) Program; however, not every course listed is taught. Additional languages may still be offered upon request, provided funding is available. Requests for the 2021-22 academic year should be made by Spring Quarter of this year at the Special Language Program office (sergul@stanford.edu).

First-year courses are offered for 4 or 5 units, as listed. First-, second-, and third-year each refer to the yearly sequence of language study. Letter suffixes refer to the quarter within the sequence: "A" courses (1st Quarter) are typically taught in Autumn; "B" courses (2nd Quarter), in Winter; and "C" courses (3rd Quarter) in Spring. In some circumstances, a beginning or intermediate course may be offered in alternate years. Language courses may not be repeated for credit, and must be taken in sequence. For additional information, see the Special Language Program website.

Fulfilling the Language Requirement in Special Language Program

Students can fulfill the language requirement by taking courses offered by the Special Language Program. At least 12 units are needed to complete the requirement. Students who have already taken courses in the relevant language at another institution, or who have previous knowledge of the language, can request to be tested. Tests are comprised of written and oral parts. A student must display completion of first-year level proficiency in the requested language in order to fulfill the requirement. Testing is guaranteed only for these languages currently offered. Students planning to take a test must contact the Special Language Program no later than the Spring Quarter of sophomore year. To submit a request for language testing, or to request that a language be taught, and for further information on the program, contact the Special Language Program office by email to sergul@stanford.edu.

Faculty

Director: Elizabeth Bernhardt

Associate Director: Joan Molitoris

African and Middle Eastern Languages

Coordinator: Khalil Barhoum

Lecturers: Ameneh Shervin Emami (Persian), Saadet Ebru Ergul (Turkish), Samuel Mukoma (Swahili), Gallia Porat (Hebrew), Vered Shemtov (Sr. Lecturer in Jewish Language & Literature)

Arabic Language

Coordinator: Khalid Obeid

Lecturers: Khalil Barhoum (Sr. Lecturer), Thoraya Boumehdi, Ramzi Salti

Catalan Language

Coordinator: Joan Molitoris (Associate Director, Language Center)

Chinese Language

Coordinator: Chao Fen Sun (Professor, East Asian Languages and Cultures)

Lecturers: Marina Chung, Michelle DiBello, Nina Lin, Le Tang, Huazhi Wang, Hong Zeng, Youping Zhang, Xiaofang Zhou

English for Foreign Students

Coordinator: Kristopher Geda

Lecturers: Robyn Brinks Lockwood, Kenneth Romeo, Seth Streichler, Dominic Wang

French Language

Coordinator: Marie Lasnier

Lecturers: Maria Comsa, Heather Howard, Alix Mazuet, Vera Shapirshteyn

German Language

Coordinator: Paul Nissler

Lecturer: Patric Di Dio Di Marco

Italian Language

Coordinator: Professor Elizabeth Bernhardt (Director of the Language Center)

Lecturers: Marta Baldocchi, Alessandra McCarty, Giovanni Tempesta

Japanese Language

Coordinator: Yoshiko Matsumoto (Professor, East Asian Languages and Cultures)

Lecturers: Momoyo Kubo Lowdermilk, Emiko Yasumoto Magnani, Momoe Saito Fu, Xiaoman Miao, Yoshiko Tomiyama

Korean Language

Coordinator: Hee-Sun Kim

Lecturers: Hannah Yoon

Portuguese Language

Coordinator and Senior Lecturer: Lyris Wiedemann

Lecturer: Agripino Silveira

Slavic Language

Coordinator: Eugenia Khassina

Lecturers: Rima Greenhill (Sr. Lecturer)

Spanish Language

Coordinator: Alice Miano

Lecturers: Vivian Brates, Citlalli del Carpio, Joan Molitoris (Associate Director, Language Center), Carimer Ortiz Cuevas, Kara Sanchez, Ana Maria Sierra, María Cristina Urruela, Juan Valdez, Ana Vivancos, Tom Winterbottom, Hae-Joon Won

Special Language Program

Coordinator: Saadet Ebru Ergul

Lecturers: Cathy Haas (ASL), Sonia Sharma (Hindi)

Latin-American Studies Department

Contacts

Office: Bolívar House, 582 Alvarado Row
Mail Code: 94305-8545
Phone: (650) 725-0383
Email: latinamerica@stanford.edu
Web Site: http://clas.stanford.edu

Courses offered by the Interdisciplinary Program in Latin American Studies are listed under the subject code LATINAM on the Stanford Bulletin's ExploreCourses web site.

The Center for Latin American Studies (CLAS) supports research and teaching in all fields of study as they relate to Latin America. Academic programs encourage interdisciplinary approaches and draw on the expertise of nearly sixty active affiliated faculty members representing Stanford's various schools and departments. Stanford University Libraries' substantial Latin American collections are valuable resources for students, faculty, and visiting researchers alike. Each year, CLAS hosts a number of visiting scholars. The Tinker Visiting Professors are highly distinguished Latin American and Iberian scholars who come to Stanford to teach in their field of specialization. CLAS maintains a highly active public events calendar and provides funding to students and faculty for a variety of research, teaching, internship, and conference activities.

As a Latin America National Resource Center (NRC), supported by the U.S. Department of Education under the auspices of Title VI, Section 602(a) of the Higher Education Act of 1965, CLAS serves to strengthen access to and training in the major languages of Latin America, and to broaden Latin-America area studies training across all disciplines.

CLAS is part of Stanford Global Studies in the School of Humanities and Sciences. The program offers two academic programs in Latin American Studies: an undergraduate minor and a master of arts degree.

Undergraduate Programs in Latin American Studies

Stanford Global Studies offers a minor with a Latin American Studies Specialization. Although there is no undergraduate major in Latin American Studies, students may concentrate on Latin America through other departmental and interdisciplinary degree programs, such as Anthropology, History, Political Science, Iberian and Latin American Cultures, or International Relations. Interested students should consult the relevant departmental web sites and sections of this bulletin for further information.

Undergraduates can obtain a coterminal M.A. degree in Latin American Studies while concurrently working on their undergraduate major by applying during the regular admissions cycle no later than their senior year.

Financial Aid

Each summer, CLAS awards grants to a small number of undergraduates to complete internships in Latin America. Applications include a proposal, academic transcript, and letters of recommendation. Students from any department are eligible to apply. See Funding section in the Center for Latin American Studies website.

Students in undergraduate programs who enroll in Portuguese, Quechua, or Nahuatl language during the academic year may be eligible for Summer Foreign Language and Area Studies (FLAS) fellowships. Recipients of FLAS fellowships must be American citizens or permanent residents. For detailed program information and eligibility, see the Center for Latin American Studies website.

Graduate Programs in Latin American Studies

The one-year master's program in Latin American Studies is designed for students who have experience working, living, or studying in Latin America or Iberia and little prior course work on Latin America.

Stanford University does not offer a Ph.D. program in Latin American Studies; however, doctoral candidates may concentrate on Latin America through other departmental programs, such as Anthropology, History, Political Science or Iberian and Latin American Cultures. Interested applicants should consult the relevant departmental web sites and sections of this bulletin for admissions information and further details.

Admission

The application deadline for the 2022-23 academic year is December 1, 2021. Applicants submit an online application, including a 2-3 page double-spaced statement of purpose, resumé or CV, 10-15 page double-spaced academic writing sample in English, and three letters of recommendation. In addition, all applicants must submit two sets of official transcripts. The GRE general test scores are optional, and no longer a requirement. TOEFL scores are required of applicants whose first language is not English or who did not earn a degree from an undergraduate institution where English is the primary language of instruction. For information on University graduate admissions and to access the online application, visit the Office of Graduate Admissions website.

Applicants must meet the University admission requirements, have a working knowledge of Spanish, Portuguese, or an indigenous language of Latin America (e.g., Quechua or Nahuatl) at the university third-year level or higher, and have experience working, living, or studying in Latin America or Iberia prior to admission.

CLAS takes a broad approach to evaluating applications for admission. As important as grades are the applicant's essay, letters of recommendation, academic writing sample, and the experiences and goals conveyed through the personal statement and resume/CV.

Students interested in pursuing the joint degree program in Latin American Studies and Law (J.D.) or a dual degree in Latin American Studies and Business (M.B.A.) or Medicine (M.D.) must apply to each program separately and be accepted by both.

Coterminal Master's Degrees in Latin American Studies

Undergraduates at Stanford may apply for admission to the coterminal master's program in Latin American Studies when they have earned a minimum of 120 units toward graduation, including advanced placement and transfer credit, and no later than the quarter prior to the expected completion of their undergraduate degree.

The application deadline for the 2022-23 academic year is December 1, 2021. Prospective students who are applying to the Knight-Hennessy Scholars program must apply to the scholars program by October 6, 2021 at 1:00 p.m. Pacific Time.

Coterminal applicants must submit:

- the Coterminal Online Application
- a 2-3 page double-spaced statement of purpose
- a resumé or CV
- a 10-15 page double-spaced academic writing sample in English
- three letters of recommendation
- a Stanford transcript
- GRE general test scores (optional)

Coterminal applicants must have a minimum cumulative GPA of 3.5 and a working knowledge of Spanish or Portuguese at a university third-year level or higher.

Financial Aid

The Center for Latin American Studies provides several graduate fellowships as well as limited course assistantships with the Tinker Visiting Professors each quarter. US and international M.A. applicants who wish to be considered for financial aid during the admissions review process can simply indicate this when prompted on the online application.

M.A. in Latin American Studies applicants who plan to enroll in Portuguese, Quechua, or Nahuatl language and area or international studies courses may be eligible for Academic Year and Summer Foreign Language and Area Studies (FLAS) fellowships, sponsored by the US Department of Education. Recipients of FLAS fellowships must be American citizens or permanent residents. Applicants to the M.A. program who can demonstrate financial need have priority in the FLAS fellowship competition; in recent years CLAS has also awarded FLAS fellowships to students enrolled in the Professional Schools. For detailed program information and eligibility, see the FLAS Fellowship section in the Center for Latin American Studies website.

CLAS awards Working Group grants to graduate students across the University who wish to organize events such as lectures, speaker series, symposia, exchange of working papers, and collaborative research efforts. For detailed program information and eligibility, see the Working Group Grants section in the Center for Latin American Studies website.

CLAS has a limited number of travel awards for graduate students to conduct field research work in Latin America or to present their Latin American related research in a conference. Please see the Graduate Funding section in the Center for Latin American Studies website

The Knight-Hennessy Scholars program awards full funding to pursue a graduate education at Stanford to students from all disciplines, with additional opportunities for leadership training and collaboration across fields.

Apply to Knight Hennessy by October 6, 2021 at 1:00 p.m. Pacific Time, and to the Latin American Studies MA Program by December 1, 2021 at 11:59 p.m. Pacific Time.

Joint Degree Program in Latin American Studies and Law

The joint degree program in Latin American Studies and Law allows students to pursue the M.A. degree in Latin American Studies concurrently with the Doctor of Jurisprudence (J.D.) degree, with a significant number of courses that may apply to both degrees. It is designed to train students interested in a career in teaching, research, or the practice of law related to Latin American legal affairs. Students must apply separately to the Latin American Studies M.A. program and to the Stanford School of Law and be accepted by both. Completing this combined course of study requires approximately four academic years, depending on the student's background and level of language training. For more information, see the "Joint Degree Programs" section of this bulletin and consult with the program offices for the two programs.

Dual Master's Degree with Medicine or Business

Stanford offers dual degree programs that grant an M.A. degree in Latin American Studies and a Master of Business Administration degree or a Medical Doctor degree. Students must apply separately to and be accepted by both the Latin American Studies M.A. program and the Graduate School of Business or School of Medicine.

For further information, contact a CLAS adviser at latinamerica@stanford.edu

Faculty

Director of the Center: Alberto Díaz-Cayeros

Associate Director: Elizabeth Sáenz-Ackermann

Director of Graduate Studies: Alberto Díaz-Cayeros

Affiliated Faculty and Staff:

Anthropology: George Collier (emeritus), Lisa Curran, William Durham (emeritus), Angela Garcia, Thomas Hansen, John Rick (emeritus),

Art and Art History: Enrique Chagoya, Rose Salseda

Biology: Gretchen Daily, Rodolfo Dirzo, Judith Frydman, Harold Mooney (emeritus), Peter Vitousek, Virginia Walbot

BOSP Santiago: Ivan Jaksic

Business, Graduate School of: Saumitra Jha, Ken Shotts

Carnegie Institution: Greg Asner

Comparative Studies in Race and Ethnicity: Carolyn Duffey

Comparative Literature: Roland Greene, Hans Ulrich Gumbrecht, José David Saldívar

Earth Sciences, School of: Rob Dunbar, Pamela Matson

Economics: Roger Noll (emeritus), Frank Wolak

Education, Graduate School of: Martin Carnoy, Amado Padilla, Jonathan Rosa, Guadalupe Valdés

Engineering, School of: Jenna Davis, Leonard Ortolano

English: Roland Greene, Paula Moya, Ramón Saldívar

Freeman Spogli Institute for International Studies: Francis Fukuyama, Rosamond Naylor

History: Ana Raquel Minian Andjel, Zephyr Frank, Mikael Wolfe

Hoover Institute: Herbert Klein

Human Biology: Anne Firth Murray

Iberian and Latin American Cultures: Héctor Hoyos, Nicole Hughes, Joan Ramon Resina, Jorge Ruffinelli (emeritus), Lisa Surwillo

Language Center: Alice Miano, Marisol Necochea, Ana Sierra, Agripino Silveira, Lyris Wiedemann

Law, School of: Jonathan Greenberg, Thomas Heller (emeritus), Diego A. Zambrano

Linguistics: John Rickford (emeritus)

Medicine, School of: Jason Andrews, Michele Barry, Gabriel Garcia (emeritus), Grant Miller, Paul Wise

Political Science: Bruce Cain, Alberto Díaz-Cayeros, Stephen Haber, Terry Karl (emerita), Beatriz Magaloni, Robert Packenham (emeritus), Michael Tomz

Religious Studies: Thomas Sheehan

SLAC: Helen Quinn (emerita)

Sociology: Asad L. Asad, David Grusky, Tomás Jiménez, Michael Rosenfeld, Florencia Torché

Stanford University Libraries: Adán Griego, Sergio Stone, Robert Trujillo

Graduate Advising

The Center for Latin American Studies is committed to providing academic advising in support of graduate student scholarly and professional development. When most effective, this advising relationship entails collaborative and sustained engagement by both the adviser and the advisee. As a best practice, advising expectations should be periodically discussed and reviewed to ensure mutual understanding. Both the adviser and the advisee are expected to maintain professionalism and integrity.

Faculty advisers guide students in key areas such as selecting courses, designing and conducting research, and exploring academic opportunities and professional pathways. Program administrative staff are available for advising students on program policies and degree requirements, as well as course selection.

Graduate students are active contributors to the advising relationship; they should proactively seek academic and professional guidance, take responsibility for informing themselves of policies and degree requirements for their graduate program, and remain aware of all program-specific and University-wide deadlines.

At or before the start of graduate study, normally at the beginning of Autumn Quarter, each student is assigned an adviser: a member of the program's faculty who provides research advice and guidance in course selection and in exploring academic opportunities and professional pathways. Usually, the same faculty member serves as program adviser for the duration of master's study; however, formal adviser change requests are possible in consultation with CLAS staff.

CLAS students are required to meet with their adviser at least twice per quarter and they must submit an adviser meeting form to the program office as proof. Students are expected to have a discussion with their adviser during or before the first week of each quarter to agree upon the courses that the student plans to take that quarter.

The department's student services office is also an important part of the advising team. It informs students and advisers about University and department requirements, procedures, and opportunities, and it maintains the official records of advising assignments and approvals.

In addition, MA students are required to participate in the M.A. quarterly meeting, which is held during the second half of each quarter. The faculty director, associate director, and student services officer meet with all students during these mandatory quarterly meetings, and are available during the academic year by email and during office hours.

For a statement of University policy on graduate advising, see the Graduate Advising Policies website and the Graduate Advising section of this bulletin. Academic advising by Stanford faculty is a critical component of all graduate students' education and additional resources can be found in the Policies and Best Practices for Advising Relationships at Stanford and the Guidelines for Faculty-Student Advising at Stanford.

Programs

LAmer-MA
Degree Designation: MA - Master of Arts

Linguistics Department

Contacts

Office: Margaret Jacks Hall, Building 460
Mail Code: 94305-2150
Phone: (650) 498-8720
Email: linguistics@lists.stanford.edu
Website: http://linguistics.stanford.edu

Courses offered by the Department of Linguistics are listed under the subject code LINGUIST on the Stanford Bulletin's Explore Courses web site.

Linguistics is the study of language as a fundamental human activity. Linguists consider language as a cultural, social, and psychological phenomenon and seek to determine what is universal to all languages and what is specific to individual languages, how language varies across individuals and communities, how it is acquired, how it changes, and how it is processed by humans and machines. Linguistics is an inherently interdisciplinary field that links the humanities, the social sciences, and the other cognitive sciences, as well as computer science, education, and hearing and speech sciences.

The department offers courses at the undergraduate and graduate levels. Some focus on analyzing structural patterns of sounds (phonetics and phonology), meanings (semantics and pragmatics), words (morphology), sentences (syntax). Others examine how these structures vary over time (historical linguistics), or over individuals and social groups (sociolinguistics), or how language is processed and learned by humans (psycholinguistics and language acquisition) or by computers (computational linguistics).

A variety of open forums provide for the discussion of linguistic issues, including colloquia and regularly scheduled workshops in computational linguistics, phonetics and phonology, psycholinguistics, semantics and pragmatics, sociolinguistics, and syntax and morphology.

Mission of the Undergraduate Program in Linguistics

The mission of the undergraduate program in Linguistics is to provide students with basic knowledge in the principal areas of linguistics (phonetics, phonology, morphology, syntax, semantics, pragmatics, historical linguistics, sociolinguistics, psycholinguistics, and computational linguistics) and the skills to do more advanced work in these subfields. Courses in the major also involve interdisciplinary work with connections to other programs including anthropology, communication, computer science, education, foreign languages, psychology, and symbolic systems. The program provides students with excellent preparation for further study in graduate or professional schools as well as careers in business, government agencies, social services, and teaching.

Graduate Programs in Linguistics

The department offers an M.A., Ph.D., and Ph.D. minor in Linguistics. For admissions information, please see the Department of Linguistics admissions page. The GRE is not required.

Cognitive Science

Linguistics is participating with the departments of Philosophy and Psychology in an interdisciplinary program in Cognitive Science for doctoral students. The program is intended to provide an interdisciplinary education as well as a deeper concentration in linguistics. Students who complete the Linguistics and Cognitive Science requirements receive a special designation in Cognitive Science along with the Ph.D. in Linguistics.

To receive this designation, students must complete 30 units of approved course work. The 30 units cannot include courses counted elsewhere towards the Ph.D. Courses may be drawn from the participating departments, as well as from other departments, as long as their content is appropriate to the designation. At least 18 of the 30 units must be from outside the student's major department and must include course work in at least two other departments. The majority of the courses taken towards the 30 units of coursework must be taken for a letter grade and should be completed with at least a 'B'. Special topic seminars are excluded in favor of more foundational courses.

Linguistics Course Catalog Numbering System

Courses numbered under 100 are designed primarily for pre-majors. Courses with 100-level numbers are designed for undergraduate majors and minors; a limited number of 100-level units may apply to a master's or Ph.D. minor. Those

with numbers 200 and above are primarily for graduate students, but with consent of the instructor some of them may be taken for credit by qualified undergraduates. At all levels, the final two digits of the course number indicate a special area, as follows:

	Linguistics Course Catalog Numbering System
NUMBER	**SPECIAL AREA**
00-04	General
05-09	Phonetics
10-14	Phonology
15-19	Morphology
20-29	Syntax
30-39	Semantics, Pragmatics, Discourse
40-49	Language Acquisition, Psycholinguistics
50-62	Sociolinguistics, Language Variation, Change
63-73	Language and Culture, Structure of a Language
74-79	Methods, Mathematical Linguistics, Statistics
80-89	Computational Linguistics
90-99	Directed Work, Theses, Dissertations

Faculty

Emeriti: (Professors) Joan Bresnan, Eve V. Clark, Kenji Hakuta, Shirley Brice Heath, Philip L. Hubbard (Senior Lecturer, Language Center), Martin Kay, William R. Leben, Stanley Peters, John R. Rickford, Elizabeth C. Traugott, Thomas A. Wasow

Chair: Christopher Potts

Director of Graduate Studies/Graduate Studies Adviser: Vera Gribanova

Director of Undergraduate Studies: Robert Podesva

Professors: Cleo Condoravdi, Penelope Eckert (emerita in Winter), Daniel Jurafsky (on leave in Autumn), Paul Kiparsky (on leave in AY 2020-21), Beth Levin, Christopher Manning, Christopher Potts

Associate Professors: Arto Anttila (on leave in Spring), Vera Gribanova, Robert Podesva, Meghan Sumner

Assistant Professors: Judith Degen, Boris Harizanov, Daniel Lassiter

Courtesy Professors: Yoshiko Matsumoto, James McClelland, Chao Fen Sun

Courtesy Associate Professors: Michael C. Frank, Noah Goodman, Miyako Inoue, Jonathan Rosa

Lecturers: Katherine HiIlton

Adjunct Professors: Jared Bernstein, Ronald Kaplan, Lauri Karttunen, Paul Kay, Annie Zaenen, Arnold Zwicky

Graduate Advising

The department is committed to providing academic advising in support of each graduate student's scholarly and professional development. The advising relationship should entail collaborative engagement by both the adviser and the advisee. Faculty advisers guide students in key areas such as selecting courses, designing and conducting research, navigating degree requirements, exploring academic and professional opportunities, and preparing for their post-Ph.D. careers. Graduate students are active contributors to the advising relationship, proactively seeking academic and professional guidance and taking responsibility for informing themselves of policies and degree requirements for the Ph.D. program. An important part of the advisee-adviser relationship is that students learn to advocate for themselves; this includes discussing expectations for the adviser/advisee relationship with the adviser and revisiting these expectations periodically to ensure mutual understanding.

Advisers and Advising Meetings

A department faculty member serves as the Graduate Studies Adviser (GSA). Typically, the GSA keeps track of the general degree progress of all M.A. and Ph.D. students, offers advice on meeting department and University milestones, coordinates departmental advising and TA assignments, and approves special petitions.

Ph.D. Students

Each student has an individual adviser (also referred to as a second adviser in the pre-candidacy stage), usually chosen based on shared research interests, who advises on coursework, training in research methodologies, research projects, and professional development. Entering students are assigned a second adviser for their first two quarters in the program. The second adviser helps first year students make the transition to graduate school and take the initial steps towards their long-term goals. Beginning with Spring Quarter of the first year, the student's current Qualifying Paper Committee Chair serves as the second adviser. On completion of these papers, the student chooses a faculty member as Chair of their dissertation Reading Committee; this faculty member becomes the main adviser. Throughout their graduate career, students are also encouraged to consult with other faculty, including the members of their Qualifying Paper and Reading Committees.

In order to meet the department's advising expectations, twice a year each student and their adviser meet for a holistic, structured discussion of the student's recent progress, short-term plans, and longer-term academic and professional goals and to discuss the steps that the student should take to meet these objectives. The GSA usually joins the discussion with students in the earlier stages of the Ph.D. program. Students who receive department Summer funding are also expected to fill out a Summer Commitments Agreement that lays out their activities, priorities and goals for the summer, and to discuss these with their adviser.

Students are expected to meet regularly with their advisers and to keep them informed about their academic progress. Each student and their adviser should mutually agree on the frequency of these meetings when the advising relation begins and reassess their frequency at the start of every quarter.

M.A. Students

At the start of graduate study, each student is assigned a faculty member as an M.A. program adviser, chosen based on shared research interests and the student's proposed M.A. thesis area. Usually this faculty member serves in this role for the duration of the M.A. program. Besides advising the student on the M.A. thesis, the adviser provides guidance on

the student's overall path through the M.A. program. Students are expected to meet with their advisers at least once each quarter and to keep them informed about their academic progress. The precise meeting frequency should be mutually agreed upon and reassessed quarterly; it depends on the student's stage in the program.

Additional resources

The Department of Linguistics Ph.D. Handbook provides additional information. Students are also encouraged to familiarize themselves with the Policies and Best Practices for Advising Relationships at Stanford. Additional resources on advising are offered by VPGE. For a statement of University policy on graduate advising, see the Graduate Advising section of the Bulletin.

Programs

Ling-BA
Degree Designation: BA - Bachelor of Arts

Ling-MA
Degree Designation: MA - Master of Arts

Ling-Min
Degree Designation:

Ling-PhD
Degree Designation: PHD - Doctor of Philosophy

Ling-PMn
Degree Designation:

MLA Program Department

Contacts

Office: 365 Lasuen Street, Littlefield Center, Level G
Mail Code: 94305-2078
Phone: (650) 725-0061
Email: mlaprogram@stanford.edu
Web Site: http://mla.stanford.edu

Courses offered by the Master of Liberal Arts Program are listed under the subject code MLA on the Stanford Bulletin's ExploreCourses web site.

Program Description

The Master of Liberal Arts (MLA) program aims to provide a flexible, interdisciplinary program for returning adult students who seek a broad education in the liberal arts. Begun in 1991, the underlying premise of the MLA program is that knowledge gained through an interdisciplinary course of study leads to intellectual independence and satisfaction not always found in discipline-based programs of study. The goals of the MLA program are to develop advanced critical thinking, to foster intellectual range and flexibility, and to cultivate an individual's ability to find the connections among different areas of human thought: art, history, literature, music, philosophy, political science, science, and theology.

The program is designed with part-time students in mind: seminars meet in the evening, and students complete the degree in 4-5 years. All master's seminars are taught by members of the Stanford faculty. Seminar size is limited to 20 students.

Faculty

Associate Dean and Director: Linda Paulson

Director of Graduate Studies: Linda Paulson

Participating Faculty: Jonathan Berger (Music), Jay Bhattacharya (Medicine), James Campbell (History), William Chace (English, emeritus), James Daughton (History), Gerald Dorfman (Hoover Institution, Political Science), William Durham (Anthropology), Michele Elam (English), Paula Findlen (History), Hester Gelber (Religious Studies, emerita), Albert Gelpi (English, emeritus), Barbara Gelpi (English, emerita), Jonathan Gienapp (History), Denise Gigante (English), Robert Gregg (Religious Studies, emeritus), Heather Hadlock (Music), Allyson Hobbs (History), Ari Kelman (Education), Nancy Kollmann (History), Pavle Levi (Film and Media), Joe Lipsick (Medicine), James Lock (Medicine), Ivan Lupic (English), Marsh McCall (Classics, emeritus), Ana Minian (History), Paula Moya (English), Thomas Mullaney (History), Alexander Nemerov (Arts), Kathryn Olivarius (History), David Palumbo-Liu (Comparative Literature), Grant Parker (Classics), Rush Rehm (Drama, Classics), John Rick (Anthropology), David Riggs (English, Emeritus), Jessica Riskin (History), Eric Roberts (Engineering, emeritus), Paul Robinson (History, emeritus), Thomas Sheehan (Religious Studies), Robert Siegel (Microbiology and Immunology), Peter Stansky (History, emeritus), Stephen Stedman (Freeman Spogli Institute for International Studies), Barton Thompson (Law), Elaine Treharne (Humanities), Peter Vitousek (Biology), Michael Wilcox (Anthropology), Caroline Winterer (History), Yvonne Yarbro-Bejarano (Latin American Cultures), Ali Yaycioglu (History).

Graduate Advising

For a statement of University policy on graduate advising, see the "Graduate Advising" section of this bulletin.

The MLA Program has an advising program that is created to respond to student need as well as the unique nature of this student group. That is to say, the MLA student group is diverse in age, experience, expectation, and availability. The program has determined that important gateway moments in the program (finishing core courses and entering the seminar track, preparation of the thesis prospectus, work on thesis) require cohort advising meetings. Individual academic advising, however, is best accomplished one-on-one, between student and adviser, at a mutually convenient time and place. The advising structure has two stages: Pre-thesis Advising and Thesis Advising.

Pre-thesis Advising begins just before matriculation and lasts until the student has been assigned a thesis adviser.

- Specific pre-thesis academic advising sessions occur before students begin the program, at the conclusion of their foundations course year, as they begin to choose their seminars, and as they begin to contemplate their thesis topics. The dates for these sessions are published well before the events, and students recognize the importance of attending; when exceptional circumstances keep students away, the program offers make-up sessions in person or by phone or video call.
- Entering students are also assigned a faculty adviser as they enter the program. They are encouraged to meet with the adviser during the first year to establish a relationship with the faculty member. Once they begin to choose seminars and to move toward thesis subject matter, the program encourages students to contact their adviser once a quarter, before they sign up for the following quarter, for a meeting.

Year 1

Incoming students meet individually with the Associate Dean and Director in July, prior to starting the program. This meeting provides an opportunity to talk about student and program expectations, to clarify the administrative specifics of the program, and to pass on information about the resources available to the student. This meeting also constitutes an open invitation for students to consult the Associate Dean and Director throughout their time in the program. Before this meeting, students are sent the *MLA Student Handbook* for their perusal.

In October of their first year, students are assigned a Stanford faculty adviser, from among the members of the MLA Faculty Advisory Committee. These advisers are familiar with MLA program policies and the MLA curriculum; they also are familiar with the *MLA Student Handbook*. This adviser works with students throughout Foundations, Core, and

seminar classes, until they are assigned a thesis adviser.

In their first year, students should plan to reach out to their adviser at least once. The meeting (or meetings) during their first year provide an opportunity to get to know the adviser before the students and adviser begin meeting regularly during the second year.

Students meet with the Associate Dean and Director again in June at the completion of their first year. This meeting provides an opportunity to go over how the year went, and discuss concerns or challenges the student is having.

Year 2

During Autumn Quarter, second-year students are taking their final core course. One session of that course begins an hour early, and addresses the students' move into seminar choice. The Associate Dean and Director and the Chair of the Faculty Advisory Committee conduct the meeting; faculty who will be offering seminars through the rest of the academic year are invited to the session. This meeting takes place just prior to enrollment opening for Winter Quarter.

Students are encouraged to consult with their faculty adviser prior to enrolling in courses Autumn, Winter, Spring, and summer quarters of the second year to keep the adviser informed of their choices, to discuss program expectations and upcoming responsibilities. These meetings can be held in person, by phone, or over email. Students are expected to initiate these quarterly meetings.

Year 3

Students are advised to contact their faculty adviser each quarter as they continue their seminar work.

Early in Winter Quarter of their third year, students meet as a group with the Associate Dean and Director, and the writing instructor. This meeting is an orientation for students as they begin to think about their thesis topic, and move into the next stage of the degree program. They receive a substantial binder of policies and advice to consult through their thesis-writing.

As students reach the end of their seminars and begin thinking about thesis topics, they begin a conversation with the Associate Dean and Director and the Chair of the Faculty Advisory Committee about their thesis direction and potential faculty they should speak with as they are writing their prospectus. Students are introduced to and encouraged to consult individual faculty members whose expertise can guide the students' building of the prospectus.

Thesis Advising, End of Year 3 and Beyond

The MLA Faculty Advisory committee responds in writing to each students' prospectus, approving it, deferring approval, or rejecting it. In each case, the response brings together the considered advice of the committee as to next steps for the student.

Once students have an approved prospectus, the MLA Faculty Advisory committee assigns them a Stanford faculty adviser.

Students with approved prospectuses (or those who are close to having their prospectuses approved) attend a day-long thesis workshop, held every summer. The MLA writing consultant and instructor directs the workshop; the Chair of the Faculty Advisory Committee, the Faculty Writing Consultant, and the Associate Dean and Director attend, along with representative faculty advisers and recent graduates. The thesis workshop is intended to give provide insight into working with a thesis adviser, to help students to take maximum advantage of class and instructor feedback in the weekly thesis workshops, to address the necessary work of researching and then shaping and focusing the thesis, to inform students about the practices and expectations of the weekly Thesis-in-Progress sessions and of thesis presentations, and generally to illuminate some of the ups and downs of thesis-writing. (The summer thesis workshop is intended for all students who are working on their theses, not only those who are beginning their work.)

As soon as their prospectus is approved, students become a part of the thesis working group, MLA 398 MLA Thesis in Progress. The thesis-in-progress group meets weekly and includes all MLA students who are working on their theses; it is led by the MLA writing instructor; the MLA faculty writing consultant and the Associate Dean and Director attend most meetings. The meetings provide a time for peer feedback and support as well as guidance from the writing consultants.

Programs

MLA
Degree Designation: MLA - Master of Liberal Arts
-

Materials Science and Engineering Department

Contacts

Office: 496 Lomita Mall, Durand Building
Mail Code: 94305-4034
Phone: (650)725-2648
Email: msestudentservices@stanford.edu
Web Site: http://mse.stanford.edu

Courses offered by the Department of Materials Science and Engineering are listed under the subject code MATSCI on the *Stanford Bulletin's* ExploreCourses website.

The Department of Materials Science and Engineering is concerned with the relation between the structure and properties of materials, factors that control the internal structure of solids, and processes for altering their structure and properties, particularly at the nanoscale.

Mission of the Undergraduate Program in Materials Science and Engineering

The mission of the undergraduate program in Materials Science and Engineering is to provide students with a strong foundation in materials science and engineering with emphasis on the fundamental scientific and engineering principles which underlie the knowledge and implementation of material structure, processing, properties, and performance of all classes of materials used in engineering systems. Courses in the program develop students' knowledge of modern materials science and engineering, teach them to apply this knowledge analytically to create effective and novel solutions to practical problems and develop their communication skills and ability to work collaboratively. The program prepares students for careers in industry and for further study in graduate school.

The B.S. in Materials Science and Engineering provides training for the materials engineer and also preparatory training for graduate work in materials science. Capable undergraduates are encouraged to take at least one year of graduate study to extend their course work through the coterminal degree program which leads to an M.S. in Materials Science and Engineering. Coterminal degree programs are encouraged both for undergraduate majors in Materials Science and Engineering and for undergraduate majors in related disciplines.

Learning Outcomes (Undergraduate)

The department expects undergraduate majors in the program to be able to demonstrate the following learning outcomes. These learning outcomes are used in evaluating students and the department's undergraduate program. Students are expected to demonstrate the ability to:

1. Apply the knowledge of mathematics, science, and engineering to assess and synthesize scientific evidence, concepts, theories, and experimental data relating to the natural or physical world.
2. Extend students' knowledge of the natural or physical world beyond that obtained from secondary education by refining their powers of scientific observation, the essential process by which data is gained for subsequent analysis.
3. Design and conduct experiments, as well as understand and utilize the scientific method in formulating hypotheses and designing experiments to test hypotheses.
4. Function on multidisciplinary teams, while communicating effectively.
5. Identify, formulate, and solve engineering issues by applying conceptual thinking to solve certain problems, bypassing calculations or rote learning, and relying on the fundamental meaning behind laws of nature.
6. Understand professional and ethical responsibility.
7. Understand the impact of engineering solutions in a global, economic, environmental, and societal context.
8. Demonstrate a working knowledge of contemporary issues.
9. Recognize the need for, and engage in, lifelong learning.
10. Apply the techniques, skills, and modern engineering tools necessary for engineering practice.
11. The transition from engineering concepts and theory to real engineering applications and understanding the distinction between scientific evidence and theory, inductive and deductive reasoning, and understanding the role of each in scientific inquiry.

Graduate Programs in Materials Science Engineering

Graduate programs lead to the degrees of Master of Science, Engineer, and Doctor of Philosophy. Graduate students can specialize in any of the areas of materials science and engineering.

Learning Outcomes (Graduate)

The purpose of the master’s program is to provide students with the knowledge and skills necessary for a professional career or doctoral studies. This is done through the course and laboratory work in solid-state fundamentals and materials engineering, and further course work in a technical depth area which may include a master’s Research Report. Typical depth areas include nanocharacterization, electronic and photonic materials, energy materials, nano, and biomaterials.

The Ph.D. is conferred upon candidates who have demonstrated substantial scholarship and the ability to conduct independent research. Through course work and guided research, the program prepares students to make original contributions in Materials Science and Engineering, and related fields.

Facilities

The department is located in the William F. Durand Building, with extensive facilities in the Jack A. McCullough Building and the Gordon and Betty Moore Materials Research Building. These buildings house offices for the chair, majority of the faculty, administrative and technical staff, graduate students as well as lecture and seminar rooms. The

research facilities are equipped to conduct electrical measurements, mechanical testing of bulk and thin-film materials, fracture and fatigue of advanced materials, metallography, optical, scanning, transmission electron microscopy, atomic force microscopy, UHV sputter deposition, vacuum annealing treatments, wet chemistry, and x-ray diffraction.

The McCullough/Moore Complex is also the home of the Center for Magnetic Nanotechnology (CMN), Stanford Nanocharacterization Laboratory (SNL), and Nanoscale Prototyping Laboratory (NPL; joint facility with Mechanical Engineering in Building 530).

Depending on the needs of their programs, students and faculty also conduct research in a number of other departments and independent laboratories. Chief among these are the Stanford Nanofabrication Facility (SNF), Geballe Laboratory for Advanced Materials (GLAM), and Stanford Synchrotron Radiation Laboratory (SSRL).

The Stanford Nanofabrication Facility (SNF) is a laboratory joining government and industrially funded research on microelectronic materials, devices, and systems. It houses a 10,000 sq. ft., class 100 cleanroom for Si and GaAs integrated circuit fabrication, a large number of electronic tests, materials analysis, and computer facilities, and office space for faculty, staff, and students. In addition, the Center for Integrated Systems (CIS) provides start-up research funds and maintains a fellow-mentor program with the industry.

Graduate Advising Expectations

The Department of Materials Science and Engineering is committed to providing academic advising in support of graduate student scholarly and professional development. When most effective, this advising relationship entails collaborative and sustained engagement by both the adviser and the advisee. As a best practice, advising expectations should be periodically discussed and reviewed to ensure mutual understanding. Both the adviser and the advisee are expected to maintain professionalism and integrity.

Faculty advisers guide students in key areas such as selecting courses, designing and conducting research, developing teaching pedagogy, navigating policies and degree requirements, and exploring academic opportunities and professional pathways.

Graduate students are active contributors to the advising relationship, proactively seeking academic and professional guidance and taking responsibility for informing themselves of policies and degree requirements for their graduate program.

For a statement of University policy on graduate advising, see the "Graduate Advising" section of this bulletin.

M.S. Advising

The Department of Materials Science and Engineering (MSE) is committed to providing academic advising in support of its M.S. students' education and professional development. When most effective, this advising relationship entails collaborative engagement by both the adviser and the advisee. As a best practice, advising expectations should be discussed and reviewed to ensure mutual understanding. Both the adviser and the advisee are expected to maintain professionalism and integrity.

At the start of graduate study, each student is assigned a master's program adviser, a member of department faculty who provides guidance in course selection and in exploring academic opportunities and professional pathways. Usually, the same faculty member serves as a program adviser for the duration of the master's study, but the MSE Graduate Handbook does describe a process for formal adviser changes.

The MSE Graduate Handbook provides information and suggested timelines for advising meetings; however, ideally, the program adviser and student meet at least three times during the student's two-year degree. The first meeting between the program adviser and student should occur once in the Autumn Quarter of the first year to discuss the student's goals and objectives. Student and program adviser meet again in Spring Quarter to discuss the student's

course plans and goals for the next academic year. The last meeting should be at the start of the quarter before the student's final quarter of study, and the program adviser and student review the student's coursework taken and the final quarter of study courses the student intends to take. It is expected that the student initiates these meetings.

In addition, the faculty Director of Graduate Studies (DGS) meets all the master's students during the MSE Orientation at the start of the first year and is available during the academic year by email and/or appointment. The DGS or program adviser may initiate a meeting with any student they feel could be in academic distress.

The MSE student services team is also an important part of the master's advising team. They inform students and advisers about University and department requirements, procedures, and opportunities, and maintain the official records of advising assignments and approvals.

Finally, the department believes that graduate students are active contributors to the advising relationship, proactively seeking academic and professional guidance and taking responsibility for informing themselves of policies and degree requirements for their graduate program. As such, it expects students to read not only the MSE Graduate Handbook, but also the monthly MSE Updates newsletter, which provides deadlines, web links, and other valuable information on graduate degree progress.

Ph.D. Advising

The Department of Materials Science and Engineering (MSE) is committed to providing academic advising in support of its Ph.D. students' education and professional development. When most effective, this advising relationship entails collaborative engagement by both the adviser and the advisee. As a best practice, advising expectations should be discussed and reviewed to ensure mutual understanding. Both the adviser and the advisee are expected to maintain professionalism and integrity.

Faculty advisers guide students in key areas such as selecting courses, designing and conducting research, developing teaching pedagogy, navigating policies and degree requirements, and exploring academic opportunities and professional pathways. The MSE Graduate Handbook provides information and suggested timelines for advising meetings in the different stages of the doctoral program, and this timeline is reviewed in the MSE Orientation held at the start of a student's doctoral program and at the annual MSE Graduate Updates meeting in September.

During their first two-quarters of study, incoming Ph.D. students have the opportunity to connect with any member of the Ph.D. Advising Team. These faculty members provide initial guidance in course selection, assist students in exploring academic opportunities and professional pathways, and aid in identifying doctoral research opportunities. MSE does not require formal lab rotations, but students are strongly encouraged to explore research activities in two or three labs during their first academic year. MSE faculty have established a required, one-unit seminar (MATSCI 231) in the Autumn quarter of first-year. The course is intended to help students identify an adviser and initiate their new advising/mentoring relationship.

Students identify their doctoral research adviser prior to the end of February of their first year of study. This research supervisor assumes primary responsibility for the future direction of the student, taking on the roles previously filled by the program adviser, and ultimately directs the student's dissertation. Most students find an adviser from among the primary faculty members of the department. However, the research adviser may be a faculty member from another Stanford department who is familiar with supervising doctoral students and able to provide both research advising and funding for the duration of the doctoral program. When the research adviser is from outside the department, the student must also identify a department co-adviser from the department's primary faculty to provide guidance on departmental requirements, core coursework, and opportunities.

The faculty Director of Graduate Studies (DGS) meets with all the doctoral students during the MSE Orientation at the start of the first year and is available during the academic year by email and/or appointment. The DGS or research adviser/co-adviser may initiate a meeting with any student they feel could be in academic or research distress.

The MSE student services team is also an important part of the doctoral advising team: they inform students and advisers about University and department requirements, procedures, and opportunities, and they maintain the official records of advising assignments and approvals. Students are encouraged to talk with the DGS and the student services office as they consider adviser selection, or for guidance in working with their adviser(s). Student services can discuss how a student can change program/research adviser(s), declare their Dissertation Reading Committee/Oral Exam Committee, and process for filing important paperwork.

The department's doctoral students are active contributors to the advising relationship, proactively seeking academic and professional guidance and taking responsibility for informing themselves of policies and degree requirements for their graduate program. As such the department expects students to read the monthly MSE Updates newsletter which provides deadlines, web links, and other valuable information on graduate degree progress.

Faculty

Chair: Alberto Salleo

Associate Chair: Sarah C. Heilshorn

Director of Graduate Studies: Eric Appel

Director of Undergraduate Studies: Rajan Kumar

Professors: Mark L. Brongersma, Yi Cui, Reinhold H. Dauskardt, Thomas Devereaux, Persis S. Drell, Sarah C. Heilshorn, Paul C. McIntyre, Nicholas A. Melosh, Friedrich B. Prinz, Alberto Salleo, Robert Sinclair, Shan X. Wang

Associate Professors: William Chueh, Jennifer A. Dionne, Aaron M. Lindenberg, Evan J. Reed, Andrew Spakowitz

Assistant Professors: Eric Appel, Felipe da Jornada, Leora E Dresselhaus-Marais, Guosong Hong, Andrew Mannix, Kunal Mukherjee

Courtesy Professors: Raag Airan, Zhenan Bao, Stacey F. Bent, Wei Cai, Matteo Cargnello, Christopher Chidsey, Ian R. Fisher, Curtis W. Frank, David Goldhaber-Gordon, Kenneth Goodson, Sanjiv Sam Gambhir, Wendy Gu, Geoffrey C. Gurtner, Michael T. Longaker, Arunava Majumdar, James D. Plummer, Eric Pop, Krishna Saraswat, Jonathan Stebbins, Yuri Suzuki, Peter Yang, Xiaolin Zheng

Lecturers: Rajan Kumar, Ann Marshall, Arturas Vailionis

Adjunct Professors: Khalil Amine, Geraud Dubois, Annika Enejder, Turgut Gur, Bryce Meredig, Hendrik Ohldag

Emeriti: (Professors) David M. Barnett, Clayton W. Bates Jr., Arthur Bienenstock, John C. Bravman, Richard H. Bube, Bruce M. Clemens, Theodore H. Geballe, Robert A. Huggins, William D. Nix, John C. Shyne, William A. Tiller, Robert L. White, Robert S. Feigelson (Professor, Research)

Programs

MatSc-BS
Degree Designation: BS - Bachelor of Science
-

MatSc-Eng
Degree Designation: ENG - Engineer
-

MatSc-Min
Degree Designation:
-

MatSc-MS
Degree Designation: MS - Master of Science
-

MatSc-PhD
Degree Designation: PHD - Doctor of Philosophy
-

MatSc-PMn
Degree Designation:
-

Mathematical and Computational Science Department

Contacts

Office: Sequoia Hall, 390 Jane Stanford Way
Mail Code: 94305-4065
Email: mcs-inquiries@stanford.edu
Web Site: https://mcs.stanford.edu/

Courses offered by Mathematical and Computational Science program are listed under the subject code MCS on the Stanford Bulletin's ExploreCourses website.

This interdisciplinary undergraduate degree program in MCS is sponsored by Stanford's departments of Statistics, Mathematics, Computer Science, and Management Science & Engineering, providing students with a core of mathematics basic to all the mathematical sciences and an introduction to concepts and techniques of computation, optimal decision making, probabilistic modeling, and statistical inference.

Utilizing the faculty and courses of the departments listed above, this major prepares students for graduate study or employment in the mathematical and computational sciences or in those areas of applied mathematics which center around the use of computers and are concerned with the problems of the social and management sciences. A biology option is offered for students interested in applications of mathematics, statistics, and computer science to the biological sciences (bioinformatics, computational biology, statistical genetics, neurosciences); and in a similar spirit, an engineering and statistics option.

Undergraduate Mission Statement for Mathematical and Computational Science

The mission of the Mathematical and Computational Science Program is to provide students with a core of mathematics basic to all the mathematical sciences and an introduction to concepts and techniques of computation, optimal decision making, probabilistic modeling and statistical inference. The program is interdisciplinary in its focus, and students are required to complete course work in mathematics, computer science, statistics, and management science and engineering. A computational biology track is available for students interested in biomedical applications. The program prepares students for careers in academic, financial and government settings as well as for study in graduate or professional schools.

Faculty

Director: Professor Guenther Walther

Associate Director: Professor Chiara Sabatti

Faculty Advisers: Assistant Professor John Duchi, Associate Professor David Rogosa, Assistant Professor Johan Ugander,

Steering Committee: Takeshi Amemiya (Economics, emeritus), Emmanuel Candès (Mathematics, Statistics), Brian Conrad (Mathematics), Richard Cottle (Management Science and Engineering, emeritus), John Duchi (Electrical Engineering & Statistics), Darrel Duffie (Economics & GSB), Bradley Efron (Statistics), Peter Glynn (Management Science and Engineering), Ramesh Johari (Management Science and Engineering), Percy Liang (Computer Science & Statistics), Parviz Moin (Mechanical Engineering), George Papanicolaou (Mathematics), David Rogosa (Education & Statistics), Chiara Sabatti (Biomedical Data Science & Statistics), David Siegmund (Statistics), Jonathan Taylor (Statistics), Brian White (Mathematics)

Programs

MatCS-BS
Degree Designation: BS - Bachelor of Science
-

MatCS-Min
Degree Designation:

Mathematics Department

Contacts

Office: Bldg. 380, Sloan Hall
Mail Code: 2125
Phone: (650) 725-6284
Web Site: https://mathematics.stanford.edu

Courses offered by the Department of Mathematics are listed under the subject code MATH on the Stanford Bulletin's ExploreCourses web site.

The Department of Mathematics offers programs leading to the degrees of Bachelor of Science, Master of Science, and Doctor of Philosophy in Mathematics.

Mission of the Undergraduate Program in Mathematics

The mission of the undergraduate program in Mathematics is to provide students with a broad understanding of mathematics encompassing logical reasoning, generalization, abstraction, and formal proof. Courses in the program teach students to create, analyze, and interpret mathematical models and to communicate sound arguments based on mathematical reasoning and careful data analysis. The mathematics degree prepares students for careers in the corporate sector, tech industry, government agencies, and for graduate programs in mathematics.

Introductory and Undergraduate Courses

The department offers a year-long sequence in single-variable calculus: MATH 19, MATH 20, and MATH 21. The department also offers three options for studying multivariable mathematics. See here for more information on the introductory math courses.

Faculty

Emeriti: Gregory Brumfiel, Gunnar Carlsson, Robert Finn, Yitzhak Katznelson, Harold Levine, Jun Li, Tai-Ping Liu, R. James Milgram, Donald Ornstein, Richard Schoen, Leon Simon, Ralph L. Cohen

Chair: Rafe Mazzeo

Director of Graduate Studies: Jan Vondrák

Director of Undergraduate Studies: Brian Conrad

Professors: Daniel Bump, Emmanuel Candès, Sourav Chatterjee, Brian Conrad, Amir Dembo (on leave Fall 2021), Persi Diaconis, Yakov Eliashberg (on leave Fall & Spring 2021-22), Jacob Fox, Steven Kerckhoff (on leave Winter 2021), Eugenia Malinnikova, Ciprian Manlescu, Rafe Mazzeo, Eleny Ionel, George Papanicolaou, Lenya Ryzhik, Kannan Soundararajan, Richard Taylor (on leave Spring 2022), Ravi Vakil (on leave Fall 2021), András Vasy, Jan Vondrák, Brian White, Lexing Ying

Professor (Teaching): Tadashi Tokieda

Associate Professor: Jonathan Luk

Assistant Professors: Otis Chodosh

Courtesy Professors: Moses Charikar, Renata Kallosh, Andrea Montanari

Adjunct Professors: Brian Conrey, David Hoffman

Szegö Assistant Professors: Jacopo Borga, Joonhyun La, Yi Lai, Zhenkun Li, Chao Ma, Jinyoung Park, Hunter Spink, Weifeng Sun, Steve Trettel, Sara Venkatesh

Senior Lecturer: Mark Lucianovic

Lecturers: Lernik Asserian, Nathan Dowlin, Trevor Jack, Gene Kim, Christine Taylor, Wojciech Wieczorek

Graduate Advising Expectations

The Department of Mathematics is committed to providing academic advising in support of graduate student scholarly and professional development. When most effective, this advising relationship entails collaborative and sustained engagement by both the adviser and the advisee. As a best practice, advising expectations should be periodically discussed and reviewed to ensure mutual understanding. Both the adviser and the advisee are expected to maintain professionalism and integrity.

Faculty advisers guide students in key areas such as selecting courses, designing and conducting research, developing of teaching pedagogy, navigating policies and degree requirements, and exploring academic opportunities and professional pathways.

Graduate students are active contributors to the advising relationship, proactively seeking academic and professional guidance and taking responsibility for informing themselves of policies and degree requirements for their graduate program.

For a statement of University policy on graduate advising, see the "Graduate Advising" section of this bulletin.

Programs

Math-BS
Degree Designation: BS - Bachelor of Science

Math-MS
Degree Designation: MS - Master of Science

Math-PMn
Degree Designation:

Math-Min
Degree Designation:

Math-PhD
Degree Designation: PHD - Doctor of Philosophy

Mechanical Engineering Department

Contacts

Office: Building 530, Room 125
Mail Code: 94305-3030
Web Site: http://me.stanford.edu

Courses offered by the Department of Mechanical Engineering are listed under the subject code ME on the *Stanford Bulletin's* ExploreCourses web site.

The programs in the Department of Mechanical Engineering (ME) emphasize a mix of applied mechanics, biomechanical engineering, computer simulations, design, and energy science and technology. Since mechanical engineering is a broad discipline, the undergraduate program can be a springboard for graduate study in business, law, medicine, political science, and other professions where understanding technology is important. Both undergraduate and graduate programs provide technical background for work in biomechanical engineering, environmental pollution control, ocean engineering, transportation, and other multidisciplinary problems that concern society. In all programs, emphasis is placed on developing systematic procedures for analysis, creating innovative solutions to complex problems, communication of work and ideas, practical and human-centered and aesthetic aspects in design, and responsible use of technology.

Mission of the Undergraduate Program in Mechanical Engineering

The mission of the undergraduate program in Mechanical Engineering is to provide students with a balance of intellectual and practical experiences that enable them to address a variety of societal needs. The curriculum encompasses elements from a wide array of disciplines built around the themes of biomechanical engineering, computational engineering, design, energy, materials, and multiscale engineering. Course work may include mechatronics, computational simulation, solid and fluid dynamics, microelectromechanical systems, biomechanical engineering, energy science and technology, propulsion, sensing and control, nano- and micro-mechanics, and design. The program prepares students for entry-level work as mechanical engineers and for graduate studies in either an engineering discipline or another field where a broad engineering background is useful.

Graduate Programs in Mechanical Engineering

Admission and Financial Assistance

Mechanical engineering is a varied profession, ranging from primarily aesthetic aspects of design to highly technical scientific research. Disciplinary areas of interest to mechanical engineers include biomechanics, energy conversion, fluid mechanics, materials, nuclear reactor engineering, propulsion, rigid and elastic body mechanics, systems engineering, scientific computing, thermodynamics, robotics, and controls, to name a few. Our graduate programs provide advanced depth and breadth in the field.

Graduate degree programs and admission

- Master of Science (M.S.) in Mechanical Engineering
- Master of Science (M.S.) in Engineering — Design Impact
- Doctor of Philosophy (Ph.D.) in Mechanical Engineering

To be eligible for admission to graduate study to the department, a student must have a B.S. degree in engineering, physics, or a comparable science program. M.S. and Ph.D. applications must be received by the first Tuesday in December, and admitted students must matriculate in the following Autumn. In rare circumstances, with the support of an ME faculty member who is a potential Ph.D. adviser, Ph.D. applications from students who have completed or are currently in an M.S. program are reviewed for Winter or Spring Quarter start. In addition, M.S. applicants eligible for the Honors Cooperative Program (on-campus courses required for Mechanical Engineering) can apply in Autumn, Winter, or Spring quarters.

Additional degree programs available to currently enrolled students

- Master of Science (M.S.) in Engineering — Biomechanical Engineering
- Master of Science (M.S.) in Engineering — Individually Designed Major
- Engineer in Mechanical Engineering

For additional information about these programs, see the Mechanical Engineering Department Graduate Handbook.

Financial Assistance

The department annually awards, on a competitive basis, a limited number of fellowships, teaching assistantships, and research assistantships to incoming graduate students. For M.S. students, limited financial aid in the form of fellowships and short-term research assistantships are provided at the time of admission, and course assistantships can sometimes be arranged with individual course instructors after admission. All Ph.D. students receive financial support for the duration of their program, given satisfactory degree progress.

Post-Master's Degree Programs

The department offers two post-master's degrees: Engineer and Doctor of Philosophy. Post-master's research generally requires some evidence that a student has research potential before a faculty member agrees to supervision and a research assistantship appointment. It is most efficient to carry out preliminary research during the M.S. degree program, if interested in a post-master's degree.

Graduate Advising

The Department of Mechanical Engineering (ME) is committed to providing academic advising in support of graduate student scholarly and professional development. This advising relationship is most effective when it entails collaborative and sustained engagement between the advisor and the advisee. As a best practice, the advisor/advisee relationship and expectations of both sides should be periodically discussed and reviewed to ensure mutual understanding. All advisors and the advisee are expected to maintain professionalism and integrity.

Faculty advisors guide graduate students in key areas of their academic career. An academic advisor helps guide student selection of courses and provides help in navigating polices and degree requirements. In the case of faculty advising teaching assistants, the relationship should include help with development of teaching pedagogy and practice. If the advisor also serves as the primary research advisor, then the advising is much more extensive and also includes research training, design, execution, and career planning (see also Ph.D. section below).

In all cases, graduate students should be active contributors to the advising relationship, proactively seeking academic and professional guidance and taking responsibility for informing themselves of policies and degree requirements for their graduate program (including reading the ME Department's Graduate Student Handbook). Graduate students conducting research should also strive to understand the method and goals of the research and the project's contribution to the pertinent field.

The faculty Director of Graduate Studies (DGS) meets with all master's and doctoral students at the start of their first year, and is available year-round via email and by appointment. The department's Student Services Office is also an important part of the advising team; they inform students and advisors about university and department requirements, procedures, and opportunities, and maintain the official records of advising assignments. Students are encouraged to talk with staff of the Student Services Office, including the DGS, as they consider advisor selection, or for advice in working with their advisor(s). Another excellent resource for students is the ME Graduate Student Committee, a student-run group which organizes social, academic, and community events for the graduate student population in the ME Department.

Master of Science

At the start of graduate study in the master's program, each student is assigned an advisor: a member of the who provides guidance in course selection and in exploring academic opportunities and professional pathways. The graduate student handbook provides a summary of program requirements. Although there is no set rule for meeting frequency, academic advisor and student should meet about once per quarter, particularly during the first few quarters

of the student's time at Stanford. Usually, the same faculty member serves as program advisor for the duration of master's study, but a student can seek a change of advisor by contacting the Student Services Office and/or the ME faculty with whom they seek an advisor/student relationship.

Ph.D. and Engineer Degrees

The ME Department provides academic advising in support of doctoral student scholarly and professional development. A successful advisor/advisee relationship is particularly important for students seeking a Ph.D. in the department. The material in this section is also applicable to students seeking the Degree of Engineer.

In addition to the goals listed above for all advisor/advisee relationships, the Ph.D. advisor provides advice and guidance on developing research skills, choosing classes that helps with the student's research, identifying and planning research projects, dissemination/publishing of the research, and exploring academic opportunities and professional pathways. The Ph.D. advisor serves as an intellectual and professional mentor to the Ph.D. student. In some cases, a Ph.D. student may be advised by two or more advisors. In these cases, the various roles and goals of each of these individuals should be made very clear to all involved. For example, the co-advisors in such arrangements should strive to coordinate and provide non-conflicting advice to the student and the advisee should work to improve and facilitate communication with the two advisors and provide feedback to and from their advisors.

In the ME department, Ph.D. students can be admitted to be advised by a specified faculty member, or admitted with a fellowship associated with the research rotation program. For the latter, the student is initially assigned a program advisor by the department. This faculty member provides initial guidance in course selection, in exploring academic opportunities and professional pathways, and in identifying doctoral research opportunities. Students are required to perform rotations until a Ph.D. research advisor is identified, and they are strongly encouraged to explore research activities with two or three different faculty members during their first academic year. All Ph.D. students seeking a Ph.D. research advisor are encouraged to very proactively seek out, meet with, and discuss possibilities for Ph.D. advisors. Ideally, these discussions should include possible research projects and the possibility for and sources of sustained research funding.

Ph.D. students must identify their doctoral research/thesis advisor (and vice versa) prior to the end of the first year of study. Ideally, this should happen with the first 9 to 10 months. The research supervisor assumes primary responsibility for the future direction of the student, taking on the roles previously filled by the program advisor as well as the aforementioned research-related advice, and ultimately directing the student's dissertation. Most ME Ph.D. students find an advisor from among the primary faculty members of the department. However, the research advisor may be a qualified faculty member from another Stanford department who is able to provide both advising and funding for the duration of the doctoral program. When the research advisor is from outside the department, the student must also identify a program advisor, called a co-advisor, from the primary ME faculty, to provide guidance on departmental requirements and opportunities. The co-advisor is also a member of the student's dissertation reading committee.

For a statement of University policy on graduate advising, see the "Graduate Advising" section of this bulletin.

Departmental Groups

The department has five groups: Biomechanical Engineering; Design; Flow Physics and Computation; Mechanics and Computation; and Thermosciences. Each maintains its own labs, shops, and offices.

The Biomechanical Engineering (BME) Group has teaching and research activities which focus primarily on musculoskeletal biomechanics, neuromuscular biomechanics, cardiovascular biomechanics, and rehabilitation engineering. Research in other areas including hearing, ocean, plant, and vision biomechanics exists in collaboration with associated faculty in biology, engineering, and medicine. The group has strong research interactions with the Mechanics and Computation and the Design groups, and the departments of Neurology, Radiology, and Surgery in the School of Medicine.

The Design Group is devoted to the imaginative application of science, technology, and art to the conception, visualization, creation, analysis and realization of useful devices, products, and objects. Courses and research focus on topics such as bio-inspired design, kinematics, haptics, applied finite elements, micro-electricalmechanical systems (MEMS), medical devices, fatigue and fracture mechanics, dynamics and simulation, rehabilitation, optimization, high-speed devices, product design, vehicle dynamics, experimental mechanics, robotics, creativity, idea visualization, computer-aided design, manufacturing technology, design analysis, and engineering education.

The Flow Physics and Computational Engineering Group (FPCE) The Flow Physics and Computational Engineering Group (FPCE) blends research on flow physics and modeling with algorithm development, scientific computing, and numerical database construction. FPCE is contributing new theories, models and computational tools for accurate engineering design analysis and control of complex flows (including multi phase flows, micro-fluidics, chemical reactions, acoustics, plasmas, interactions with electromagnetic waves and other phenomena) in aerodynamics, propulsion and power systems, materials processing, electronics cooling, environmental engineering, and other areas. A significant emphasis of research is on modeling and analysis of physical phenomena in engineering systems.

The Mechanics and Computational Group covers biomechanics, continuum mechanics, dynamics, experimental and computational mechanics, finite element analysis, fluid dynamics, fracture mechanics, micromechanics, nanotechnology, and simulation based design. Qualified students can work as research project assistants, engaging in thesis research in association with the faculty director and fellow students. Projects include analysis, synthesis, and control of systems; biomechanics; flow dynamics of liquids and gases; fracture and micro-mechanics, vibrations, and nonlinear dynamics; and original theoretical, computational, and experimental investigations in the strength and deformability of elastic and inelastic elements of machines and structures.

The Thermosciences Group conducts experimental and analytical research on both fundamental and applied topics in the general area of thermal and fluid systems. Research strengths include high Reynolds number flows, microfluidics, combustion and reacting flows, multiphase flow and combustion, plasma sciences, gas physics and chemistry, laser diagnostics, microscale heat transfer, convective heat transfer, and energy systems. Research motivation comes from applications including air-breathing and space propulsion, bioanalytical systems, pollution control, electronics fabrication and cooling, stationary and mobile energy systems, biomedical systems, and materials processing. Emphasis is on fundamental experiments leading towards advances in modeling, optimization, and control of complex systems.

Facilities

The department groups maintain modern laboratories that support undergraduate and graduate instruction and graduate research work. A partial listing can be found below. More information is available at the department's Labs and Centers website.

The d'Arbeloff Undergraduate Research and Teaching Lab supports undergraduate research and teaching in the Mechanical Engineering Department. In this unique facility, the department holds undergraduate project-based classes, and offers its students the opportunity to build and collaborate.

The Structures and Composites Laboratory, a joint activity with the Department of Aeronautics and Astronautics, studies structures made of fiber-reinforced composite materials. Equipment for fabricating structural elements includes autoclave, filament winder, and presses. X-ray, ultrasound, and an electron microscope are available for nondestructive testing. The lab also has environmental chambers, a high speed impactor, and mechanical testers. Lab projects include designing composite structures, developing novel manufacturing processes, and evaluating environmental effects on composites.

Experimental facilities are available through the interdepartmental Structures and Solid Mechanics Research Laboratory, which includes an electrohydraulic materials testing system, a vehicle crash simulator, and a shake table for earthquake engineering and related studies, together with highly sophisticated auxiliary instrumentation. Facilities to study the micromechanics of fracture areas are available in the Micromechanics/Fracture Laboratory, and include a computer-controlled materials testing system, a long distance microscope, an atomic force microscope, and

other instrumentation. Additional facilities for evaluation of materials are available through the Center for Materials Research, Center for Integrated Circuits, and the Ginzton Laboratory. Laboratories for biological experimentation are accessible through the School of Medicine. Individual accommodation is available for the work of each research student.

Major experimental and computational laboratories engaged in bioengineering work are located in the Biomechanical Engineering Group. Other Biomechanical Engineering Group activities and resources are associated with the Rehabilitation Research and Development Center of the Veterans Administration Palo Alto Health Care System. This major national research center has computational and prototyping facilities. In addition, the Rehabilitation Research and Development Center houses the Electrophysiology Laboratory, Experimental Mechanics Laboratory, Human Motor Control Laboratory, Rehabilitation Device Design Laboratory, and Skeletal Biomechanics Laboratory. These facilities support graduate course work as well as Ph.D. student research activities.

Computational and experimental work is also conducted in various facilities throughout the School of Engineering and the School of Medicine, particularly the Advanced Biomaterials Testing Laboratory of the Department of Materials Science and Engineering, the Orthopaedic Research Laboratory in the Department of Functional Restoration, and the Vascular Research Laboratory in the Department of Surgery. In collaboration with the School of Medicine, facilities throughout the Stanford Medical Center and the Veterans Administration Palo Alto Health Care System conduct biological and clinical work.

The Design Group has facilities for lab work in experimental stress analysis. Design Group students also have access to the Stanford NanoFabrication Facility (SNF) and characterization facilities at the Stanford Nano Shared Facilities (SNSF).

The Automotive Innovation Facility houses the Volkswagen Automotive Innovation Lab (VAIL) which provides a state-of-the-art vehicle research facility and community space where interdisciplinary teams work on projects that move vehicle technology forward by focusing on human-centered mobiling solutions. High-profile Stanford projects accommodated in the building include research on drive-by-wire and drive assistance systems, and the interaction of drivers with vehicles (via the full–scale driving simulator).

The Design Group also maintains the Product Realization Laboratory (PRL), a multi-site teaching facility offering students integrated experiences in market definition, product design, and prototype manufacturing. The PRL provides coaching, design manufacturing tools, and networking opportunities to students interested in product development. The PRL's Room 36 offerings include laser cutters, 3D printers, sewing machines, and equipment for work with electronics and hotwire foam cutting, The ME 310 Design Project Laboratory has facilities for CAD, assembly, and testing of original designs by master's students in the engineering design program. The Smart Product Design Laboratory supports microprocessor application projects.

The Center for Design Research (CDR) is a unique doctoral-level research community that studies the dynamics of science, engineering, management, and design teams in academic and worldly settings internationally. This closely knit group studies human/machine interactions from both technology and human performance points of view: why did the robot (autonomous car; surgical robot; instructor) do that? Why is the team doing that? Smart technical systems are never smart enough at the interface with humans and the human environment. Stanford courses, especially ME 310, often serve as laboratories for the researchers. The CDR collaborates closely with other disciplines and laboratories, especially Computer Science (AI, big data), the behavioral sciences (VR, AR), and the School of Medicine (haptics, neurosciences, fMRI, fNIRS).

The Nanoscale Prototyping Laboratory addresses fundamental issues on energy conversion and storage at the nanoscale. It employs a wide range of nano-fabrication technologies to build prototype fuel cells and capacitors with induced topological electronic states. It tests these concepts and novel material structures with the help of atomic layer deposition, scanning tunneling microscopy, impedance spectroscopy and other technologies. In addition, it uses atomic scale modeling to gain insights into the nature of charge separation and recombination processes.

The Design Group also maintains The Loft, in which students in the Design Impact Program develop graduate thesis projects.

The Flow Physics and Computation Group has a 32 processor Origin 2000, 48-node and 85-node Linux cluster with high performance interconnection and an array of powerful workstations for graphics and data analysis. Several software packages are available, including all the major commercial CFD codes. FPC is strongly allied with the Center for Turbulence Research (CTR), a research consortium between Stanford and NASA, and the Center for Integrated Turbulence Simulations (CITS), which is supported by the Department of Energy (DOE) under its Accelerated Strategic Computing Initiative (ASCI). The Center for Turbulence Research has direct access to major national computing facilities located at the nearby NASA-Ames Research Center, including massively parallel super computers. The Center for Integrated Turbulence Simulations has access to DOE's vast supercomputer resources. The intellectual atmosphere of the Flow Physics and Computation Group is greatly enhanced by the interactions among CTR's and CITS's postdoctoral researchers and distinguished visiting scientists.

The Mechanics and Computation Group has a Computational Mechanics Laboratory that provides an integrated computational environment for research and research-related education in computational mechanics and scientific computing. The laboratory houses Silicon Graphics, Sun, and HP workstations and servers, including an 8-processor SGI Origin2000 and a 16-processor networked cluster of Intel-architecture workstations for parallel and distributed computing solutions of computationally intensive problems. Software is available on the laboratory machines, including commercial packages for engineering analysis, parametric geometry and meshing, and computational mathematics. The laboratory supports basic research in computational mechanics as well as the development of related applications such as simulation-based design technology.

The Thermosciences Group has four major laboratory facilities. The Heat Transfer and Turbulence Mechanics Laboratory concentrates on fundamental research aimed at understanding and improved prediction of turbulent flows and high performance energy conversion systems. The laboratory includes two general-purpose wind tunnels, a pressurized high Reynolds number tunnel, two supersonic cascade flow facilities, three specialized boundary layer wind tunnels, and several other flow facilities. Extensive diagnostic equipment is available, including multiple particle-image velocimetry and laser-Doppler anemometry systems.

The High Temperature Gas Dynamics Laboratory includes research on sensors, plasma sciences, cool and biomass combustion and gas pollutant formation, and reactive and non-reactive gas dynamics. Research facilities include diagnostic devices for combustion gases, a spray combustion facility, laboratory combustors including a coal combustion facility and supersonic combustion facilities, several advanced laser systems, a variety of plasma facilities, a pulsed detonation facility, and four shock tubes and tunnels. The Thermosciences Group and the Design Group share the Microscale Thermal and Mechanical Characterization laboratory (MTMC). MTMC is dedicated to the measurement of thermal and mechanical properties in thin-film systems, including microfabricated sensors and actuators and integrated circuits, and features a nanosecond scanning laser thermometry facility, a laser interferometer, a near-field optical microscope, and an atomic force microscope. The activities at MTMC are closely linked to those at the Heat Transfer Teaching Laboratory (HTTL), where undergraduate and master's students use high-resolution probe stations to study thermal phenomena in integrated circuits and thermally-actuated microvalves. HTTL also provides macroscopic experiments in convection and radiative exchange.

The Energy Systems Laboratory is a teaching and research facility dedicated to the study of energy conversion systems. The lab includes three dynamometers for engine testing, a computer-controlled variable engine valve controller, a fuel-cell experimental station, a small rocket testing facility, and a small jet engine thrust stand.

The Guidance and Control Laboratory, a joint activity of the Department of Aeronautics and Astronautics and the Department of Mechanical Engineering, specializes in construction of electromechanical systems and instrumentation, particularly where high precision is a factor. Work ranges from robotics for manufacturing to feedback control of fuel injection systems for automotive emission control. The faculty and staff work in close cooperation with both the Design and Thermosciences Groups on device development projects of mutual interest.

Many computation facilities are available to department students. Three of the department's labs are equipped with super-minicomputers. Numerous smaller minicomputers and microcomputers are used in the research and teaching laboratories.

Library facilities at Stanford beyond the general library include Engineering, Mathematics, and Physics department libraries.

Mechanical Engineering Course Catalog Numbering System

The department uses the following course numbering system:

	Mechanical Engineering Course Catalog Numbering System
NUMBER	**LEVEL**
001-099	Freshman and Sophomore
100-199	Junior and Senior
200-299	Advanced Undergraduate and Beginning Graduate
300-399	Graduate
400-499	Advanced Graduate
500	Ph.D. Thesis

Faculty

Emeriti: (Professors) James L. Adams, Thomas P. Andriacchi, David M. Barnett, Peter Bradshaw, Brian J. Cantwell, Dennis R. Carter, Daniel B. DeBra, Robert H. Eustis, Thomas J. R. Hughes, James P. Johnston, Thomas R. Kane, William M. Kays, Joseph B. Keller, Charles H. Kruger, Robert H. McKim, Robert J. Moffat, M. Godfrey Mungal, J. David Powell, Charles R. Steele*, Douglass J. Wilde; *(Professors, Research)* Richard M. Christensen, Sidney A. Self, Kenneth J. Waldron*, Felix E. Zajac

Chair: Ellen Kuhl

Director of Graduate Studies: Allison Okamura

Director of Undergraduate Studies: Mark Cappelli

Group Chairs: Mark R. Cutkosky & Sheri D. Sheppard (Design), Marc Levenston (Biomechanical Engineering), Gianluca Iaccarino & Parviz Moin (Flow Physics and Computational Engineering), Wei Cai (Mechanics and Computation), Christopher F. Edwards (Thermosciences)

Professors: Craig T. Bowman, Mark A. Cappelli, Mark R. Cutkosky, John Dabiri, Scott L. Delp, John K. Eaton, Christopher F. Edwards, Charbel Farhat, J. Christian Gerdes, Kenneth E. Goodson, Ronald K. Hanson, Gianluca Iaccarino, David M. Kelley, Thomas W. Kenny, Ellen Kuhl, Larry J. Leifer, Sanjiva K. Lele, Arun Majumdar, Reginald E. Mitchell, Parviz Moin, Drew V. Nelson, Allison M. Okamura, Peter M. Pinsky, Friedrich B. Prinz, Beth L. Pruitt, Bernard Roth, Juan G. Santiago, Eric S. G. Shaqfeh, Sheri D. Sheppard, Hai Wang

Associate Professors: Wei Cai, Steve Collins, Eric F. Darve, W. Matthias Ihme, Marc E. Levenston, Adrian J. Lew, Ali Mani, Xiaolin Zheng

Assistant Professors: Ovijit Chaudhuri, Sean Follmer, Wendy Gu, David Lentink, Erin MacDonald, Sindy K.-Y. Tang

Professor (Teaching): David W. Beach

Courtesy Professors: Oussama Khatib, Paul Yock

Courtesy Associate Professor: Nicholas Giori, Christian Linder

Courtesy Assistant Professor: David Camarillo, Roseanna Zia

Senior Lecturers: Vadim Khayms, J. Craig Milroy

Adjunct Professors: Mehdi Asheghi, Michael R. Barry, William R. Burnett, J. Edward Carryer, Rainer J. Fasching, Shannon Gilmartin, John A. Howard, Barry M. Katz, Paul Mitiguy, Gary O'Brien, Dev Patnaik, Paul Saffo III, George Toye

* Recalled to active duty.

Programs

ME-BS
Degree Designation: BS - Bachelor of Science

ME-Eng
Degree Designation: ENG - Engineer

ME-Min
Degree Designation:
-

ME-MS
Degree Designation: MS - Master of Science

ME-PhD
Degree Designation: PHD - Doctor of Philosophy

ME-PMn
Degree Designation:

Management Science and Engineering Department

Contacts

Office: Huang Engineering Center, 475 Via Ortega, 94305-4121
Mail Code: 94305-4026
Web Site: https://msande.stanford.edu/

Courses offered by the Department of Management Science and Engineering are listed under the subject code MS&E on the Stanford Bulletin's ExploreCourses web site.

The Department of Management Science and Engineering leads at the interface of engineering, business, and public policy. The department’s mission is, through education and research, to advance the design, management, operation, and interaction of technological, economic, and social systems. The department’s engineering research strength is integrated with its educational program at the undergraduate, master’s, and doctoral levels: graduates of the program are trained as engineers and future leaders in technology, policy, and industry. Research and teaching activities are complemented by an outreach program that encourages the transfer of ideas to the environment of Silicon Valley and beyond.

Management Science and Engineering (MS&E) provides programs of education and research by integrating three basic strengths:

1. depth in conceptual and analytical foundations
2. comprehensive coverage of functional areas of application
3. interaction with other Stanford departments, Silicon Valley industry, and organizations throughout the world.

The analytical and conceptual foundations include decision and risk analysis, dynamic systems, economics, optimization, organizational science, and stochastic systems. The functional areas of application include entrepreneurship, finance, information, marketing, organizational behavior, policy, production, and strategy. Close

associations with other engineering departments and with industry enrich the programs by providing opportunities to apply MS&E methods to important problems and by motivating new theoretical developments from practical experience. MS&E's programs also provide a basis for contributing to other areas such as biotechnology, defense policy, environmental policy, information systems, and telecommunications.

Undergraduate Programs in Management Science and Engineering

MS&E offers a program leading to the degree of Bachelor of Science as well as undergraduate minor.

The undergraduate curriculum in Management Science and Engineering provides students training in the fundamentals of engineering systems analysis to prepare them to plan, design, and implement complex economic and technological management systems where a scientific or engineering background is necessary or desirable. The major prepares students for a variety of career paths, including investment banking, management consulting, facilities and process management, or for graduate school in industrial engineering, operations research, business, economics, law, medicine, or public policy.

The educational objectives of the undergraduate degree program are:

- *Principles and Skills*—provide students with a basic understanding of management science and engineering principles, including analytical problem solving and communications skills.
- *Preparation for Practice*—prepare students for practice in a field that sees rapid changes in tools, problems, and opportunities.
- *Preparation for Continued Growth*—prepare students for graduate study and self development over an entire career.
- *Preparation for Service*—develop in students the awareness, background, and skills necessary to become responsible citizens, employees, and leaders.

MS&E also participates with the departments of Computer Science, Mathematics, and Statistics in a program leading to a B.S. in Mathematical and Computational Science. See the "Mathematical and Computational Science" section of this bulletin.

Graduate Programs in Management Science and Engineering

MS&E offers programs leading to the degrees of Master of Science and Doctor of Philosophy. The department also offers a coterminal B.S./M.S. degree, a dual master's degree in cooperation with each of the other departments in the School of Engineering, joint master's degrees with the School of Law and the Public Policy Program, and a Ph.D. minor.

The master's degree is designed to be a terminal degree program with a professional focus. The M.S. degree can be earned in one academic year (three academic quarters) of full-time work, although most students choose to complete the program in five academic quarters, or eighteen months, and work as an intern in the Summer Quarter.

Admission

The Graduate Record Examination General Test (GRE) is optional when applying for admission to MS&E graduate programs for Autumn 2021 and Autumn 2022. The deadline for application to the doctoral program is December 1, 2021, the deadline for application to the master's program is December 14, 2021, and the deadline for application to the coterminal master's program is January 11, 2022.

Except in unusual circumstances, admission is limited to the Autumn Quarter because courses are arranged sequentially with basic courses and prerequisites offered early in the academic year.

Advising

The Department of Management Science and Engineering is committed to providing academic advising in support of graduate student scholarly and professional development. When most effective, this advising relationship entails collaborative and sustained engagement by both the adviser and the advisee. As a best practice, advising expectations should be periodically discussed and reviewed to ensure mutual understanding. Both the adviser and the advisee are expected to maintain professionalism and integrity.

Every student is assigned a faculty program adviser based on their stated area within the department. Faculty program advisers guide all students in key areas such as selecting courses, navigating policies and degree requirements, and exploring academic opportunities and professional pathways. Faculty program advisers additionally guide doctoral students in designing and conducting research, and development of teaching pedagogy. Faculty program advisers and students meet regularly, and the faculty program adviser may initiate a meeting with any student deemed to be in academic or research distress.

Doctoral students are encouraged to explore research activities in several research groups/labs during their first academic year, and to declare candidacy with a faculty dissertation adviser by the end of their second year in the program. Students may align with faculty across the department. This faculty dissertation adviser supersedes the faculty program adviser in assuming primary responsibility for advising and mentoring the student. When the faculty dissertation adviser is from outside our department, the student must also identify a faculty research adviser from MS&E to provide guidance on departmental requirements, core coursework, and opportunities. We encourage students to decide on their thesis committee within one year after start of candidacy in order to avail themselves of advice from multiple faculty members on the reading committee. MS&E conducts an annual review of all doctoral students' progress on degree progress milestones and research. Research input is solicited and an individual progress report spelling out the forthcoming milestones and any remedial action needed to maintain status is sent to the student via email.

Master students are encouraged to explore courses from across the department, and with multiple MS&E faculty members. Students may request a new adviser from MS&E Student Services staff as their interests clarify. Master's students are encouraged to meet with their adviser on a regular basis, to discuss their program goals and objectives, course selection, career goals, and academic and industry opportunities.

The MS&E student services staff are also an important part of the advising team. They inform students and advisers about University and department requirements, procedures, opportunities, and maintain the official records of adviser assignments and course approvals. Students are encouraged to talk with both the faculty program adviser and the student services office as they consider courses.

Students are active contributors to the advising relationship and we urge them to proactively seek academic and professional guidance and take responsibility for informing themselves of policies and degree requirements for their graduate program. We therefore expect students to read regular communication from the Registrar's office and Student Services regarding upcoming academic deadlines and policy updates, and to be responsible for complying with the university and program requirements.

For a statement of University policy on graduate advising, see the Graduate Advising section of this bulletin.

Assistantships and Fellowships

A limited number of fellowships and assistantships are awarded each year. Applicants admitted to the doctoral program, who have indicated on their application that they would like to be considered for financial aid, are automatically considered for these assistantships and fellowships. New and returning master's students may apply for course assistantships each quarter, but priority is given to MS&E doctoral students.

Information about loan programs and need-based aid for U.S. citizens and permanent residents can be obtained from the Financial Aid Office.

Careers in MS&E

MS&E students are candidates for careers in consulting, product and project management, financial analysis, and work in policy arenas. A significant number join or found start-ups. Many have become leaders in technology-based businesses which have an increasing need for analytically oriented people who understand both business and technology. Other graduates make careers tackling the problems faced by local, national, and international governments by developing new healthcare systems, new energy systems and a more sustainable environment. The major problems of the day demand an ability to integrate the technical, social and economic ways of thinking. This is precisely what the department educates its students to do.

Professional Education

The Stanford Center for Professional Development (SCPD) provides opportunities for to take courses part-time at Stanford and online.

The Honors Cooperative Program (HCP) provides opportunities for working professionals to earn an M.S. degree over a longer period, by taking one or two courses per academic quarter. Some courses are only offered on campus; HCP students may attend those courses at Stanford to meet the degree requirements. It is possible to complete this program as a remote HCP student although the remote offerings are limited. Students must apply for a degree program through the standard application process, and must meet the standard application deadlines.

The non-degree option (NDO) program allows the opportunity to take Stanford graduate courses on a part-time basis without having to be formally admitted to a degree program. NDO students enroll as distance learners where up to 18 units of graduate credit earned may later be applied toward a degree program (if admitted), or may be applied toward a certificate. Students who have completed an undergraduate degree with a minimum of a 3.0 grade point average, may apply to take MS&E courses online each quarter through the Stanford Center for Professional Development. Completion of multivariable calculus and linear algebra is required for most MS&E courses and graduate certificates. For additional information about the NDO application process and deadlines, see the SCPD web site, or contact SCPD at (650) 725-3000.

Faculty

Emeriti: (Professors) James L. Adams, Stephen R. Barley, Richard W. Cottle, B. Curtis Eaves, Warren H. Hausman, Frederick S. Hillier, Ronald A. Howard, Donald L. Iglehart, David G. Luenberger, Michael M. May, William J. Perry, David A. Thompson; *(Associate Professor)* Samuel S. Chiu; *(Professors, Research)* Siegfried S. Hecker, Walter Murray, Michael A. Saunders; *(Professor, Teaching)* Robert E. McGinn

Chair: Pamela J. Hinds

Director of Graduate Studies: Riitta Katila

Director of Undergraduate Studies: Ross D. Shachter

Professors: Nicholas Bambos, Jose Blanchet, Margaret L. Brandeau, Kathleen M. Eisenhardt, Kay Giesecke, Peter W. Glynn, Ashish Goel, Pamela J. Hinds, Ramesh Johari, Riitta Katila, M. Elisabeth Paté-Cornell, Amin Saberi, Robert I. Sutton, James L. Sweeney, Benjamin Van Roy, Yinyu Ye

Associate Professors: Itai Ashlagi, Charles E. Eesley, Ross D. Shachter, Edison T. S. Tse, Melissa A. Valentine

Assistant Professors: Irene Y. Lo, Markus Pelger, Aaron Sidford, Johan Ugander

Professor (Research): John P. Weyant

Professor (Teaching): Thomas H. Byers

Professor of the Practice: Tina L. Seelig

Courtesy Professors: Paul Milgrom, Douglas K. Owens

Programs

EESOR-PhD
Degree Designation: PHD - Doctor of Philosophy

EESOR-PMn
Degree Designation:

MgtSc-BS
Degree Designation: BS - Bachelor of Science
-

MgtSc-Min
Degree Designation:
-

MgtSc-MS
Degree Designation: MS - Master of Science
-

MgtSc-PhD
Degree Designation: PHD - Doctor of Philosophy
-

MgtSc-Pmn
Degree Designation:
-

Mgtsc-Pmn
Degree Designation:
-

Microbiology and Immunology Department

Contacts

Office: D300 Fairchild Building, 299 Campus Drive
Mail Code: 94305-5124
Phone: (650) 725-8541
Email: micro_immuno@lists.stanford.edu
Web Site: http://microimmuno.stanford.edu

Courses offered by the Department of Microbiology and Immunology are listed under the subject code MI on the Stanford Bulletin's ExploreCourses website.

Graduate Programs in Microbiology and Immunology

The Department of Microbiology and Immunology offers a program of training leading to the Ph.D. degree, as well as research training, courses, and seminars for medical students and postdoctoral fellows. Research interests focus on two broad areas: host-microbe interactions, and the function of the immune system. Laboratories investigate mechanisms of pathogenesis and commensalism and the physiology of viruses, bacteria, and protozoan parasites, as well as the lymphocyte function in antigen recognition, immune response, and autoimmunity.

Faculty

Emeriti: (Professors) AC Matin, Hugh O. McDevitt, Edward S. Mocarski,

Chair: David Schneider

Associate Chair: Denise Monack

Director of Graduate Studies: Justin Sonnenburg

Professors: Manuel Amieva, Ann Arvin, Helen Blau, Matthew Bogyo, John C. Boothroyd, Yueh-Hsiu Chien, Wah Chiu, Mark M. Davis, Stephen J. Galli, Jeffrey Glenn,Harry B. Greenberg, K.C. Huang, Peter Jackson, Karla Kirkegaard, Denise Monack, Peter Parham, Phillip Pizzo, Charles Prober, Bali Pulendran, David Relman, Peter Sarnow, David Schneider, Upinder Singh, Lucy S. Tompkins, Priscilla Yang.

Professor (Teaching): Robert D. Siegel

Associate Professors: Paul Bollyky, Jan Carette, Shirit Einav, Michael Fischbach, Justin Sonnenburg, Ellen Yeh

Assistant Professors: Jennifer Bando, Dylan Dodd, Elizabeth Egan, Michael Howitt, Juliana Idoyaga, Prasanna Jagannathan, Taia Wang

Institute for Immunity, Transplantation and Infection

Director, Human Immune Monitoring Center and Professor (Research): Holden Maecker

Graduate Advising

Graduate Advising Expectations

The Department of Microbiology and Immunology is committed to providing academic advising in support of graduate student scholarly and professional development. When most effective, this advising relationship entails collaborative and sustained engagement by both the adviser and the advisee. As a best practice, advising expectations should be periodically discussed and reviewed to ensure mutual understanding. Both the adviser and the advisee are expected to maintain professionalism and integrity.

Faculty advisers guide students in key areas such as selecting courses, designing and conducting research, development of teaching and mentoring skills, navigating policies and degree requirements, and exploring academic opportunities and professional pathways.

Graduate students are active contributors to the advising relationship, proactively seeking academic and professional guidance and taking responsibility for informing themselves of policies and degree requirements for their graduate program.

Additional information about the department's policy on graduate advising can be found on the Microbiology and Immunology website. For a statement of University policy on graduate advising, see the "Graduate Advising" section of this bulletin.

Programs

MI-MS
Degree Designation: MS - Master of Science
-

MI-PhD
Degree Designation: PHD - Doctor of Philosophy
-

Modern Thought and Literature Department

Contacts

Office: Building 460, Room 216
Mail Code: 94305-2022
Phone: (650) 723-3413
Web Site: mtl.stanford.edu

Courses offered by the Program in Modern Thought and Literature are listed under the subject code MTL on the Stanford ExploreCourses web site.

The program in Modern Thought and Literature admits students for the Ph.D. and a limited number for a coterminal B.A./M.A. Program.

Graduate Programs in Modern Thought and Literature

Modern Thought and Literature (MTL) is an interdisciplinary humanities graduate program advancing the study of critical issues in the modern world. Since 1971, MTL students have helped to redefine the cutting edge of many interdisciplinary fields and to reshape the ways in which disciplinary scholarship is understood and practiced. MTL graduates are leaders in fields such as American studies, ethnic studies, film studies, social and cultural studies, and women's studies, as well as English and comparative literature.

The program trains students to understand the histories and methods of disciplines and to test their assumptions. It considers how disciplines shape knowledge and, most importantly, how interdisciplinary methods reshape objects of study. MTL students produce innovative analyses of diverse texts, forms, and practices, including those of literature, history, philosophy, anthropology, law, and science; film, visual arts, popular culture, and performance; and material culture and technology.

Each student constructs a unique program of study suited to his or her research. Students have focused on such areas as gender and sexuality; race and ethnicity; science, technology, and medicine; media and performance; legal studies; and critical and social theory. The program's affiliated faculty is drawn from fields throughout the humanities and humanistic social sciences, as well as from education and law. As interdisciplinary study is impossible without an understanding of the disciplines under consideration, each student is expected to master the methods of literary analysis and to gain a foundation in a second field or discipline.

Faculty

Director: Héctor Hoyos

Director of Graduate Studies: Tom Mullaney

Committee in Charge: Michaela Bronstein, Angèle Christin, Shane Denson, Shelley Fisher Fishkin, Héctor Hoyos (Chair), Roanne Kantor, Elizabeth Kessler, Charles Kronengold, Marci Kwon, Bernadette Meyler, Ana Minian, Tom Mullaney, Vaughn Rasberry, José David Saldívar, Matthew Smith, Dafna Zur

Affiliated Faculty: Lanier Anderson *(Philosophy)*, Russell Berman *(German Studies)*, Jennifer Brody *(Theater & Performance Studies),* Michaela Bronstein *(English)*, Scott Bukatman *(Art & Art History)*, Gordon Chang *(History)*, Adrian Daub *(German Studies)*, Jean-Pierre Dupuy *(French & Italian)*, Paulla Ebron *(Anthropology)*, Harry Elam *(Theater & Performance Studies)*, Michele Elam *(English)*, Amir Eshel *(German Studies, Comparative Literature),* Shelley Fisher Fishkin *(English)*, Zephyr Frank *(History)*, Estelle Freedman *(History)*, Duana Fullwiley (*Anthropology),* Thomas Hansen *(Anthropology)*, David Hills *(Philosophy),* Héctor Hoyos *(Iberian & Latin American Cultures)*, Lochlain Jain (*Anthropology*), Tomas Jimenez *(Sociology)*, Roanne Kantor *(English)*, Elizabeth Kessler *(American Studies)*, Matthew Kohrman *(Anthropology)*, Charles Kronengold (*Music*), Marci Kwon *(Art & Art History)*, Joshua Landy *(French & Italian, Comparative Literature)*, Pavle Levi *(Art & Art History)*, Helen Longino *(Philosophy)*, Douglas McAdam *(Sociology)*, Mark McGurl *(English)*, Alison McQueen *(Political Science)*, Jisha Menon *(Theater & Performance Studies)*, Lynn Meskell *(Anthropology)*, Ana Minian *(History)*, Paula Moya *(English)*, Tom Mullaney *(History)*, Alex Nemerov (*Art & Art History*), David Palumbo-Liu *(Comparative Literature),* Peggy Phelan *(Theater & Performance Studies)*, Robert Proctor *(History)*, Vaughn Rasberry *(English)*, Robert Reich *(Political Science),* Jessica Riskin *(History),* José David Saldívar *(Comparative Literature)*, Ramón Saldívar *(English, Comparative Literature),* Londa Schiebinger *(History)*, Matthew Smith *(German Studies, Theater and Performance Studies)*, Sharika Thiranagama (*Anthropology*), Fred Turner *(Communication)*, Ban Wang *(East Asian Languages and Cultures),* Gail Wight *(Art & Art History)*, Alex Woloch *(English)*

Graduate Advising Expectations

The Program in Modern Thought and Literature is committed to providing academic advising in support of graduate student scholarly and professional development. When most effective, this advising relationship entails collaborative and sustained engagement by both the adviser and the advisee.

Faculty advisers guide students in key areas such as selecting courses, designing and conducting research, developing of teaching pedagogy, navigating policies and degree requirements, and exploring academic opportunities and professional pathways.

Upon arrival, incoming MTL Ph.D. students are assigned first-year faculty advisers who help students select classes with the student's academic interests as well as the program requirements in mind. Advising arrangements are made for coterminal M.A. students at the time of their admission to the program.

Prior to advancement to TGR status, all Ph.D. students should also meet with the Director of Graduate Studies (DGS) each quarter to discuss overall progress. After reaching TGR status, students should check in with the DGS at least once a year.

As a best practice, advising expectations should be periodically discussed and reviewed to ensure mutual understanding. For both Ph..D and M.A. students, at least two consultations per quarter with the DGS and the primary adviser are highly recommended to foster an effective advising relationship. Both the adviser and the advisee are expected to maintain professionalism and integrity.

Graduate students are active contributors to the advising relationship, proactively seeking academic and professional guidance and taking responsibility for informing themselves of policies and degree requirements for their graduate program.

After the first year of study, when Ph.D. students have a better sense of their academic trajectories, they may choose to change advisers with the approval of the director and the DGS.

For a statement of University policy on graduate advising, see the "Graduate Advising" section of this bulletin.

Programs

CSRE-PMN
Degree Designation:
-

FGSS-PMN
Degree Designation:
-

MTLit-MA
Degree Designation: MA - Master of Arts

MTLit-PhD
Degree Designation: PHD - Doctor of Philosophy

Molecular and Cellular Physiology Department

Contacts

Office: Beckman Center, B100A
Mail Code: 94305-5345
Phone: (650) 725-7554
Email: schantae@stanford.edu
Web Site: http://mcp.stanford.edu

Courses offered by the Department of Molecular and Cellular Physiology are listed under the subject code MCP on the Stanford Bulletin's ExploreCourses website.

The Department of Molecular and Cellular Physiology is located in the Beckman Center for Molecular and Genetic Medicine.

A central goal of physiology in the post-genomic era is to understand how thousands of encoded proteins serve to bring about the highly coordinated behavior of cells and tissues. Research in the department approaches this goal at many levels of organization, ranging from single molecules and individual cells to multicellular systems and the whole organism. The faculty share common interests in the molecular mechanisms of cell signaling and behavior, with a special focus on structure/function analysis of ion channels and G-protein coupled receptors, and their roles at the cellular, organ, and whole-organism levels; the molecular basis of sensory transduction, synaptic transmission, plasticity and memory; the role of ion channels and calcium in controlling gene expression in neural and immune cells; and the regulation of vesicle trafficking and targeting, cell polarity, and cell-cell interactions in the nervous system and in epithelia. Research programs employ a wide range of approaches, including molecular and cell biology, biochemistry, genetics, biophysics, x-ray crystallography and solution NMR, electrophysiology, and in vitro and in vivo imaging with confocal and multi-photon microscopy.

Graduate Programs in Molecular and Cellular Physiology

The department offers required and elective courses for students in the School of Medicine and is also open to other qualified students with the consent of the instructor. Training of medical, graduate, and postdoctoral students is available. The program offers a course of study leading to the Ph.D. degree. No B.S. is offered, and an M.S. is offered only in the unusual circumstance where a student completes the course work, rotation, and the written section of the qualifying exam, but is unable to complete the requirements for the Ph.D.

Faculty

*Emeriti (*Professors*):* W. James Nelson, Stephen J. Smith, Richard W. Tsien

Chair: Miriam B. Goodman

Professors: Axel T. Brunger, K. Christopher Garcia, Miriam B. Goodman, Brian K. Kobilka, Richard S. Lewis, Georgios Skiniotis, Thomas C. Sudhof

Associate Professors: Liang Feng, Lucy E. O'Brien, V. Daniel Madison, Merritt C. Maduke

Joint Professors: Steve Chu, William Weis

Courtesy Professors: John Huguenard, Anthony J. Ricci, Ron Dror

Graduate Advising

Graduate Advising Expectations

The Department of Molecular and Cellular Physiology is committed to providing academic advising in support of graduate student scholarly and professional development. When most effective, this advising relationship entails collaborative and sustained engagement by both the adviser and the advisee. As a best practice, advising expectations should be periodically discussed and reviewed to ensure mutual understanding. Both the adviser and the advisee are expected to maintain professionalism and integrity.

Faculty advisers guide students in key areas such as selecting courses, designing and conducting research, developing of teaching pedagogy, navigating policies and degree requirements, and exploring academic opportunities and professional pathways.

Graduate students are active contributors to the advising relationship, proactively seeking academic and professional guidance and taking responsibility for informing themselves of policies and degree requirements for their graduate program.

For a statement of University policy on graduate advising, see the "Graduate Advising" section of this bulletin.

Programs

MolCI-MS
Degree Designation: MS - Master of Science
-

MolCI-PhD
Degree Designation: PHD - Doctor of Philosophy
-

Music Department

Contacts

Office: Braun Music Center, Room 101
Mail Code: 94305-3076
Phone: (650) 723-3811
Email: musicinfo@stanford.edu

Web Site: http://music.stanford.edu

Courses offered by the Department of Music are listed under the subject code MUSIC on the Stanford Bulletin ExploreCourses web site.

Mission of the Department of Music

The Department of Music at Stanford brings together music-making and scholarly research in composition, conducting, performance, music history, ethnomusicology, music theory, cognitive science, intermedia, and computer-based technologies.

Departmental activities serve a broad and diverse constituency on campus and in local communities, with an abundance of courses, concerts, performance opportunities, research projects, workshops, and lectures throughout the year. Ensembles from a variety of world cultures are open to all students: orchestras, jazz and chamber ensembles, taiko, guzheng, steelpan, and several choral groups. Many of the faculty have affiliations with other departments, programs, and interdisciplinary centers, such as Computer Science, Electrical Engineering, Art and Art History, German Studies, Neuroscience, Symbolic Systems, Comparative Studies in Race and Ethnicity, and Islamic Studies. Alumni include faculty in universities and conservatories around the world, researchers in the technologies of music and acoustics, members of major orchestras, soloists, chamber musicians, and sound artists, composers and arrangers in contemporary, film and game music.

Faculty

Emeriti: (Professors) Karol Berger, John M. Chowning, Brian Ferneyhough, William H. Ramsey; *(Professors, Performance)* Arthur P. Barnes, Marie Gibson; *(Professor Teaching)* George Barth

Chair: Jaroslaw Kapuscinski

Director of Graduate Studies: Heather Hadlock

Director of Undergraduate Studies: Takako Fujioka

Professors: Mark Applebaum (on leave AS), Jonathan Berger, Chris Chafe, Thomas Grey, Stephen Hinton (on leave), Julius O. Smith (on leave AW)

Associate Professors: Takako Fujioka, Denise Gill (on leave Autumn), Heather Hadlock, Jaroslaw Kapuscinski, William P. Mahrt, Jesse Rodin, Ge Wang

Assistant Professors: Patricia Alessandrini (on leave), Charles Kronengold

Professor (Teaching): Stephen M. Sano (Director of Choral Studies)

Associate Professor (Teaching): Paul Phillips (Director of Orchestral Studies)

Courtesy Professors: Paul DeMarinis, Elizabeth Erikson-DiRenzo, Doug L. James, C. Kwang Sung

Senior Lecturers: Giancarlo Aquilanti (Director of Theory; Wind Ensemble), Talya Berger (Theory), Laura Dahl (Director of Keyboard Studies; Resident Collaborative Pianist), Kathryne Jennings (Voice; Director of Vocal Studies), Stephen Harrison (Cello), François Rose (Theory and Composition), Thomas Schultz (Piano), Frederick R. Weldy (Piano)

Lecturers: Akwasi Papa Abrefah (Steelpan), Kumaran Arul (Piano), Erika Arulanantham (Theory), Constantin Basica (CCRMA; PostDoc), Mark Brandenburg (Clarinet), Marie-Louise Catsalis (Voice), Tony Clements (Tuba), Greer Ellison (Flute, Baroque Flute), Charles A. Ferguson (Guitar), Debra Fong (Violin), Michael Galisatus (Jazz Ensemble), Russell Gavin (LSJUMB), Dawn Harms (Violin, Viola), Alexandra Hawley (Flute), David Henderson (Classical Saxophone), Wendy Hillhouse (Voice), Melody Holmes-Vedder (Flute), Nova Jiménez (Voice), McDowell Kenley (Trombone), Hans Kretz (SNE), Joo-Mee Lee (Violin), Mary Linduska (Voice, Summer), Benjamin Liupaogo (Voice), Murray Low (Jazz & Jazz Piano), Adam Luftman (Trumpet), Anthony Martin (Baroque Violin), Robin May (Oboe), Charles McCarthy (Jazz Saxophone), Romain Michon (CCRMA), Robert Huw Morgan (University Organist, Organ), Bruce Moyer (Contrabass), Stan Muncy (Percussion), Herbert Myers (Early Winds), James Nadel (Jazz), Rufus Olivier (Bassoon), Rafael Ornes (Summer Chorus) Lawrence Ragent (French Horn), Joshua Redman (Jazz), David Rokeach (Drum Set), Robin Sharp (Violin), Annabelle Taubl (Harp), Elaine Thornburgh (Harpsichord), Josh Thurston-Milgrom (Jazz Bass), Erik Ulman (Composition, Theory), Linda Uyechi (Taiko), Rick Vandivier (Jazz Guitar), Nicholas Virzi (CCRMA), John Worley (Jazz Trumpet), Hui (Daisy) You (Gu-Zheng), Timothy Zerlang (University Carillonneur, Piano)

Adjunct Professors: Jonathan Abel (CCRMA), David Berners (CCRMA), Marina Bosi (CCRMA), Poppy Crum (CCRMA), Pierre Divenyi (CCRMA), Walter Hewlett (Computer-Assisted Research in the Humanities), Blair Kaneshiro (CCRMA), Gautham Mysore (CCRMA), Craig Sapp (Computer-Assisted Research in the Humanities), Eleanor Selfridge-Field (Computer-Assisted Research in the Humanities), Malcolm Slaney (CCRMA)

Artists-in-Residence (St. Lawrence String Quartet): Geoff Nuttall (Violin), Owen Dalby (Violin), Lesley Robertson (Viola), Christopher Costanza (Cello)

Graduate Advising Expectations

The Department of Music is committed to providing academic advising in support of graduate student scholarly and professional development. When most effective, this advising relationship entails collaborative and sustained engagement by both the adviser and the advisee. As a best practice, advising expectations should be periodically discussed and reviewed to ensure mutual understanding. Both the adviser and the advisee are expected to maintain professionalism and integrity.

Faculty advisers guide students in key areas such as selecting courses, designing and conducting research, developing of teaching pedagogy, navigating policies and degree requirements, and exploring academic opportunities and professional pathways.

The faculty program adviser is the primary source of information for the duration of a student's graduate career. Program adviser assignments are made based on perceived best fit at the time of acceptance to a degree program. Only Academic Council Teaching Faculty ("ACTFac" – any tenure-track faculty, i.e., Assistant, Associate, and full Professors),

are eligible to serve as graduate program advisers; however, non-ACTFac instructors may serve as co-advisers in conjunction with an ACTFac instructor. See the faculty listing on the Music website.

Graduate students are active contributors to the advising relationship, proactively seeking academic and professional guidance and taking responsibility for informing themselves of policies and degree requirements for their graduate program. Graduate students are encouraged to meet with their program adviser at least once each quarter, and are actively encouraged to communicate frequently with their advisers. It is valuable to set clear mutual expectations for the advising process, and to revisit those expectations periodically. While developing a proposal for the Ph.D. dissertation or DMA final project, the student should invite a reading committee in consultation with the program adviser and other relevant faculty.

At the start of graduate study, each student is assigned a program adviser. Should a student feel it necessary to change advisers, the following procedure should be followed:

1. Discuss this with the current adviser. With their permission,
2. Solicit agreement from the proposed new adviser.
3. Email the Graduate Student Services Officer with a notification of this change copying both old and new advisers.

If there are problems with the advising relationship, please contact the Department Chair or the Graduate Student Services Officer.

Advising Expectations for Doctoral & Master's Students

A student should be an active advisee and should not wait for your adviser to email. Students should arrange for meetings to discuss coursework, summer plans, quals preparation, language study, and, later, the dissertation topic, fellowship applications, and other aspects of professional development. Students should prepare for these meetings carefully, recognizing that the adviser's time is limited.

Stanford Advising Documents and Resources

The Office of the Vice Provost for Graduate Education (VPGE) works collaboratively with Stanford's schools and departments to enhance the quality of graduate education at Stanford University. Among the many resources at their site is a set of graduate advising resources.

The Graduate Academic Policies and Procedures (GAP) section on advising is available on the GAP website.

For a statement of University policy on graduate advising, see the "" section of this bulletin.

Programs

Music-BA
Degree Designation: BA - Bachelor of Arts

Music-DMA
Degree Designation: DMA - Doctor of Musical Arts

Music-MA
Degree Designation: MA - Master of Arts

Music-Min
Degree Designation:

Music-PhD
Degree Designation: PHD - Doctor of Philosophy

Neurosciences Program Department

Contacts

Office: 290 Jane Stanford Way, E165
Phone: (650) 721-1173
Web Site: http://med.stanford.edu/neurogradprogram.html

Courses offered by the Neurosciences Program are listed under the subject code NEPR on the Stanford Bulletin's ExploreCourses web site.

Faculty

Interim Director of Graduate Studies: Anthony Ricci

Anesthesia: Vivianne Tawfik

Applied Physics: Surya Ganguli

Biochemistry: Mark Krasnow

Bioengineering: Karl Deisseroth, Paul Nuyujukian

Biology: Xiaoke Chen, Liqun Luo, Mark Schnitzer, Carla Shatz, Kang Shen, Marc Tessier-Lavigne

Chemical Engineering: Xiaojing Gao

Comparative Medicine: Paul Buckmaster, Shaul Hestrin

Computer Science: Fei-Fei Li

Electrical Engineering: Krishna Shenoy

Genetics: Aaron Gitler

Molecular and Cellular Physiology: Axel Brunger, Miriam Goodman, Daniel Madison, Merritt Maduke, Thomas Sudhof

Neurobiology: Stephen Baccus, Thomas Clandinin, Shaul Druckmann, Lisa Giocomo, Keren Haroush, Andrew Huberman, Michael Lin, Tirin Moore, William Newsome, Jennifer Raymond

Neurology and Neurological Sciences: Katrin Andreasson, Marion Buckwalter, Paul George, Ting-Ting Huang, John Huguenard, Michelle Monje-Deisseroth, Elizabeth Mormino, Josef Parvizi, Tony Wyss-Coray, Yanmin Yang

Neurosurgery: Lu Chen, E.J. Chichilnisky, Jun Ding, Julia Kaltschmidt, Scott Owen, Ivan Soltesz, Suzanne Tharin, Xinnan Wang, J. Bradley Zuchero

Ophthalmology: Jeffrey Goldberg, Yang Hu, Sui Wang

Otolaryngology: Teresa Nicolson, Anthony Ricci

Pathology: Marius Wernig

Pediatrics: Dennis Wall

Psychiatry and Behavioral Sciences: Luis de Lecea, William Giardino, Erin Gibson, Julie Kauer, Corey Keller, Robert Malenka, Karen Parker, Sergiu Pasca, Nirao Shah, Leanne Williams

Psychology: Justin Gardner, Kalanit Grill-Spector, James McClelland, Anthony Norcia, Russell Poldrack, Anthony Wagner, Daniel Yamins

Radiology: Raag Airan, Scott Linderman

Graduate Advising

Graduate Advising Expectations

The Neurosciences Program is committed to providing academic advising in support of graduate student scholarly and professional development. When most effective, this advising relationship entails collaborative and sustained engagement by both the adviser and the advisee.

Graduate students are active contributors to the advising relationship. They should proactively seeking academic and professional guidance and take responsibility for informing themselves of policies and degree requirements for the Neurosciences Ph.D. program.

All first year Neurosciences graduate student have an assigned first year adviser. This faculty member provides guidance on lab rotations, coursework, thesis lab selection, and reminds students of their academic and administrative responsibilities.

Graduate students are expected to select a thesis adviser by the end of the first year in the program and are encouraged to work collaboratively with their adviser to establish a dissertation project and form a Dissertation Reading Committee. Advancement to doctoral candidacy and the formation of a Dissertation Reading Committee is expected to occur by the end of the second year of the program.

Thesis advisers are expected to meet with graduate students at least once per year and help develop the student's Individual Development Plan (IDP). Additionally, advisers and students should meet on a regular basis throughout the year to discuss the student's professional development in key areas such as selecting courses, designing and conducting research, navigating policies and degree requirements, and exploring academic opportunities and professional pathways. As a best practice, advising expectations should be periodically discussed and reviewed to ensure mutual understanding. Both the adviser and the advisee are expected to maintain professionalism and integrity.

Graduate students are expected to meet with their Dissertation Reading Committee at least annually in the third and fourth year of training, and at least twice annually starting in the fifth year of training.

Academic progress and student completion of program requirements and milestones are monitored by the program director and staff, and may be discussed by faculty at meetings devoted to assessing graduate student progress. A detailed description of the program's requirements, milestones, and advising expectations are listed in the Neurosciences Ph.D. Student Handbook, found on the program website.

For a statement of University policy on graduate advising, see the "Graduate Advising" section of this bulletin, the Stanford Graduate Academic Policies and Procedures (GAP) handbook. Additional guidance and resources are available from The Office of the Vice Provost for Graduate Education.

Programs

NeurS-MS
Degree Designation: MS - Master of Science
-

NeurS-PhD
Degree Designation: PHD - Doctor of Philosophy
-

Overseas Studies Program Department

Contacts

Office: Sweet Hall, Ground Floor, 590 Escondido Mall
Mail Code: 94305-3089
Phone: (650) 723-3558
Email: bospstudy@lists.stanford.edu
Web Site: http://bosp.stanford.edu

Bing Overseas Studies Program

Located on the ground floor of Sweet Hall, BOSP has full-time staff members and student ambassadors to assist in advising and planning for study away. Course and program information, while accurate at the time of publication, is subject to change. Consult the BOSP website for updated information.

The Bing Overseas Studies Program (BOSP) provides opportunities for Stanford students to broaden their undergraduate education through study away and exposure to other cultures. Regular quarter-length programs in Australia, Berlin, Cape Town, Florence, Hong Kong, Istanbul, Kyoto, Madrid, New York, Oxford, Paris, and Santiago offer courses in social and natural sciences, humanities, engineering, and earth sciences with full Stanford credit. Many courses also count toward major requirements and/or fulfill University breadth requirements.

Students may enroll for one or more quarters at most locations. Academic or paid internships are available at certain program locations. Research opportunities are available in various formats at different centers. Minimum academic and language prerequisites are specific to each program. See the BOSP website for information on these prerequisites.

Overseas Studies also offers three-week faculty-led, short-term programs in various locations during Summer Quarter, including Oaxaca, Mexico focused on community health and biocultural diversity, and occasionally other programs in various locations. In addition to the programs offered through BOSP for enrolled Stanford students, the University is a member of the Kyoto Consortium for Japanese Studies (KCJS), where students may enroll while remaining registered at Stanford.

While studying away through BOSP, students remain enrolled at Stanford and pay regular tuition along with an overseas fee, which is based on Stanford on-campus room and board rates. Regular financial aid applies and may be adjusted to cover additional costs. At many centers, students live in a homestay or a dormitory setting with local and other students.

Locations

Courses offered by the Overseas Studies Program are listed on the ExploreCourses web site under subject codes beginning with OSP or SINY. Each BOSP location has its own subject code. Those subject codes, by location, are:

- Australia [OSPAUSTL]
- Berlin [OSPBER]
- Cape Town [OSPCPTWN]
- Florence [OSPFLOR]
- Istanbul [OSPISTAN]
- Hong Kong [OSPHONGK]
- Kyoto [OSPKYOTO]
- Kyoto Consortium for Japanese Studies [OSPKYOCT]
- Madrid [OSPMADRD]
- New York [SINY]
- Oxford [OSPOXFRD]
- Paris [OSPPARIS]
- Santiago [OSPSANTG]

Faculty

Program Director

Program Director: Aron Rodrigue

Stanford Program in Australia

Program suspended for Autumn Quarter 2021-22

Stanford Program in Berlin

Director: Karen Kramer

Faculty-in-Residence: Barbara Pitkin, Brent Sockness, Charlotte Fonrobert, Greg Walton

Program Faculty: : Diana Böbe, Ulrich Brückner, Timur Flissikowski, Wolf-Fabian Hungerland, Martin Jander, Wolf-Dietrich Junghanns, Sylvia Klötzer, Friederike Knüpling, Ralf Müller, Leah Muir, Matthias Pabsch, Matthew Stephen, Tomasz Wozniakowski

Stanford Program in Cape Town

Program suspended for Autumn Quarter 2021-22.

Director: Adelene Africa

Faculty-in-Residence: Lars Osterberg, Chris Piech

Program Faculty: Mohamed Adhikari, John Parkington, Ulrike Rivett, Helen Scanlon, Laura Wenz, Lance Louskieter

Stanford Program in Florence

Director: Ermelinda Campani

Faculty-in-Residence: Mark Hlatky, Sylvia Yanagisako, Tom Byers

Program Faculty: Francesca Banchi, Elena Baracani, Nicola Bellini, Paola Bonizzoni, Giulia Calvi, Veronica De Romanis, John Hooper, Sebastiano Maffettone, Marie Moise, Fiorenza Quercioli, Matteo Renzi, Serena Rovai, Mackda Ghebremariam Tesfau', Timothy Verdon

Stanford Program in Hong Kong

Stanford Program in Istanbul

Program suspended for the 2021-22 academic year.

Stanford Program in Kyoto

Program suspended for Autumn Quarter 2021-22.

Director: Mike Hugh

Faculty-in-Residence: Matthew Somer, James Hamilton

Program Faculty: Yuka Kanno, Yuko Kawahara, Sachiko Kubuki, Catherine Ludvik, Daiko Matsuyama, Yasue Numaguchi, Naoyuki Ogino, Naoko Shiotani, Kiyoko Tanaka, Yoshitaka Terada, Rie Tsujino

Kyoto Consortium for Japanese Studies

Director:

Stanford Program in Madrid

Director: Pedro Pérez--Leal

Faculty-in-Residence: C. Kevin Boyce, Joe Nation

Program Faculty: María Almudena Ariza Armada, Alberto Bosco, Aída Esther Bueno Sarduy, Miguel Buñuel, María Teresa Camblor Portilla, Pablo Campos Calvo Sotelo, Jean Castejón Gilabert, Raúl de la Fuente Marcos, Julia Doménech López, Sylvia Hilton, Miguel Larrañaga Zulueta, Laura Luceño Casals, Irene Martín Cortés, Laura Murcia Cánovas, Alicia Pérez Blanco, Beatriz Pérez Galán, Roshan Samtani, Oscar Sánchez Fuster, Almendra Staffa-Healey

Stanford in New York

Program Director: Rosina Miller

Faculty-in-Residence: Kay Kostopoulos Amarotico, Jonathan Berger, Jennifer DeVere Brody

Program Faculty: Danielle Jackson, James Russell, Mark Oldman, Ben Allanson, Emily Bell, Matthew Boggie, Richard Gowan, Chiseche Mibenge, Mohammed Badi, Jonathan Bronson

Stanford Program in Oxford

Director: Stephanie Solywoda

Faculty-in-Residence: Stephen Monismith, Denise Gigante, Emma Brunskill

Program Faculty: Sebastian Petzolt, Ilya Afanasyev, Emma Plaskitt, Sabine Parrish, Scot Peterson, Roxana Baiasu, Alberto Baena-Lopez, Olivia Reilly, Jack Nasher, Alison Kahn

Stanford Program in Paris

Director: Audrey Calefas-Strebelle

Faculty-in-Residence: Laurence Baker, Jan Skotheim, Helen Longino, Valerie Miner

Program Faculty: Jean-Francois Allemand, Nicolas Baudouin, Nicolas Desprat, Benedicte Gady, Louise Lartigot-Hervier, Eloi Laurent, Florence Leca, Elizabeth Molkou, Gregoire Quenault, Pauline Reychman, Marie-Christine Ricci, Klaus-Peter Sick, Fabrice Vir

Stanford Program in Santiago

Program suspended for Autumn Quarter 2021-22.

Director: Iván Jaksic

Faculty-in-Residence: Rodolfo Dirzo, José David Saldívar, Amalia Kessler

Program Faculty: Mabel Abad, César Albornoz, Germán Correa, Claudia Dides, Rolf Lüders, Sergio Missana, Hernan Pons, Sharon Reid

Philosophy Department

Contacts

Office: Building 90
Mail Code: 94305-2155
Phone: (650) 723-2547
Email: philosophy@stanford.edu
Website: http://philosophy.stanford.edu

Courses offered by the Department of Philosophy are listed under the subject code PHIL on the Stanford Bulletin's ExploreCourses web site.

Philosophy concerns itself with fundamental problems. Some are abstract and deal with the nature of truth, justice, value, and knowledge; others are more concrete, and their study may help guide conduct or enhance understanding of other subjects. Philosophy also examines the efforts of past thinkers to understand the world and people's experience of it.

Although it may appear to be an assortment of different disciplines, there are features common to all philosophical inquiry. These include an emphasis on methods of reasoning and the way in which judgments are formed, on criticizing and organizing beliefs, and on the nature and role of fundamental concepts.

Students of almost any discipline can find something in philosophy which is relevant to their own specialties. In the sciences, it provides a framework within which the foundations and scope of a scientific theory can be studied, and it may even suggest directions for future development. Since philosophical ideas have had an important influence on human endeavors of all kinds, including artistic, political, and economic, students of the humanities and social sciences should find their understanding deepened by acquaintance with philosophy.

Mission of the Undergraduate Program in Philosophy

The mission of the undergraduate program in Philosophy is to train students to think clearly and critically about the deepest and broadest questions concerning being, knowledge, and value, as well as their connections to the full range of human activities and interests. The Philosophy major presents students with paradigms and perspectives of past thinkers and introduces students to a variety of methods of reasoning and judgment formation. Courses in the major equip students with core skills involved in critical reading, analytical thinking, sound argumentation, and the clear, well-organized expression of ideas. Philosophy is an excellent major for those planning a career in law, medicine, business, or the non-profit sector. It provides analytical skills and a breadth of perspective helpful to those called upon to make decisions about their own conduct and the welfare of others. Philosophy majors who have carefully planned their undergraduate program have an excellent record of admission to professional and graduate schools.

Special and Joint Majors

The Special Program in the History and Philosophy of Science enables students to combine interests in science, history, and philosophy. Students interested in this program should see the special adviser.

The Special Option in Philosophy and Literary Thought enables students to combine interests in philosophy and literary studies. Interested students should see the Director of Undergraduate Studies for Philosophy and Literature.

The combined major in Philosophy and Religious Studies joins courses from both departments into a coherent theoretical pattern.

The joint major in Philosophy and Computer Science provides opportunities for the systematic study of computation together with philosophy in the broadest sense.

Graduate Program in Philosophy

The Department of Philosophy offers an M.A. and a Ph.D. degree. The University's basic requirements for the M.A. and Ph.D. degrees are discussed in the Graduate Degrees section of this bulletin.

Library and Associations

The Tanner Memorial Library of Philosophy contains an excellent working library and ideal conditions for study. Graduate students and undergraduate majors in philosophy have formed associations for discussion of philosophical issues and the reading of papers by students, faculty, and visitors.

Faculty

Emeriti (Professors): Dagfinn Føllesdal, Helen Longino, John Perry, Thomas Wasow, Allen Wood, Rega Wood, Denis Phillips (Courtesy Professor)

Chair: Mark Crimmins

Director of Graduate Studies: Chris Bobonich

Director of Undergraduate Studies: Nadeem Hussain

Honors Director and Undergraduate Outreach Coordinator: Nadeem Hussain

Professors: R. Lanier Anderson, Chris Bobonich, Michael Bratman, Ray Briggs (on leave), Alan Code, Graciela De Pierris, John Etchemendy, Michael Friedman, Krista Lawlor, Thomas Ryckman (Teaching), Debra Satz, Brian Skyrms, Johan van Benthem, Leif Wenar

Associate Professors: Mark Crimmins, David Hills (Teaching), Nadeem Hussain

Assistant Professors: Juliana Bidadanure (on leave), Rosa Cao, Jorah Dannenberg, Thomas Icard, Antonia Peacocke, Wendy Salkin (on leave), Jared Warren

Courtesy Professors: Eamonn Callan, Reviel Netz, Josiah Ober, Rob Reich, Thomas Sheehan

Visiting Professors: Terence Irwin, Kendall Walton

Visiting Assistant Professor: Gabrielle Jackson

Lecturers: John Holliday, Rhodes Pinto, Gregory Wong-Taylor

Graduate Advising

For a statement of University policy on graduate advising, see the "Graduate Advising" section of this bulletin.

The Philosophy department is committed to providing academic advising in support of graduate student scholarly and professional development. Faculty advisors guide students in key areas such as selecting courses, designing and conducting research, navigating degree requirements, exploring academic and professional opportunities, and preparing for their post-degree careers. When most effective, this advising relationship involves collaborative and

sustained engagement by both the advisor and the advisee. An important part of the advisee-advisor relationship is that students learn to advocate for themselves; this includes discussing expectations for the advisor-advisee relationship with the advisor and revisiting these expectations periodically.

Master's Advising

Each first year Philosophy M.A. student is assigned an advisor on the basis of the student's interests. Entering students should meet with their advisors to discuss the selection of courses. Changes of advisors are always possible; they are initiated by a request of the graduate student to the M.A. Director and require the agreement of the proposed new advisor.

The department expects that M.A. advisors meet with their advisees regularly and at least once during the academic year. Such meetings may either be in-person or via the Internet (Skype, Zoom, etc.) and may be scheduled in-person or by email. Students typically initiate such meetings although faculty, when appropriate, try to get in touch with students who do not stay in regular contact.

M.A. advisors direct students towards the successful completion of the degree in good time. The Director of Graduate Studies and the M.A. Director monitor the student's progress and may initiate meetings when appropriate. Any graduate student can always seek the advice of the M.A. Director or the Director of Graduate Studies on general issues pertaining to the graduate program.

Academic progress and student completion of program requirements and milestones are monitored by the program director and staff, and are discussed by faculty at an annual meeting devoted to assessing graduate student progress. A detailed description of the program's requirements, milestones, and advising expectations is found in the Stanford Bulletin. Additionally, the program adheres to the advising guidelines and responsibilities listed by the Office of the Vice Provost for Graduate Education (VPGE) and in the (GAP).

Graduate students are active contributors to the advising relationship. They should proactively seek academic and professional guidance and take responsibility for informing themselves of policies and degree requirements.

As a best practice, advising expectations should be periodically discussed and reviewed to promote mutual understanding.

Doctoral Advising

Each first year Philosophy Ph.D. student is assigned an advisor on the basis of the student's stated interests. Entering students should meet with their Ph.D. advisors to discuss the selection of courses. Changes of advisors are always possible; they are initiated by a request of the graduate student to the Director of Graduate Studies (DGS) and require the agreement of the proposed new advisor. Students may, for instance, change advisors as their research focus takes shape. Ph.D. advisors direct students towards the successful completion of the degree in good time. In the first years of the program, this means successfully reaching candidacy. The DGS also monitors the student's progress and may initiate meetings when appropriate. Any graduate student can always seek the advice of the Director of Graduate Studies on general issues pertaining to the graduate program.

The department expects that Ph.D. advisors, during the student's first two years, meet with their advisees at least once per quarter during the academic year. Such meetings may either be in-person or via the Internet (Skype, Zoom, etc.) and may be scheduled in-person or by email. Students typically initiate such meetings although faculty, when appropriate, try to get in touch with students who do not stay in regular contact. Academic progress and student completion of program requirements and milestones are monitored by the Ph.D. advisor, the DGS, and staff, and are discussed by faculty at an annual meeting devoted to assessing graduate student progress. A detailed description of the program's requirements, milestones, and advising expectations is found on the Stanford Bulletin. Additionally, the program adheres to the advising guidelines and responsibilities listed by the Office of the Vice Provost for Graduate Education (VPGE) and in the Graduate Academic Policies (GAP).

A required pre-dissertation seminar in the summer after the second year helps students make the transition to forming a dissertation committee and starting to work on their dissertation. The University's requirements for the composition of the dissertation committee may be found in the Doctoral section of this bulletin. Dissertation development seminars are available to graduate students in their third year and beyond. At this point in the program, students often transition from the Ph.D. advisor to a dissertation advisor.

Students and their dissertation advisors are expected to regularly establish mutually agreed upon expectations for turning in written work. Dissertation advisors are expected to meet quarterly with their advisees. Submitted work is to be discussed or commented upon without undue delay. During each year that the student teaches in the department, a student's teaching experience and preparation for academic teaching is to be discussed during at least one meeting with their dissertation advisors.

Dissertation advisors direct the student towards the successful completion of the degree in good time. The DGS monitors the student's progress and initiates meetings when appropriate. The DGS and the placement committee cooperate to make the student aware of opportunities for professional development both inside and outside academics.

Advising and mentoring relationships are not limited to members of the dissertation committee, and all faculty (especially those on the student's dissertation committee) contribute when they can. When a faculty member joins a Ph.D. dissertation committee, the faculty member and the student should meet and work out mutually agreed upon expectations about how often they meet and when written work is to be turned in. Such work is to be read and commented on within a reasonable period of time. Any graduate student can always seek the advice of the Director of Graduate Studies on general issues pertaining to the graduate program.

Graduate students are active contributors to the advising relationship. They should proactively seek academic and professional guidance and take responsibility for informing themselves of policies and degree requirements for the Philosophy Ph.D. program.

As a best practice, advising expectations should be periodically discussed and reviewed to promote mutual understanding.

Dissertation advisors, members of the dissertation committee, and the advisee are expected to maintain professionalism and integrity throughout the course of their work together.

Programs

Philo-BA
Degree Designation: BA - Bachelor of Arts

Philo-MA
Degree Designation: MA - Master of Arts

Philo-Min
Degree Designation:

Philo-PhD
Degree Designation: PHD - Doctor of Philosophy

Philo-PMn
Degree Designation:

PhRel-BA
Degree Designation: BA - Bachelor of Arts
-

Physician Assistant Studies Department

Contacts

Office: Medical School Office Building (MSOB), 1265 Welch Road, Ste. 100
Mail Code: 5195
Phone: (650) 725-6959
Web Site: http://med.stanford.edu/pa

Courses offered by the Master of Science in Physician Assistant Studies program are listed under the subject code PAS on the Stanford Bulletin's Explore Courses website.

The Master of Science (M.S.) in Physician Assistant Studies, or MSPA, program is a 9-quarter program (with one summer break) that includes streamlined courses with innovative content delivery, a state-of-the-art simulation lab, and world-class clinical anatomy experiences as well as early exposure to patient care. Students receive mentorship and support in their academic and research focus areas by clinically practicing Stanford PAs. During the didactic work, PA students are located at the School of Medicine and enroll as a cohort in a clinically focused curriculum. A substantial portion of their courses are integrated with medical students, allowing for an invaluable interprofessional education experience. During their clerkship year, students rotate through Stanford-affiliated hospitals and ambulatory practices as well as select sites throughout California. In an innovative approach to PA education that encourages the next generation of PA leaders, students are required to select one leadership track and complete a capstone project in that area. The leadership tracks include:

- Community Health
- Health Services and Policy Research
- Clinical Research
- Medical Education
- Healthcare Administration

Upon completion of this program, students are prepared to sit for the Physician Assistant National Certification Examination (PANCE).

The Master of Science in Physician Assistant Studies program is open to external as well as internal applicants. Advanced placement and coterminal degrees for Stanford University undergraduates are not available at this time. Individuals who wish to apply to the program should do so via the Central Application Service for Physician Assistants (CASPA). The application window typically opens at the end of April and closes on August 1, though the deadline has been extended to October 1 for the 2020 application cycle only. GRE scores *or* MCAT scores are typically required, though this requirement is being waived for the 2020 application cycle. The CASPer exam is also required, and this requirement has not been waived for the 2020 cycle. An undergraduate degree from a regionally accredited US educational institution is required; applicants with a graduate degree from a regionally accredited U.S. academic institution **and** an equivalent undergraduate degree (see required minimum level of study) from a recognized academic institution outside the U.S. are also eligible to apply. For detailed information on applying, please visit the Admissions section of our website.

Faculty

Leadership

Associate Dean for PA Education and Program Director: Susan Fernandes
Associate Program Director: Rhonda Larsen
Medical Director: Andrew Nevins
Associate Medical Director: Ian Nelligan

Core Faculty

Director of Pre-Clerkship Education: Nicole Burwell
Director of Clerkship Education: Kendra Patton Silverman
Director of Student Scholarship: Michele Toussaint
Clinical Site Director - Central Valley: Sampath (Sam) Wijesinghe

Educators for Care PA (E4C-PA) Faculty

Lead E4C-PA: Courtney Nelson

Chad Anderson
Camille Bloom
Andrea Fox
Jennifer Hunter
Rochelle Reyes
Hannah Wright

Graduate Advising

Graduate Advising Expectations

The Master of Science in Physician Assistant Studies program is committed to providing academic advising in support of graduate student scholarly and professional development. When most effective, this advising relationship entails collaborative and sustained engagement by both the advisor and the advisee. As a best practice, advising expectations should be periodically discussed and reviewed to ensure mutual understanding. Both the advisor and the advisee are expected to maintain professionalism and integrity.

Faculty advisors guide students in key areas such as selecting courses, designing and conducting research, development of teaching pedagogy, navigating policies and degree requirements, and exploring academic opportunities and professional pathways.

Graduate students are active contributors to the advising relationship, proactively seeking academic and professional guidance and taking responsibility for informing themselves of policies and degree requirements for their graduate program.

For a statement of University policy on graduate advising, see the Graduate Advising section of this bulletin.

Programs

PAS-MS
Degree Designation: MS - Master of Science
-

Physics Department

Contacts

Office: 382 Via Pueblo Mall
Mail Code: 94305-4060
Phone: (650) 723-4344
Web Site: Physics

Mission of the Undergraduate Program in Physics

The mission of the undergraduate program in Physics is to provide students with a strong foundation in both classical and modern physics. The goal of the program is to develop both quantitative problem-solving skills and the ability to conceive experiments and analyze and interpret data. These abilities are acquired through both course work and opportunities to conduct independent research. The program prepares students for careers in fields that benefit from quantitative and analytical thinking, including physics, engineering, teaching, medicine, law, science writing, and science policy, in government or the private sector. In some cases, the path to this career will be through an advanced degree in physics or a professional program.

Course Work

The course work is designed to provide students with a sound foundation in both classical and modern physics. Students who wish to specialize in astronomy, astrophysics, or space science should also consult the Physics Minor section of this bulletin, looking specifically at the Minor in Physics with a Concentration in Astronomy.

Three introductory series of courses include labs in which undergraduates carry out individual experiments. The Intermediate and Advanced Physics Laboratories offer facilities for increasingly complex individual work, including the conception, design, and fabrication of laboratory equipment. Undergraduates are also encouraged to participate in research; most can do this through the senior thesis and/or the summer research program.

The study of physics is undertaken by three principal groups of undergraduates: those including physics as part of a general education; those preparing for careers in professional fields that require a knowledge of physics, such as medicine or engineering; and those preparing for careers in physics or related fields, including teaching and research in colleges and universities, research in federally funded laboratories and industry, and jobs in technical areas. Physics courses numbered below 100 are intended to serve all three of these groups. The courses numbered above 100 mainly meet the needs of the third group, but also of some students majoring in other branches of science and engineering.

Entry-Level Sequences in Physics

The Department of Physics offers three-year-long, entry-level physics sequences, the PHYSICS 20, 40, and 60 series. The first of these (the 20 series) is non-calculus-based, and is intended primarily for those who are majoring in biology. Students with AP Physics credit, particularly those who are considering research careers, may wish to consider taking the PHYSICS 40 series, rather than using AP placement. These introductory courses provide a depth and emphasis on problem-solving that has significant value in biological research, given today's considerable physics-based technology.

For those intending to major in engineering or the physical sciences, or simply wanting a stronger background in physics, the department offers the PHYSICS 40 and 60 series. Either of these satisfies the entry-level physics requirements of any Stanford major. The 60 series is intended for those who have already taken a Physics course at the level of the 40 series, or at least have a strong background in mechanics, some background in electricity and magnetism, and a strong background in calculus.

The PHYSICS40 VECTOR AND MATHEMATICAL ANALYS series begins with PHYSICS41 MECHANICS Mechanics offered Autumn and Winter Quarters, PHYSICS43 ELECTRICITY & MAGNETISM Electricity and Magnetism offered Winter and Spring Quarters, and PHYSICS45 LIGHT AND HEAT Light and Heat offered Autumn Quarter. While it is recommended that most students begin the series with PHYSICS41 MECHANICS, those who have had strong physics preparation in high school (as indicated by the Physics Placement Diagnostic or a score of 5 on the AP Physics C-Mechanics exam) may start the series with PHYSICS45 LIGHT AND HEAT in Autumn Quarter.

PHYSICS40 VECTOR AND MATHEMATICAL ANALYS , an optional 2-unit class offered in Autumn Quarter, provides extra instruction in mathematics and physics concepts required for success in PHYSICS41 MECHANICS and is intended for students who may not have had the opportunity to take calculus or physics in high school, as indicated by the Physics Placement Diagnostic. Students who enroll in PHYSICS40 VECTOR AND MATHEMATICAL ANALYS in the Autumn should then enroll in PHYSICS41 MECHANICS in a later quarter.

The Physics Tutoring Center offers students in the entry-level courses an environment for working with other students and receiving assistance from a member of the teaching staff. It is staffed Monday through Friday.

Entry-Level Course List

One course from the following is recommended for the humanities or social science student who wishes to become familiar with the methodology and content of modern physics:

		Course List
		UNITS
PHYSICS15 STARS AND PLANETS IN A HABITAB	Stars and Planets in a Habitable Universe	3
PHYSICS16 ORIGIN AND DEVELOPMENT OF THE	The Origin and Development of the Cosmos	3
PHYSICS17 BLACK HOLES AND EXTREME ASTROP	Black Holes and Extreme Astrophysics	3

The 20 series (below) is recommended for general students and for students preparing for medicine or biology:

		Course List
		UNITS
PHYSICS21 MECHANICS, FLUIDS, AND HEAT	Mechanics, Fluids, and Heat	4
PHYSICS22 MECHANICS, FLUIDS, AND HEAT LA	Mechanics, Fluids, and Heat Laboratory	1
PHYSICS23 ELECTRICITY, MAGNETISM, AND OP	Electricity, Magnetism, and Optics	4
PHYSICS24 ELECTRICITY, MAGNETISM, AND OP	Electricity, Magnetism, and Optics Laboratory	1
PHYSICS25 MODERN PHYSICS	Modern Physics	4
PHYSICS26 MODERN PHYSICS LAB	Modern Physics Laboratory	1

The 40 series (below) is for students majoring in engineering, chemistry, earth sciences, mathematics, or physics:

		Course List
		UNITS
PHYSICS41 MECHANICS	Mechanics	4
PHYSICS42 CLASSICAL MECHANICS LAB	Classical Mechanics Laboratory	1
PHYSICS43 ELECTRICITY & MAGNETISM	Electricity and Magnetism	4
PHYSICS44 ELECTRICITY & MAGNETISM LAB	Electricity and Magnetism Lab	1
PHYSICS45 LIGHT AND HEAT	Light and Heat	4
PHYSICS46 LIGHT & HEAT LAB	Light and Heat Laboratory	1

The 60 series (below), or advanced freshman series, is for students who have had strong preparation in physics and calculus in high school. Students who have had the appropriate background and wish to major in physics should take this introductory series:

		Course List
		UNITS
PHYSICS61 MECHANICS & SPECIAL RELATIVITY	Mechanics and Special Relativity	4
PHYSICS62 MECHANICS LAB	Mechanics Laboratory	1
PHYSICS63 ELECTRICITY, MAGNETISM & WAVES	Electricity, Magnetism, and Waves	4
PHYSICS64 ELECTRICITY, MAGNETISM AND WAV	Electricity, Magnetism and Waves Laboratory	1
PHYSICS65 QUANTUM & THERMAL PHYSICS	Quantum and Thermal Physics	4
PHYSICS67 INTRO TO LABORATORY PHYSICS	Introduction to Laboratory Physics	1

Physics Placement Diagnostic

All students: You must take the Physics Placement Diagnostic if you intend to enroll in either PHYSICS40 VECTOR AND MATHEMATICAL ANALYS or PHYSICS41 MECHANICS or PHYSICS45 LIGHT AND HEAT or PHYSICS61 MECHANICS & SPECIAL RELATIVITY and you have never taken an entry-level Physics course at Stanford -- i.e., you have not taken at least one of PHYS 21, 23, 25, 41, 41A/E, 43, 45, 61, 63, 65.

For more information, see the department's page.

Graduate Programs in Physics

Graduate students find opportunities for research in many areas of Physics. Faculty advisers are drawn from many departments, including, but not limited to Physics, Particle Physics and Astrophysics at SLAC, Photon Science at SLAC, Materials Science and Engineering, Electrical Engineering, and Biology.

The number of graduate students admitted to the Department of Physics is strictly limited. Students should submit applications by Tuesday, December 14, 2021 at 11:59 p.m. Pacific Time for matriculation the following Autumn Quarter. Graduate students may normally enter the department only at the beginning of Autumn Quarter.

Fellowships and Assistantships

The Department of Physics makes an effort to support all its graduate students through fellowships, teaching assistantships, research assistantships, or a combination of sources. More detailed information is provided with the offer of admission.

Laboratories and Institutes

The Russell H. Varian Laboratory of Physics, the Physics and Astrophysics Building, the W. W. Hansen Experimental Physics Laboratory (HEPL), the E. L. Ginzton Laboratory, the Center for Nanoscale Science and Engineering and the Geballe Laboratory for Advanced Materials (GLAM) together house a range of physics activities from general courses through advanced research. Ginzton Lab houses research on optical systems, including quantum electronics,

metrology, optical communication and development of advanced lasers. GLAM houses research on novel and nanopatterned materials, from high-temperature superconductors and magnets to organic semiconductors, subwavelength photon waveguides, and quantum dots. GLAM also supports the materials community on campus with a range of characterization tools: it is the site for the Stanford Nanocharacterization Lab (SNL) and the NSF-sponsored Center for Probing the Nanoscale (CPN). The SLAC National Accelerator Laboratory is just a few miles from the Varian Laboratory. SLAC is a national laboratory funded by the Offices of Basic Energy Sciences and High Energy Physics of the Department of Energy. Scientists at SLAC conduct research in photon science, accelerator physics, particle physics, astrophysics and cosmology. The laboratory hosts a two-mile-long linear accelerator that can accelerate electrons and positrons. The Stanford Synchrotron Radiation Light Source (SSRL) uses intense x-ray beams produced with a storage ring on the SLAC site. The Linac Coherent Light Source (LCLS), completed in 2009, is the world's first x-ray free-electron laser and has opened new avenues of research in ultra-fast photon science.

The Kavli Institute for Particle Astrophysics and Cosmology (KIPAC), formed jointly with the SLAC National Accelerator Laboratory, provides a focus for theoretical, computational, observational, and instrumental research programs. A wide range of research areas in particle astrophysics and cosmology are investigated by students, postdocs, research staff and faculty. The two major projects with which KIPAC is heavily involved are the Fermi Gamma-Ray Space Telescope (FGST) and the Large Synoptic Survey Telescope (LSST). KIPAC members also participate fully in the Cryogenic Dark Matter Search (CDMS), the Solar Dynamics Observatory (SDO), the EXO-200 double beta decay experiment, the Dark Energy Survey (DES), the NuSTAR and Astro-H X-ray satellites, and several cosmic microwave background experiments (BICEP, KECK, QUIET and POLAR-1).

The Ginzton Laboratory, HEPL, GLAM, KIPAC, SLAC, and SSRL are listed in the "Centers, Laboratories, and Institutes" section of this bulletin. Students may also be interested in research and facilities at two other independent labs: the Center for Integrated Systems, focused on electronics and nanofabrication; and the Clark Center, an interdisciplinary biology, medicine, and bioengineering laboratory.

The Stanford Institute for Theoretical Physics is devoted to the investigation of the basic structure of matter (particle theory, string theory, M-theory, quantum cosmology, condensed matter physics).

Physics Course Numbering System

Course numbers beyond 99 are numbered in accordance with a three-digit code. The first digit indicates the approximate level of the course:

	Physics Course Catalog Numbering System
DIGIT	**DESCRIPTION**
100	intermediate and advanced undergraduate courses
200	first-year graduate courses
300	more advanced courses
400	research, special, or current topics

The second digit indicates the general subject matter:

	Physics Course Catalog Numbering System
DIGIT	**DESCRIPTION**
00	laboratory
10,20,30	general courses
40	nuclear physics, nuclear energy, energy
50	elementary particle physics
60	astrophysics, cosmology, gravitation
70	condensed matter physics
80	optics and atomic physics
90	miscellaneous courses

Faculty

Emeriti: (Professors) Sebastian Doniach, Alexander L. Fetter, William A. Little, Douglas D. Osheroff, H. Alan Schwettman, Robert V. Wagoner, John Dirk Walecka, Stanley G. Wojcicki, Mason R. Yearian; (Professors, Research) John A. Lipa, Todd I. Smith, John P. Turneaure; (Professor, Courtesy) Peter A. Sturrock (Applied Physics), Richard Taylor (SLAC National Accelerator Laboratory)

Chair: Shamit Kachru (Autumn), Giorgio Gratta (Winter, Spring, Summer)

Director of Undergraduate Studies: Peter Graham

Director of Graduate Studies: Renata Kallosh

Professors: Tom Abel, Steven Allen, Roger Blandford, Phil Bucksbaum, Patricia Burchat, Blas Cabrera, Steven Chu, Sarah Church, Persis Drell, Savas G. Dimopoulos, David Goldhaber-Gordon, Giorgio Gratta, Patrick Hayden, Kent Irwin, Shamit Kachru, Steven Kahn, Renata E. Kallosh, Aharon Kapitulnik, Mark Kasevich, Steven A. Kivelson, Chao-Lin Kuo, Robert B. Laughlin, Andrei D. Linde, Bruce Macintosh, Kathryn Moler, Peter F. Michelson, Vahe Petrosian, Xiao-liang Qi, Roger W. Romani, Zhi-Xun Shen, Stephen Shenker, Eva Silverstein, Leonard Susskind, Risa Wechsler, Carl Wieman

Associate Professors: Peter Graham, Sean Hartnoll, Benjamin Lev, Hari Manoharan, Srinivas Raghu, Monika Schleier-Smith, Douglas Stanford, Lauren Tompkins

Assistant Professors: Susan Clark, Benjamin Feldman, Jason Hogan, Vedika Khemani

Professors (Research): Leo Hollberg, Phillip H. Scherrer

Courtesy Professors: Daniel Akerib, Rhiju Das, Craig Levin, Stephen Quake, Thomas Shutt, Richard N. Zare

Lecturers: Julien Devin, Chaya Nanavati, Rick Pam

Adjunct Professor: Adam Brown, Ralph DeVoe, Marc Kastner, Grzegorz Madejski, Steve Yellin

Graduate Advising Expectations

The Department of Physics is committed to providing academic advising in support of graduate student scholarly and professional development. When most effective, this advising relationship entails collaborative and sustained engagement by both the adviser and the advisee. As a best practice, advising expectations should be periodically discussed and reviewed to ensure mutual understanding. Both the adviser and the advisee are expected to maintain professionalism and integrity.

Faculty advisers guide students in key areas such as selecting courses, designing and conducting research, developing of teaching pedagogy, navigating policies and degree requirements, and exploring academic opportunities and professional pathways.

Graduate students are active contributors to the advising relationship, proactively seeking academic and professional guidance and taking responsibility for informing themselves of policies and degree requirements for their graduate program.

For a statement of University policy on graduate advising, see the Graduate Advising section of this bulletin.

Studies in Astronomy

Contacts

Office: Varian, Room 342
Mail Code: 94305-4060
Phone: (650) 723-1439
Web Site: http://kipac.stanford.edu

Astronomy courses are offered primarily through the Physics department, with subject code PHYSICS.

Although Stanford University does not have a degree program in astronomy or astrophysics, teaching and research in various branches of these disciplines are ongoing activities in the departments of Applied Physics, Physics, SLAC National Accelerator Laboratory, and Hansen Experimental Physics Laboratory (HEPL).

For the convenience of students interested in astronomy, astrophysics, and cosmology, a course program for undergraduate and graduate study is listed in the "Astronomy Related Courses" section of this bulletin. The list includes introductory courses for the student who wishes to be informed about the fields of astronomy without the need for prerequisites beyond high school algebra and physics. Courses in astronomy numbered below 100 are designed to serve this group of students. Astronomy courses numbered 100-199 serve the student interested in an initial scientific study of astronomy. The courses numbered 200 and above are for graduate students and advanced undergraduates, subject to prior approval by the course instructor.

Undergraduate Programs in Astronomy

The University does not offer a separate undergraduate major in Astronomy. Students who intend to pursue graduate study in astronomy or space science are encouraged to major in physics, following the advanced sequence if possible, or in electrical engineering, if the student has a strongly developed interest in radioscience. The course descriptions for these basic studies are listed under the appropriate department sections of this bulletin. Students desiring guidance in developing an astronomy-oriented course of study should contact the chair of the Astronomy Program Committee. The following courses are suitable for undergraduates and are recommended to students considering advanced study in astronomy or astrophysics:

		Course List
		UNITS
PHYSICS100 OBSERVATIONAL ASTROPHYSICS	Introduction to Observational Astrophysics	4
PHYSICS160 INTRO TO STELLAR & GALACTIC AS	Introduction to Stellar and Galactic Astrophysics	3
PHYSICS161 INTRODUCTION TO COSMOLOGY AND	Introduction to Cosmology and Extragalactic Astrophysics	3
Students planning to study in astronomy beyond the B.S. are urged to take:		
PHYSICS262 GENERAL RELATIVITY	General Relativity	3

The above-mentioned courses are required for physics majors who choose the curriculum with a concentration in astrophysics (see the above Physics section of this bulletin).

Stanford Student Observatory

The student observatory, located in the hills to the west of the campus, is equipped with 24-inch and other small reflecting telescopes. It is used for instruction of the observation-oriented courses, PHYSICS50 ASTRNMY LAB AND OBSERVTNL ASTR Astronomy Laboratory and Observational Astronomy and PHYSICS100 OBSERVATIONAL ASTROPHYSICS Introduction to Observational Astrophysics.

Minor in Physics with Concentration in Astronomy

Students wishing to pursue advanced work in astrophysical sciences should major in physics and concentrate on astrophysics. However, students outside of Physics with a general interest in astronomy may organize their studies by completing one of the following Physics minor concentration programs.

Students who take the 20, 40, or 60 series at Stanford in support of their major may count those units towards the minor.

An undergraduate Physics minor with a concentration in Astronomy requires the following courses:

Non-Technical

For students whose majors do not require the PHYSICS 40 or 60 series:

		Course List
		UNITS
PHYSICS21 MECHANICS, FLUIDS, AND HEAT	Mechanics, Fluids, and Heat	4
PHYSICS23 ELECTRICITY, MAGNETISM, AND OP	Electricity, Magnetism, and Optics	4
PHYSICS25 MODERN PHYSICS & PHYSICS26 MODERN PHYSICS LAB	Modern Physics and Modern Physics Laboratory	5
PHYSICS50 ASTRNMY LAB AND OBSERVTNL ASTR	Astronomy Laboratory and Observational Astronomy	3-4
o r PHYSICS100 OBSERVATIONAL ASTROPHYSICS	Introduction to Observational Astrophysics	
Select two of the following:		6
PHYSICS15 STARS AND PLANETS IN A HABITAB	Stars and Planets in a Habitable Universe	
PHYSICS16 ORIGIN AND DEVELOPMENT OF THE	The Origin and Development of the Cosmos	
PHYSICS17 BLACK HOLES AND EXTREME ASTROP	Black Holes and Extreme Astrophysics	
Total Units		22-23

Technical

For students whose majors require the PHYSICS 40 or 60 series:

		Course List
		UNITS
Select one of the following Series:		14-17
Series A		
PHYSICS41 MECHANICS	Mechanics	
PHYSICS43 ELECTRICITY & MAGNETISM	Electricity and Magnetism	
PHYSICS45 LIGHT AND HEAT & PHYSICS46 LIGHT & HEAT LAB	Light and Heat and Light and Heat Laboratory	
PHYSICS70 FOUNDATIONS OF MODERN PHYSICS	Foundations of Modern Physics	
Series B		
PHYSICS61 MECHANICS & SPECIAL RELATIVITY	Mechanics and Special Relativity	
PHYSICS63 ELECTRICITY, MAGNETISM & WAVES	Electricity, Magnetism, and Waves	
PHYSICS65 QUANTUM & THERMAL PHYSICS	Quantum and Thermal Physics	
PHYSICS67 INTRO TO LABORATORY PHYSICS	Introduction to Laboratory Physics	
And take the following three courses:		
PHYSICS100 OBSERVATIONAL ASTROPHYSICS	Introduction to Observational Astrophysics	4
PHYSICS160 INTRO TO STELLAR & GALACTIC AS	Introduction to Stellar and Galactic Astrophysics	3
PHYSICS161 INTRODUCTION TO COSMOLOGY AND	Introduction to Cosmology and Extragalactic Astrophysics	3
Total Units		24-27

Students are also encouraged to take the electricity and magnetism/optics lab of the appropriate PHYSICS series, PHYSICS24 ELECTRICITY, MAGNETISM, AND OP, PHYSICS44 ELECTRICITY & MAGNETISM LAB, or PHYSICS64 ELECTRICITY, MAGNETISM AND WAV for 1 additional unit.

Graduate Programs in Astronomy

Graduate programs in astronomy and astrophysics and related topics are carried out primarily in the Department of Physics but also the departments of Applied Physics and Electrical Engineering. Students should consult the course listings, degree requirements, and research programs of these departments for more detailed information.

Graduate research opportunities are available in many areas of theoretical and observational astronomy. For further information, see the Kavli Institute of Particle Astrophysics and Cosmology website.

		Course List
		UNITS
Students planning to conduct research in astrophysics but lacking a background in astrophysics and/or gravitation should take 2-3 appropriate courses from the following list:		
PHYSICS260 INTRO TO STELLAR & GALACTIC AS	Introduction to Stellar and Galactic Astrophysics	3
PHYSICS261 INTRODUCTION TO COSMOLOGY AND	Introduction to Cosmology and Extragalactic Astrophysics	3
PHYSICS262 GENERAL RELATIVITY	General Relativity	3
All students planning to conduct research in astronomy and astrophysics are strongly encouraged to take:		
PHYSICS301 ASTROPHYSICS LAB	Astrophysics Laboratory	3
PHYSICS360 MODERN ASTROPHYSICS	Modern Astrophysics	3
PHYSICS361 COSMO & EXTRAGALAC ASTRO	Cosmology and Extragalactic Astrophysics	3
In addition, astrophysics students should consider these courses as appropriate to their thesis topic:		
PHYSICS269 NEUTRINOS IN ASTROPHYSICS AND	Neutrinos in Astrophysics and Cosmology	3
PHYSICS362 THE EARLY UNIVERSE	The Early Universe (not offered 2021-22)	3
PHYSICS364 GRAVITATIONAL RADIATION, BLACK	Gravitational Radiation, Black Holes, and Neutron Stars (not offered 2021-2022)	3
PHYSICS366 STATISTICAL METHODS IN ASTROPH	Statistical Methods in Astrophysics (Not offered 2021-2022)	2
PHYSICS367 SPECIAL TOPICS IN ASTROPHYSICS	Special Topics in Astrophysics: Structure Formation and Galaxy Formation	2

Each year a number of "special topics" courses are offered. Refer to courses in the PHYSICS 360 range for more details. Students interested in research programs in space physics involving spacecraft studies of the planets, their satellites, and their near-space environments should see the "Center for Space Science and Astrophysics" section of this bulletin.

Astronomy Cognate Courses

Elementary Lectures

The following courses provide a descriptive knowledge of astronomical objects and astrophysics. PHYSICS15 STARS AND PLANETS IN A HABITAB, PHYSICS16 ORIGIN AND DEVELOPMENT OF THE, and PHYSICS17 BLACK HOLES AND EXTREME ASTROP are for students not majoring in the sciences and are taught in different quarters by different instructors, and may be taken individually or in any order.

		Course List
		UNITS
PHYSICS15 STARS AND PLANETS IN A HABITAB	Stars and Planets in a Habitable Universe	3
PHYSICS16 ORIGIN AND DEVELOPMENT OF THE	The Origin and Development of the Cosmos	3
PHYSICS17 BLACK HOLES AND EXTREME ASTROP	Black Holes and Extreme Astrophysics	3

Observatory

The following courses allow students to use the on-campus Stanford Student Observatory and are intended to familiarize students with observational methods and analysis of astronomical data. PHYSICS50 ASTRNMY LAB AND OBSERVTNL ASTR is for general students, while PHYSICS100 OBSERVATIONAL ASTROPHYSICS involves more advanced observations and is intended for students with a college-level background in physics.

		Course List
		UNITS
PHYSICS50 ASTRNMY LAB AND OBSERVTNL ASTR	Astronomy Laboratory and Observational Astronomy	3
PHYSICS100 OBSERVATIONAL ASTROPHYSICS	Introduction to Observational Astrophysics	4

Advanced Undergraduate

The following courses are for students with more advanced knowledge of basic physics and mathematics and form the core courses for a concentration in astrophysics for Physics majors.

		Course List
		UNITS
PHYSICS160 INTRO TO STELLAR & GALACTIC AS	Introduction to Stellar and Galactic Astrophysics	3
PHYSICS161 INTRODUCTION TO COSMOLOGY AND	Introduction to Cosmology and Extragalactic Astrophysics	3

Graduate

		Course List
		UNITS
PHYSICS260 INTRO TO STELLAR & GALACTIC AS	Introduction to Stellar and Galactic Astrophysics	3
PHYSICS261 INTRODUCTION TO COSMOLOGY AND	Introduction to Cosmology and Extragalactic Astrophysics	3
PHYSICS262 GENERAL RELATIVITY	General Relativity	3
PHYSICS269 NEUTRINOS IN ASTROPHYSICS AND	Neutrinos in Astrophysics and Cosmology	3
PHYSICS301 ASTROPHYSICS LAB	Astrophysics Laboratory	3
PHYSICS361 COSMO & EXTRAGALAC ASTRO	Cosmology and Extragalactic Astrophysics	3
PHYSICS362 THE EARLY UNIVERSE	The Early Universe (Not offered 2021-22)	3
PHYSICS366 STATISTICAL METHODS IN ASTROPH	Statistical Methods in Astrophysics (Not offered 2021-22)	2

Faculty

Emeriti: (Professors) Peter A. Sturrock, G. Leonard Tyler, Robert V. Wagoner

Chair: Vahe Petrosian

Committee: Steve Allen, Vahe Petrosian, Roger W. Romani

Professors: Tom Abel (Physics, SLAC), Steve Allen (Physics, SLAC), Roger Blandford (Physics, SLAC), Pat Burchat (Physics), Blas Cabrera (Physics), Sarah Church (Physics), Kent Irwin (Physics, SLAC), Steven Kahn (Physics, SLAC), Chao-Lin Kuo (Physics, SLAC), Bruce Macintosh (Physics), Peter Michelson (Physics), Vahé Petrosian (Physics, Applied Physics),

Roger W. Romani (Physics), Risa Wechsler (Physics, SLAC)

Professor (Research): Philip H. Scherrer (Physics)sic InnysshyHYSIYS

Graduate Advising Expectations

The Department of Physics is committed to providing academic advising in support of graduate student scholarly and professional development. When most effective, this advising relationship entails collaborative and sustained engagement by both the adviser and the advisee. As a best practice, advising expectations should be periodically discussed and reviewed to ensure mutual understanding. Both the adviser and the advisee are expected to maintain professionalism and integrity.

Faculty advisers guide students in key areas such as selecting courses, designing and conducting research, developing of teaching pedagogy, navigating policies and degree requirements, and exploring academic opportunities and professional pathways.

Graduate students are active contributors to the advising relationship, proactively seeking academic and professional guidance and taking responsibility for informing themselves of policies and degree requirements for their graduate program.

For a statement of University policy on graduate advising, see the Graduate Advising section of this bulletin.

Programs

Phys-BS
Degree Designation: BS - Bachelor of Science

Phys-MS
Degree Designation: MS - Master of Science

Phys-PMn
Degree Designation:

Phys-Min
Degree Designation:

Phys-PhD
Degree Designation: PHD - Doctor of Philosophy

Political Science Department

Contacts

Office: Encina Hall West, room 100
Mail Code: 94305-6044
Phone: (650) 723-1608
Web Site: politicalscience.stanford.edu

Courses offered by the Department of Political Science are listed under the subject code POLISCI on the Stanford Bulletin's ExploreCourses website.

Mission of the Undergraduate Program in Political Science

The mission of the undergraduate program in Political Science is to provide students with a solid grasp of the American political system and other political systems within the context of global forces, international conflicts, social movements, ideological systems and diversity. Courses in the major are designed to help students gain competency in the study of political science; to introduce students to a variety of research methodologies and analytical frameworks;

and to develop students' written and oral communication skills. Students in the program have excellent preparation for further study in graduate or professional schools as well as careers in government, business, and not-for-profit organizations.

Graduate Programs in Political Science

The Department of Political Science offers two types of advanced degrees:

- Doctor of Philosophy
- Master of Arts in Political Science which is open to current Stanford University doctoral or professional school (Schools of Law, Medicine, Business) students only.

The department does not have a terminal M.A. program for external applicants.

Political Science Faculty

Emeriti: (Professors) David B. Abernethy, David W. Brady, Joshua Cohen, David Danielski, Charles Drekmeier, Richard R. Fagen, John A. Ferejohn, David J. Holloway, Terry L. Karl, Stephen D. Krasner, John W. Lewis, John Manley, James March, Daniel Okimoto, Robert A. Packenham, Jack N. Rakove, Philippe Schmitter, Hans N. Weiler

Chair: Michael R. Tomz

Director of Graduate Studies: Alison E.J. McQueen

Director of Undergraduate Studies: Adam Bonica

Director of Honors and Senior Capstones: Lauren Davenport

Professors: Lisa Blaydes, Bruce E. Cain, Gary W. Cox, James D. Fearon, Morris P. Fiorina, Judith L. Goldstein, Justin Grimmer, Anna Grzymala-Busse, Stephen H. Haber, Jens Hainmueller, Andrew B. Hall, Daniel E. Ho, Shanto Iyengar, Jon A. Krosnick, David D. Laitin, Margaret Levi, Beatriz Magaloni, Michael A. McFaul, Terry M. Moe, Josiah Ober, Jean C. Oi, Rob Reich, Condoleezza Rice, Douglas Rivers, Jonathan A. Rodden, Scott D. Sagan, Kenneth A. Schultz, Paul M. Sniderman, Michael R. Tomz, Barry R. Weingast, Jeremy M. Weinstein

Associate Professors: Avidit Acharya, Adam Bonica, Lauren Davenport, Alison McQueen

Assistant Professors: Emilee Chapman, Vasiliki Fouka, Saad Gulzar, Hakeem J. Jefferson, Amanda Kennard, Soledad Prillaman, Yiqing Xu

Lecturers: Brian Coyne, Alain Schläpfer

Courtesy Professors: Jonathan B. Bendor, Steven Callander, Larry Diamond, Jean-Pierre Dupuy, Dan Edelstein, James Fishkin, Lawrence Friedman, Francis Fukuyama, Colin Kahl, Keith Krehbiel, Neil Malhotra, Nathaniel Persily, Debra M. Satz, Ken Shotts, Stephen J. Stedman, Andrew Walder, Leif Wenar, Amy Zegart

Courtesy Associate Professor: Alberto Diaz-Cayeros, Saumitra Jha

Courtesy Assistant Professor: Juliana Bidadanure, Jennifer Pan

Graduate Advising Expectations

Academic advising by department faculty is a critical component of graduate students' education. The Political Science department is committed to providing academic advising in support of graduate student scholarly and professional development. When most effective, this advising relationship entails collaborative and sustained engagement by both the adviser and the advisee. Both the adviser and the advisee are expected to maintain professionalism and integrity.

As a best practice, students and advisers should periodically discuss advising expectations to ensure mutual understanding. Graduate students are active contributors to the advising relationship, proactively seeking academic and professional guidance and taking responsibility for informing themselves of policies and degree requirements for their graduate program.

Additionally, the program adheres to the advising guidelines and responsibilities listed by the Office of the Vice Provost for Graduate Education and in the "Graduate Advising" section of this bulletin. Academic advising by Stanford faculty is a critical component of all graduate students' education and additional resources can be found in the Policies and Best Practices for Advising Relationships at Stanford and the Guidelines for Faculty-Student Advising at Stanford.

Ph.D.

All incoming doctoral students are assigned two pre-candidacy mentors by the Director of Graduate Studies. These mentors are responsible for advising students until they advance to candidacy on key areas such as course selection, initial research projects, and early stage professional development opportunities. Students should meet with their pre-candidacy mentors at least once per quarter, although there is likely to be variation in meeting frequency by individual adviser and advisee.

In the third year, students will convene a prospectus committee who will meet them once each quarter to receive an update on overall progress and to provide feedback on the prospectus. In the fall, this committee will consist of at least two faculty members. By the spring quarter, the committee will have three faculty members, who will be expected to approve the final prospectus by the end of the year. While this prospectus committee may form the basis for a dissertation reading committee, students will be free to assemble a dissertation reading committee whose members differ from those of the prospectus committee.

By the end of the fourth year, students are required to appoint one primary dissertation adviser and are encouraged to identify two to three additional faculty who are likely to fill out the rest of their dissertation reading committee. They are required to formally identify their full reading committee by the end of their fourth year. The adviser and committee are selected by the student on the basis of expertise relevant to the dissertation project. Students should meet with their adviser and reading committee (once named) at least once per quarter, though there is likely to be variation in meeting frequency by individual adviser and advisee.

Faculty advisers should provide guidance in key areas such as selecting courses, designing and conducting research, developing teaching pedagogy, navigating policies and degree requirements, and exploring academic opportunities and professional pathways.

At least once per year, either formally or informally, students and advisers are expected to review the student’s progress towards completion of their research and their degree. Such discussions may include other members of the student’s dissertation committee, either together or individually.

Nearly all students have an adviser from among the primary faculty members of the department. In rare circumstances, the dissertation adviser may be a faculty member from another Stanford department. When the research adviser is from outside the department, the student must also identify a co-adviser from the department's primary faculty.

The Director of Graduate Studies is an additional advising resource for students, particularly in areas of degree progress, program requirements, and selecting research advisers. Academic progress and student completion of program requirements and milestones are monitored by the Director of Graduate Studies and student services staff and are discussed at meetings of the faculty twice per academic year.

Requirements and milestones, as well as more detailed descriptions of the program’s expectations of advisers and students, are listed in the Ph.D. Program Guide, found on the department website.

Master of Arts

The Political Science department does not offer a terminal M.A. degree. An M.A. degree may only be pursued in combination with a doctoral degree from another department within the University or with an advanced degree from one of the University's professional schools (i.e., Schools of Law, Medicine, Business).

The Director of Graduate Studies is available to provide guidance on course selection and course planning. It is the responsibility of the student to contact the Director of Graduate Studies to schedule a meeting to discuss advising expectations. This should happen when the student begins the M.A. degree program and annually as needed.

M.A. students should also discuss how the M.A. degree and Political Science coursework supports their primary doctoral degree with their doctoral program adviser.

Programs

PolSc-BA
Degree Designation: BA - Bachelor of Arts

PolSc-MA
Degree Designation: MA - Master of Arts
-

PolSc-Min
Degree Designation:

PolSc-PhD
Degree Designation: PHD - Doctor of Philosophy

PolSc-PMn
Degree Designation:

Psychology Department

Contacts

Office: Building 420
Mail Code: 94305-2130
Phone: (650) 725-2400
Web Site: http://psychology.stanford.edu

Courses offered by the Department of Psychology are listed under the subject code PSYCH on the Stanford Bulletin's ExploreCourses web site.

The department maintains many computer-equipped laboratories and the Stanford Center for Cognitive and Neurobiological Imaging (CNI). Bing Nursery School, located on campus at 850 Escondido Road, provides a laboratory for child observation, training in nursery school teaching, and research. It was constructed with funding from the National Science Foundation and a special grant from Mrs. Anna Bing Arnold and Dr. Peter Bing.

The department provides

- courses designed for the general student
- a major program leading to the degree of Bachelor of Arts, including an option for honors
- an undergraduate minor program
- programs of graduate study and research leading to the degree of Doctor of Philosophy
- a Ph.D. minor

Applications are not accepted for the master's degree except as noted below.

Mission of the Undergraduate Program in Psychology

The mission of the undergraduate program in Psychology is to introduce students to the theories and empirical studies of human behavior. This includes the study of aging, achievement, child development, cognitive processes, conflict, culture, decision making, emotion, group behavior, health, identity, infancy, language, learning and memory, morality, motivation, personality, psychopathology, race, self, social perception, visual perception, and other related topics. The major provides students with knowledge and skills relevant to professional careers in technology, business, counseling, education, public policy, law, and medicine, as well as graduate studies in Psychology.

Faculty

Emeriti: (Professors) Herbert H. Clark, Anne Fernald, John H. Flavell, Mark R. Lepper, Roger N. Shepard, Claude M. Steele, Ewart A. C. Thomas, Barbara Tversky, Jeffrey J. Wine, Philip G. Zimbardo

Chair: Kalanit Grill-Spector

Vice Chair: Jeanne L. Tsai

Director of Graduate Studies: Hyowon Gweon

Director of Undergraduate Studies: James J. Gross

Professors: Laura L. Carstensen, Geoffrey Cohen, Carol Dweck, Jennifer L. Eberhardt, Michael C. Frank, Ian H. Gotlib, Kalanit Grill-Spector, James J. Gross, Brian Knutson, Ellen M. Markman, Hazel R. Markus, James L. McClelland, Dale Miller, Benoit Monin, Russell A. Poldrack, Nilam Ram, Jeanne L. Tsai, Anthony D. Wagner, Brian Wandell

Professor (Research): Anthony Norcia

Associate Professors: Alia Crum, Justin Gardner, Noah Goodman, Hyowon Gweon, Gregory M. Walton, Jamil Zaki

Associate Professor (Teaching): Catherine Heaney

Assistant Professors: Tobias Gerstenberg, Steven Roberts, Daniel Yamins, Jason Yeatman

Assistant Professor (Research): Johannes Eichstaedt

Lecturers: David Cardinal, Parul Chandra, Todd Erickson, Amie Haas, Adrienne Lomangino, Yochai Z. Shavit, Jordan G. Starck, Jenna Valasek, Jennifer Winters, Beth Wise

Courtesy Professors: Michelle Gelfand, Gary H. Glover, Jon Krosnick, Tanya Luhrmann, Robert MacCoun, Bruce McCandliss, William T. Newsome, Laura Roberts, Leanne Williams

Graduate Advising Expectations

The Department of Psychology is committed to providing academic advising in support of graduate student scholarly and professional development. When most effective, the advising relationship entails collaborative and sustained engagement by both the advisor and the advisee. As a best practice, advising expectations should be periodically discussed and reviewed to ensure mutual understanding. Both the advisor and the advisee are expected to maintain professionalism and integrity.

Faculty advisors guide students in key areas, such as selecting courses, designing and conducting research, writing results of research studies as manuscripts for peer-reviewed journals, developing teaching pedagogy, navigating policies and degree requirements, and exploring academic opportunities and professional pathways.

Graduate students are active contributors to the advising relationship, proactively seeking academic and professional guidance and taking responsibility for informing themselves of policies and degree requirements for their graduate program.

For a statement of University policy on graduate advising, see the "Graduate Advising" section of this bulletin.

Individual Development Plan (IDP)

In order to meet the advising goals described above, each PhD student is required to complete an annual Individual Development Plan (IDP) and have at least one meeting with their advisor during the academic year to discuss the IDP. The purpose of the annual IDP meeting is to provide an opportunity to discuss the big picture of the student's progress over the past year as well as goals for the future. To help the IDP, prior to the meeting the student completes a form that promotes self-reflection and self-evaluation, and helps structure the discussion topics with the advisor. During the IDP meeting the student brings his or her current CV and discuss with the advisor current progress and future goals. During the meeting the student and their advisor develops an action plan for the subsequent year; both keep a copy of this plan.

For details about the IDP forms and process, please visit the Psychology Department website's PhD Program Requirements page. The IDP meeting must take place before June 1 of each year. It is the student's responsibility to report when the meeting has occurred to the student services manager.

Programs

Psych-PMn
Degree Designation:
-

Psych-BA
Degree Designation: BA - Bachelor of Arts
-

Psych-MA
Degree Designation: MA - Master of Arts
-

Psych-Min
Degree Designation:
-

Psych-PhD
Degree Designation: PHD - Doctor of Philosophy
-

Psych-PMN
Degree Designation:
-

Public Policy Department

Contacts

Office: Encina Hall West, 616 Jane Stanford Way, First Floor
Mail Code: 94305-6050
Phone: 650-725-0109
Email: publicpolicy@stanford.edu
Web Site: publicpolicy.stanford.edu

Courses offered by the Public Policy Program are listed under the subject code PUBLPOL on the Stanford ExploreCourses website.

The Public Policy program offers a Bachelor of Arts, an honors program, a minor for undergraduates, a coterminal M.A. in Public Policy, a two-year professional Master of Public Policy (M.P.P.) degree, and a one-year non-professional Master of Arts in Public Policy (M.A.).

Admission to the M.P.P. and M.A. programs is restricted to current Stanford undergraduates and graduate students, Stanford alumni (who have graduated within the past 5 years), and external applicants seeking a joint graduate degree.

Mission of the Undergraduate Program in Public Policy

The mission of the undergraduate program in Public Policy is to provide students with the concepts and tools used in evaluating policy options and outcomes, and to prepare students for entry-level positions in organizations concerned with such analysis. The focus is chiefly on issues such as health, education, environmental, regulation, and science and technology policy, applicable anywhere in the world.

Courses in the major provide students with a background in economics and quantitative methods, political science, law, philosophy, ethics, organizational behavior, and social psychology. Economics and quantitative analyses are central to but not sufficient for modern public policy analysis; political science, law, philosophy, organizational behavior, and psychology are among other necessary disciplinary perspectives. Political science offers insights into the decision-making process and information needs of a democracy. Political philosophy and ethics form the foundations of public policy. Organizational behavior focuses on the decisions made outside the market environment in hierarchies, bureaucracies, and teams.

Seniors have a research capstone requirement consisting either of an honors thesis or participation in a team practicum project, conducting applied policy research for an outside client, typically a nonprofit or government agency. Students majoring in Public Policy are prepared for careers in a wide variety of fields, including elected or appointed public office; business, law, and governmental agencies; research institutes; or for further study in graduate programs.

Learning Outcomes (Undergraduate)

The Public Policy Program expects its undergraduate majors to be able to demonstrate the following learning outcomes. These learning outcomes are used in evaluating students and the program. Students are expected to:

1. Demonstrate knowledge and understanding of public policy analytical tools.
2. Evaluate applied theoretical and empirical work in policy-relevant research.
3. Apply skills and knowledge acquired in the curriculum to analyze policy issues and make policy recommendations.
4. Communicate complex ideas clearly and persuasively in written and oral forms.
5. Demonstrate mastery of the above outcomes in the senior capstone project.

Mission of the Graduate Program in Public Policy

The mission of the graduate program in Public Policy is to provide students with the advanced skills necessary to assess the performance of alternative approaches to policy making and implementation, evaluate program effectiveness, understand the political constraints faced by policymakers, and appreciate the conflicts in fundamental human values that often animate policy debate. After completing the graduate core curriculum, students apply these skills by focusing their studies in a two-quarter, 10-unit practicum for the M.P.P. degree or a 5-unit master's thesis for the M.A. degree. Each student in the M.P.P. program also completes at least one concentration tailored to the student's primary degree program or the student's interests and skills. Current concentrations include:

- Computational Public Policy
- Education Policy
- Health Care Policy
- International and National Security Policy
- Legal and Regulatory Intervention
- Political and Moral Philosophy
- Resources, Environment, and Energy Policy

- Science and Technology Policy
- Self-designed (requires detailed statement of study goals, relationship of each proposed course to those goals, and commitment by a supervising faculty member)
- Urban and Regional Policy

Graduate Degrees Offered

The graduate program in Public Policy offers two master's degrees:

- Master of Public Policy (M.P.P.), a two-year professional degree program; available to current Stanford students and Stanford alumni (who have graduated within the past five years)
- Master of Arts (M.A.), a one-year program, not intended as a professional degree; available to current Stanford students

Joint Degree Programs

The following joint degree programs, which permit students to complete requirements for two degrees with a reduced number of total residency units, are also offered:

- Juris Doctor with a Master of Public Policy (J.D./M.P.P.)
- Juris Doctor with an M.A. in Public Policy (J.D./M.A.)
- Doctor of Medicine with a Master of Public Policy (M.D./M.P.P.)
- Doctor of Philosophy in Economics, Education, Management Science and Engineering, Psychology, Sociology or Structural Biology with a Master of Public Policy (Ph.D./M.P.P.)
- Master of Business Administration with a Master of Public Policy (M.B.A./M.P.P.)
- Master of Arts in Education (Policy, Organization, and Leadership subplan) with a Master of Public Policy (M.A./M.P.P.)
- Master of Arts in International Policy with a Master of Public Policy (M.A./M.P.P.)
- Master of Science in Management Science and Engineering with a Master of Public Policy (M.S./M.P.P.)

Requirements for the joint degrees differ from the requirements of completing the two degrees separately. See the Master's Degrees in Public Policy section for more details.

University requirements for the master's degree are described in the Graduate Degrees section of this Bulletin.

Learning Outcomes (Graduate)

The purpose of the master's program is to develop knowledge and skills in public policy and to prepare students for a professional career or doctoral studies. This is achieved through completion of courses, in the primary field as well as related areas, and experience with independent work and specialization.

The M.P.P. or M.A. degree is conferred upon candidates who have demonstrated substantial scholarship and the ability to conduct independent research and analysis in public policy. Through completion of advanced course work and rigorous skills training, the graduate program prepares students to make original contributions to the knowledge of public policy and to interpret and present the results of such research.

Graduate Certificate in Policy Analysis

The Stanford Public Policy Program offers a graduate "Certificate in Policy Analysis" for current Stanford graduate students. This highly flexible 25-unit program is designed for students who are interested in policy but may not be able to complete a formal one or two-year policy degree. The program's coursework provides a solid background in economics and quantitative methods, political analysis, ethics, and writing for policy audiences.

These courses will equip students with a set of skills necessary to design and evaluate policies, conduct research, and advocate policy solutions. The certificate provides formal recognition for a coherent plan of policy studies. In addition to completing coursework, students will produce a final paper reflecting on the policy lessons from their time in the program. Upon completion of the program, a certificate is provided. Note that the certificate is not included on the diploma or transcript. Grading policy: students may take two courses for a non-letter grade, in addition to the one-unit required colloquium course. The remaining courses must be taken for a letter grade.

Program Learning Outcomes

- Master analytical tools for evaluating public policies and programs in terms of their absolute and comparative efficacy in achieving social objectives.
- Participate in policy and political discussion as citizens and as professionals in a variety of fields.
- Appreciate the complexity of large organizations as it relates to the implementation of public programs.
- Understand the conflicts in ethical and value commitments that pervade public policy issues.

How to Apply

The application to the Certificate in Policy Analysis is available here and can be submitted at any time. Upon submission, a member of the Public Policy program staff will contact the applicant to confirm the course plan and answer any questions. The certificate is only available for currently enrolled graduate student.

Courses

		Course List
		UNITS
Required Courses - 13 Units total		
PUBLPOL301A MICROECONOMICS FOR POLICY	Microeconomics for Policy	4-5
PUBLPOL303D APPL ECONOMETRCS FOR PUB POL	Applied Econometrics for Public Policy (or equivalent course)	4-5
PUBLPOL301B ECONOMIC POLICY ANALYSIS	Economic Policy Analysis for Policymakers	4-5
or PUBLPOL204 ECON & PUBLIC POLICY	Economic Policy Analysis	
PUBLPOL311 PUBLIC POLICY COLLOQUIUM	Public Policy Colloquium (one quarter)	1

		Course List
Required Courses with Selection Options - 8 units total		
PUBLPOL306 WRITING & RHETORIC FOR POLICY	Writing and Rhetoric for Policy Audiences	4
or PUBLPOL314 JUSTICE IN PUBLIC POLICY	Justice in Public Policy	
PUBLPOL308 POLITICAL ANALYSIS	Political Analysis for Public Policymakers	4
or PUBLPOL353A SCIENCE AND TECHNOLOGY POLICY	Science and Technology Policy	

Course List		
Optional Course(s) - 4 units total		
PUBLPOL206 LAW AND ECONOMICS	Law and Economics	4-5
PUBLPOL302B ECON ANALYSIS OF LAW	Economic Analysis of Law	3
PUBLPOL311 PUBLIC POLICY COLLOQUIUM	Public Policy Colloquium	1
LAW7508 PROB SOLVING & DECISION MAKING	Problem Solving and Decision Making for Public Policy and Social Change	4

Faculty

Director: Gregory L. Rosston (Stanford Institute for Economic Policy Research)

Director of Undergraduate and Graduate Studies: Gregory L. Rosston (Stanford Institute for Economic Policy Research)

Directors of Graduate Practicum Program: Joe Nation and Christine Pal Chee (Public Policy)

Director of Domestic Policy Studies and Lecturer: Lanhee J. Chen (Public Policy and Hoover Institution)

Director of Honors Program and Lecturer: Marcelo Clerici-Arias (Economics and Public Policy)

Executive Committee Chair: Mark Duggan (Economics, SIEPR)

Executive Committee: Laurence Baker (Medicine), Jonathan Bendor (Graduate School of Business), David Brady (Political Science, Hoover Institution, Graduate School of Business, SIEPR), Paul Brest (Law), Bruce Cain (Political Science, Bill Lane Center for the American West), Samuel Chiu (Management Science and Engineering), Thomas Dee (Graduate School of Education), Rebecca Diamond (Graduate School of Business), Judith Goldstein (Political Science), David Grusky (Sociology), Deborah Hensler (Law), Roger Noll (Economics, emeritus, SIEPR), Bruce Owen (Public Policy, emeritus, SIEPR), Gregory Rosston (SIEPR), Paul Oyer (Graduate School of Business), Debra Satz (Philosophy), John Shoven (SIEPR, Economics), Christine Min Wotipka (Graduate School of Education)

Affiliated Faculty: William Abrams (Human Biology), Donald Barr (Medicine), Jonathan Bendor (Graduate School of Business), Eric Bettinger (Education), Jayanta Bhattacharya (Medicine), Lisa Blaydes (Political Science), Adam Bonica (Political Science), Michael J. Boskin (Economics, Hoover Institution), Paul Brest (Law), Jeremy Bulow (Graduate School of Business), Bruce Cain (Political Science, Bill Lane Center for the American West), Eamonn Callan (Education), Martin

Carnoy (Education), John Cogan (Hoover Institution), Larry Diamond (Freeman Spogli Institute for International Studies, Hoover Institution), Lawrence Friedman (Law), Francis Fukuyama (Freeman Spogli Institute for International Studies), Lawrence Goulder (Economics, Freeman Spogli Institute for International Studies), Justin Grimmer (Political Science), Stephen Haber (Political Science, Hoover Institution), Deborah Hensler (Law), Pamela Hinds (Management Science and Engineering), Daniel Ho (Law), Nicholas Hope (Stanford Center for International Development), Caroline Hoxby (Economics, Hoover Institution, SIEPR), Hakeem Jefferson (Political Science), Daniel Kessler (Law, Hoover Institution, Graduate School of Business), Pete Klenow (Economics), Stephen Krasner (Political Science, Freeman Spogli Institute for International Studies, Hoover Institution), Jon A. Krosnick (Communication, Political Science), Mark Lemley (Law), Thomas MaCurdy (Economics, Hoover Institution), David Magnus (Medicine), Milbrey McLaughlin (Education), Terry Moe (Political Science, Hoover Institution), A. Mitchell Polinsky (Law), Walter Powell (Education), Robert Reich (Political Science), Lee Ross (Psychology), Baba Shiv (Graduate School of Business), Ken Shotts (Graduate School of Business), Stephan Stedman (Freeman Spogli Institute for International Studies), Jeff Strnad (Law), Barton Thompson (Law, Woods Institute, Freeman Spogli Institute for International Studies), Michael Tomz (Political Science, SIEPR),Milana Trounce (Medicine), Michael Wald (Law), Greg Walton (Psychology), Barry Weingast (Political Science, Hoover Institution), John Weyant (Management Science and Engineering), Frank Wolak (Economics, Freeman Spogli Institute for International Studies), Cristobal Young (Sociology)

Lecturers: Newsha Ajami (Woods Institute), Tanya Beder (Law), Frank Benest (Public Policy), David Crane (Public Policy, SIEPR), Dennis Gale (Urban Studies), Russell Hancock (Public Policy), Preeti Hehmeyer (Public Policy, Bill Lane Center for the American West), Adrienne Jamieson (Bing Stanford in Washington), Lawrence Litvak (Public Policy, Urban Studies), Susan Liautaud (Public Policy), Eva Meyersson Milgrom (SIEPR, Sociology), Christine Pal Chee (Public Policy), Patrick Windham (Public Policy)

Graduate Advising Expectations

The Program in Public Policy is committed to providing academic advising in support of graduate student scholarly and professional development. When most effective, this advising relationship entails collaborative and sustained engagement by both the adviser and the advisee. As a best practice, advising expectations should be periodically discussed and reviewed to ensure mutual understanding. Both the adviser and the advisee are expected to maintain professionalism and integrity.

All graduate students must submit a signed faculty adviser form by the end of their first quarter. The form is available on the Graduate forms website. The adviser need not be affiliated with the Public Policy Program, but does need to be a member of Stanford's Academic Council. The Director and student services staff can assist by providing individualized support in identifying a faculty adviser, if necessary.

Faculty advisers guide students in key areas such as selecting courses, designing and conducting research, developing of teaching pedagogy, navigating policies and degree requirements, and exploring academic opportunities and professional pathways.

Graduate students are active contributors to the advising relationship, proactively seeking academic and professional guidance and taking responsibility for informing themselves of policies and degree requirements for their graduate program. Students are encouraged to communicate clearly and frequently with their adviser.

For a statement of University policy on graduate advising, see the Graduate Advising section of this bulletin.

Programs

PubPo-BA
Degree Designation: BA - Bachelor of Arts
-

PubPo-MA
Degree Designation: MA - Master of Arts
-

PubPo-Min
Degree Designation:

PubPo-MPP
Degree Designation: MPP - Master of Public Policy
-

Radiology Department

Contacts

Office: Stanford University School of Medicine
300 Pasteur Drive
Stanford, CA 94305-5105
Website: https://med.stanford.edu/radiology.html

Courses offered by the Department of Radiology are listed under the subject code RAD on the Stanford Bulletin's ExploreCourses web site.

The Department of Radiology does not offer degrees. However, its faculty teach courses open to medical students, graduate students, and undergraduates. The department also accepts students in other curricula as advisees for study and research. Undergraduates may also arrange individual research projects under the supervision of the department's faculty. This discipline focuses on the use of radiation, ultrasound, and magnetic resonance as diagnostic, therapeutic, and research tools. The fundamental and applied research within the department reflects this broad spectrum as it relates to anatomy, pathology, physiology, and interventional procedures. Original research and development of new clinical applications in medical imaging is supported within the Radiological Sciences Laboratory.

Faculty

Emeriti: (Professors) Herbert L. Abrams, Ronald Castellino, Barton Lane, Gerald Friedland, David A. Goodwin, Michael L. Goris, Henry H. Jones, William Marshall, I. Ross McDougall, Robert E. Mindelzun, Matilde Nino-Murcia, William H. Northway, Bruce R. Parker, Lewis Wexler, Leslie M. Zatz

Chair: Sanjiv Sam Gambhir

Professors: Patgrick Barnes, Richard A. Barth, Christopher F. Beaulieu, Bruce Daniel, Huy M. Do, Michael Federle, Nancy Fischbein, Dominik Fleischmann, Sanjiv Sam Gambhir, Gabriela Gayer, Gary H. Glover, Garry E. Gold, Robert J. Herfkens, Lawrence Hofmann, Dave Hovsepian, Debra M. Ikeda, R. Brooke Jeffrey, Peter Kane, Ralph Lachman, Barton Lane, Ann Leung, Craig Levin, Michael Marks, Tarik Massoud, Michael Moseley, Peter Moskowitz, Sandy Napel, Beverley Newman, Norbert J. Pelc, Allan Reiss, Brian Rutt, George Segall, F. Graham Sommer, Daniel Spielman, Daniel Y. Sze, Volney Van Dalsem, Joseph Wu

Professor (Research): R. Kim Butts-Pauly, Sylvia Plevritis

Associate Professors: Sandip Biswal, Francis Blankenberg, Frandics P. Chan, Terry Desser, Andrei H. Iagaru, Nishita Kothary, William Kuo, David Larson, John Louie, Eric W. Olcott, Sunita Pal, Geoffrey Riley, Erika Rubesova, Kathryn J. Stevens, Shreyas Vasanawala, Dorcas Yao, Greg Zaharchuk

Associate Professors (Research): Roland Bammer, Zhen Cheng, Heike Daldrup-Link, Rebecca Fahrig, Brian Hargreaves, Sylvia Plevritis, Jianghong Rao

Assistant Professors: Robert Dodd, Pejman Ghanouni, Howard Harvin, Gloria Hwang, Aya Kamaya, Sirisha Komakula, Amelie Lutz, Payam Massaband, Erik Mittra, Zina Payman, Peter Poullos, Jianghong Rao, Daniel Rubin, Rajesh Shah, Lewis Shin, Minal Vasanawala,David Wang, Joseph Wu, Kristen Yeom, Michael Zeineh, Ashwini, Zenooz

Assistant Professors (Research): Frederick T. Chin, Parag Mallick, Jennifer McNab, David Paik, Ramasamy Paulmurugan, Sharon Pitteri

Clinical Instructors: Bao Do, H. Henry Guo, Stefan Hura, Linda Morimoto

Graduate Advising

For a statement of University policy on graduate advising, see the Graduate Advising section of this bulletin.

Religious Studies Department

Contacts

Office: Building 70
Mail Code: 94305-2165
Phone: (650) 723-3322
Web Site: Religious Studies

Courses offered by the Department of Religious Studies are listed under the subject code RELIGST on the Stanford Bulletin's ExploreCourses web site.

Mission of the Department

The Department of Religious Studies brings a variety of disciplinary perspectives to bear on the phenomenon of religion for the purpose of understanding and interpreting the history, literature, thought, social structures, and practices of the religious traditions of the world. Comprised of sixteen regular faculty with particular strengths in the study of American Religions, Buddhism, Christianity, Hinduism, Islam, and Judaism, it enrolls about twenty graduate students (mostly doctoral) and roughly as many undergraduate majors, minors, and joint majors.

Religious Studies works closely with several related programs at Stanford: the Department of Philosophy, with which it offers a combined undergraduate major; the Ho Center for Buddhist Studies; the Taube Center for Jewish Studies; the Abbasi Program in Islamic Studies; the McCoy Center for Ethics in Society; the Center for Medieval and Early Modern Studies; and the Center for South Asia.

While some undergraduates continue their study of religion in a graduate or professional program, most pursue meaningful and successful careers in business, government, the nonprofit sector, and medicine. In this respect, Religious Studies is an ideal interdisciplinary major in the liberal arts. Graduates of the department's doctoral program generally pursue academic careers and are routinely placed in the best universities and colleges in the country and overseas.

Undergraduate Programs in Religious Studies

The department offers a Bachelor of Arts major, minor, and honors program in Religious Studies, and a combined major with the Philosophy Department in Philosophy and Religious Studies. Undergraduate courses in Religious Studies are designed to engage students existentially and to assist them in thinking about intellectual, ethical, and sociopolitical issues in the world's religions. The department's faculty seek to provide tools for understanding the complex encounters among religious ideas, practices, and communities, and the past and present cultures that have shaped and been shaped by religion. Courses therefore expose students to: leading concepts in the field of religious studies such as god(s), sacrifice, ritual, scripture, prophecy, and priesthood; approaches developed over the past century, including the anthropological, historical, psychological, philosophical, and phenomenological, that open religion to closer inspection and analysis; and major questions, themes, developments, features, and figures in the world's religious traditions. The

department encourages and supports the acquisition of languages needed for engagement with sacred texts and interpretive traditions as well as study abroad at Stanford's overseas centers where religions can be observed and experienced in their contemporary contexts.

Major in Philosophy and Religious Studies

The departments of Philosophy and Religious Studies jointly nominate for the B.A. in Philosophy and Religious Studies those students who have completed a major in the two disciplines. See a description of this combined major under the RelSt-BA section of this bulletin, the Philo-BA section of this bulletin, or in the guidelines available from the Director of Undergraduate Studies of either department.

Graduate Programs in Religious Studies

The graduate mission of the department is to provide students with an interdisciplinary setting of study within which to focus on their respective areas of specialization. The department offers an internal M.A. and a Ph.D. degree in Religious Studies. The master's program is restricted to current Stanford students.

Faculty

Emeriti: (Professors) Carl W. Bielefeldt, Arnold Eisen, Bernard Faure, Hester G. Gelber, Robert C. Gregg, Van Harvey

Emerita: (Senior Lecturer) Linda Hess

Chair: Paul Harrison

Director of Graduate Studies: Charlotte Fonrobert

Director of Undergraduate Studies: Michael Penn

Professors: Paul Harrison, John Kieschnick, Michael Penn, Thomas Sheehan, Lee Yearley

Associate Professors: Anna Bigelow, Charlotte Fonrobert, Kathryn Gin Lum, Brent Sockness

Assistant Professors: Elaine Fisher, James Gentry, Ariel Mayse, Michaela Mross, Alexis Wells-Oghoghomeh

Senior Lecturer: Barbara Pitkin

Lecturers: Rushain Abbasi, Kirsti Copeland, Jonathan Peterson, Trent Walker, Sarah Willburn

Courtesy Professors: Fiona Griffiths, Mark Lewis

Courtesy Associate Professor: Ari Y. Kelman

Graduate Advising Expectations

The Department of Religious Studies is committed to providing academic advising in support of graduate student scholarly and professional development. When most effective, this advising relationship entails collaborative and sustained engagement by both the advisor and the advisee. As a best practice, advising expectations should be periodically discussed and reviewed to ensure mutual understanding. Both the advisor and the advisee are expected to maintain professionalism and integrity.

Faculty advisors guide students in key areas such as selecting courses, designing and conducting research, developing of teaching pedagogy, navigating policies and degree requirements, and exploring academic opportunities and professional pathways.

Graduate students are active contributors to the advising relationship, proactively seeking academic and professional guidance and taking responsibility for informing themselves of policies and degree requirements for their graduate program.

For a statement of University policy on graduate advising, see the Graduate Advising section of this bulletin.

Programs

PhRel-BA
Degree Designation: BA - Bachelor of Arts
-

RelSt-BA
Degree Designation: BA - Bachelor of Arts

RelSt-MA
Degree Designation: MA - Master of Arts

RelSt-Min
Degree Designation:

RelSt-PhD
Degree Designation: PHD - Doctor of Philosophy

RelSt-PMn
Degree Designation:

Russian, East European and Eurasian Studies Department

Contacts

Office: Encina Commons, Room 128, 615 Crothers Way, Stanford, CA 94305-6045
Mail Code: 6045
Phone: (650) 725-2563
Email: creeesinfo@stanford.edu
Web Site: http://creees.stanford.edu

Courses offered by the Center for Russian, East European and Eurasian Studies are listed under the subject code REES on the Stanford Bulletin's ExploreCourses website.

The Center for Russian, East European and Eurasian Studies (CREEES) coordinates the University's teaching, research, and extracurricular activities related to Russia, Eastern Europe, Central Asia, and the Caucasus and administers a one-year interdisciplinary M.A. graduate degree program. Information on the center's degree programs and other activities is available at the CREEES web site. CREEES and its degree programs are directed by the CREEES Steering Committee, composed of faculty members associated with the Center. The program draws on the strengths of nationally recognized area faculty and research affiliates and significant library and archival collections at Stanford.

Courses offered by the Center for Russian, East European and Eurasian Studies are listed under the subject code REES on the Stanford Bulletin's ExploreCourses website. Please be advised, that only a portion of the courses related to the region are listed or cross-listed under the REES subject code. To see the full list of courses related to the region, offered by the departments across the university, , please visit CREEES website

Undergraduate Programs in Russian, East European and Eurasian Studies

Students interested in a minor should consult the Director of Undergraduate Studies in the Department of Slavic Languages and Literatures which offers the following relevant minors:

- Russian, East European and Eurasian Studies
- Russian Language
- Russian Language, Literature and Culture

- Russian Culture

Undergraduate Academic Theme House:
At Home Abroad House: Slavic, Francophone and Italian Cultures and Languages

The At Home Abroad House at Yost in Governor's Corner is an undergraduate residence that houses 61 upperclass students and offers a the opportunity to expand knowledge, understanding and appreciation of the cultures, languages, histories and contemporary societies of Russia, East Europe, the Caucasus and Central Asia in a broader comparative and global context. AHA House is a vibrant, diverse community that allows students to explore languages and cultures beyond the English-speaking world through activities including film series, seminars, cooking classes, language tables, resident-led events, off-campus outings and meetings with faculty, artists and scholars from all over the world.

Overseas Studies Programs

Undergraduates interested in the study of languages, history, culture and social organization of the countries of Russia, Eurasia and East Europe may apply to study at the Stanford center in Berlin. Information about this program is available at the Bing Overseas Studies Program web site.

Graduate Programs in Russian, East European and Eurasian Studies

The Center for Russian, East European and Eurasian Studies offers an M.A. in Russian, East European and Eurasian Studies, a coterminal M.A. in Russian, East European and Eurasian Studies, and a joint M.A./J.D. in conjunction with the Stanford Law School.

Since the University does not offer a Ph.D. in Russian, East European and Eurasian Studies, students wishing to pursue a REEES-related doctoral program must apply to one of the departments offering a Ph.D. with an emphasis on Russia, Eurasia, or Eastern Europe, such as the departments of History, Anthropology, Political Science, or Slavic Languages and Literatures.

M.A. Admission

Applicants apply electronically; see the Office of Graduate Admissions website for a link to the electronic application and general information regarding graduate admission. In addition, prospective applicants may consult with the CREEES associate director regarding the application process.

To qualify for admission to the program, the following apply:

- Applicants must have earned a B.A. or B.S. degree, or the equivalent.
- At least three years of college-level language study in Russian, an East European or Central Asian language is preferred. Candidates with fewer years of area language study will be considered.
- A one-page statement of purpose that explains how the program would advance the applicant's academic or career goals.
- Applicants must include the following additional materials in their online application: a writing sample of no more than 20 pages in English on an academic topic in Russian, East European, or Eurasian studies and a resume of college-level courses taken that are relevant to Russian, East European & Eurasian Studies, including language courses, with self-reported final grades. These additional materials should be uploaded as "Additional Materials" in a single file along with the application.
- Applicants must send official transcripts from all post-secondary institutions attended to CREEES.
- The Graduate Record Examination (GRE) is not required.

- Applicants whose native language is not English and do not possess a U.S. bachelor's degree are expected to take the Test of English as a Foreign Language (TOEFL) and have the results sent to Graduate Admissions, Office of the University Registrar.

The deadline for submission of applications for admission and for financial aid is January 11, 2022. Admission is normally granted for Autumn quarter, requests for exceptions are considered in exceptional circumstances.

The successful applicant generally demonstrates the following strengths: requisite foreign language study, significant coursework in Russian, East European and Eurasian studies in multiple disciplines, outstanding grades in previous academic work, strong analytical writing skills, study or work experience in the region, strong letters of recommendation from faculty members in the Russian, East European, and Eurasian Studies field (one letter may be from a language instructor), and a persuasive statement of purpose explaining how the program would advance the applicant's academic and career goals.

Coterminal Master's Program in Russian, East European, and Eurasian Studies

To qualify for a coterminal M.A. degree in Russian, East European, and Eurasian Studies, besides completing University requirements for the B.A. degree, a student must:

- Submit the Coterminal Online Application for admission to the program by the CREEES M.A. admission deadline.
- Include in the application a proposal which outlines, by quarter, the schedule of courses the student plans to complete toward the M.A. degree. The student should seek the advice of the CREEES associate director in drafting this schedule. The application also should include:
- a current Stanford transcript
- a one-page statement of purpose
- three letters of recommendation from Stanford faculty (one may be from a language instructor)
- a writing sample of 20 pages or less in English on an academic topic in Russian, East European, or Eurasian Studies
- Applicants must have a grade point average (GPA) of at least 3.0 (B)
- Complete 15 full-time quarters or the equivalent, or three quarters in full-time residence after completing 180 units; and complete, in addition to the 180 units required for the bachelor's degree, a minimum of 48 units for the master's degree.

University Coterminal Requirements

Coterminal master’s degree candidates are expected to complete all master’s degree requirements as described in this bulletin. University requirements for the coterminal master’s degree are described in the “Coterminal Master’s Program” section. University requirements for the master’s degree are described in the "Graduate Degrees" section of this bulletin.

After accepting admission to this coterminal master’s degree program, students may request transfer of courses from the undergraduate to the graduate career to satisfy requirements for the master’s degree. Transfer of courses to the graduate career requires review and approval of both the undergraduate and graduate programs on a case by case basis.

In this master’s program, courses taken three quarters prior to the first graduate quarter, or later, are eligible for consideration for transfer to the graduate career. No courses taken prior to the first quarter of the sophomore year may be used to meet master’s degree requirements.

Course transfers are not possible after the bachelor’s degree has been conferred.

The University requires that the graduate advisor be assigned in the student's first graduate quarter even though the undergraduate career may still be open. The University also requires that the Master's Degree Program Proposal be completed by the student and approved by the department by the end of the student's first graduate quarter.

Joint Degree Program in Russian, East European, and Eurasian Studies

The joint degree program in Russian, East European, and Eurasian Studies and Law allows students to pursue the M.A. degree in REEES concurrently with the Doctor of Jurisprudence (J.D.) degree, with a significant number of courses that may apply to both degrees. It is designed to train students interested in a career in teaching, research, or the practice of law related to REEES legal affairs. Students must apply separately to the REEES M.A. program and to the Stanford School of Law and be accepted by both. Completing this combined course of study requires approximately four academic years, depending on the student's background and level of language training. For more information, see the Joint Degree Programs section of this bulletin and the Stanford Law School's website. Students who have been accepted by both programs should consult with the departments to determine which courses can be double-counted.

Financial Aid

CREEES offers a number of full- and partial-tuition scholarships to incoming CREEES M.A. students. These awards are made for one year of full-time study on the basis of merit. All applicants to the CREEES M.A. program automatically are considered for a tuition award, and successful applicants are notified of their aid awards simultaneously with their admissions offers.

The Knight-Hennessy Scholars program awards full funding to pursue graduate education at Stanford to students from all disciplines, with additional opportunities for leadership training and collaboration across fields. For more information please visit Knight-Hennessy Scholars program website

Graduate Advising Expectations

The Center for Russian, East European and Eurasian Studies is committed to providing academic advising in support of graduate student scholarly and professional development. When most effective, this advising relationship entails collaborative and sustained engagement by both the adviser and the advisee. As a best practice, advising expectations should be periodically discussed and reviewed to ensure mutual understanding. Both the adviser and the advisee are expected to maintain professionalism and integrity.

Faculty advisers guide students in key areas such as selecting courses, designing and conducting research, developing of teaching pedagogy, navigating policies and degree requirements, and exploring academic opportunities and professional pathways.

Graduate students are active contributors to the advising relationship, proactively seeking academic and professional guidance and taking responsibility for informing themselves of policies and degree requirements for their graduate program.

For a statement of University policy on graduate advising, see the Graduate Advising section of this bulletin.

Faculty

Director of the Center: Amir Weiner

Associate Director: Jovana Knezevic

Director of Graduate Studies: Amir Weiner

Affiliated Faculty and Staff:

Anthropology: Ewa Domanska (visiting)

Art and Art History: Srdan Keca, Pavle Levi, Karla Oeler, Bissera Pentcheva

Comparative Literature: Burcu Karahan

Education, School of: Martin Carnoy

Engineering, School of: Margaret Brandeau, Siegfried Hecker, William Perry (emeritus)

English: Nancy Ruttenburg

Freeman Spogli Institute for International Studies: Coit Blacker, Christophe Crombez, Gail Lapidus (emerita), Kathryn Stoner

Graduate School of Business: llya Strebulaev

History: Robert Crews, Terence Emmons (emeritus), David Holloway (emeritus), Katherine Jolluck, Nancy Kollmann, Norman Naimark, Aron Rodrigue, Amir Weiner, Ali Yaycioglu, Steven Zipperstein

Hoover Institute: Elena Danielson (emerita), John Dunlop (emeritus), Timothy Garton Ash, Paul Gregory, Bertrand Patenaude, Anatol Shmelev, Maciej Siekierski

International Policy Studies: Eric Morris

International Relations: Robert Rakove

Language Center: Jara Dusatko, Rima Greenhill, Lessia Jarboe, Leelo Kask, Eugenia Khassina, Suzan Negip Schatt, Bisera Rakicevic, Eva Soos Szoke, Gerardina Malgorzata Szudelski

Law, School of: Allen Weiner

Linguistics: Boris Harizanov, Vera Gribanov

Medicine, School of: Grant Miller, Douglas Owens

Political Science: Anna Grzymala-Busse, David Holloway (emeritus), David Laitin, Michael McFaul

Psychology: Lera Boroditsky

Slavic Languages and Literatures: Lazar Fleishman, Gregory Freidin (emeritus), Monika Greenleaf, Yuliya Ilchuk, Gabriella Safran, Richard Schupbach (emeritus), Nariman Skakov

Sociology: Nancy Tuma (emerita),

Stanford Libraries: Zachary Baker (emeritus), Liisi Esse, John Eilts, Margarita Nafpaktitis, Karen Rondestvedt (emerita), Wojciech Zalewski (emeritus)

Theater and Performance Studies: Branislav Jakovljevic

Programs

REES-MA
Degree Designation: MA - Master of Arts

School of Engineering Department

Contacts

Office: 135 Huang Engineering Center
Mail Code: 94305-4027
Phone: (650) 723-5984
Web Site: http://engineering.stanford.edu

Courses offered by the School of Engineering are listed under the subject code ENGR on the Stanford Bulletin's ExploreCourses web site.

The School of Engineering offers undergraduate programs leading to the degree of Bachelor of Science (B.S.), programs leading to both B.S. and Master of Science (M.S.) degrees, other programs leading to a B.S. with a Bachelor of Arts (B.A.) in a field of the humanities or social sciences, dual-degree programs with certain other colleges, and graduate curricula leading to the degrees of M.S., Engineer, and Ph.D.

The school has nine academic departments: Aeronautics and Astronautics, Bioengineering, Chemical Engineering, Civil and Environmental Engineering, Computer Science, Electrical Engineering, Management Science and Engineering, Materials Science and Engineering, and Mechanical Engineering. These departments and one interdisciplinary program, the Institute for Computational and Mathematical Engineering, are responsible for graduate curricula, research activities, and the departmental components of the undergraduate curricula.

In research where faculty interest and expertise embrace both engineering and the supporting sciences, there are numerous interdisciplinary research centers and programs within the school as well as several interschool activities, including the Army High Performance Computing Research Center, Biomedical Informatics Training Program, Center for Integrated Systems, Center for Work, Technology, and Organization, Collaboratory for Research on Global Projects, National Center for Physics-Based Simulation in Biology, Center for Position, Navigation, and Time, the Energy Modeling Forum, the NIH Biotechnology Graduate Training Grant in Chemical Engineering, and the Stanford Technology Ventures Program. Energy Resources Engineering (formerly Petroleum Engineering) is offered through the School of Earth, Energy, and Environmental Sciences.

The School of Engineering's Hasso Plattner Institute of Design (also known as "the d.school") brings together students and faculty in engineering, business, education, medicine, and the humanities to learn design thinking and work together to solve big problems in a human-centered way.

The Woods Institute for the Environment brings together faculty, staff, and students from the schools, institutes and centers at Stanford to conduct interdisciplinary research, education, and outreach to promote an environmentally sound and sustainable world.

Global Engineering Programs (GEP) offers a portfolio of international opportunities for Stanford engineering students. Current opportunities focus on self-designed engineering internships. These opportunities enhance engineering education by providing students with an opportunity to learn about technology and engineering in a global context, to build professional networks, and to gain real world experience in a culturally diverse and international environment. Need-based financial aid is available to undergraduate students to ensure that GEP programs are inclusive. GEP programs evolve each year so students are encouraged to check the GEP website regularly for updated opportunities and details including application deadlines.

Instruction in Engineering is offered primarily during Autumn, Winter, and Spring quarters of the regular academic year. During the Summer Quarter, a small number of undergraduate and graduate courses are offered.

Undergraduate Programs in the School of Engineering

The principal goals of the undergraduate engineering curriculum are to provide opportunities for intellectual growth in the context of an engineering discipline, for the attainment of professional competence, and for the development of a sense of the social context of technology. The curriculum is flexible, with many decisions on individual courses left to the student and the adviser. For a student with well-defined educational goals, there is often a great deal of latitude.

In addition to the special requirements for engineering majors described below, all undergraduate engineering students are subject to the University general education, writing, and foreign language requirements outlined in the first pages of this bulletin. Depending on the program chosen, students have the equivalent of from one to three quarters of free electives to bring the total number of units to 180.

The School of Engineering's Handbook for Undergraduate Engineering Programs is the definitive reference for all undergraduate engineering programs; it provides detailed descriptions of all undergraduate programs in the school, as well as additional information about extracurricular programs and services. Because it is revised in the summer, and updates are made to the web site on a continuing basis, the handbook reflects the most up-to-date information on School of Engineering programs for the academic year.

Accreditation

The Accreditation Board for Engineering and Technology (ABET) accredits college engineering programs nationwide using criteria and standards developed and accepted by U.S. engineering communities. At Stanford, the following undergraduate programs are accredited:

- Civil Engineering
- Mechanical Engineering

In ABET-accredited programs, students must meet specific requirements for engineering science, engineering design, mathematics, and science course work. Students are urged to consult the School of Engineering Handbook for Undergraduate Engineering Programs and their adviser.

Accreditation is important in certain areas of the engineering profession; students wishing more information about accreditation should consult their department office or the office of the Senior Associate Dean for Student Affairs in 135 Huang Engineering Center.

Policy on Satisfactory/No Credit Grading and Minimum Grade Point Average

All courses taken to satisfy major requirements (including the requirements for mathematics, science, engineering fundamentals, Technology in Society, and engineering depth) for all engineering students (including both department and School of Engineering majors) must be taken for a letter grade if the instructor offers that option: If in doubt about requirements, courses should always be taken for a letter grade.

For departmental majors, the minimum combined GPA (grade point average) for all courses taken in fulfillment of the Engineering Fundamentals requirement and the Engineering Depth requirement is 2.0. For School of Engineering majors, the minimum GPA on all engineering courses taken in fulfillment of the major requirements is 2.0.

Admission

Any students admitted to the University may declare an engineering major if they elect to do so; no additional courses or examinations are required for admission to the School of Engineering. All students admitted to Stanford as undergraduates can have pathways to success in any engineering major at Stanford.

First Year Advice

For first year students thinking about getting started in engineering or other STEM majors, the School of Engineering has a simple online tool called the Roadmap which suggests which courses might be appropriate to take in the first year. In addition, the one-unit Autumn course, ENGR1 WANT TO BE AN ENGINEER? - Want to Be an Engineer?, offers a broad exposure to STEM majors within and outside of the School of Engineering. Faculty present an overview of their

program and where study of that topic might lead. Other courses that might be of interest are the IntroSems and Engineering Fundamentals (for a list and areas where they might apply to a major program go to Exploring Engineering on the UGHB website).

Recommended Preparation

Freshman

Students who plan to enter Stanford as freshmen and intend to major in engineering are advised to take the highest level of mathematics offered in high school. (See the AP Credit section of this bulletin for information on advanced placement in mathematics.) High school courses in physics and chemistry are strongly recommended, but not required. Additional elective course work in the humanities and social sciences is also recommended. Alternately, these courses can be taken after arrival at Stanford, and the best advice would be to begin early and have a detailed plan for completing requirements worked out.

Transfer Students

Students who do the early part of their college work elsewhere and then transfer to Stanford to complete their engineering programs should follow an engineering or pre-engineering program at the first school, selecting insofar as possible courses applicable to the requirements of the School of Engineering, that is, courses comparable to those mentioned under the Majors tab. In addition, students should work toward completing the equivalent of Stanford's foreign language requirement and as many of the University's General Education Requirements (GERs) as possible before transferring. Some transfer students may require more than four years (in total) to obtain the B.S. degree. However, Stanford affords great flexibility in planning and scheduling individual programs, which makes it possible for transfer students, who have wide variations in preparation, to plan full programs for each quarter and to progress toward graduation without undue delay.

Transfer credit is given for courses taken elsewhere whenever the courses are equivalent or substantially similar to Stanford courses in scope and rigor. The policy of the School of Engineering is to study each transfer student's preparation and make a reasonable evaluation of the courses taken prior to transfer by means of a petition process. Inquiries may be addressed to Darlene Lazar at dlazar@stanford.edu, in the Office of Student Affairs in 135 Huang Engineering Center. For more information, see the transfer credit section of the Handbook for Undergraduate Engineering Programs.

Degree Program Options

In addition to the B.S. degrees offered by departments, the School of Engineering offers two other types of B.S. degrees:

- Bachelor of Science in Engineering (see subplan majors listed below)
- Bachelor of Science for Individually Designed Majors in Engineering (IDMEN)

There are six Engineering B.S. subplans that have been proposed by cognizant faculty groups and approved by the Undergraduate Council:

- Architectural Design
- Atmosphere/Energy
- Biomechanical Engineering
- Biomedical Computation
- Engineering Physics
- Product Design

The B.S. for an Individually Designed Major in Engineering has also been approved by the council.

Curricula for majors are offered by the departments of:

- Aeronautics and Astronautics
- Bioengineering
- Chemical Engineering
- Civil and Environmental Engineering
- Computer Science
- Electrical Engineering
- Management Science and Engineering
- Materials Science and Engineering
- Mechanical Engineering

Curricula for majors in these departments have the following components:

- 36-45 units of mathematics and science (see Basic Requirements 1 and 2 at the end of this section)
- Engineering fundamentals (two-three courses minimum, depending up individual program requirements; see Basic Requirement 3)
- Technology in Society (TIS) (one course minimum, see Basic Requirement 4)
- Engineering depth (courses such that the total number of units for Engineering Fundamentals and Engineering Depth is between 60 and 72)
- ABET accredited majors must meet a minimum number of Engineering Science and Engineering Design units; (see Basic Requirement 5)

Consult the Handbook for Undergraduate Engineering Programs for additional information.

Dual Degree Programs

A Stanford undergraduate may work simultaneously toward two bachelor's degrees or toward a bachelor's and a master's degree, that is, B.A. and M.S., B.A. and M.A., B.S. and M.S., or B.S. and M.A. The degrees may be granted simultaneously or at the conclusion of different quarters. Five years are usually required for a dual or coterminal program or for a combination of these two multiple degree programs. For further information, inquire with the School of Engineering's student affairs office, 135 Huang Engineering Center, or with department contacts listed in the Handbook for Undergraduate Engineering Programs.

Dual B.A. and B.S. Degree Program—To qualify for both degrees, a student must:

1. complete the stated University and department requirements for each degree
2. complete 15 full-time quarters (3 full-time quarters after completing 180 units)
3. complete a total of 225 units (180 units for the first bachelor's degree plus 45 units for the second bachelor's degree)

Coterminal Bachelor's and Master's Degree Program

A Stanford undergraduate may be admitted to graduate study for the purpose of working simultaneously toward a bachelor's degree and a master's degree, in the same or different disciplines. To qualify for both degrees, a student must:

1. complete, in addition to the units required for the bachelor's degree, the number of units required by the graduate department for the master's degree which in no event is fewer than the University minimum of 45 units
2. complete the requirements for the bachelor's degree (department, school, and University) and apply for conferral of the degree at the appropriate time
3. complete the department and University requirements for the master's degree and apply for conferral of the degree at the appropriate time

A student may complete the bachelor's degree before completing the master's degree, or both degrees may be completed in the same quarter.

Procedure for Applying for Admission to Coterminal Degree Programs

Stanford undergraduates apply to the pertinent graduate department using the University coterminal application. Application deadlines and admissions criteria vary by department, but in all cases the student must apply early enough to allow a departmental decision at least one quarter in advance of the anticipated date of conferral of the bachelor's degree.

Students interested in coterminal degree programs in Engineering should refer to our departments' sections of this bulletin for more detailed information. The University requirements for the coterminal master's degree are described in the Coterminal Master's Degrees section of this bulletin.

Graduate Programs in the School of Engineering

Admission

Application for admission with graduate standing in the school should be made to the graduate admissions committee in the appropriate department or program. While most graduate students have undergraduate preparation in an engineering curriculum, it is feasible to enter from other programs, including chemistry, geology, mathematics, or physics.

For further information and application instructions, see the department sections in this bulletin or the Graduate Graduate Admissions section of this bulletin. Stanford undergraduates may also apply as coterminal students; details can be found under "Undergraduate Degree Programs" on the School of Engineering website.

Fellowships and Assistantships

Departments and divisions of the School of Engineering award graduate fellowships, research assistantships, and teaching assistantships each year.

Curricula in the School of Engineering

For further details about the following programs, see the department sections in this bulletin.

Related aspects of particular areas of graduate study are commonly covered in the offerings of several departments and divisions. Graduate students are encouraged, with the approval of their department advisers, to choose courses in departments other than their own to achieve a broader appreciation of their field of study. For example, most

departments in the school offer courses concerned with nanoscience, and a student interested in an aspect of nanotechnology can often gain appreciable benefit from the related courses given by departments other than her or his own.

Departments and programs of the school offer graduate curricula as follows:

Aeronautics and Astronautics

- Aeroelasticity and Flow Simulation
- Aircraft Design, Performance, and Control
- Applied Aerodynamics
- Autonomy
- Computational Aero-Acoustics
- Computational Fluid Dynamics
- Computational Mechanics and Dynamical Systems
- Control of Robots, including Space and Deep-Underwater Robots
- Conventional and Composite Materials and Structures
- Decision Making under Uncertainty
- Direct and Large-Eddy Simulation of Turbulence
- High-Lift Aerodynamics
- Hybrid Propulsion
- Hypersonic and Supersonic Flow
- Micro and Nano Systems and Materials
- Multidisciplinary Design Optimization
- Navigation Systems (especially GPS)
- Optimal Control, Estimation, System Identification
- Sensors for Harsh Environments
- Space Debris Characterization
- Space Environment Effects on Spacecraft
- Space Plasmas
- Spacecraft Design and Satellite Engineering
- Turbulent Flow and Combustion

Bioengineering

- Biomedical Computation
- Biomedical Devices
- Biomedical Imaging

- Cell and Molecular Engineering
- Regenerative Medicine

Chemical Engineering

- Applied Statistical Mechanics
- Biocatalysis
- Biochemical Engineering
- Bioengineering
- Biophysics
- Computational Materials Science
- Colloid Science
- Dynamics of Complex Fluids
- Energy Conversion
- Functional Genomics
- Hydrodynamic Stability
- Kinetics and Catalysis
- Microrheology
- Molecular Assemblies
- Nanoscience and Technology
- Newtonian and Non-Newtonian Fluid Mechanics
- Polymer Physics
- Protein Biotechnology
- Renewable Fuels
- Semiconductor Processing
- Soft Materials Science
- Solar Utilization
- Surface and Interface Science
- Transport Mechanics

Civil and Environmental Engineering

- Atmosphere/Energy
- Environmental Engineering
- Geomechanics
- Structural Engineering

- Sustainable Design and Construction

Computational and Mathematical Engineering

- Applied and Computational Mathematics
- Computational Biology
- Computational Fluid Dynamics
- Computational Geometry and Topology
- Computational Geosciences
- Computational Medicine
- Data Science
- Discrete Mathematics and Algorithms
- Numerical Analysis
- Optimization
- Partial Differential Equations
- Stochastic Processes
- Uncertainty Quantification
- Financial Mathematics

Computer Science

See the Stanford Computer Forum for additional information.

- Algorithmic Game Theory
- Algorithms
- Artificial Intelligence
- Autonomous Agents
- Biomedical Computation
- Compilers
- Complexity Theory
- Computational and Cognitive Neuroscience
- Computational Biology
- Computational Geometry and Topology
- Computational Logic
- Computational Photography
- Computational Physics
- Computational Social Science

- Computer Architecture
- Computer Graphics
- Computer Security
- Computer Science Education
- Computer Sound
- Computer Vision
- Crowdsourcing
- Cryptography
- Database Systems
- Data Center Computing
- Data Mining
- Design and Analysis of Algorithms
- Distributed and Parallel Computation
- Distributed Systems
- Education and Learning Science
- Electronic Commerce
- Formal Verification
- General Game Playing
- Haptic Display of Virtual Environments
- Human-Computer Interaction
- Image Processing
- Information and Communication Technologies for Development
- Information Management
- Learning Theory
- Machine Learning
- Mathematical Theory of Computation
- Mobile Computing
- Multi-Agent Systems
- Nanotechnology-enabled Systems
- Natural Language and Speech Processing
- Networking and Internet Architecture
- Operating Systems

- Parallel Computing
- Probabilistic Models and Methods
- Programming Systems/Languages
- Robotics
- Robust System Design
- Scientific Computing and Numerical Analysis
- Sensor Networks
- Social and Information Networks
- Social Computing
- Ubiquitous and Pervasive Computing
- Visualization
- Web Application Infrastructure

Electrical Engineering

See EE Research at Stanford: The Big Picture for additional information.

- Biomedical Devices, Sensors and Systems
- Biomedical Imaging
- Communications Systems
- Control and Optimization
- Data Science
- Electronic Devices
- Embedded Systems
- Energy Harvesting and Conversion
- Energy-Efficient Hardware Systems
- Information Theory and Applications
- Integrated Circuits and Power Electronics
- Machine Learning
- Mobile Networking
- Nanoelectronic Devices and NanoSystems
- Nanotechnology and NEMS/MEMS
- Photonics, Nanoscience and Quantum Technology
- Secure Distributed Systems
- Signal Processing and Multimedia

- Societal Networks
- Software Defined Networking

Management Science and Engineering

- Algorithms
- Computational Social Science
- Decision and Risk Analysis
- Energy and Environment
- Entrepreneurship and Innovation
- Health Systems Modeling and Policy
- National Security Policy
- Networks
- Operations Management
- Optimization
- Organizational Science and Theory
- Quantitative Finance
- Stochastic Systems
- Strategy

Materials Science and Engineering

- Biomaterials
- Computational Materials Science
- Electrical and Optical Behavior of Solids
- Electron Microscopy
- Fracture and Fatigue
- Imperfections in Crystals
- Kinetics
- Magnetic Behavior of Solids
- Magnetic Storage Materials
- Nanomaterials
- Photovoltaics
- Organic Materials
- Phase Transformations
- Physical Metallurgy

- Solid State Chemistry
- Structural Analysis
- Thermodynamics
- Thin Films
- X-Ray Diffraction

Mechanical Engineering

- Biomechanics
- Combustion Science
- Computational Mechanics
- Controls
- Design of Mechanical Systems
- Dynamics
- Environmental Science
- Experimental Stress and Analysis
- Fatigue and Fracture Mechanics
- Finite Element Analysis
- Fluid Mechanics
- Heat Transfer
- High Temperature Gas Dynamics
- Kinematics
- Manufacturing
- Mechatronics
- Product Design
- Robotics
- Sensors
- Solids
- Thermodynamics
- Turbulence

School of Medicine Department

Contacts

Office: Medical School Office Building (MSOB), 1265 Welch Road, Ste. 100

Mail Code: 94305-5404

Web Site: https://med.stanford.edu/

Office: MS in Medicine

Web Site: http://msm.stanford.edu/

Office: MS in Medicine in Biomedical Investigation

Web Site: http://med.stanford.edu/md/discovery-curriculum/BergScholarsProgram.html

Office: Doctor of Medicine (M.D.)

Web Site: http://med.stanford.edu/md.html

Office: Medical Scientist Training Program (MSTP)

Web Site: http://med.stanford.edu/mstp.html

Mission of the Degree Programs in Medicine

The mission of the degree programs in Medicine is to educate and inspire leaders in medicine and science who will improve human health through discovery, innovation, scholarship, education, and the delivery of outstanding patient-centered care.

Stanford is committed to representing the diversity of the U.S. and California populations by seeking a diverse body of students who are interested in the intellectual substance of medicine and committed to advancing the field of health care, broadly defined. Provided an applicant to the school has completed basic courses in physics, chemistry, and biology, the choice of an undergraduate major may reflect other interests, including the arts and humanities. Course work in advanced biology such as biochemistry, molecular biology, or genetics and the behavioral sciences is recommended because of their importance in understanding health care. Breadth of interests and depth of experiences play an important role in the selection of students from among those applicants having superior academic records.

Degree Programs in Medicine

The School of Medicine offers a professional degree in Medicine (MD), a Masters in Medicine (MSM), a Masters in Medicine in Biomedical Investigation, and oversees a dual-degree Medical Scientist Training Program (MD-PhD). Additional School of Medicine graduate degree programs are available on the School of Medicine Education website.

The Master of Science in Medicine program admits current Stanford Ph.D. students who have a commitment to translational research, but are not interested in becoming clinicians. The goal of the program is to train researchers in human biology and disease to be better equipped to translate new scientific discoveries into useful medical advances. Students offered admission into any Ph.D. program at Stanford may apply for admission to the master's program.

The Master of Science in Medicine in Biomedical Investigation program admits current Stanford M.D. students who have a commitment to becoming physician-scientists. A major goal of the program is to address decreasing numbers of physician- scientists by shortening the training period without compromising quality of research – focusing instead on individualized career development of M.D.-only Physician-Scientists by placing them in outstanding research groups led by experienced faculty.

The Doctor of Medicine (M.D.) program provides education in biomedical and clinical sciences along with study and independent research through scholarly concentrations. Emphasis is placed on interdisciplinary learning, with streamlined content, interactive approaches, and melding of basic science and clinical instruction across the

curriculum. Blocks of unscheduled time allow for individual or group study, participation in elective courses, research, and reflection. The flexible Discovery Curriculum supports student's scientific discovery and self-discovery by offering multiple learning pathways at a more individualized pace and opportunities for pursuing a second degree, such as an M.P.H., M.B.A., Master's of Science in Epidemiology or Health Services Research, a Ph.D., or participating in longitudinal and global health research experiences. The M.D. degree requires 12 quarters of registration at full Med-M.D. tuition.

The Medical Scientist Training Program (MSTP) M.D.-Ph.D. program provides a select group of medical students with an opportunity to pursue a training program designed to equip them for careers in academic investigative medicine. Individualization of the curricular and research programs of each trainee is the hallmark of the Program. Training for a combined MD-PhD includes the same content encountered by students who pursue each degree separately, but the total time of training should be less than the sum of the time normally taken for each degree. To this end, students must plan their training carefully and commit to a rigorous and intensive period of study. The flexible curriculum at Stanford Medical School allows each student to satisfy the requirements for the MD degree and to pursue an independent research program.

M.D.-Ph.D. candidates are assessed 12 quarters full MD tuition, 3 quarters full graduate tuition, and the MD reduced tuition rate thereafter. Completion of the M.D. degree must be achieved within six years, unless a petition is granted to extend this time frame. For further details on the M.D. degree, including admission requirements, see the Stanford M.D. Program website

Programs

Med-MD
Degree Designation: MD - Doctor of Medicine

Med-MS
Degree Designation: MS - Master of Science
-

Science, Technology, and Society Department

Contacts

Office: Science, Technology, and Society
Mail Code: 94305-2120
Phone: (650) 723-2565
Web Site: https://sts.stanford.edu/

Courses offered by the Program in Science, Technology, and Society are listed under the subject code STS on the ExploreCourses website.

Mission of the Undergraduate Program in Science, Technology, and Society

The Program in Science, Technology, and Society (STS) aims to provide students with an interdisciplinary framework through which to understand the complex interactions of science, technology and the social world. To major in STS, students work through a common core of courses drawn from the social sciences, the humanities, the natural and physical sciences and engineering. Students pursue coursework in one of seven specialized areas:

- Catastrophic Risks and Solutions
- Communication and Media
- Innovation and Organization

- Life Sciences and Health
- Politics and Policy
- Social Dynamics of Data and Information
- Self-Designed Concentration

Students may also undertake research in affiliated laboratories and through the honors program for course units. All students complete a capstone project, either by taking one of the senior capstone courses (STS 200) or by applying for and completing an STS honors thesis. Students are encouraged to pursue mastery in at least one field from within the humanities or social sciences and at least one field from within the sciences or engineering. Majors may declare either a B.A. or a B.S. degree (see the specific requirements for each degree).

The Program's affiliated faculty represent over a dozen departments, including Anthropology, Communication, Computer Science, Education, Electrical Engineering, History, Law, Management Science and Engineering, Political Science and Sociology. By learning to bring such a rich collection of disciplinary approaches to bear on questions of science and technology, students graduate uniquely equipped to succeed in professions that demand fluency with both technical and social frameworks. Recent graduates of STS have entered top-ranked Ph.D. and MBA programs and forged successful careers in a variety of fields, including business, engineering, law, public service, medicine and academia.

Advising and Course Selection

The Program in Science, Technology, and Society offers an advising process that includes faculty, staff and peer advisers. Prospective majors must first meet with a peer adviser and then with the Program's Student Services Officer to determine which degree they will pursue (the B.A. or B.S.) and how they will fulfill the Program's basic requirements. When they are ready to declare, they meet with the Program's Student Services Officer to submit their degree plan and then the Associate Director reviews the coursework for intellectual coherence. Majors are then assigned to a faculty adviser who serves as an intellectual mentor and helps them identify the core questions driving their interest in the field. The Program also sponsors a wide variety of events designed to help students meet their colleagues and Program alumni, discover research and internship opportunities, and make their way toward the career of their choice.

STS Affiliated Faculty

Director: Paul N Edwards

Associate Director: Kyoko Sato

Executive Board: Paul N Edwards (STS and CISAC), Paula Findlen (History), Mark Granovetter (Sociology), Stephen Luby (Global Health), Rob Reich (Center for Ethics in Society), Gabrielle Hecht (History), Pamela Hinds (Management Science and Engineering), Michael Lepech (Civil and Environmental Engineering), Scott Sagan (Political Science), Fred Turner (Communication)

Affiliated Faculty and Staff: Jeremy Bailenson (Communication), Adam Banks (Graduate School of Education), Thomas Byers (Management Science and Engineering), Angèle Christin (Communication), Jean-Pierre Dupuy (French), Paul N. Edwards (STS and CISAC), Paula Findlen (History), Duana Fullwiley (Anthropology), Mark Granovetter, (Sociology), Hank Greely (Law), Ann Grimes (Communication), James T. Hamilton (Communication), Gabrielle Hecht (History) Pamela Hinds (Management Science and Engineering), Hector Hoyos (Iberian and Latin American Cultures), Miyako Inoue (Anthropology), Sarah Lochlann Jain (Anthropology), Robert Laughlin (Physics), Pamela Lee (Art and Art History), Michael Lepech (Civil and Environmental Engineering), Helen Longino (Philosophy), Henry Lowood (Stanford University Libraries), Thomas Mullaney (History), Brad Osgood (Electrical Engineering), Walter Powell (Education), Robert Proctor (History), Jessica Riskin (History), Scott Sagan (Political Science), Kyoko Sato (STS), Londa Schiebinger

(History), Michael Shanks (Classics, Anthropology), Mitchell Stevens (Education), Fred Turner (Communication), John Willinsky (Education), Xiaochang Li (Communication), Aileen Robinson (Theater & Performance Studies), Daniel McFarland (Education)

Emeriti: James Adams (Management Science and Engineering, Mechanical Engineering), Barton Bernstein (History), Martin Hellman (Electrical Engineering), Robert McGinn (Management Science and Engineering), Eric Roberts (Computer Science), Walter Vincenti (Aeronautics and Astronautics), Gavin Wright (American Economic History)

Programs

STS-BA
Degree Designation: BA - Bachelor of Arts

STS-BS
Degree Designation: BS - Bachelor of Science

STS-IHn
Degree Designation:
-

Slavic Languages and Literatures Department

Contacts

Office: Building 260, Rooms 127-128
Mail Code: 94305- 2006
Phone: (650) 723-4438
Email: slavic@stanford.edu
Web Site: Slavic Languages and Literatures

Courses offered by the Department of Slavic Languages and Literatures are listed on the Stanford Bulletin's ExploreCourses web site under the subject codes SLAVIC (Slavic Studies), and SLAVLANG (Slavic Language).

The department supports coordinated study of Russian language, literature, literary and cultural history, theory, and criticism. The department's programs may also be combined with the programs in Russian, East European and Eurasian Studies, Jewish Studies, Film Studies, Drama, International Relations, Stanford's Overseas Studies, the Special Languages Program, and other programs. The department is a part of the Division of Literatures, Cultures, and Languages.

A full undergraduate program provides a choice of several tracks leading to a B.A. (with a major or a minor) or to a B.A. with Honors. The department offers a full graduate program leading to an M.A. in Russian and a Ph.D. in Slavic Languages and Literatures. Stanford undergraduates are eligible to apply to the department for a coterminal B.A./M.A. degree. Students in the department's Ph.D. program are required to choose among minor programs in other national literatures, linguistics, Russian, East European, and Eurasian Studies, Jewish Studies, art and music history, theater, or film studies; or they may design their own minor or choose the related field option.

The department runs a colloquium series, which brings distinguished speakers to Stanford; organizes international conferences and symposia; and since 1987 maintains a continuing publication series, Stanford Slavic Studies. Along with the Center for Russian, East European and Eurasian Studies, the department offers qualified undergraduates summer grants (on a competitive basis) for intensive Russian language instruction in accredited programs in Russia and the U.S.

Improving cultural understanding is a critical part of the department's mission, and the department offers a full range of courses at all levels devoted to Russian literature, music and visual arts that do not require specialized knowledge, as well as advanced research seminars for graduate students. The Slavic theme house, Slavianskii Dom, serves as an

undergraduate residence for many students in the program and hosts program-related activities. The undergraduate program has attracted students seeking careers in journalism, business, international relations, law, medicine, and human rights, as well as academia. Russian is still the lingua franca over the vast territory of the former Soviet Union, and a good command of this language offers a gateway to Eurasia's diverse cultures, ethnicities, economies, and religions.

Stanford students of Russian, East European and Eurasian Studies benefit from unmatched faculty resources. Green Library and the Hoover Institution libraries and archives hold world-renowned Russian and East European collections, which undergraduates and graduate students use in their research. Department students master a difficult language and a rich and challenging literature, and are rewarded by gaining entry into a unique, powerful, and diverse civilization that defined major trends in the past century and plays an increasingly significant role in the world today.

Mission of the Undergraduate Program in Slavic Languages and Literatures

The mission of the undergraduate program in Slavic Language and Literatures is to expose students to a variety of perspectives on Slavic, especially Russian language, history, culture, literature, and philosophical thought. The program offers three tracks. Courses in the Russian Language and Literature track focus on the linguistic and philological study of literature, as well as the history of Russian literature. The Russian Studies track guides students through a comprehensive interdisciplinary study of Russian literature and culture in historic context. The Russian and Philosophy track provides students with a background in the Russian language and literary tradition with emphasis on philosophical thought.

Slavic Theme House

Slavianskii Dom, at 650 Mayfield Avenue, is an undergraduate residence that offers opportunities for students to expand their knowledge, understanding, and appreciation of Russia, Eastern Europe, and Eurasia. Assignment is made through the regular undergraduate housing draw.

Faculty in Slavic Languages and Literatures

Director: Lisa Surwillo

Chair of Graduate Studies: Lisa Surwillo

Chair of Undergraduate Studies: Yuliya Ilchuk

Professors: Lazar Fleishman, Gabriella Safran

Associate Professor: Monika Greenleaf

Assistant Professor: Yuliya Ilchuk

Acting Assistant Professor: Katherine Hill Reischl

Courtesy Professor: Nancy Ruttenburg

Emeriti (Professors): Gregory Freidin, Richard D. Schupbach

Graduate Advising Expectations

The Department of Slavic Languages and Literatures is committed to providing academic advising in support of graduate student scholarly and professional development. The overall goal of advising, both in the DLCL and the department, is to help graduate students make academic and career choices wisely, and think ahead, in order to craft a long-term plan for their graduate student career and beyond. When most effective, the advising relationship entails collaborative and sustained engagement by both the advisor and the advisee. As a best practice, advising expectations should be periodically discussed and reviewed to ensure mutual understanding. Both the advisor and the advisee are expected to maintain professionalism and integrity. Advising is both an academically invaluable form for the transmission of expertise, as well as a key aspect of creating a strong departmental and Stanford community.

Faculty Advisors

Faculty advisors guide students in key areas such as selecting courses, designing and conducting research, developing of teaching pedagogy, navigating policies and degree requirements, and exploring academic opportunities and professional pathways.

- Upon enrolling, students plan their work under the direction of the Chair of Graduate Studies or a faculty member designated by the program. When the student selects a more specialized advisor, the transition should involve oral or written communication between both advisors and the student concerning the student's progress, goals, and expectations. It is possible for doctoral students to choose two main advisors at the dissertation stage, provided all agree this is academically sound.
- Faculty advisors should meet with assigned students to discuss their selection of courses and to plan from a broader, longer-term perspective, including discussion of Program milestones and a basic timeline; an overview of Department and DLCL offerings beyond courses; student goals and interests and DLCL or Stanford programs that may be relevant; and (for doctoral students) how to transfer previous graduate coursework.
- Faculty advisors and graduate students should meet at least once per quarter to assess the advisee's course of study, performance over the past quarter, and plans for the next quarter, as well as longer term plans. If a student has two advisors, the student should meet at least once per quarter with each advisor and at least once per year with both advisors at the same time.
- For doctoral students, faculty should help their advisees plan for exams, research grant applications, develop research projects, and plan ahead for both the academic job market and the job search beyond academia.
- Faculty advisors should provide feedback about the student's progress to the department during the Annual Review process. For more information about the Annual Review, see the Graduate Handbook.

Graduate Students

Graduate students are active contributors to the advising relationship, proactively seeking academic and professional guidance and taking responsibility for informing themselves of policies and degree requirements for their graduate program.

- Upon enrolling, students plan their work under the direction of the Chair of Graduate Studies or a faculty member designated by the program. As the student develops a field of expertise, the student will choose a program advisor to replace the Chair of Graduate Studies role. The transition should involve oral or written communication between both advisors and the student concerning the student's progress, goals, and expectations.
- Graduate students and faculty advisors and should meet at least once per quarter to assess the advisee's course of study, performance over the past quarter, and plans for the next quarter, as well as longer term plans. If a student has two advisors, the student should meet at least once per quarter with each advisor and at least once per year with both advisors at the same time.
- Students should consult with their advisors on all academic matters, including coursework, conference presentations and publications, research travel, and teaching plans.

- Students should provide a thorough self-evaluation each year for the annual review. For more information about the Annual Review, see the Graduate Handbook.

For a statement of University policy on graduate advising, see the Graduate Advising section of this bulletin

Programs

Slav-BA
Degree Designation: BA - Bachelor of Arts

Slav-MA
Degree Designation: MA - Master of Arts

Slav-Min
Degree Designation:

Slav-PhD
Degree Designation: PHD - Doctor of Philosophy

Slav-PMn
Degree Designation:

Sociology Department

Contacts

Office: Building 120, Room 160
Mail Code: 94305-2047
Phone: (650) 723-3956
Web Site: https://sociology.stanford.edu/

Courses offered by the Department of Sociology are listed under the subject code SOC on the Stanford Bulletin's ExploreCourses web site.

Sociology seeks to understand all aspects of human social behavior, including the behavior of individuals as well as the social dynamics of small groups, large organizations, communities, institutions, and entire societies. Sociologists are typically motivated both by the desire to better understand the principles of social life and by the conviction that understanding these principles may aid in the formulation of enlightened and effective social policy. Sociology provides an intellectual background for students considering careers in the professions or business. Students may pursue degrees in sociology at the bachelor's, master's, or doctoral levels. The department organizes its courses by areas of study to assist students in tailoring their education and research to their academic interests and career goals.

Mission of the Undergraduate Program in Sociology

The mission of the undergraduate program in Sociology is to provide students with the skills necessary to understand and address social problems and inequalities in global, institutional, and interpersonal social relations. At its core, the curriculum in the major is rooted in social theory and the scientific method. Sociology majors are given opportunities to develop a broad understanding of core sociological theories and the methodological skills used to evaluate human behavior and social organizations. Sociology provides an intellectual background for students considering careers in business, social services, public policy, government service, international nongovernmental organizations, foundations, or academia.

The Sociology major consists of a core curriculum plus elective courses intended to provide breadth of exposure to the variety of areas encompassed by sociology.

Graduate Programs in Sociology

The Department of Sociology offers three types of advanced degrees:

- the Doctor of Philosophy
- the coterminal Master of Arts in Sociology which is restricted to currently enrolled Stanford undergraduates
- the Master of Arts in Sociology which is available to Stanford students who are currently enrolled in other advanced degree programs.

The department does not have a terminal M.A. program for external applicants.

Areas of Study

The Department of Sociology specializes in four general areas of study, allowing students to tailor their education and research to their academic interests and career goals. The five areas of study supported by the department are:

Organizations, Business, and the Economy

Focus is on the arrangements which societies construct for the provision of material goods or services. A formal organization which provides goods or services for profit and sells them through a market is called a business, and the economic system is capitalism. Social needs are also met through government and not-for-profit organizations, such as garden clubs, hospitals, prisons, and the Red Cross; some private and social needs are met outside of organizations, such as health care provided by family members and exchange of favors among friends. Courses stress the factors that determine whether needs that people define are met through markets or non-market allocation, through organizations, or by other means. They also investigate the environmental and technical factors that shape organization structure, the determinants of how efficiently organizations operate, and the interpersonal processes that shape individual behavior within organizations. Careers related to this field include management and administration in business or public settings, management consulting and analysis, and legal studies related to corporations, organizations, and business.

Social Movements, Comparative Politics, and Social Change

Focus is on the emergence, reproduction, and change of political systems and institutions, especially on why and how different political systems and social movements appear in different times and places, and how differences in political regimes and economic systems influence attempts to change these systems. The origins and significance of national and transnational social movements, transition to democracy, including revolution, nationalism, and other forms of collective action, in creating and sustaining these changes analyzed across countries and over time. Careers that are relevant to this field include law, public policy, government service, nonprofit and international nongovernmental organizations, business organizations (especially those with international interests), consulting, and managerial jobs.

Social Psychology and Interpersonal Processes

Focus is on the social organization of individual identity, beliefs, and behavior, and upon social structures and processes which emerge in and define interpersonal interactions. Processes studied include social acceptance and competition for prestige and status, the generation of power differences, the development of intimacy bonds, the formation of expectation states which govern performance in task-oriented groups, and social pressures to constrain deviance. Foundation courses emphasize the effect of social processes on individual behavior and the analysis of group processes. This field provides training for careers with a significant interpersonal component, including advertising and marketing, business, education, law, management, medicine and health, or social work.

Social Inequality

Focus is on forms of social inequality, including fields such as: the shape and nature of social inequalities; competition for power; allocation of privilege; production and reproduction of social cleavages; and consequences of class, race, and gender for outcomes such as attitudes, political behavior, and lifestyles. Many courses emphasize changes in the structure of social inequalities over time, and the processes which produce similarities or differences in stratification across nations. Topics include educational inequality, employment history, gender differences, income distributions,

poverty, race, and ethnic relations, social mobility, and status attainment. Careers related to this field include administration, advertising, education, foreign service, journalism, industrial relations, law, management consulting, market research, public policy, and social service.

Race, Gender, Immigration, Identity and Policy

Focus is on population diversity, primarily in the United States, and on how identity is formed and maintained. Classes in this subject area address segregation, integration, and assimilation. What does it mean to cross from one group to another? How has the law treated racial minorities, sexual minorities, and immigrants differently over time? Careers related to this field include social work, teaching, research, law, management, and population studies which can be applied to any industry.

Joint Programs in Sociology with the School of Law

The School of Law and Department of Sociology conduct joint programs leading to either a combined J.D. degree with an M.A. degree in Sociology or to a combined J.D. degree with a Ph.D. in Sociology.

Law students interested in pursuing an M.A. in Sociology apply for admission to the Department of Sociology during the first year of Law school. Once admitted to the Department of Sociology, the student must complete standard departmental master's degree requirements as specified in this bulletin. Applications for the joint J.D./M.A. degree program must be approved by both the department and the Law school. Faculty advisers from each program participate in the planning and supervising of the student's academic program.

The J.D./Ph.D. degree program is designed for students who wish to prepare themselves for research or teaching careers in areas relating to both legal and sociological concerns. Students interested in the joint degree program must be admitted to both the School of Law and the Department of Sociology. Interest in the joint degree program must be noted on each of the student's applications. Alternatively, an enrolled student in either the Law School or the Sociology department may apply to the other program, preferably during their first year of study. Students participating in the joint degree program are not eligible to transfer and receive credit for a masters, or other degree, towards the Sociology Ph.D..

Upon admission, students are assigned a joint program faculty adviser who assists the student in planning an appropriate program and ensuring that all requirements for both degrees are satisfied. The faculty adviser serves in this capacity during the student's course of study regardless of whether the student is enrolled in the School of Law or the Sociology department.

J.D./Ph.D. students may elect to begin their course of study in either the School of Law or the Department of Sociology. Students must be enrolled full-time in the Law school for the first year of Law school and must enroll full time in the graduate school for the first year of the Sociology program. After that time, enrollment may be in the graduate school or the Law school, and students may choose courses from either program regardless of where enrolled. Students must satisfy the requirements for both the J.D. and the Ph.D. degrees. Up to 54 quarter units of approved course work may be counted towards both degrees, but no more than 31 quarter units of courses that originate outside the Law school may count towards the Law degree. The Law degree may be conferred upon completion of applicable Law school requirements; it is not necessary to have both degrees conferred simultaneously. Students participating in the joint degree program are not eligible to transfer and receive credit for a master's or other degree towards the Ph.D. Students must complete the equivalent of 183 quarter units to complete both degrees. Tuition and financial aid arrangements normally are through the school in which the student is currently enrolled.

The Law degree may be conferred upon completion of applicable Law school requirements; it is not necessary to have both degrees conferred simultaneously.

For more information, see the Sociology web site, and the Law School web site on the J.D./Ph.D.

Faculty

Emeriti: (Professors) Joseph Berger, Michael T. Hannan, Douglas McAdam, John W. Meyer, Susan Olzak, Cecilia Ridgeway, W. Richard Scott, Nancy B. Tuma

Chair: Jeremy Freese

Director of Graduate Studies: Shelley Correll

Director of Coterminal Masters: Michelle Jackson

Director of Undergraduate Studies: Michael Rosenfeld

Professors: Karen Cook, Shelley Correll, Jeremy Freese, Mark Granovetter, David Grusky, Tomás Jiménez, Michael Rosenfeld, Gi-Wook Shin, C. Matthew Snipp, Florencia Torche, Kiyoteru Tsutsui, Andrew Walder, Robb Willer, Xueguang Zhou

Associate Professors: Aliya Saperstein, Forrest Stuart

Assistant Professors: Asad L. Asad, Matthew Clair, Mark Hoffman, Jackelyn Hwang, Michelle Jackson, Barbara Kiviat

Adjunct Professors: Glenn Carroll, Michele Landis Dauber, Larry Diamond, Daniel McFarland, Walter Powell, Francisco Ramirez, Hayagreeva Rao, Sean Reardon, Jesper Sørensen, Sarah Soule, Mitchell Stevens

Adjunct Associate Professors: Patricia Bromley, Amir Goldberg, David Rehkopf, Adina Sterling, Christine Min Wotipka

Adjunct Assistant Professors: Angèle Christin, Benjamin Domingue, Sharad Goel, Jennifer Pan

Lecturers: Eva Meyersson Milgrom, Michaela Simmons

Adjunct Consulting Professor: Ruth Cronkite

Graduate Advising Expectations

The Department of Sociology is committed to providing academic advising in support of graduate student scholarly and professional development. When most effective, this advising relationship entails collaborative and sustained engagement by both the advisor and the advisee. As a best practice, advising expectations should be periodically discussed and reviewed to ensure mutual understanding. Both the advisor and the advisee are expected to maintain professionalism and integrity.

Faculty advisors guide students in key areas such as selecting courses, designing and conducting research, developing of teaching pedagogy, navigating policies and degree requirements, and exploring academic opportunities and professional pathways.

Graduate students are active contributors to the advising relationship, proactively seeking academic and professional guidance and taking responsibility for informing themselves of policies and degree requirements for their graduate program.

For a statement of University policy on graduate advising, see the "Graduate Advising" section of this bulletin.

Programs

Socio-BA
Degree Designation: BA - Bachelor of Arts

Socio-Min
Degree Designation:

Socio-PMn
Degree Designation:

Socio-MA
Degree Designation: MA - Master of Arts

Socio-PhD
Degree Designation: PHD - Doctor of Philosophy

Stanford Arts Institute Department

Contacts

Office: Stanford Arts Institute, Littlefield Center, 2nd Floor
Mail Code: 94305-2250
Email: artsinstitute@stanford.edu
Web Site: http://arts.stanford.edu/arts-institute/

The Stanford Arts Institute offers interdisciplinary arts curricula and research programs, drawing on the wide-ranging intellectual resources of Stanford University. The Institute forges arts connections across the University; offers grants for faculty, staff, and students; presents arts events; curates critical conversations around the arts; incubates new arts projects; and supports artists and cultural groups across campus. Since its founding in 2006, the Stanford Arts Institute has catalyzed the Stanford arts community to grow and thrive.

Courses offered by the Stanford Arts Institute are listed under the subject code ARTSINST on the Stanford Bulletin's ExploreCourses website.

Faculty

Chair: Jean Ma

Director of Undergraduate Studies: Jean Ma

Programs

ARTS-IHN
Degree Designation:
-

Interdisci
Degree Designation:
-

Stanford Center for Clinical R Department

Contacts

Office: Center for Academic Medicine (CAM1 Building), CERC, 453 Quarry Road, Palo Alto, CA
Mail Code: 94304-5657
Email: MCiMInquiry@stanford.edu
Web Site: https://med.stanford.edu/master-clinical-informatics-management.html

The Master of Science in Clinical Informatics Management program (MCiM) is an intensive, one-year professional master's degree combining business and technology constructs directed toward our migration to value in health care. The program offers students a unique experience of both remote and weekend onsite sessions to fit the needs of working professionals. Master of Science in Clinical Informatics Management courses provide rich learning experiences for students through a collaborative environment and dynamic course content. Through the coursework, students gain a deep understanding of health informatics and the business insights to accurately leverage technology to succeed in the real world.

COVID-19 has reinforced the longstanding need for leaders who can expertly navigate business, technology, and medicine to manage and drive the digital transformation of a $4.0 trillion health care system. Diverse applications such as telemedicine for routine clinical care and digital radiology for the rapid diagnosis of COVID pneumonia are among some of the opportunities the crisis has highlighted. Others include greater capabilities for remote health monitoring, wearable sensors for monitoring patients, the health of populations on college campuses and in the workforce, and interactive voice-response tools such as Alexa, Siri, or Hey Google to provide new patient care services.

Behind the scenes, machine learning has been rapidly adopted in applications as diverse as screening potential therapies for application to COVID and profiling symptoms that might indicate infection. Failures of the existing health care infrastructure have also been glaringly illustrated by the lack of interoperable data between hospitals and between the public and private sectors, as well as the lack of access to real-time data and reports as the COVID situation rapidly unfolded. Together, these scenarios call for leadership that brings together technology and clinical business units in entirely new ways.

MCiM develops managers and senior leaders who have a keen understanding of the strategic business concepts and data science principles fundamental to raising the quality and efficiency of care delivery, in the COVID era and beyond. The founder of MCiM, Kevin Schulman, Professor of Medicine (Hospital Medicine) and, by courtesy, of Operations, Information and Technology at the Graduate School of Business, built the country's first clinical informatics management program at Duke University in 2011. Graduates from that program have moved into management and senior leadership roles such as CEO, CIO, CMIO, CHIO, and Health Care IT Director.

Faculty

Director of Clinical Excellence Research Center: Arnold Milstein

Director of Graduate Studies: Kevin Schulman

Associate Director: Zoë Richardson

Graduate Advising

For a statement of University policy on graduate advising, see the "Graduate Advising" section of this bulletin.

MCiM is committed to providing academic advising in support of graduate student scholarly and professional development. When most effective, this advising relationship entails collaborative and sustained engagement by both the advisor and the advisee. As a best practice, advising expectations should be periodically discussed and reviewed to ensure mutual understanding. Both the advisor and the advisee are expected to maintain professionalism and integrity.

Graduate students are active contributors to the advising relationship; students are expected to proactively seek academic and professional guidance and take responsibility for informing themselves of policies and degree requirements. MCiM administrative program staff also play an important part in student advising. Program staff informs and advises students about University and department requirements, procedures, and opportunities.

All MCiM students have the MCiM Director of Graduate Studies assigned as their faculty advisor. In this role, the advisor communicates and is available to students regarding degree requirements and academic and non-academic policies that pertain to students, and serves as a general mentor regarding research and exploring academic opportunities and professional pathways.

Stanford Global Studies Department

Contacts

Office: Encina Commons, 615 Crothers Way
Mail Code: 94305-6045
Web Site: http://sgs.stanford.edu

The Stanford Global Studies Division (SGS) is a hub for internationally focused research and teaching on campus. SGS prepares Stanford students for the world through an interdisciplinary education that cultivates knowledge of different cultures, and deepens our understanding of the global affairs through innovative research. Stanford Global Studies is comprised of 14 centers and programs, which are described below.

Global Studies Minor

The Global Studies minor is available to Stanford undergraduates from any major, and is designed to provide students with the opportunity to pursue interdisciplinary study in one of six specializations, including in-depth language study, while integrating this knowledge into a larger vision of global affairs:

- Africa Studies
- European Studies
- Iranian Studies
- Islamic Studies
- Latin America Studies
- South Asia Studies

Students who have participated or plan to participate in the Bing Overseas Studies Program (BOSP) are especially encouraged to enroll as most units earned through the BOSP program satisfy the Global Studies minor.

All students are required to complete 28 units, including a 3 unit gateway course GLOBAL 101 Critical Issues in Global Affairs. The remaining 25 units are unique to each specialization. For questions, contact Dr. Katherine Kuhns at kkuhns@stanford.edu.

To declare the Global Studies minor, students must:

1. Set up an appointment with the appropriate specialization adviser (see appropriate specialization page for contact information).
2. Declare the Global Studies minor and subplan in Axess.

Center for African Studies

Director: Joel Cabrita
Office: 127 Encina Commons, 615 Crothers Way
Web Site: https://africanstudies.stanford.edu

The Center for African Studies (CAS) coordinates an interdisciplinary program in African Studies for undergraduates and graduate students. The program seeks to enrich understanding of the interactions among the social, economic, cultural, historical, linguistic, genetic, geopolitical, ecological, and biomedical factors that shape and have shaped African societies. CAS offers a certificate and a specialization in African Studies as part of the Global Studies Minor. For further information, see the "African Studies" section of this bulletin.

Center for East Asian Studies

Director: Dafna Zur
Office: Knight Building, 521 Memorial Way
Web Site: http://ceas.stanford.edu

The Center for East Asian Studies (CEAS) supports teaching and research on East Asia-related topics across all disciplines; disseminates knowledge about East Asia through projects of local, regional, national, and international scope; and serves as the intellectual gathering point for a collaborative and innovative community of scholars and students of East Asia. CEAS works with all schools, departments, research centers, and student groups to facilitate and enhance all aspects of East Asia-related research, teaching, outreach, and exchange across the Stanford campus.

For further information, see the "East Asian Studies" section of this bulletin.

France-Stanford Center for Interdisciplinary Studies

Director: Jessica Riskin
Office: Building 260, Room 122, 450 Jane Stanford Way
Web Site: http://francestanford.stanford.edu

The France-Stanford Center for Interdisciplinary Studies, founded in partnership with the French Ministry of Foreign Affairs, aims to bridge the disciplines of the humanities, social sciences, sciences, engineering, business, and law, addressing historical and contemporary issues of significance for France and the United States. The Center brings together Stanford faculty and students and academics in France to advance collaborative research and foster interdisciplinary inquiry. Its programs include conferences, support for collaborative research projects, internships, exchanges, lectures, and seminars.

Global Studies Internship Program

Web Site: https://global-internships.stanford.edu

The Stanford Global Studies Division offers highly qualified Stanford students an opportunity to extend classroom knowledge of the world to immersive cultural and working experiences every summer through the Global Studies Internship Program. Currently enrolled freshmen, sophomores, juniors, seniors, and coterms at Stanford in all majors are eligible to apply, including students who are undeclared. For more information, visit :https://sgs.stanford.edu/global-studies-internship-program/home

Center for Human Rights and International Justice

Director: David Cohen
Office: Encina Hall, Suite 030, 616 Jane Stanford Way
Web Site: https://humanrights.stanford.edu

The Center for Human Rights and International Justice equips equips a new generation of leaders with the knowledge and skills necessary to protect and promote human rights and dignity for all. Reflecting a deep commitment to international justice and the rule of law, the center collaborates with partners across Stanford University and beyond on innovative programs that foster critical inquiry in the classroom and in the world. The center offers an undergraduate minor.

For further information, see the "Human Rights" section of this bulletin.

Program in International Relations

Director: Kenneth Schultz
Office: Encina Hall, Suite 030, 616 Jane Stanford Way
Web Site: http://internationalrelations.stanford.edu

International Relations (IR) is an interdisciplinary undergraduate major focusing on changing political, economic, and cultural relations within the international system in the modern era. The IR program also offers an interdisciplinary minor and honors program.

For further information, see "International Relation" section of this bulletin.

Hamid and Christina Moghadam Program in Iranian Studies

Director: Abbas Milani
Office: Encina Commons 128, 615 Crothers Way
Web Site: https://iranian-studies.stanford.edu

The Hamid and Christina Moghadam Program in Iranian Studies at Stanford University provides an interdisciplinary and multidisciplinary platform for the study of modern Iranian history, culture, politics, society, and economy. The program combines pedagogy, policy analysis, and research on all aspects of Iran as a civilization, one of the oldest in the world. The program offers research support, internships, a range of events and initiatives, and a specialization in Iranian Studies as part of the Stanford Global Studies minor.

For further information, see the "Iranian Studies"section of this bulletin.

Sohaib and Sara Abbasi Program in Islamic Studies

Director: Lisa Blaydes
Office: Encina Commons 124D, 615 Crothers Way
Web Site: http://islamicstudies.stanford.edu

The mission of the Sohaib and Sara Abbasi Program in Islamic Studies is to serve as a forum for interdisciplinary research and teaching in Islamic studies, complemented by seminars, colloquia and public lectures. The program seeks to illuminate Islamic history from its beginnings to the 21st century, the religion of Islam in its many aspects, and the diversity of Muslim cultures and societies, past and present, not only in the Middle East but also including South and Southeast Asia, Africa, Europe, and America. In addition to geographical breadth, the program promotes scholarship from both the humanities and the social sciences. The program offers student grants for research and language training and a specialization in Islamic Studies as part of the Stanford Global Studies minor.

For further information, see the "Islamic Studies " section of this bulletin

Taube Center For Jewish Studies

Director: Charlotte Fonrobert
Office: Building 360, Room 362H, 450 Jane Stanford Way
Web Site: https://jewishstudies.stanford.edu

The interdisciplinary Taube Center for Jewish Studies coordinates and promotes the study of all aspects of Jewish life. The center offers an undergraduate minor and an interdisciplinary major through the Center for Comparative Studies in Race and Ethnicity .

Center for Latin American Studies

Director: Alberto Díaz-Cayeros
Office: Bolivar House
Web Site: https://las.stanford.edu

The Stanford Center for Latin American Studies supports research and teaching on Latin America by the faculty and students of Stanford in all fields of study. The center offers a master's degree, in addition to a specialization in Latin American Studies as part of the Global Study minor.

For further information, see the "Center for Latin America Studies" section of this bulletin.

Mediterranean Studies Forum

Director: Lisa Blaydes
Office: Encina Commons 124D, 615 Crothers Way
Web Site: https://mediterraneanstudies.satanford.edu

The Mediterranean Studies Forum encourages scholars to explore the interplay among societies, cultures, and communities around the Mediterranean Basin from the Middle Ages to the present. The forum also studies the relations of the Mediterranean with other regions and areas of the world. The central goal of the forum is to contribute to interfield and interdisciplinary dialogue among scholars of these areas through lectures, colloquia, workshops, conferences, and publications. Particular programming fields include Turkish Studies and Sephardic Studies.

Center for Russian, East European and Eurasian Studies

Director: Amir Weiner
Office: Encina Commons 128, 615 Crothers Way
Web Site: https://creees.stanford.edu

The Center for Russian, East European and Eurasian Studies (CREEES) is Stanford University's hub for the interdisciplinary study of a vast region stretching from the former Berlin Wall to the Bering Strait. CREEES is home to a one-year master’s degree, and supports undergraduates and graduate students throughout campus, especially in regard to funding for research and language study. CREEES also hosts renowned visiting scholars, lecture series, conferences, and public events.

For further information, see the "Center for Russian, East European and Eurasian Studies" section of this bulletin.

Center for South Asia

Director: Anna Bigelow
Office: Encina Commons 124, 615 Crothers Way
Web Site: http://southasia.stanford.edu

The Center for South Asia (CSA) serves to coordinate and develop Stanford's resources for the study of South Asia across all the disciplines in the School of Humanities and Sciences. It works closely with departments and other units of the University to increase faculty strength, support research, enhance the curriculum, build the library collection, and sponsor programs and events. The program also offers a specialization in South Asian Studies as part of the Global Studies minor.

For further information, see the "South Asian Studies " section of this bulletin.

The Europe Center

Director: Anna Grzymala-Busse
Office: Encina Hall C243, 616 Jane Stanford Way
Web Site: https://tec.fsi.stanford.edu

The Europe Center is a multidisciplinary institute committed to the examination of European society, culture, politics, diplomacy, and security. The program also offers a specialization in European Studies as part of the Global Studies minor.

For further information, see the "European Studies" section of this bulletin.

Faculty

SGS Division Director

Jisha Menon (Theatre & Performance Studies)

SGS Directors

Center for African Studies: Joel Cabrita (History)

Center for East Asian Studies: Dafna Zur (East Asian Languages and Cultures)

France-Stanford Center: Jessica Riskin (History)

Center for Human Rights and International Justice: David Cohen (Classics)

Program in International Relations: Kenneth Schultz (Political Science)

Hamid and Christina Moghadam Program In Iranian Studies: Abbas Milani (Hoover Institution)

Sohaib and Sara Abbasi Program in Islamic Studies: Lisa Blaydes (Political Science)

Taube Center For Jewish Studies: Charlotte Fonrobert (Religious Studies)

Center for Latin American Studies: Alberto Díaz-Cayeros (Freeman Spogli Institute for International Studies)

Mediterranean Studies Forum: Lisa Blaydes (Political Science)

Center for Russian, East European and Eurasian Studies: Amir Weiner (History)

Center for South Asia: Anna Bigelow (Religious Studies)

The Europe Center: Anna Grzymala-Busse (Political Science)

Programs

Global Stu
Degree Designation:
-

Humrts-Min
Degree Designation:
-

Statistics Department

Contacts

Office: Sequoia Hall, 390 Jane Stanford Way
Mail Code: 94305-4065
Web Site: https://statistics.stanford.edu/

Courses offered by the Department of Statistics are listed under the subject code STATS on the Stanford Bulletin's ExploreCourses web site.

The department's goals are to acquaint students with the role played in science and technology by probabilistic and statistical ideas and methods, to provide instruction in the theory and application of techniques that have been found to be commonly useful, and to train research workers in probability and statistics. There are courses for general students as well as those who plan careers in statistics in business, government, industry, and teaching.

The department has long recognized the relation of statistical theory to applications. It has fostered this by encouraging a liaison with other departments in the form of joint and courtesy faculty appointments, as well as membership in various interdisciplinary programs: Biomedical Data Science, Bio-X, Center for Computational, Evolutionary and Human Genomics, Computer Science, Economics, Education, Electrical Engineering, Environmental Earth System Science, Genetics, Mathematics, Mathematical and Computational Finance, and Medicine. The research activities of the department reflect an interest in applied and theoretical statistics and probability. There are workshops in biology/medicine and in environmental factors in health.

In addition to courses for Statistics students, the department offers a number of service courses designed for students in other departments. These tend to emphasize the application of statistical techniques rather than their theoretical development.

The department has always drawn visitors from other countries and universities, and as a result there are a wide range of seminars offered by both the visitors and the department's own faculty.

Undergraduate Programs in Statistics

The department offers a minor in Statistics and in Data Science. Program details can be found under the Minor section.

Undergraduates Interested in Statistics

Students wishing to build a concentration in probability and statistics are encouraged to consider declaring a major in Mathematical and Computational Science. This interdisciplinary program is administered in the Department of Statistics and provides core training in computing, mathematics, operations research, and statistics, with opportunities for further elective work and specialization. See the "Mathematical and Computational Science" section of this bulletin.

Graduate Programs in Statistics

University requirements for the M.S. and Ph.D. degrees are discussed in the "Graduate Degrees" section of this bulletin.

Faculty

Emeriti: (Professors) Bradley Efron, Jerome H. Friedman, Paul Switzer

Chair: Jonathan Taylor

Director of Graduate Studies: Joseph P. Romano

Director of Undergraduate Studies: Guenther Walther

Professors: Emmanuel Candès, Sourav Chatterjee, Amir Dembo, Persi Diaconis, David L. Donoho, Emily B. Fox, Trevor J. Hastie, Susan P. Holmes, Iain M. Johnstone, Tze L. Lai, Andrea Montanari, Art Owen, Joseph P. Romano, Chiara Sabatti, David O. Siegmund, Jonathan Taylor, Robert J. Tibshirani, Guenther Walther, Wing H. Wong

Assistant Professors: John Duchi, Scott Linderman, Tengyu Ma, Julia Palacios, Dominik Rothenhäusler, Tselil Schramm

Courtesy Professors: John Ioannidis, Hua Tang

Courtesy Associate Professors: David Rogosa, Lu Tian

Courtesy Assistant Professors: Mike Baiocchi, Percy Shuo Liang, Stefan Wager

Stein Fellows: Daniel Erdmann-Pham, Vishesh Jain, Michael Sklar

Graduate Advising Expectations

The Department of Statistics is committed to providing academic advising in support of graduate student scholarly and professional development. When most effective, this advising relationship entails collaborative and sustained engagement by both the adviser and the advisee. As a best practice, advising expectations should be periodically discussed and reviewed to ensure mutual understanding. Both the adviser and the advisee are expected to maintain professionalism and integrity.

Faculty advisers guide students in key areas such as selecting courses, designing and conducting research, developing of teaching pedagogy, navigating policies and degree requirements, and exploring academic opportunities and professional pathways.

Graduate students are active contributors to the advising relationship, proactively seeking academic and professional guidance and taking responsibility for informing themselves of policies and degree requirements for their graduate program.

For a statement of University policy on graduate advising, see the "Graduate Advising" section of this bulletin.

M.S. in Statistics and Data Science

Master's students are assigned an academic adviser for the duration of their tenure in the program. The adviser serves as a key resource for the purposes of course placement and approval of elective coursework as it relates to fulfilling degree requirements. Since the majority of MS students choose employment in the field of industry (tech/programming), the program adviser may provide assistance with regards to internships and general professional opportunities. Those planning to apply to doctoral programs are also able to receive feedback on research opportunities.

Ph.D. in Statistics

First and second year students are advised on course selection and other academic matters by the Director of Graduate Studies who is available by appointment to consult with students about any graduate student related matter, including degree progress. The DGS also leads cohort-specific workshops addressing topics such as qualifying exams, adviser selection, oral exams and post-graduation placement.

By the final study list deadline of Spring Quarter of the second year students are expected to have selected a research adviser who later serves as their principal dissertation adviser. The dissertation adviser must be a member of the Academic Council, and may be from outside the department. Students may also opt to have two co-advisers rather than one principal adviser, which may include one from outside the department.

The adviser-student mentorship takes many different forms, including, but not limited to programmatic consultation and degree progress, and support and collaboration relating to research, conferences, publications, and academic and professional opportunities.

It is the responsibility of the student to meet with their adviser at least once per quarter during the academic year to discuss academic standing and graduate degree progress. In addition, the Director of Graduate Studies is always available to Ph.D. students for consultation.

Program requirements and milestones, as well as more detailed descriptions of the program's expectations of advisers and students, are listed in the Stats Ph.D. Handbook, available on the department website.

Programs

DATSCI-Min
Degree Designation:
-

Stats-Min
Degree Designation:

Stats-MS
Degree Designation: MS - Master of Science

Stats-PhD
Degree Designation: PHD - Doctor of Philosophy

Stats-PMn
Degree Designation:

Stem Cell Bio Regenerative Med Department

Contacts

Office: 265 Campus Drive, Suite G1141, Stanford, CA 94305
Mail Code: 94305-5454
Phone: (650) 723-6716
Email: stemcellphd@stanford.edu
Web Site: http://stemcellphd.stanford.edu/

Courses offered by the Program in Stem Cell Biology and Regenerative Medicine are listed under the subject code STEMREM on the Stanford Bulletin's Explore Courses web site.

Graduate Program in Stem Cell Biology and Regenerative Medicine

The Stanford Stem Cell Biology and Regenerative Medicine (SCBRM) program is dedicated to doctoral education that translates basic science to clinical applications, typically referred to as Translational Science, and of intense interest internationally in medical schools and universities. Our doctoral program provides exceptional didactic education and research experience in the basic sciences underlying stem cell biology. In addition, program participants will receive specialized training in the development and clinical application of discoveries in the basic sciences to achieve regenerative therapies. Thus, our graduates will be uniquely positioned to develop successful translational careers in Stem Cell Biology and Regenerative Medicine, and will emerge prepared to deliver on their passion to improve the human condition. The core curriculum is combined with unique research and clinical/professional immersion rotations to provide opportunities for doctoral students to specialize in the broad subject of translational medicine and yet focus specifically on fundamentals of SCBRM. The curriculum combines education in genetics and developmental biology with an introductory laboratory-based stem cell course, an advanced course in stem cell biology and regenerative medicine, and a clinical rotation with alternative opportunities in law, business and/or engineering.

The mission of the SCBRM graduate program is to produce future leaders in translational science through a combination of basic science and clinical/professional immersion. The program aims to be innovative and to change the landscape for graduate education in the biomedical sciences by having the immersion tailored to each student's translational goals. The program accommodates students who wish to focus primarily at the basic science level alongside those who wish to focus specifically on innovation such as a new device to solve a clinical problem. In the former case, the student might seek out a primary mentor affiliated with the basic sciences and take electives that reflect the more basic interest. In the latter case, the student might select an elective with an engineering focus and

seek out primary mentorship with a more clinically or engineering focused mentor. In this way, graduates from our doctoral program receive exceptional didactic education and research experience and are well positioned to develop successful translational careers in SCBRM by applying their knowledge and passion to improve human health.

Faculty

Program Director: Irv Weissman

Institute Faculty:

- Arash A. Alizadeh (Assistant Professor, Medicine/Oncology and Member of Bio-X, Child Health Research Institute and Stanford Cancer Institute)
- Philip A. Beachy (Professor, Institute for Stem Cell Biology and Regenerative Medicine, Department of Biochemistry and Developmental Biology and Member of Bio-X and Stanford Cancer Institute)
- Charles K.F. Chan (Assistant Professor, Surgery - Plastic & Reconstructive Surgery, and Member of Bio-X, Institute for Stem Cell Biology and Regenerative Medicine)
- Michael F. Clarke (Professor, Institute for Stem Cell Biology and Regenerative Medicine and Department of Medicine/Oncology and Member of Bio-X and Stanford Cancer Institute)
- Tushar Desai (Assistant Professor, Medicine/Pulmonary & Critical Care Medicine and Member of Bio-X, Child Health Research Institute and Stanford Cancer Institute)
- Maximilian Diehn (Assistant Professor, Radiation Oncology/Radiation Therapy and Member of Bio-X and Stanford Cancer Institute)
- Agnieszka Czechowicz, (Assistant Professor, Department of Pediatrics and Member of Bio-X, Institute for Stem Cell Biology and Regenerative Medicine, Maternal & Child Health Research Institute)
- Stefan Heller (Professor, Otolaryngology/Head and Neck Surgery and Member of Bio-X, Stanford Cancer Institute and Stanford Neurosciences Institute)
- Sidd Jaiswal (Assistant Professor of Pathology, Member of Bio-X, Cardiovascular Institute, Cancer Institute, Institute for Stem Cell Biology and Regenerative Medicine)
- Kyle Loh (Assistant Professor, Developmental Biology and Member of Bio-X, Institute for Stem Cell Biology and Regenerative Medicine, Stanford Neurosciences Institute, and Faculty Fellow)
- Michael T. Longaker (Professor, Surgery/Plastic and Reconstructive Surgery, and (by courtesy) Bioengineering and Materials Science and Engineering and Member of Bio-X, Child Health Research Institute and Stanford Cancer Institute)
- Ravindra Majeti (Associate Professor, Medicine/Hematology and Member of Bio-X and Stanford Cancer Institute)
- Michelle Monje-Deisseroth (Assistant Professor, Neurology & Neurological Sciences and Member of Bio-X, Child Health Research Institute, Stanford Cancer Institute and Stanford Neurosciences Institute)
- Hiromitsu Nakauchi (Professor, Institute for Stem Cell Biology and Regenerative Medicine and Department of Genetics and Member of Bio-X)
- Aaron Newman (Assistant Professor, Department of Biomedical Data Science, Member of Bio-X and Institute for Stem Cell Biology and Regenerative Medicine)
- Roeland Nusse (Professor, Developmental Biology and Member of Bio-X and Stanford Cancer Institute)

- Anthony Oro (Professor, Dermatology and Member of Bio-X, Child Health Research Institute and Stanford Cancer Institute)
- Theo D. Palmer (Associate Professor, Neurosurgery and Member of Bio-X, Child Health Research Institute, Stanford Cancer Institute and Stanford Neurosciences Institute)
- Matthew Porteus (Associate Professor, Pediatrics/Stem Cell Transplantation and Member of Bio-X, Cardiovascular Institute, Child Health Research Institute and Stanford Cancer Institute)
- Kristy Red-Horse (Associate Professor, Biology, Member of Bio-X, Cancer Institute, Institute for Biology and Regenerative Medicine)
- Maria Grazia Roncarolo (Professor, Pediatrics/Stem Cell Transplantation and Medicine/Blood & Marrow Transplantation and Member of Bio-X, Child Health Research Institute and Stanford Cancer Institute)
- Vittorio Sebastiano (Assistant Professor, Obstetrics & Gynecology/Reproductive Biology and Member of Bio-X and Child Health Research Institute)
- Judith Shizuru (Professor, Medicine/Blood & Marrow Transplantation and Member Stanford Cancer Institute)
- Irving L. Weissman (Professor, Institute for Stem Cell Biology and Regenerative Medicine, Department of Pathology and Developmental Biology and (by courtesy) Department of Biology and Member of Bio-X and Stanford Cancer Institute)
- Gerlinde Wernig (Assistant Professor, Pathology, Member of Bio-X, Institute for Biology and Regenerative Medicine)
- Marius Wernig (Professor, Institute for Stem Cell Biology and Regenerative Medicine and Department of Pathology and (by courtesy) Chemical & Systems Biology and Member of Bio-X, Child Health Research Institute, Stanford Cancer Institute and Stanford Neurosciences Institute)
- Joanna Wysocka (Professor, Chemical & Systems Biology and Developmental Biology and Member Bio-X and Stanford Cancer Institute)

Graduate Advising

Graduate Advising Expectations

The Program in Stem Cell Biology and Regenerative Medicine is committed to providing academic advising in support of graduate student scholarly and professional development. When most effective, this advising relationship entails collaborative and sustained engagement by both the adviser and the advisee. As a best practice, advising expectations should be periodically discussed and reviewed to ensure mutual understanding. Both the adviser and the advisee are expected to maintain professionalism and integrity.

Faculty advisers guide students in key areas such as selecting courses, designing and conducting research, developing of teaching pedagogy, navigating policies and degree requirements, and exploring academic opportunities and professional pathways.

Graduate students are active contributors to the advising relationship, proactively seeking academic and professional guidance and taking responsibility for informing themselves of policies and degree requirements for their graduate program.

For a statement of University policy on graduate advising, see the "Graduate Advising" section of this bulletin.

Programs

STMRM-MS
Degree Designation: MS - Master of Science
-

STMRM-Phd
Degree Designation: PHD - Doctor of Philosophy
-

Structural Biology Department

Contacts

Office: Fairchild Building D100
Mail Code: 94305- 5126
Phone: (650) 723-7576
Email: structuralbio@med.stanford.edu
Web Site: https://med.stanford.edu/structuralbio.html

Courses offered by the Department of Structural Biology are listed under the subject code SBIO on the Stanford Bulletin's ExploreCourses web site.

The department offers course work and opportunities for research in structural biology.

The emphasis of research in the department is on understanding fundamental cellular processes in terms of the structure and function of biological macromolecules and their assemblies. Techniques used include standard methods of biochemistry, cell culture, single-molecule fluorescence spectroscopy, genetic engineering, and three dimensional structure determination by x-ray diffraction, nuclear magnetic resonance spectroscopy and electron microscopy, coupled with the development of computational methods.

Doctoral

Doctor of Philosophy in Structural Biology

Admission

For more information, please refer to the Department Curriculum page.

Graduate Studies:

For more information, please refer to the Department Curriculum page.

1. The graduate program is intended to prepare students for careers as independent investigators in cell and molecular biology. The principal requirement of a Ph.D. degree is the completion of research constituting an original and significant contribution to the advancement of knowledge. It is a training in a major with connections to biophysics (e.g., physics, chemistry, or biology, with a quantitative background equivalent to that of an undergraduate physics or chemistry major at Stanford).
2. Opportunities for teaching are available during the first nine quarters at the discretion of the advising committee.
3. The student must prepare a dissertation proposal defining the research to be undertaken including methods of procedure. This proposal should be submitted by the end of summer quarter of the second year, and it must be approved by a committee of at least three members including the principal research adviser and at least one member from the Department of Structural Biology. The candidate must defend the dissertation proposal in an oral examination. The dissertation reading committee normally evolves from the dissertation proposal review committee.

4. The student must present a Ph.D. dissertation as the result of independent investigation and expressing a contribution to knowledge in the field of structural biology.
5. The student must pass the University oral examination, taken only after the student has substantially completed the research. The examination is preceded by a public seminar in which the research is presented by the candidate.

Current topics of research in the department lie in the areas of gene expression; theoretical, crystallographic, and genetic analysis of protein structure; and cell-cell interaction. See Stanford's School of Medicine web site for further information.

COVID-19 Policies

COVID-19 Policies

On July 30, the Academic Senate adopted grading policies effective for all undergraduate and graduate programs, excepting the professional Graduate School of Business, School of Law, and the School of Medicine M.D. Program. For a complete list of those and other academic policies relating to the pandemic, see the "COVID-19 and Academic Continuity" section of this bulletin.

The Senate decided that all undergraduate and graduate courses offered for a letter grade must also offer students the option of taking the course for a “credit” or “no credit” grade and recommended that deans, departments, and programs consider adopting local policies to count courses taken for a “credit” or “satisfactory” grade toward the fulfillment of degree-program requirements and/or alter program requirements as appropriate.

Graduate Degree Requirements

Grading

The Department of Structural Biology counts all courses taken in academic year 2020-21 with a grade of 'CR' (credit) or 'S' (satisfactory) towards satisfaction of graduate degree requirements that otherwise require a letter grade provided that the instructor affirms that the work was done at a 'B-' or better level.

Graduate Advising

Graduate Advising Expectations

The Department of Structural Biology is committed to providing academic advising in support of graduate student scholarly and professional development. When most effective, this advising relationship entails collaborative and sustained engagement by both the adviser and the advisee. As a best practice, advising expectations should be periodically discussed and reviewed to ensure mutual understanding. Both the adviser and the advisee are expected to maintain professionalism and integrity.

Faculty advisers guide students in key areas such as selecting courses, designing and conducting research, developing of teaching pedagogy, navigating policies and degree requirements, and exploring academic opportunities and professional pathways.

Graduate students are active contributors to the advising relationship, proactively seeking academic and professional guidance and taking responsibility for informing themselves of policies and degree requirements for their graduate program.

For a statement of University policy on graduate advising, see the "Graduate Advising" section of this bulletin.

Faculty

Faculty

Chair: William I. Weis

Associate Chair: Michael Levitt

Director of Graduate Studies: Theodore Jardetzky

Professors:

- K. Christopher Garcia
- Theodore Jardetzky
- Roger D. Kornberg
- Michael Levitt
- Peter Parham
- Joseph D. Puglisi
- Georgios Skiniotis
- Soichi Wakatsuki
- William I. Weis

Associate Professor (Research):

- Yahli Lorch

Assistant Professor (Research):

- Elizabetta Viani Puglisi

Associate Professor:

- Adam de la Zerda

Courtesy Professor:

- Axel Brunger
- Vijay Pande

Courtesy Associate Professor:

- Zev Bryant

Courses

Stanford Course Catalog website: https://explorecourses.stanford.edu/

Programs

StrBio-PhD
Degree Designation: PHD - Doctor of Philosophy
-

Sustainability Science and Prc Department

Contacts

Office: Mitchell Bldg, 397 Panama Mall, Room 136
Mail Code: 94305-2210
Phone: (650) 736-3686
Website: https://earth.stanford.edu/sust

Mission of the Coterminal Program in Sustainability Science and Practice

The Sustainability Science and Practice program (SUST for short) is an interdisciplinary coterminal master's program hosted by the School of Earth, Energy and Environmental Sciences. The goal of the program is to prepare leaders to radically accelerate the transition to a sustainable and just society. As the global human population climbs toward 11 billion, consumption demands increase, and disparities in wealth and opportunity persist, society must learn to equitably meet existing human needs in ways that do not forgo possibilities for future generations. These sustainability challenges are marked by extreme complexity, urgency, conflicting demands, and often a paucity of resources or political will to address them. Transforming these challenges into powerful opportunities requires a new kind of leader — one who can both envision a prosperous future for all and who can design practices and cultivate partnerships essential to building that future. The SUST program equips students with the theoretical and conceptual knowledge and the mindsets and practical skills needed to advance sustainability, securing human well-being around the world and across generations.

The curriculum covers three main elements:

Element 1: Understanding complex social-environmental systems

Students develop a “systems perspective”, deepening their awareness of the dynamic and interrelated nature of social-environmental systems. They explore tools to measure, map, and model five capital assets — social, natural, human, manufactured, and knowledge capital — and their complex interactions in order to recognize potential feedbacks, thresholds, and unintended consequences, as well as to identify leverage points and opportunities for interventions that can have transformative impact.

Element 2: Understanding decision making and developing strategies for change

Students examine the roles of diverse actors who influence change in social-environmental systems and explore strategies to align decision making and behavior with sustainability. They explore mindsets and approaches of transformative leaders and examine effective strategies for advancing sustainability across sectors. Students develop skills in decision making in complex and uncertain contexts, use metrics and evaluation approaches aligned with sustainability goals, cultivate leadership orientations, and practice effective communications and storytelling approaches.

Element 3: Designing innovations with impact at scale

Students develop understanding of how to intervene in complex systems for transformative impact by exploring frameworks and tools from systems thinking, design thinking, social cognitive theory, behavioral economics, and partnership strategies. They develop practical skills in mapping complex systems and designing creative, high-leverage interventions that realign systems with the goal of intergenerational well-being.

Sustainability Leadership Practicum

To integrate and internalize core lessons from the SUST curriculum, each student completes a 120-hour practicum project of their own design, collaborating on a complex sustainability challenge with an outside partner and working through the types of constraints often faced by decision makers and leaders. Students apply the leadership mindsets, knowledge, and skills from the curriculum to this practical experience and present their final analysis and reflections to faculty and peers.

Learning Outcomes

The Sustainability Science and Practice program integrates theoretical and conceptual knowledge, mindsets, and practical skills to enable students to understand and manage complex systems, understand decision making and develop strategies for change, and cultivate partnerships and design innovations with potential for impact at scale.

The program prepares students to become effective participants and agents of change as individuals and within organizations across all sectors of society, contributing to the advancement of the goal of sustainability, i.e., the well-being of people around the world and across generations. Using a conceptual framework that connects human well-being with key underlying assets, students learn how social-environmental systems work, how decisions can be made to system dynamics in a way that supports sustainability goals, and how to engage with others to design new ways of managing these systems.

Application and Admission

The Sustainability Science and Practice program offers current Stanford University undergraduates the opportunity to apply to a one-year coterminal master's program. Students can pursue either a coterminal Master of Arts (M.A.) degree or a coterminal Master of Science (M.S.) degree.

The Sustainability Science and Practice program will offer one coterm application round in the 2021-22 academic year. To be considered for admission, students must complete the required pre-application steps below by the stated deadlines and submit all required materials via the University's application portal by February 1, 2022.

Required Pre-application Steps:

- Prior to applying, candidates are expected to attend a one-hour information session hosted by the program. Information sessions will take place in Autumn quarter. Please refer to the events section of the program website for dates and times.
- Each applicant must identify a faculty member who agrees to serve as the student's master's advisor. The master's advisor must be an Academic Council member. Faculty on Academic Council typically hold a title of professor, associate professor, or assistant professor, whereas instructors with the title of lecturer, adjunct professor, or professor of practice are generally not on Academic Council. If unsure whether a faculty member is on Academic Council, please contact the SUST Student Services Officer to verify. The Advising section below includes additional guidance on seeking an advisor.
- As part of the application process, candidates must email the SUST Student Services Officer to schedule a pre-application interview. Interviews should ideally be completed prior to the University's winter closure, and in all cases must be completed by January 14, 2022. In advance of the interview, applicants should provide the following:

1) a draft of the SUST Master's Program Proposal indicating the courses the student intends to take to satisfy the program's degree requirements, and 2) the name of the student's proposed master's advisor, or a short list of preferred advisors if an advisor has not yet been confirmed.

Required Application Materials:

- The Stanford Coterminal Application.
- A statement of purpose, 500-700 words long, that describes the applicant's sustainability interests, the experiences that have influenced the student and motivated them to apply, and what the applicant hopes to learn from and contribute to the program. The statement should provide a clear picture of who the applicant is and what matters to them.
- A current resume.
- A current Stanford unofficial transcript.
- SUST Master's Program Proposal signed by the SUST Student Services Officer and by the applicant's master's advisor. The Student Services Officer's signature serves as confirmation that the course plan satisfies program requirements. The advisor's signature serves as confirmation of the faculty member's willingness to serve in the advising role.
- Two letters of recommendation from Stanford faculty members who know the applicant well and can speak to their qualifications and fit for the program. At least one of the two faculty writers must be a member of Stanford's Academic Council. Academic Council members typically hold a title of professor, associate professor, or assistant professor, whereas instructors with the title of lecturer, adjunct professor, or professor of practice are generally not on Academic Council. If unsure whether a faculty member is on Academic Council, please contact the SUST Student Services Officer to verify before requesting the letter. The candidate's master's advisor is not required to serve as one of the two recommenders.

  Note: Once the applicant enters a recommender's contact information into the application portal, the recommender will receive an automated email with instructions for completing and submitting the recommendation. Students should submit the names of their recommenders as early as possible in the application process so that faculty have adequate time to prepare and submit their materials by the February 1, 2022 application deadline.
- An optional third letter of recommendation from someone who is not necessarily a Stanford faculty member may also be submitted for consideration.

Note:

Students applying to the coterminal master's program must have completed a minimum of 120 units towards graduation with a recommended minimum overall Stanford GPA of 3.4.

Coterm applications must be submitted no later than the quarter prior to the expected completion of the student's bachelor's degree (and by the specific program application deadline noted above).

Students who are admitted will matriculate into the program in Spring Quarter of the 2021-22 academic year. An application fee is assessed by the Registrar's Office for coterminal applications once a student matriculates. Fee waivers are available to eligible applicants.

Coterminal master's students have the option of receiving their bachelor's degree after completing that degree's requirements or may wait and receive the bachelor's and master's degrees concurrently upon completion of the master's program.

University Coterminal Requirements

Coterminal master's degree candidates are expected to complete all coterminal degree requirements and master's degree requirements as described in this bulletin. University requirements for coterminal master's degrees are described in the Coterminal Master's Degrees section of this bulletin. University requirements for master's degrees are described in the Graduate Degrees section.

After accepting admission to this coterminal master's degree program, students may request the transfer of eligible courses from the undergraduate to the graduate career to satisfy requirements for the master's degree. Transfer of courses to the graduate career requires review and approval of both the undergraduate and graduate programs on a case by case basis. Course transfers are not possible after the bachelor's degree has been conferred.

In this master's program, courses taken during or after the first quarter of the sophomore year are eligible for consideration for transfer to the graduate career, however, requests to transfer courses taken prior to junior year are discouraged. No courses taken prior to the first quarter of the sophomore year may be used to meet master's degree requirements.

The University requires that coterm students have a graduate advisor assigned by the student's first graduate quarter even though the undergraduate career may still be open. The University also requires that the Master's Degree Program Proposal be completed by the student and approved by the department by the end of the student's first graduate quarter.

Graduate Advising

The primary purpose of the master's advisor in the Sustainability Science and Practice (SUST) program is to serve as a mentor, helping to guide students in their academic development and support them as they prepare for their careers. Because SUST is an interdisciplinary program and does not have its own faculty, the program relies upon faculty in relevant departments to advise its students. The program greatly appreciates this advising support, and our staff are readily available to answer questions and assist as needed. Advisors are not expected to know the details of program policies or degree requirements; the program staff take the lead on communicating and advising students on these matters and are also available to support students with course selection, practicum guidance, and more.

Confirming an Advisor

Prior to applying to the Sustainability Science and Practice coterminal master's program, all candidates are required to identify a faculty member who will serve as their master's advisor. The coterm advisor must be a member of the Academic Council. Faculty on Academic Council typically hold a title of professor, associate professor, or assistant professor, whereas instructors with the title of lecturer, adjunct professor, or professor of practice are generally not on Academic Council. If unsure whether a prospective advisor is on Academic Council, please contact the SUST Student Services Officer to verify. In limited cases, a student may also be permitted to engage a co-advisor who is not on Academic Council. Candidates who would like to explore a co-advising relationship should consult with the SUST Student Services Officer in advance.

In seeking out potential advisors, students are encouraged to research faculty backgrounds to identify those with shared interests and academic focus areas that they would like to emphasize in their own studies. Candidates are welcome to seek out an advisor from any part of the University. As a starting point, students may wish to consult the SUST program website, which includes a list of faculty members who are affiliated with the SUST program (note that not all who are listed are on Academic Council). Once a candidate has developed a short list of carefully considered ideas, the student should contact the faculty member to ask for a meeting to explore whether an advising relationship could be a good fit for both parties.

Advising Expectations

A prospective faculty advisor meets with a student prior to application submission to:

- Discuss the student's interests and motivation for applying to the program;

- Discuss what the advisor/advisee relationship will look like; and
- Review, discuss and sign the student's SUST Master's Program Proposal. The advisor's signature on the completed Program Proposal is required at the time of application and serves as confirmation of the faculty member's willingness to serve in the advising role. The student must also review their Program Proposal with the SUST Student Services Officer to ensure alignment with program requirements.

Once admitted, the student and advisor should meet quarterly to:

- Consider the student's proposed courses for the upcoming quarter;
- Discuss career goals and practicum ideas;
- Help connect the student with sustainability networks outside of Stanford in support of the student's practicum and/or career;
- Review the student's practicum proposal and attend (if possible) the student's final practicum presentation. The SUST Program Director is an additional resource for students, specifically for practicum planning, mentoring and completion. Students are expected to talk with their advisor and with the SUST Program Director about this aspect of the program.
- Engage the student in relevant research opportunities and projects;
- Discuss the student's well-being and any support they may need.

The student is responsible for scheduling the quarterly advising meeting. If a student is on leave of absence, the program encourages him/her to check in with his/ her advisor each quarter via email. If an advisor is on sabbatical, it is expected that planning for this would have been covered in an earlier meeting. Most faculty members on sabbatical continue the advising relationship with existing advisees, and meetings shift from in-person to phone or video conference.

For a statement of University policy on graduate advising, see the Graduate Advising section of this bulletin.

Addressing Mental Health

Pursuing a master's degree at Stanford University is one of the many exciting but challenging tasks students may be taking on. The pressures of academic work, external projects, and family affairs can at times cause students mental, physical, and emotional stress. The program encourages academic advisors to provide resources to students who may show signs of struggling with mental health, including extreme levels of anxiety and depression, or battling issues such as grief.

Resources:

- Counseling and Psychological Services (CAPS) offers crisis counseling. Walk-in appointments are available, and clinicians are always on call at (650) 723-3785.
- The Graduate Life Office is available during office hours at (650) 736-7078, or 24/7 at (650) 723-8222, pager ID number 25085.
- The Bridge Peer Counseling Center offers counseling by trained students 24/7 at (650) 723-3392
- The Office for Religious Life offers spiritual guidance for students. Call (650) 723-1762 or visit the Round Room at Memorial Church.
- The Faculty and Staff Help Center, located in Kingscote Gardens, offers confidential help for Stanford faculty and staff.
- If you are aware of someone in distress, contact CAPS, the Department of Public Safety or the Office of the Dean of Students.

Staff and Faculty

Program Staff:

Faculty Director: Pamela Matson

Co-Director: Julia Novy

Program Director: Shelley Ratay

Student Services Officer: Bhe Balde

Director of Graduate Studies: Pamela Matson and Julia Novy

Affiliated Faculty and Lecturers:

- Nicole M. Ardoin (Education)
- Inêz Azevedo (Energy Resources Engineering)
- Banny Banerjee (Sustainability Science and Practice)
- William Barnett (Business)
- Sally Benson (Energy Resources Engineering)
- Paul Brest (Law)
- Marshall Burke (Earth System Science)
- Karen Casciotti (Earth System Science)
- Geoffrey Cohen (Psychology)
- Gretchen C. Daily (Woods Institute for the Environment)
- Jenna Davis (Civil and Environmental Engineering)
- Noah Diffenbaugh (Earth System Science)
- Sibyl Diver (Earth System Science)
- Rob Dunbar (Earth System Science)
- Scott Fendorf (Earth System Science)
- Zephyr Frank (History)
- Margot Gerritsen (Energy Resource Engineering)
- Lynn Hildemann (Civil and Environmental Engineering)
- Pamela Hinds (Management Science and Engineering)
- Rob Jackson (Earth System Science)
- James Holland Jones (Earth System Science)
- Jeffrey Koseff (Civil and Environmental Engineering)
- Eric Lambin (Earth System Science)

- James Leape (Woods Institute for the Environment)
- Susan Liautaud (Law, Public Policy)
- David Lobell (Earth System Science)
- Hazel Markus (Psychology)
- Pamela Matson (Sustainability Science and Practice)
- Meagan Mauter (Civil and Environmental Engineering)
- Rosamond Naylor (Earth System Science)
- Julia Novy (Sustainability Science and Practice)
- Morgan O'Neill (Earth System Science)
- Hayagreeva Rao (Business)
- Burke Robinson (Sustainability Science and Practice)
- Lee Ross (Psychology)
- Nikhil Sawe (Emmett Interdisciplinary Program in Environment and Resources)
- Tina Seelig (Management Science and Engineering)
- Claude Steele (Psychology)
- Jenny Suckale (Geophysics)
- Barton Thompson (Law)
- Peter Vitousek (Biology)
- Jeremy Weinstein (Political Science)
- Mikael Wolfe (History)
- Gabrielle Wong-Parodi (Earth System Science)
- Annette Zou (Sustainability Science and Practice)

Programs

SUST-MA
Degree Designation: MA - Master of Arts
-

SUST-MS
Degree Designation: MS - Master of Science
-

Symbolic Systems Department

Contacts

Office: Margaret Jacks Hall, Building 460, Suite 040
Mail Code: 94305-2150
Phone: (650) 498-8720

Email: symsys-afs@lists.stanford.edu
Web Site: http://symsys.stanford.edu

Courses offered by the Symbolic Systems Program are listed under the subject code SYMSYS on the Stanford Bulletin's ExploreCourses web site.

The observation that both human beings and computers can manipulate symbols lies at the heart of Symbolic Systems, an interdisciplinary program focusing on the relationship between natural and artificial systems that represent, process, and act on information. Computer programs, natural languages, the human mind, and the Internet embody concepts whose study forms the core of the Symbolic Systems curriculum, such as computation, representation, communication, and intelligence. A body of knowledge and theory has developed around these notions, from disciplines such as philosophy, computer science, linguistics, psychology, statistics, neurobiology, and communication. Since the invention of computers, researchers have been working across these disciplines to study questions such as: in what ways are computers and computer languages like human beings and their languages; how can the interaction between people and computers be made easier and more beneficial?

The core requirements of the Symbolic Systems Program (SSP) include courses in symbolic logic, the philosophy of mind, formal linguistics, cognitive psychology, programming, the mathematics of computation, statistical theory, artificial intelligence, and interdisciplinary approaches to cognitive science. These courses prepare students with the vocabulary, theoretical background, and technical skills needed for study and research at the advanced undergraduate and graduate levels. Most of the courses in SSP are drawn from affiliated departments. Courses designed specifically for the program are aimed at integrating and supplementing topics covered by the department-based offerings. The curriculum includes humanistic approaches to questions about language and intelligence, as well as training in science and engineering.

SSP offers B.S. and M.S. degree programs. Both programs require students to master a common core of required courses and to choose an area of specialization.

Faculty

Director: Michael C. Frank

Director of Graduate Studies: Hyowon Gweon

Associate Director: Todd Davies

Faculty Advisory Board: Jeremy Bailenson, Michael Bernstein, Ray Briggs, Todd Davies, Judith Degen, Michael C. Frank, Noah Goodman, Hyowon Gweon, Thomas Icard, Daniel Jurafsky, Daniel Lassiter, Krista Lawlor, Christopher Manning, James McClelland, Stanley Peters, Christopher Potts, Mehran Sahami, Johan van Benthem, Thomas A. Wasow

Executive Committee: Michael Bernstein, Todd Davies, Michael C. Frank, Hyowon Gweon, Thomas Icard, Christopher Potts

Program Faculty:

Aeronautics and Astronautics: Mykel Kochenderfer (Assistant Professor)

Biology: Deborah Gordon (Professor)

Classics: Reviel Netz (Professor)

Communication: Jeremy Bailenson (Professor), Jeff Hancock (Professor), Byron Reeves (Professor), Frederick Turner (Professor)

Computer Science: Maneesh Agrawala (Professor), Michael Bernstein (Assistant Professor), Emma Brunskill (Assistant Professor), David Dill (Professor, emeritus), Chelsea Finn (Assistant Professor), Michael Genesereth (Associate Professor), Oussama Khatib (Professor), Daphne Koller (Adjunct Professor), James Landay (Professor), Jean-Claude Latombe

(Professor, emeritus), Marc Levoy (Professor, emeritus), Christopher Manning (Professor), Andrew Ng (Adjunct Professor), Chris Piech (Assistant Professor), Vaughan Pratt (Professor, emeritus), Eric Roberts (Professor, emeritus), Mehran Sahami (Professor, Teaching), Yoav Shoham (Professor, emeritus), Terry Winograd (Professor, emeritus), Jiajun Wu (Assistant Professor)

Economics: Muriel Niederle (Professor)

Education: Nick Haber (Assistant Professor), Raymond P. McDermott (Professor, emeritus), Roy Pea (Professor), Daniel Schwartz (Professor), Jason Yeatman (Assistant Professor)

Electrical Engineering: Chelsea Finn (Assistant Professor), Krishna Shenoy (Professor), Sebastian Thrun (Adjunct Professor)

French and Italian: Jean-Pierre Dupuy (Professor)

Genetics: Russ B. Altman (Professor)

Graduate School of Business: Amir Goldberg (Associate Professor), Michal Kosinski (Associate Professor), Baba Shiv (Professor)

History: Jessica G. Riskin (Professor)

Law: Daniel Ho, (Professor), Mark Lemley (Professor)

Linguistics: Arto Anttila (Associate Professor), Joan Bresnan (Professor, emerita), Eve Clark (Professor, emerita), Cleo Condoravdi (Professor Research), Judith Degen (Assistant Professor), Penelope Eckert (Professor), Vera Gribanova (Associate Professor), Boris Harizanov (Assistant Professor), Daniel Jurafsky (Professor), Ronald Kaplan (Adjunct Professor), Lauri Karttunen (Adjunct Professor), Martin Kay (Professor), Paul Kiparsky (Professor), Daniel Lassiter (Assistant Professor), Beth Levin (Professor), Christopher Manning (Professor), Stanley Peters (Professor, emeritus), Christopher Potts (Professor), Meghan Sumner (Associate Professor), Thomas A. Wasow (Professor, emeritus), Annie Zaenen (Adjunct Professor)

Management Science and Engineering: Sharad Goel (Assistant Professor), Pamela Hinds (Professor), John Ugander (Assistant Professor)

Mathematics: Persi Diaconis (Professor)

Mechanical Engineering: Sean Follmer (Assistant Professor)

Medicine: Russ B. Altman (Professor), Mark Musen (Professor)

Music: Jonathan Berger (Professor), Christopher Chafe (Professor), Eleanor Selfridge-Field (Adjunct Professor), Ge Wang (Associate Professor)

Neurobiology: Keren Haroush (Assistant Professor), William T. Newsome (Professor), Jennifer Raymond (Professor)

Philosophy: Michael Bratman (Professor), Ray Briggs (Professor), Rosa Cao (Assistant Professor), Mark Crimmins (Associate Professor), John Etchemendy (Professor), Dagfinn Føllesdal (Professor, emeritus), Thomas Icard III (Assistant Professor), Krista Lawlor (Professor), Anna-Sara Malmgren (Assistant Professor), John Perry (Professor, emeritus), Brian Skyrms (Professor), Johan van Benthem (Professor), Thomas A. Wasow (Professor, emeritus)

Psychiatry and Behavioral Sciences: Vinod Menon (Professor)

Psychology: Herbert H. Clark (Professor, emeritus), Johannes Eichstaedt (Assistant Professor), Anne Fernald (Associate Professor), Michael C. Frank (Associate Professor), Justin Gardner (Assistant Professor), Noah Goodman (Associate Professor), Kalanit Grill-Spector (Professor), Hyowon Gweon (Assistant Professor), Brian Knutson (Professor), Ellen Markman (Professor), James McClelland (Professor), Russell Poldrack (Professor), Barbara Tversky (Professor, emerita), Anthony Wagner (Professor), Brian Wandell (Professor), Daniel Yamins (Assistant Professor), Jamil Zaki (Assistant Professor)

Statistics: Persi Diaconis (Professor), Susan P. Holmes (Professor)

Symbolic Systems: Todd Davies (Associate Director), Jeff Shrager (Adjunct Professor), Paul Skokowski (Adjunct Professor)

Other Affiliates: David Barker-Plummer (CSLI Engineering Research Associate), Keith Devlin H-STAR Operation Senior Researcher), Daniel Flickinger (CSLI Research and Development Engineer), Cheryl Phillips (Lecturer in Communications)

Graduate Advising Expectations

The Symbolic Systems Program is committed to providing academic advising in support of graduate student scholarly and professional development. When most effective, this advising relationship entails collaborative and sustained engagement by both the adviser and the advisee. As a best practice, advising expectations should be periodically discussed and reviewed to ensure mutual understanding. Both the adviser and the advisee are expected to maintain professionalism and integrity.

Faculty advisers guide students in key areas such as selecting courses, designing and conducting research, developing of teaching pedagogy, navigating policies and degree requirements, and exploring academic opportunities and professional pathways.

Graduate students are active contributors to the advising relationship, proactively seeking academic and professional guidance and taking responsibility for informing themselves of policies and degree requirements for their graduate program. Students are expected to meet regularly with their advisers and to keep them informed about their academic progress. Each student and their adviser should mutually agree on the frequency of these meetings when the advising relation begins and reassess their frequency at the start of every quarter.

For a statement of University policy on graduate advising, see the "Graduate Advising" section of this bulletin.

Programs

Symbo-BS
Degree Designation: BS - Bachelor of Science
-

Symbo-Min
Degree Designation:
-

Symbo-MS
Degree Designation: MS - Master of Science
-

Theatre and Performance Studies Department

Contacts

Office: 375 Santa Teresa Street, Roble Gym, Rm 149
Mail Code: 94305-8125
Phone: (650) 723-2576
Email: tapsstudentservices@stanford.edu
Web Site: http://taps.stanford.edu

Courses offered by the Department of Theater and Performance Studies are listed on the Stanford Bulletin's ExploreCourses web site under the subject codes TAPS and DANCE.

Mission of the Undergraduate Program in Theater and Performance Studies

The mission of the undergraduate program in Theater and Performance Studies is to provide a strong, non-conservatory program that joins the study and practice of performance within the context of a liberal arts curriculum. The department gives students a strong grasp of historical, cultural, and practical contexts in which live performance develops. With close faculty contact, department majors pursue areas of interest that may include acting, directing, writing, dance, devised theater, design, stage management, performance theory, and cultural studies. During the senior year students complete a senior project as part of fulfilling the 60 units required for the major.

Mission of the Graduate Program in Theater and Performance Studies

The mission of the graduate program in Theater and Performance Studies (TAPS) is to educate students who work on the leading edge of both scholarly and performance practice. The Ph.D. program includes the study of critical theory, dramatic literature, performance theory, theater history, and performance making. Graduate students complete a program with a rigorous study of critical theory, textual history, elements of production (directing, acting, choreography, writing, and design) and embodied research.

Faculty

Emeriti: (Professors) Jean-Marie Apostolidès (TAPS; French and Italian), Harry Elam, Michael Ramsaur, Alice Rayner, *(Associate Professor)* William S. Eddelman, *(Senior Lecturer)* Patricia Ryan, *(Senior Lecturer)* Connie Strayer

Chair: Matthew W. Smith

Director of Graduate Studies: Diana Looser

Director of Undergraduate Studies: Branislav Jakovljevic

Professors: Jennifer DeVere Brody (TAPS, Center for Comparative Studies in Race and Ethnicity), Branislav Jakovljevic, Peggy Phelan (TAPS, English), Rush Rehm (TAPS, Classics), Matthew W. Smith (TAPS, German Studies)

Associate Professor: Young Jean Lee, Diana Looser, Jisha Menon (Center for South Asia, Stanford Global Studies)

Assistant Professors: Samer Al-Saber, Michael Rau, Aileen Robinson

Professor (Teaching): Janice Ross

Senior Lecturer: Becky Bodurtha, Aleta Hayes

Lecturers: Rotimi Agbabiaka , Kathryn Amarotico-Kostopoulos, Nina Ball, David Bresenham, Jane Casamajor, Matt Chapman, Kara Davis, Diane Frank, Stephanie Hunt, Mikéah Jennings (Mohr Visiting Artist), Alex Ketley, Daniel Klein, Laxmi Kumaran, Anton Pankevich, Richard Powers, Ronnie Reddick, Amanda Reid (Mellon Fellow), Lisa Rowland, Raissa Simpson

Artists-in-Residence: Amy Freed, Amara Smith

Director of Finance and Operations: Beth McKeown

Student Services Officer: Katie Dooling

Administrative Associate: Janet Pineda

Production Staff: Daniel Cadigan, Jane Casamajor, Lindsay Martens, Brendon Martin, Kenny McMullen, Heather Patterson Miller, Stefanie M. Okuda, Paul Strayer, Emma Vossbrink

Graduate Advising Expectations

The Department of Theater and Performance Studies is committed to providing academic advising in support of graduate-student scholarly and professional development. When most effective, this advising relationship entails collaborative and sustained engagement by both the adviser and the advisee. Advising expectations should be periodically discussed and reviewed to ensure mutual understanding. Both the advisee and the adviser are expected to maintain professionalism and integrity throughout this important relationship.

Faculty advisers guide students in key areas such as selecting courses, designing and conducting research, developing of teaching pedagogy, navigating policies and degree requirements, and exploring academic opportunities and professional pathways.

Graduate students are active contributors to the advising relationship, proactively seeking academic and professional guidance and taking responsibility for informing themselves of policies and degree requirements for their graduate program.

At the start of the first year in the program, students are assigned a faculty adviser based upon common research interests. The adviser's role is to serve as an intellectual adviser and professional mentor to their graduate students, to understand the academic and non-academic policies that pertain to graduate students, and to prepare students to be competitive for future employment.

In the fourth year, Ph.D. students consult closely with their Academic Council faculty adviser to form a dissertation committee. Together, the student and the adviser determine which members of faculty comprise the dissertation committee. The formation of a dissertation committee is a required part of the dissertation prospectus milestone. At this time, the student must decide which faculty will fulfill the following dissertation committee roles:

- Principal Dissertation Adviser: The principal dissertation adviser provides guidance and direction to the doctoral student's research, as well as evaluation of the student's progress. As a mentor and a role model, the dissertation adviser plays a critical role in the student's development as an academic researcher.
- Dissertation Reader: Dissertation Readers participate in the dissertation defense. They read and evaluate the final version of the dissertation, and offer their comments and suggestions for revisions.

Further information about the roles and responsibilities of the dissertation committee can be found in GAP 3.3.1 and GAP 8.4.1.

Advisers and advisees are expected to meet quarterly, perhaps more frequently during exams and milestones. There may likely be variation of meeting frequency, depending on the individual adviser and advisee. Graduate students are active contributors to the advising relationship, proactively seeking academic and professional guidance and taking responsibility for informing themselves of policies and degree requirements for their graduate program. Students are also encouraged to consult with the Director of Graduate Studies and the student services officer as needed.

Students are encouraged to communicate and meet frequently with their adviser. It is important to set expectations with your adviser and to revisit those expectations periodically. VPGE has a number of helpful advising resources, including an advising workshop, as part of their professional development programs.

Students wishing to change their adviser may do so. Contact department staff for more information.

For a statement of University policy on graduate advising, see the Graduate Advising section of this bulletin.

Programs

THPST-BA
Degree Designation: BA - Bachelor of Arts
-

THPST-M
Degree Designation: MA - Master of Arts
-

THPST-MIN
Degree Designation:
-

THPST-PhD
Degree Designation: PHD - Doctor of Philosophy
-

THPST-PMN
Degree Designation:
-

Urban Studies Department

Contacts

Office: Building 120, Room 160
Mail Code: 94305-2048
Phone: (650) 725-1731
Email: urbanstudies@stanford.edu
Web Site: http://urbanstudies.stanford.edu

Courses offered by the Program on Urban Studies are listed under the subject code URBANST on the Stanford Bulletin's ExploreCourses web site.

The Program on Urban Studies treats urbanism as an interdisciplinary field; it brings together students, faculty, and outside specialists concerned with cities, and the impacts of cities on society and people's lives. The Urban Studies major encourages students to inquire deeply into the nature of cities and the techniques used to modify urban environments. It prepares students to address urbanization, and gives students a knowledge base and theoretical, analytical, and practical skills to understand urban social systems and effect social change.

Mission of the Undergraduate Program on Urban Studies

Cities are now home to more than half of humanity. The mission of the undergraduate Program on Urban Studies is to develop students' understanding of the nature of cities and their impact on the world. The dynamic and complex nature of cities challenges traditional disciplinary boundaries, so the program is interdisciplinary in nature, drawing from fields in the social sciences, the humanities, engineering, and education. Courses in the program focus on issues in contemporary urban society, and on the forces and practices that shape urban life. Courses also address how cities have changed over time and how they continue to change today in societies around the world. Through a comprehensive program that includes course work, community engagement, and independent research, a major in Urban Studies prepares students for careers and graduate study in fields including architecture, business, education, environmental planning, law, public policy, real estate development, social services, urban design, and urban planning. It also prepares students to be critical thinkers, engaged citizens, and informed leaders who can help to transform cities for the better.

Coterminal Programs for Urban Studies Majors

Undergraduates in Urban Studies may enter coterminal master's degree programs in a number of departments and schools in the University. In recent years, Urban Studies majors have developed coterminal programs in the fields of African Studies, Anthropology, Civil and Environmental Engineering, Communication, Community Health and Prevention Research., Earth Systems, Education, Public Policy, Sociology, and Sustainability Science and Practice. Information and applications for coterminal degree programs are available at Undergraduate Advising and Research. Students should discuss the coterminal program with a program director during their junior year.

University requirements for the coterminal master's degree are described in the "Coterminal Master's Program" section. University requirements for the master's degree are described in the "Graduate Degrees" section of this bulletin.

Overseas Studies

Urban Studies students are encouraged to spend at least one quarter studying overseas to learn how cities vary across societies. Some Urban Studies concentration courses, as well as electives, can be satisfied at Stanford overseas campuses. Courses offered overseas vary from year to year, and students should check in advance with Overseas Studies and Urban Studies concerning which courses meet Urban Studies requirements. Students may arrange to fulfill the service learning requirement through an internship placement at one of Stanford's overseas locations.

Faculty

Director: Tomás Jiménez (Sociology)

Co-Director: Michael Kahan (Senior Lecturer, Sociology)

Executive Committee: David Grusky (Sociology), Michael Lepech, (Civil and Environmental Engineering), Ato Quayson (English), Jennifer Trimble (Classics)

Affiliated Faculty: Michelle Anderson (Law), Asad Asad (Sociology), Arnetha Ball (Education, African and African American Studies), Eric Bettinger (Education), Sarah Billington (Civil and Environmental Engineering), Bryan Brown (Education), Scott Bukatman (Art and Art History), Samuel Chiu (Management Science and Engineering), Matthew Clair (Sociology), Rebecca Diamond (Business), Paulla Ebron (Anthropology), Paula Findlen (History), James Fishkin (Communication), Shelley Fisher Fishkin (English), Charlotte Fonrobert (Religious Studies), Richard Ford (Law), Zephyr Frank (History), Angela Garcia (Anthropology), Sharad Goel (Management Science and Engineering), David Grusky (Sociology), Thomas Hansen (Anthropology), Gabrielle Hecht (History), Allyson Hobbs (History), Ian Hodder (Anthropology), Jackelyn Hwang (Sociology), Miyako Inoue (Anthropology), Rishee Jain (Civil and Environmental Engineering), S. Lochlann Jain (Anthropology), Tomás Jiménez (Sociology), Kincho Law (Civil and Environmental Engineering), Michael Lepech (Civil and Environmental Engineering), Tanya Luhrmann (Anthropology), Ramón Martínez (Education), Pamela Matson (Earth, Energy, and Environmental Sciences), Doug McAdam (Sociology, Emeritus), Raymond McDermott (Education, Anthropology), Daniel McFarland (Education, Sociology), William McLennan (Business), Jisha Menon (Theater and Performance Studies), Ian Morris (Classics, History), Josiah Ober (Classics, Political Science, Philosophy), Leonard Ortolano (Civil and Environmental Engineering), Nicholas Ouellette (Civil and Environmental Engineering), Grant Parker (Classics), Francis Pearman (Education), Peggy Phelan (Theater and Performance Studies, English), Walter Powell (Education, Sociology), Ato Quayson (English), Sean Reardon (Education, Sociology), Rob Reich (Political Science, Education), Jonathan Rodden (Political Science), Jonathan Rosa (Education, Comparative Studies in Race and Ethnicity), Michael Rosenfeld (Sociology), Walter Scheidel (Classics, History), Michael Shanks (Classics), Forrest Stuart (Sociology), Jennifer Trimble (Classics), Fred Turner (Communication), Guadalupe Valdes (Education), Barbara Voss (Anthropology), Ali Yaycioglu (History), Steve Zipperstein (History)

Lecturers: Deland Chan, Brian Coyne, Melanie Edwards, Dehan Glanz, Michael Kahan, Patricia Karlin-Neumann, Jennifer LeSar, Lawrence Litvak, Carol McKibben, Laura Scher, Frederic Stout, Mark Wolfe

Programs

UrbSt-BA
Degree Designation: BA - Bachelor of Arts

UrbSt-Min
Degree Designation: