BIOMEDICAL INFORMATICS TRAINING PROGRAM Stanford University

Student Handbook 2015-2016

TABLE OF CONTENTS

Biomedical Informatics (Rev. 9/2015   http://bmi.stanford.edu/biomedical-informatics-students/handbook.html
Note: Click headers within the document to return to the Contents Page.

THE BIOMEDICAL INFORMATICS TRAINING PROGRAM

The Biomedical Informatics (BMI) Training Program is an Interdisciplinary Program in Stanford University's School of Medicine. There are currently about 60 students, which include full time PhD, full-time academic MS, Co-terminal MS students, and HCP (distance education) MS students.

BMI Exec

The BMI Executive Committee is the official council which runs the program. Russ Altman is the Chair and Program Director, Mark Musen is Co-Director and Steven C. Bagley is the Executive Director. Other members of the Exec are Manisha Desai, Michel Dumontier, Teri Klein, Daniel Rubin, Nigam Shah and Dennis Wall. Student Services Officer Mary Jeanne Oliva, Student Services Specialist Nancy Lennartsson, and BMIR Business Manager Christine Scholberg serve ex officio on the BMI Exec. Meetings are held Tuesday mornings approximately once a month. This group makes decisions about BMI policy, considers student requests, and discusses various matters related to running the BMI program.

Student Czars

Early each fall, students elect two representatives, or Student Czars. All BMI students vote on the candidates who are interested in becoming the Czars. To be eligible for the Czarship, a student must be a PhD candidate and have passed the Qualifying Exam. The Student Czars are members of the Admissions Committee and attend the BMI Exec meetings occasionally, at which time they bring thoughts or concerns of the students to the attention of the BMI Exec Committee. They also organize social events and help build community among the BMI students. The Czars are expected to keep all admissions related information confidential.

2014-2015	Erika Strandberg and Rachel Goldfeder
2013-2014	Katie Planey and Luke Yancy, Jr.
2012-2013	Francisco Gimenez and Pablo Sanchez Cordero
2011-2012	Konrad Karczewski and Rob Bruggner
2010-2011	Linda Liu and Nick Tatonetti
2009-2010	Tiffany Chen and Alex Morgan
2008-2009	Sarah Aerni and Marina Sirota
2007-2008	Amit Kaushal
2006-2007	Lucy Southworth and Shirley Wu
2005-2006	Maureen Hillenmeyer and Nikesh Kotecha

BMI Computing

Laptop computers are loaned to first-year students. A few desktop computers are available in the designated MSOB student space. **HelpMeIT1@lists.stanford.edu** provides desktop and laptop support to BMI. Students should send a ticket to the HelpMeIT address, attention John DiMario, if there is a technical problem with a machine.

Students are generally required to return their laptops by September 1 of their second year.

University rules require that all software installed on any campus computer be a licensed copy and that no software be copied from University computers to be used on another computer. Downloading movies and mp3 files on any university network is also against university policy. Violations of these rules are considered violations of the Honor Code and will be investigated and treated as such. We ask that you do not install software on the department machines.

Note: Click headers within the document to return to the Contents Page.

Ergonomics

Stanford encourages affiliates to be aware of ergonomic issues to help promote employee health by decreasing workplace exposure to ergonomic risk factors. If you need ergonomic support or special equipment please contact BMI Student Services. BMI will finance items needed for health issues as requested. Recommended items can be found at the **Environmental Health & Safety** web site.

E-Mail / SUNet ID / Mailing Lists

BMI requires all students to establish an @stanford.edu e-mail account prior to arriving on campus. Create your email account when signing up for your official Stanford University account (**SUNet ID) that** will identify you uniquely and permanently, and will your online credentials, required for all networking. Be sure to:

1. Send the BMI Student Services Officer an email from your @stanford.edu account when it becomes active.
2. Enter your email address and local mailing address in the student **AXESS** system as soon as possible. If help is needed, call 5-8181, or submit a HelpSU ticket. Enter information into each of the fields even if it is duplicated; each field serves a separate purpose. Students must maintain up-to-date e-mail and mailing addresses in the "Address" portion of the student AXESS system. Graduate students are required to enter their office location and (daytime) phone number. Enter emergency notification information as well. Both the department and the University will use this information to communicate with you.
3. New students and graduating students are automatically added to the appropriate BMI mailing lists.
   To subscribe or unsubscribe to other Stanford mail lists see the **IT Services Mailing Lists (Mailman)** site: **http://www.stanford.edu/services/mailman/** .
   > bmi-students@lists.stanford.edu (roll-up list :BMI students: full time, part time, co-term, & HCP)
   > bmi-coterms@lists.stanford.edu (only Co-terminal students)
   > bmi-first-years@lists.stanford.edu (all BMI first-year students)
   > bmi-honors-coop@lists.stanford.edu (only HCP distance MS students)
   > bmi-phdms-students@lists.stanford.edu (full time MS and PhD)
   > bmi-colloquia-tu@lists.stanford.edu (Tuesday Colloquia/Student talks)
   > bmi-alumni@lists.stanford.edu (all BMI alumni who have given us your current email address)
   > bmi-alumni-local@lists.stanford.edu (all local BMI alumni)
   > bmi-job-openings@lists.stanford.edu (job announcement board)
   > nlm-trainees@lists.stanford.edu (all current NLM trainees)
4. Use your @stanford.edu email when posting to any Mailman list so that your message does not have to be approved by a list administrator.
5. Graduating students need to subscribe to the jobs list with your non-Stanford email address to continue receiving job postings after you graduate.

Calendars

Stanford uses the Zimbra client for calendaring staff and conference room events. BMI maintains a Google calendar where public presentations at Stanford's Biomedical Informatics Graduate Training Program are entered. The calendar is: http://www.google.com/calendar/ical/0huf8fn26r1fosph2u419gl79s%40group.calendar.google.com/public/basic.ics

Mail / Mailboxes

Every full-time MS and PhD student has a mailbox in the 2nd floor BMIR/BMI suite of MSOB. It is your responsibility to check your mailbox regularly, as the BMI program uses them for distribution of necessary, often timely, forms.

Incoming U.S. and interdepartmental mail is delivered and outgoing mail picked up in area x215 Monday-Friday. BMI-related U.S. outgoing mail requires either adequate postage affixed or a departmental postage code, available through Student Services. The BMI campus mail code for interdepartmental mail is 5479.

The USPS mailing address is:
> Biomedical Informatics Training Program
> Stanford University School of Medicine
> 1265 Welch Road, MC 5479
> MSOB, X-215
> Stanford, CA 94305-5479

Note: Click headers within the document to return to the Contents Page.

Building Access: Every full time/funded BMI student is eligible to receive building access for the BMI office area. Check with BMI Student Services for the required form and instructions on how to obtain a badge with building access.

Conference Rooms / Meeting Spaces / Lounge

In addition to our BMI lounge area where 'living room' style seating is available, MSOB has an open pod space used on a first-come basis for small group discussions, as well as two official conference rooms available for Zimbra Calendar booking through Student Services. If you would like to book conference rooms x271 or x275, send your request to Nancy Lennartsson nlennart@stanford.edu; include the date, time & event purpose.

Copying/Fax Machine

The copier is a shared resource that is intended for research-related use and for reasonable amounts of academic copying. Copying for personal purposes is inappropriate; students should use the copy machines in Lane Library for making personal copies. The same rules apply for the Fax machine. Please ask the Student Services Officer for your appropriate access code.

Student Carrel Space

BMI first year students are assigned study carrels in MSOB for up to one year while they are rotating. Assigned carrel space is available in the MSOB for graduate students undertaking research supervised by BMIR (Biomedical Informatics Research) faculty and staff. Priority for carrel space will be given to doctoral students whose thesis advisor or co-advisor is a BMIR faculty member, followed by BMI and other graduate students who are undertaking research rotations with BMI faculty and staff.

Graduate students in the academic BMI program whose primary research adviser is not a BMIR faculty member or who are not undertaking research on BMIR projects may make an email request to the BMI executive committee for assigned carrel space in MSOB. Please send the request to the Student Services Officer. These requests will be considered on a quarterly basis. Such carrel assignments may need to be revoked at the end of a quarter if additional space is needed for students working with BMIR faculty or on BMIR projects. BMI students may always take advantage of shared research space in MSOB, as well as the sunny student lounge area.

Students given assigned carrel spaces are expected to make regular use of them. Students are expected to maintain an acceptable appearance of their personal workspace. The use of carrel spaces will be reviewed on a quarterly basis by the BMI executive committee, and carrels may be reassigned if they are not appropriately utilized.

Shared work areas -- including the conference pods and adjacent study carrels, the docking station area and lounge areas -- are available for use by BMI students and any students involved in BMIR-related work. Students using these shared spaces are expected to relinquish any claimed area each day and to maintain a responsible upkeep of these workspaces.

Kitchen / Office Supplies

There are microwave and toaster ovens and a small refrigerator in the BMIR area. Coffee and tea are available as well. Please be considerate of others who use these appliances and keep the area clean. A larger refrigerator (shared by the entire second floor) is in the kitchen on the main 2nd floor hallway.

General office supplies for academic use at Stanford are kept in the hall closet. If you need something that is not in the closet, or need an ergonomic item, etc., please ask Student Services staff for assistance.

Note: Click headers within the document to return to the Contents Page.

The BMI program includes students who are enrolled in the MS (academic, professional, or co-terminal tracks) or PhD track. Stanford students in other PhD programs may apply for the BMI PhD Minor.

Postdoctoral Students

Students who have previously received a PhD or MD are considered to be Postdoctoral students, although they are not appointed as postdocs through the Office of Postdoctoral Affairs because they are primarily full-time students.

Professional MS

1) **Co-Term Track**

Stanford undergraduates with strong academic records may apply for admission to the BMI coterminal master's program upon completion of 120 units, but no later than the quarter prior to the expected completion of the undergraduate degree. Please see the Registrar's website for detailed information:

If admitted to the BMI program, an academic advisor will be assigned to you.

1. Co-terminal master's students must complete at least the 45 units required for the professional MS.
2. Formal BMI coursework (not including BIOMEDIN 299 or other unstructured units) must total at least 27 units. Students may request to place out of courses in the core curriculum based on previous work. These requests must be in writing to the BMI Executive Committee by **November 1 of the first year only**, and may be approved fully or partially, so it is important to get approval IN ADVANCE of finalizing study lists.
3. The total units taken for the MS must be at least 45 units, and these units can be taken in BMI-related courses, as determined by student and BMI advisor. Some of these units can be BIOMEDIN 299, extra courses in core curriculum areas, or other areas that will strengthen the student's record.

2) **HCP/Honors Co-op Track**

This degree is designed primarily for the working professional who already has advanced training in one discipline and wishes to acquire interdisciplinary skills. This program is offered part-time and courses are available online. The professional MS is offered in conjunction with the **Stanford Center for Professional Development** (SCPD), which establishes the rates of tuition and fees. SCPD is based on the honors cooperative program (HCP) model, which assumes that the student is working in a corporate setting and is enrolled in the MS program on a part-time basis. The student has up to five years to complete the program. Research projects are optional and must be pre-arranged with program faculty. Graduates of this program are prepared to contribute creatively to basic or applied projects in biomedical informatics.

HCP students usually matriculate in the autumn, winter or spring quarter. There are multiple steps to complete in the BMI office, SCPD office, Registrar's Office, and on the student's end to successfully be enrolled. Refer to the website for deadlines and allow sufficient time to complete the process.

Mary Jeanne Oliva (Student Services) and Steven Bagley (Executive Director) are the primary post-admissions contacts for HCP students. Since HCP students are not residential, ongoing communication with the BMI program is recommended. Please refer to the Stanford Center for Professional Development **HCP Student Handbook.**

1. HCP master's students must complete at least the 45 units required for the professional MS.
2. HCP students have up to five years to complete the program.
3. HCP students may request to place out of specific courses in the core curriculum based on previous work. These requests must be in writing to the BMI Executive Committee by **November 1 of the first year only**, and may be approved fully or partially, so it is important to get approval IN ADVANCE of finalizing study lists.

Degree requirements for the MS and PhD degrees are described on the Stanford ExploreDegrees website at: http://exploredegrees.stanford.edu/graduatedegrees/ .

Core Curriculum

All students are expected to participate regularly in the Biomedical Informatics Student Seminar (BIOMEDIN 201) and another seminar series relevant to their research interests, regardless of whether they register for credit in those courses. In addition, all students are expected to fulfill requirements as detailed in the Stanford Bulletin. There are course flowsheets based on the year of matriculation and the core requirements. The flowsheets are part of the semi-annual progress report and are located on the BMI website under Student Info Forms Progress Report Forms for BMI students. The core curriculum generally entails a minimum of 45 units of course work, but can require substantially more or less depending upon the courses selected and the previous training of the student. The varying backgrounds of students are well recognized and no one is required to take courses in an area in which he or she has already been adequately trained; under such circumstances, students are permitted to skip courses or substitute more advanced work. Students design appropriate programs for their interests with the assistance and approval of their Biomedical Informatics academic adviser. At least 27 units of formal course work are expected.

Waivers and Exemptions (Placing out of courses)

All students (full time, co-term and HCP) may petition the Executive committee to be excused from specific courses or domain unit requirements. Submit your request in an email to the Student Services Officer. All course waiver requests are due around **November 1 of the first year only,** to be considered by the BMI Exec. The student must complete and submit the BMI course flowsheet with the request.

Students on the old pre-2011-12 curriculum who have previously taken a course that covers the material of a required BMI course, may request EXEMPTION from that required COURSE. If an exemption is granted, the student does not have to enroll in that specific course. This exemption may not reduce the credit requirements for a particular portion of curriculum.

If a student is following the old pre-2011-12 curriculum and has previously taken graduate level courses that fulfill specific BMI domain requirements, the student may request a WAIVER for a specific number of domain area UNITS. If this waiver is granted, the number of units that the student must take in that particular domain is reduced by the requested amount. For instance, a student may have taken several graduate-level courses in molecular biology while previously pursuing a master's degree. In this case, the student could request that they be waived 3 units of biological domain coursework and if granted, the student would then only need to take 3 more units of biological domain coursework instead of the required 6. BMI students are generally not allowed to waive CS units.

Exemptions and waivers are allowed under the new curriculum (which starts Autumn Quarter 2011-12). The new curriculum provides greater flexibility for completing domain requirements. Please refer to the University Bulletin for requirements in the various categories. For example, particular CS courses are not specifically required; however, there is a new requirement that the set of courses in the STEM-related subjects provide a coherent body of in-depth exposure to topics relevant to Biomedical Informatics.

Grades

Most courses counted toward a core requirement must be taken for a grade. Pass/fail options are accepted for some core courses in the new curriculum effective Autumn 2011-12. Please refer to the University Bulletin for details. If a student accidentally signs up for the Pass/Fail option in a course that should have been taken for a letter grade, he/she must email the instructor to ask what the letter grade would have been, then forward the response to the Student Services Officer to be included in the student's file. Medical students are required to take courses Pass/Fail, but need to keep a record of letter grades they would have received.

Candidates must maintain an overall GPA of 3.0. If the candidate's GPA does not meet the minimum requirement, the executive committee may require corrective courses of action. If progress remains unsatisfactory, the committee may ask the candidate to leave the program.

Units

All funded BMI students are required to enroll in *exactly* 10 units every quarter. Co-term students generally enroll in an average of 15 units and Honors Co-op (HCP) students usually enroll in only 3 units a quarter. All BMI students should discuss their enrollment plans with their Academic advisor.   If a funded BMI student enrolls in more than 10 units, the student will be responsible for paying the additional unit rate charged by the Registrar's Office. Students should check their unit enrollment to avoid paying extra tuition.

For the purpose of Research Assistantships (RAships), the 10 unit rate is considered half time (20 hours) or 50%. In addition to the 20 hours of work on the research project paying the student, the student is expected to study for courses and/or pursue his or her own research to meet degree requirements the other half of the time.

Study List

By 5 p.m. on the first day of classes each quarter each student must submit a study list in **Axess** to register for classes. The study list tells the University and the BMI program exactly what courses will be taken in a given quarter. Remember to enroll in 10 units, if this is applicable to you. There are *serious* financial consequences to missing these deadlines (a $200 late fee, losing the health care subsidy, etc.).

Each student must set up a semi-annual meeting with his/her advisor to discuss courses to take during the year and to complete the required Progress Report by the January and July deadlines.

PeopleSoft requires that you register for courses in a given "career." Be sure to select the correct degree. This is especially important for Co-terminal students pursuing two degrees at once. You will need to submit separate study lists for your undergraduate degree and your graduate degree.

Cross-listed courses

When taking a course that is cross-listed in both BMI and another department (such as Computer Science), please sign up for it under the BIOMEDIN number.

Graduate Tuition Adjustment (AGR)

If a student needs only 3-7 units in the last quarter before qualifying to go TGR, or in the last quarter before graduation, discuss the "Request for Graduate Tuition Adjustment" form with the Student Services Officer prior to the first day of the quarter. Sometimes this is referred to as AGR, adjusted graduate rate.

If the AGR petition is granted, students may enroll in 3-7 units. Co-terminal students with an active undergraduate degree program are not eligible for this petition. All students are strongly 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. Form Deadline: The Preliminary Study List deadline of the effective quarter.

Terminal Graduate Registration (TGR)

Terminal Graduate Registration (TGR) is reached when PhD students have completed the University's residency requirement, been admitted to candidacy, completed 135 units of coursework, and submitted the Doctoral Dissertation Reading Committee form. TGR greatly reduces the tuition rate. When enrolling under TGR status, a student may only enroll in only 1-3 units of non-required coursework (with PI's knowledge), in addition to the zero-unit TGR course (BIOMEDIN 801 for MS and BIOMEDIN 802 for PhD students). It is the student's responsibility to be aware of when he/she is eligible for TGR. To be considered on TGR status, the student must submit the TGR form to the Registrar prior to the beginning of the quarter for which the request is being made.

Students enrolled in master's programs with a required project (such as BMI post-docs funded by the NLM training grant) may apply for TGR status upon completion of all required courses and completion of 45 residency units at Stanford. These students enroll in BIOMEDIN 801.

Faculty Designations in the Study List

When registering for any type of individual study course (BIOMEDIN 299) or TGR (BIOMEDIN 801 or 802), choose the correct faculty name and number. To check on faculty-specific courses in Axess:
1. Click on shop for classes. The Basic class Search page will show up.
2. Scroll to the bottom of the page and click on Independent/Individual Study Search.
3. Choose Biomedical Informatics from the subject list and type in 299 for the catalog number.
4. Choose the number that corresponds to the name of the professor who is supervising your research or teaching.   If the faculty name does not appear in AXESS, contact the Student Services Officer.

ACADEMICS

Journal Club and Research-in-Progress Talks

BMI has a regular seminar series. It meets Tuesday, 12:15-1:15pm in MSOB X-275. You can get course credit by signing up for BIOMEDIN 201. During the Autumn Quarter, we start with faculty talks surveying their lab research; Winter and Spring Quarter are for students with two 30-minute talks, each one of either a Journal Club, or a Research-in-Progress talk. Generally, first-year students present a journal club, and second-year and later students present research-in-progress. During the Summer Quarter, we adopt a slightly different format: the journal club is one hour long, led by BMI faculty who present a "best of" or highly influential paper.

In response to specific requests from HCP MS (distance education) students, the Tuesday Talks series (journal club + research-in-progress) is video taped each week. Our desire is to include those students in as many program activities as possible. The videos are uploaded to a Box folder; the files are not stored permanently, and are deleted after being available for one month. The videos can only be "previewed," not downloaded, by the HCP students. (Please do not try to circumvent these security features.) Note that the BMI Exec can view/download. The presenters are encouraged to use the videos to improve their presentation skills, either by themselves or with help from their lab PIs. If you want access to a video of your talk, please let BMI staff know so that you can be added to the Box viewing folder. HCP students are encouraged to follow up with questions for the presenters by email.

Journal Club. The purpose of a journal club presentation is to gain practice in oral presentation skills, and to learn to present and fairly critique a published paper in some area of biomedical informatics. In general, you should (1) pick a paper, (2) clear it with Steven Bagley, (3) prepare a slide presentation, (4) practice that with Steven Bagley, and then (5) give the presentation. This means you need to plan ahead. The paper can come from any area of biomedical informatics. Your choice should reflect your own interests, and be likely to engage other students. A paper about biomedical informatics methods published in the last couple of years with at least a moderate number of citations is ideal; you might want to look at Russ Altman's AMIA TBI year-in-review talk for suggestions. Please avoid papers that are very long or that require excessive background in some niche area of biology or medicine. Drafts or papers in press are generally not acceptable. Feedback forms are filled out by the audience and given to you for your review.

Research-in-Progress. The purpose of a research-in-progress talk is to gain more practice in presentation skills, to present your work to the BMI community, and to get useful feedback on both your presentation and your work. You should prepare a slide presentation and practice it with Steven Bagley prior to your talk date. Because this venue is open the public, it is important that you discuss issues about disclosure of intellectual property with your advisor prior to giving the talk. The talk title and abstract are viewable by the outside world, and anyone may attend the talk. This is different from presentations at lab meetings, which are considered to be closed. There may be intellectual property issues and disclosure issues, which is why discussing with your research advisor first is so important. If you and your advisor so choose, you may include a slide at the beginning of your talk, saying something like: "This is research in progress and not for public disclosure. Please do not take photos of the slides or discuss outside of this venue."

Progress Reports

Semi-annual progress reports must be completed in a timely manner and given to Student Services Officer. They are the primary way in which the program documents progress towards the degree. The advisor works with the student to ensure that any challenges are addressed. Each semi-annual report should be accompanied by an updated BMI flow sheet. Each missed report will count as a presumed "no progress towards degree." After two such "no progress" reports, the BMI Exec will consider administrative action. If a report is not filed on time, the Exec may limit progress to the next degree milestone and may suspend BMI discretionary student travel (except for mandated NLM training meeting).

The semi-annual forms are due in December/January and June/ July. If you will not be on campus for summer quarter, make sure you complete your report before you leave campus. The Progress **Reports are available** on the BMI website in the Forms section for Current Students. **http://bmi.stanford.edu/biomedical-informatics-students/forms.html.** The instructions on that page tell you which individual forms you need; this depends on your degree program and year.

Teaching Assistant (TA) Requirements

PhD students are required to TA two courses. Academic MS students receiving fellowship support through BMI are required to TA one course. Others, including HCP and co-term MS students, are exempted from this requirement. The TA requirement is usually completed during the second and third years. TA's are expected to review and understand the TA Guidelines (following section).

There are three kinds of TA positions:
1. Assigned. These courses are assigned by the Exec and count towards the BMI requirement. Typically, the assignments are to BMI core courses or related, such as BMI 205.
2. Voluntary. The instructor and student agree that the student will help with course development or serve as TA. This may be for pay ("moonlighting"). If not for pay, the student can petition Exec to have this count towards the BMI TA requirement.
3. "Formal" TAship. Some departments (but not BMI) offer students formal TAship positions, which include some financial benefits. Sometimes these are offered to BMI students.

The BMI Exec determines the TA assignments once a year, typically in late June. All eligible students should submit their preferences as a ranked list of all BMI core courses taken to date, and their grades in those courses. They may also list other courses they would like to TA, including courses under development and Biosciences mini-courses; students should justify such requests by writing to the Exec. Course instructors may also submit requests for particular students, especially to maintain continuity for large or complex courses. The BMI Exec will attempt to honor all the requests, but there are no guarantees. Priority is given to coverage of the BMI core courses. Mini-courses may be approved as partial credit for the BMI requirement at the discretion of the Exec. Typically, the "moonlighting" TA positions go to senior graduate students who have passed their Quals, and completed their coursework and TA requirements. All students are responsible for notifying notify BMI Admin of TA requests and assignments regardless of kind as early as possible.

BMI Teaching Assistantship Guidelines

Background:
The purpose of the unfunded teaching assistant (TA) requirement is to help students to understand the process of organizing and delivering a course as an intellectual academic exercise, and learn about course administration and logistics. Tuition income from courses covers some expenses of the BMI program, including recruitment, the retreat, and student social activities. Students should consider their unfunded teaching partly as a contribution back to the program and their fellow students, as well as an opportunity to learn pedagogical methods.

BMI PhD students generally are required to TA two courses. Academic MS students receiving NLM or other fellowship support are required to TA one course. These are usually assigned by the BMI Exec, who usually request student preferences. Not all preferences can be accommodated, but the BMI Exec can discuss assignments with students who are concerned about them. Sometimes students will be asked to TA courses outside of their area of research interest, and (rarely) even to TA courses that they have not taken. In those cases, particular care should be taken by the faculty to meet with the students and discuss strategies for TA success.

Guidelines:

Each course may have different specific requirements, but these are general guidelines for faculty and TA to use as a starting point for discussion. These should be reviewed before each course begins to set common expectations. In general, the BMI Exec is the body responsible for mediating disagreements between students TA and faculty.

1. In general, it is expected that a course will have administrative personnel (often the administrative assistant of the instructor) who will handle routine administrative issues such as room reservations, copying, logistical coordination of guest lectures and procurement of supplies for the course.
2. TAs may be assigned in-class logistical support tasks, such as in-class homework logistics (distribution/accepting assignments), videotaping, information dissemination, and communication with the administrative support personnel.
3. TAs should have regular office hours for interaction with students.
4. Unless specifically exempted, TAs should attend all classes. Vacations should not be scheduled during the quarter, unless it is pre-arranged with the Instructor.
5. TAs may be charged with creating and grading assignments and exams. Instructors should examine and approve these, and must take overall responsibility for them.
6. TAs are encouraged to give at least one lecture during the course, in order to have the experience of preparing a course lecture (and to appreciate the differences from research talks).
7. TAs may be asked to maintain a course website, with relevant materials. Routine administration of these sites should be shared with the administrative support personnel.
8. TAs may be asked to create class newsgroups or email lists, and to monitor activity on these, and respond appropriately.
9. Decisions about final grades rest with the faculty, but they are encouraged to consult with the TAs to learn of extenuating circumstances, particularly if the TAs have had the major responsibility for grading homework assignments and/or examinations.

SCPD

Special challenges arise in supporting the distance education students who take BMI courses via SCPD. These students have the task of following the class without the benefit of live interaction with faculty, TA or other students. Often these students don't know where to look for information that might be considered common knowledge.

1. TAs should familiarize themselves before the course with SCPD policies and procedures. Look at http://scpd.stanford.edu under "Contact Us". SCPD offers orientations quarterly to faculty and TAs. Some information about SCPD is here: http://ldt.stanford.edu/~meyerse/SCPD/
2. TA's should arrange a procedure for talking with SCPD students on the phone or by email during office hours. The hardest part about TA-ing an SCPD course is figuring out when SCPD will support the student and when you have to step in. Generally, SCPD has so much information that the real problem is finding it. Mainly, your job is to cover the material in the class, not provide technical assistance to the student.
3. SCPD handles student registration and tuition.
4. The students should know the difference between an incomplete and a withdrawal. They should know if a crisis occurs they can request an incomplete.
5. Many SCPD student are unaware of the difference (if any) between the SCPD course description and the course description in the Stanford Bulletin. Most of the time, the course descriptions on the SCPD webpages are adequate.

If you are contacted by another faculty member to TA outside of the process described here, please notify the Student Services Officer.

Instructors will complete a TA evaluation form, based on the TA's experience with the course. The evaluation form will be kept in the student's file and he/she will receive a copy. The evaluation should be included in the Quals folder.

ADVISING

Academic Advisor

The BMI Exec Committee will select an academic advisor for all incoming students. New students will be notified of their advisor prior to the beginning of their first quarter. Upon joining a research group, the PI will typically serve as the research advisor and a new academic advisor will be assigned if the PI was the student's academic advisor.

Research Advisor

Doctoral students must declare a research advisor at the time they complete their research lab rotations but no later than the end of their fourth quarter in the graduate program.

- The primary research advisor should be someone conversant in the informatics/statistics/computer science/engineering literature. We strongly recommend a co-advisor who works in the biological application area and can provide expert level understanding of the literature and important open problems in biology or medicine.
- Research advisors and the students should have a clear, shared understanding of the scientific objectives of the students work, and how it fits into a research program that will lead to an MS degree or PhD degree. Students should be creating new methods to analyze biomedical data. Although they may do experimental work to understand the data sources, in general they need to be concentrating on informatics projects. Initial "confidence builder" projects can include creating databases, or doing out-of-the-box analysis of data, but PhD dissertations typically need to involve methods development.

- Research advisors should understand the course requirements and degree milestones in the BMI program that may be different from the milestones associated with other training programs with which they interact.
- Research advisors are expected to supplement BMI students to standard graduate student stipend rates and tuition at the medical school level.
- Research advisors fill out a semi-annual report of progress with the student to document progress. This is a short form that tracks research progress, career plans, courses taken, papers, and oral presentations. It also can raise issues/questions. These are regularly reviewed by the BMI executive committee.

Research Co-advisors

- In general, the BMI students must have a primary advisor who knows the informatics, computer science or statistics literature, and thus typically should come from the core BMI faculty, computer science, statistics, biostatistics, or an engineering discipline. The BMI Exec will approve other mentors who they believe are qualified to be primary mentors. Co-advisors who are familiar with the biomedical application domain and literature, and can provide expertise and opportunities for biomedical hypothesis generation and experimental collaboration, are highly recommended for all students.
- If the research advisor is not an executive committee member or advising faculty member listed on the BMI web page, the student must select a core BMI faculty member as a co-advisor. The role of the co-advisor is to ensure that the student's doctoral work is within the field of biomedical informatics. A student may make a written request to the BMI Exec for exemption from the co-advising requirement based on the researchers work and mentorship in biomedical informatics. The student must notify the Student Services Officer when a research advisor, and co-advisor, if required, have been selected.

Rotations in the First Year for Academic MS and PhD Students

Research rotations are critical for students in choosing their research lab or project. In addition, rotations broaden a student's research experience and familiarize students with ongoing research projects. Rotation possibilities and experiences are discussed with the Academic advisor. Rotations are set up by discussion of the student directly with the faculty member of interest. A handout of rotation sites is distributed during BMI New Student Orientation. Rotations are typically one quarter in length, but the student can arrange more, shorter rotations. Rotations longer than one quarter are discouraged, as the primary purpose of the rotation is to find a suitable thesis lab, not to obtain publication quality results. Students should choose their lab and Research advisor by the end of their fourth quarter in the program (i.e. typically the end of the summer quarter of first year). Academic MS students should select their research project by the

12

spring quarter or before. If the rotation advisor is not a primary BMI executive committee member, the student should engage a qualified and interested co-advisor (see policy on co-advisors) as early as possible.   By default, the academic advisor is the co-advisor during rotations.

REQUIREMENTS FOR ALL MASTERS STUDENTS

Milestones/Progress

There are many milestones and accompanying forms to complete along the way to the MS and PhD. For most milestones, the student must take a particular action, usually requiring submission of a form or other materials. Required forms can be found on the BMI website under **Student Info / Forms.**

Who/When	Milestone	Required form	Due by:	Additional
Academic MS Part time/HCP Co-terms	MS program proposal	**MS Program Proposal** +BMI Course flowsheet	End of First Quarter	Submit to Student Services Officer; required to be eligible for graduation

MS ACADEMIC REQUIREMENTS

MS on the way to PhD

There is no tradition in the Biosciences of routinely offering MS degrees on the way to a PhD, although our program has awarded them in the past under special circumstances at the request of the student. The BMI Exec committee will consider requests to be awarded an MS degree. Upon completion of MS coursework requirements, students must submit a Master's Program Proposal, submit a Graduate Authorization Petition ($125), and (if approved) apply for graduation, selecting the MS (not PhD) program.

Note that there are major financial consequences of PhD students obtaining two MS degrees along the way. Typically this would occur if you request the BMI MS, and then add an MS in statistics or CS. Generally, you shouldn't do this; please discuss with BMI administration at the earliest opportunity.

Masters Practicum Proposal

A practicum proposal is required of all full-time NLM-funded Master's students. The student must submit the proposal and have it approved by two faculty members, one of whom must be the student's research preceptor and one of whom must be on the BMI executive committee. The practicum proposal must be submitted and approved no later than two quarters prior to anticipated completion of degree requirements (for example, by the end of autumn quarter for those intending to graduate the following spring). In order to allow revisions as needed in advance of this deadline students are encouraged to submit their proposals early in the quarter.

A practicum proposal should provide relevant background on the research, describing both the status of the project itself and relevant work done by other researchers. The proposal (1) should identify clearly the task to be undertaken by the student, (2) should specify the level of system performance anticipated upon completion of the practicum (if applicable), and (3) should summarize the anticipated contribution of the work. A rough timetable of anticipated milestones and their proposed completion dates is an important component of the proposal. The document may be brief as long as the plan is clear; excessive length is to be avoided.

Practicum report

The final report for a master's practicum should be written as a scientific paper, suitable for submission to a journal. The presumed audience for such a paper should be researchers in biomedical informatics. If the student feels that the space constraints or thematic constraints of a single journal article limit the ability to say as much as he or she wishes about the

Note: Click headers within the document to return to the Contents Page.

work, the student should simply prepare a second (or third) paper to complement the first. The second paper may be aimed at a journal/audience of the student's choosing.

The report(s) must be approved by the research preceptor and by one other faculty member on the BMI committee. Students are encouraged to submit their draft final reports early enough in the quarter of anticipated graduation so that revisions can be made in response to comments from the research preceptor and from the other BMI faculty member.

Two copies of each final practicum paper, including a cover sheet signed by the research advisor and the second reader which confirms that the MS research requirement has been successfully completed, must be submitted to the Student Services Officer before the degree may be granted.

PHD REQUIREMENTS

When	Milestone	Takes Place When?	Required form/other	Due By	Additional
1st Year	Rotations, Choose Research Lab	Each quarter during first year	None, Contact Student Services Officer when decision is made	Summer of 1st year or Fall of 2nd year for PhD	PI needs copy of "Care and Feeding" memo for BMI advisors
2nd Year	Pre Quals Meeting	Summer prior to 3rd year, by October 1st at the latest	Pre Quals folder (see Quals section)	One week prior to Pre Quals meeting	Pre Quals folder is required, should be submitted to Student Services Officer
3rd Year	Quals Meeting (Pre Candidacy)	October of 3rd year (August 15 for SGF)	Pre Quals folder for Exec committee	One week prior to Exec meeting	Student should give copies to all committee members two weeks prior, Work with Academic Advisor and Student Services Officer to schedule Exam
3rd Year	PhD Candidacy Form	Complete after passing Quals	Candidacy Form + BMI course flowsheet	Immediately following passing of Quals	Submit to Student Services Officer
3rd Year	Pre Proposal	Winter-Spring Quarter or 6 months following Quals	Feedback form completed by faculty during talk	--	Student Services Officer has feedback forms
3rd/4th Year	Establish Reading Committee	3rd Yr summer or 4th yr fall	Reading Committee Form	Before Defense can be scheduled	Submit to Student Services Officer, Required to go TGR
4th Year	Oral Exam/ Thesis Defense	Approximately by 5th year at the latest, 6 months prior to graduating	1) Orals Schedule Form 2) Thesis Proposal 3) Chair Guidelines	Schedule 2+ months ahead, refer to below for each timeline	Student works with committee & Student Services Officer to schedule Orals
5th Year-ideally	Dissertation	Submit close to graduating, check deadlines	Work with Student Services Officer, Registrar	Check submit deadlines	Have photo taken
5th Year-ideally	Final Talk	While matriculated, before graduation	Abstract and title for announcement	Schedule 3-4 weeks before graduation	Celebrate

All university and BMI forms can be found on the BMI website: http://bmi.stanford.edu/biomedical-informatics-students/forms.html

Individual Development Plan

The plan is an annual process to review your professional development with your research advisor, and document that you've done so. The Individual Development Plan (IDP) is intended to facilitate important discussions between you and your advisor in order to accomplish the following: (1) help you assess and develop your core scientific skills as well as

Note: Click headers within the document to return to the Contents Page.

complementary skills (e.g. oral and written communication, proposal writing, lab management, and professionalism); (2) provide regular and open two-way feedback; (3) develop a specific action plan, recognizing your ownership of your project and training, to aid your project and development; and (4) guide you to helpful resources related to your research progress, professional development, and general wellbeing.

As of March 31, 2014, the Committee on Graduate Admissions and Policy (CGAP) has adopted a new policy requiring all Biosciences PhD candidates and their mentors in the Schools of Medicine and H&S to create and discuss their Individual Development Plans (IDPs) on an annual basis.

Students and their advisors share responsibility for completing the IDP, as well as the consequences of not completing the IDP by the deadlines below. Failure to comply with IDP requirements will
• negatively impact Stanford's ability to receive NIH funding; and
• incur a hold on student registration that prevents stipends from being funded.

IDP Deadlines:

Action	First Year Students	All Other Students
Schedule a planning and mentoring meeting with your advisor	Within 30 days of joining your thesis lab	Before June 1
Download and complete the appropriate IDP form. (Ideally, share the completed form with your advisor in advance.)	Before your meeting	Before your meeting
Hold your annual planning/ mentoring meeting with advisor	Within 30 days of joining your thesis lab	By August 1
Verify that you and your advisor met to discuss your IDP	Within 30 days of joining your thesis lab	By August 1

See http://biosciences.stanford.edu/current/idp/ for more information and IDP forms, including extensive FAQs and resources for both faculty and students. Note that your Individual Development Plan is different from the BMI progress report, but you could consider addressing both in the same meeting with your research advisor.

Required Committee Meetings (by year)

The following is a list of the required number of committee meetings for each year of graduate study as set by the Biosciences Committee on Graduate Admission and Policy (CGAP).

Years 2-3:   One meeting each year (these can be the Qualifying exam and Pre-Proposal meeting)
Year 4:   One meeting and a one-page written progress report (spaced roughly evenly in the year). CGAP also strongly encourages students to schedule one-on-one meetings with committee members during their 4th year, using the written progress report as starting point for discussion.
Years 5+:   Two meetings each year

Please keep in mind, these are *minimum* meeting requirements and do not preclude students from adhering to any additional program-specific requirements or prevent students or committees from requesting and having additional meetings.

Required Application for NIH Fellowship Support

BMI (and the other Biosciences programs and departments) are now routinely asking students to apply for individual fellowship support. This will not only help Stanford, but also give you external validation of your research ideas, and increase your research autonomy. All 3rd year BMI PhD students who are eligible for NIH support are now required to apply for an NIH fellowship grant under the NRSA (National Research Service Award F31 awards.
• Please discuss with your PI.
• See http://grants.nih.gov/training/nrsa.htm

15

- There are several deadlines (about three per year)
- Stanford Biosciences provides resources to assist you, including grant-writing classes.

Qualifying Exam

Prior to being formally admitted to candidacy for the Ph.D. degree, the student must demonstrate knowledge of biomedical informatics fundamentals and the potential for research by passing an oral qualifying exam ("Quals"). The exam is taken after completing the BMI core curriculum and no later than October of the third year. SGF-funded students must successfully complete the BMI qualifying exam before the start of their third year. MS students do not take the qualifying exam.

Purpose of the Exam:

The PhD Qualifying Exam is a University-mandated event that moves the student to PhD candidacy. Its goals are:
1) To motivate students to review and synthesize course work and research material
2) To determine the student's ability to understand and apply fundamental concepts
3) To develop and test the student's ability to communicate orally and to respond to questions and comments
4) To evaluate the student's potential to pursue doctoral research
5) To identify areas needing strengthening for the student to be successful as a PhD student, independent scholar and teacher
6) To provide a mechanism for faculty to come to know the student's capabilities

Remember, preliminary results are not required for the Quals talk alone, which can just discuss the problem and the anticipated approach/methods.

Procedure for the Qualifying Exam

There are several steps:
1) You submit an Oral Exam folder to the Exec.
2) The Exec approves the folder.
3) The exam is scheduled.
4) You take the exam.

Submitting the Oral Exam folder. When you are ready, you submit a folder of information to the Student Services Officer for review by the Exec. Please discuss this with your research advisor, as their consent in this process is important. Students may ask the Student Services Officer to see examples of Quals folders. **The folder must be submitted by the end of your second year, that is, before Oct 1 of your third year. SGF-supported students are expected to take and *pass* the exam by the end of August in their second year.**

The Quals folder should contain the following items:
a) Research project abstract.
b) Preliminary dissertation proposal (one to two pages), demonstrating knowledge and work of the student and others, synthesized to present a rationale for the proposed dissertation topic (e.g., theory to be developed, hypotheses to be tested) as well as proposed methodology to fulfill the dissertation objective.
c) Depth Areas: a list of four independent areas related to their proposed research. Students should discuss these areas with their advisor in the process of planning their graduate program and prior to preparation of their application folder. A list of references and relevant classes taken should be included. For each area, you should propose one or more faculty as examiners for that area.
   a. One of these areas must come from a fundamental informatics topic.
   b. A second area should focus on domain knowledge relevant to your proposed work; it may come from any area of biology, medicine, or clinical practice, including research areas as represented by Stanford School of Medicine departments and programs..
   c. The remaining two areas are additional informatics or domain areas.
d) Transcripts of all undergraduate and graduate course work with calculation showing the student's GPA for courses taken at Stanford.
e) Completed BMI flowsheet.

Note: Click headers within the document to return to the Contents Page.

f) Curriculum vitae.
g) All completed TA evaluations.

Quals folder approval. The Exec reviews the folder during a regularly scheduled meeting, where your folder is presented by your research advisor. The Exec may approve as submitted, or make suggestions for modification (or modify themselves). In some cases, the Exec may not feel the student is ready for the exam. This information will be communicated to the student by their research advisor. As part of the approval process, the Exec will list four faculty examiners, starting from, but not limited to, your nominations.

Scheduling the Quals exam. After the folder is approved, the exam can be scheduled. Currently, we are offering the option that the student may schedule the exam himself or herself. Please coordinate with the Student Services Officer about this, as important considerations and constraints apply. If you do not want to schedule the exam yourself, it will be scheduled for you.

The Quals exam structure. There are two main parts to the exam:
1) A 15-minute talk about the material described in the abstract/proposal. This talk is open to the public, and is followed by a brief question-and-answer session.
2) A 1.5 hour closed question-and-answer session, with the student and the examination committee. The focus will be on the content of the talk and the depth areas. Following the exam, the student leaves the room, and the committee deliberates to produce a recommendation of pass, conditional pass, or fail. This result is communicated to the student at that time, and then to the Exec. At the next Exec meeting, the recommendation will be considered and voted upon.

The possible outcomes are:
a) pass unconditionally
b) pass conditionally (with specification of the conditions needed to pass, such as remedial coursework needed)
c) fail with option to retake
d) fail without option to retake

Quals advice

During the talk, we are not looking for results. Instead, we want to see a plan and scholarly understanding of the field, and the connections between your work and other areas of research. Key features the committee is looking for:
a) Compelling and well-formed specific aims
b) Scholarly preparation and knowledge of related work by others
c) Depth of knowledge about problem domain and depth areas
d) Do you have the fund of knowledge to troubleshoot your thesis when inevitable problems arise?

We evaluate your ability to synthesize all the information you have learned in courses, rotations, and seminars. It is a summative evaluation more than formative.
a) Specific questions on depth areas might not be asked, because we sense appropriate depth during the talk or while answering other questions.
b) Depth areas are not just for studying for the exam, but to help you troubleshoot and should be useful to you during your research.
c) We are assessing if you are ready to pursue the aims with an appropriate level of independence.
d) Some of our questioning will test your ability to think on your feet, and combine information from multiple sources.
e) A fundamental issue is whether your research plan is well-constructed, not too easy, and not too ambitious.

If a student fails, it is usually for one of the following reasons:
a) Weak talk without compelling aims.
b) Superficial scholarship, not deep in research or depth areas.
c) Student does not take ownership of the project, and is merely following the advisor's lead.

The specific aims should be your best effort at what you plan to do the day after you pass. The aim may subsequently change in response to what you learn along the way and what other research groups publish, but on the day you take the exam, those aims should be what you intend to do. Otherwise, you may be perceived as lacking in preparation or enthusiasm.

Note: Click headers within the document to return to the Contents Page.

Quals and Pre-Proposal Together

Sometimes students have very substantial results by the time of their Quals exam, and they feel prepared to do the Quals and the pre-proposal with the same talk. In this situation, there would be a 45-minute talk, instead of fifteen minutes, followed by questions and the private session. There would be an extended discussion of preliminary results.

This procedure is not generally available and students who want to do this will have to petition the BMI Exec committee with documentation that their Quals talk can also be a pre-proposal talk. The expected evidence would be accepted papers, submitted manuscripts, etc., that are proof of substantial progress towards the research. No additional time is provided for this combined option; the request to combine Quals and Pre-Proposal must be made at the normal time for submitting the Quals packet.

PhD Candidacy

After passing the Qualifying Exam, students must submit the required PhD Candidacy form to Student Services Officer. Being admitted to candidacy signifies that the department considers the student capable of completing the requirements necessary for earning a Ph.D. degree. Candidacy is valid for five calendar years (through the end of the quarter in which candidacy expires), unless terminated by the department for unsatisfactory progress. An extension of candidacy may be obtained for a maximum of one additional year.

Adding an MS in another department

Some students choose to pursue an MS in another department, typically Statistics or CS, while they are a PhD student in BMI. (Note that you shouldn't do this if you have chosen to get the BMI MS.) You will need to petition the Exec to add the outside MS. You should do this in advance of applying to the other department and this requires planning ahead. Please submit to the Exec:
1. A cover letter from you about why this is academically a good idea for you,
2. Your BMI flowsheet showing how you fit in coursework from both programs,
3. A letter of support from your PI. This should indicate that they are aware your MS could lengthen the time to degree, and that they will pay the tuition differential between regular full-time tuition and TGR tuition if you take longer than Winter quarter of 4th year to reach TGR.

Pre-Proposal

The pre-proposal is a work-in-progress talk that you give during your third year. It occurs roughly 6 to 9 months after the Quals exam. The purpose is to show preliminary results, modifications to the specific aims, and to get feedback on your methodological approach and innovations. The talk, which should last about 45 minutes, is public but is followed by a private session with your committee. It is important that the student should invite those faculty members whom he or she is planning to have as readers of the dissertation.

See the BMI website for Pre-Proposal Talks Suggestions.

Reading Committee

Each PhD candidate is required to establish a reading committee for the doctoral dissertation in late 3rd year-early 4th 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 committee. Students must have at least three faculty members: the principal dissertation advisor and two other readers serve on their Doctoral Dissertation Reading Committee, to read and certify their dissertation. At least two members must be on the Stanford Academic Council. It is not necessary that the committee include a member of the BMI Exec. The Doctoral Dissertation Reading Committee Form is to be completed and filed with the Student Service Office before scheduling a University oral examination that is a defense of the dissertation. On occasion, the department chair may approve the appointment of a reader who is not on 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. Approval is requested on a Petition for Doctoral Committee Form.

University Oral Examination Policy with Thesis Proposal Document Instructions

The University oral examination committee consists of at least five members, comprising at least four examiners and a University chair. Details are listed on the explore degrees website here: http://exploredegrees.stanford.edu/graduatedegrees/#doctoraltext and at the VPGE website here: http://gap.stanford.edu/4-7.html

The University Oral Examination form should be submitted to the Student Services Officer at least two weeks prior to the examination date.

1. Because it is difficult to find times when all committee members can simultaneously set aside the time for an oral exam, the student should schedule the orals *at least two months prior* to the anticipated date. You should plan on one hour for a public presentation, including time for questions from the audience, followed by 30-90 minutes of closed session with your committee, leading to a vote. This means that committee members should set aside 2-1/2 to 3 hours if at all possible. If you plan on using the BMIR conference room in MSOB, please confirm with the Student Services Officer that the room is available before committing to the date and time. If a student attempts to schedule the Orals less than two months in advance, the BMI Exec can ask the student to choose a new date that is at least 2 months into the future.

2. When a date and time for the oral exam is identified, then seek a chair for the exam committee. The Student Services Officer can assist with selection of a University Chair. Chairs should be members of the academic council who are NOT from the same department as the thesis advisor. They CAN be from another department that is represented on the committee by one of the examiners other than the thesis advisor. Once the full committee is defined, including the chair, fill out the University-mandated paperwork and provide the form along with your title and abstract to Student Services Officer *at least two-three weeks prior to the Defense*. The Student Services Officer will make sure that the talk is announced appropriately.

3. Meet with all members of the committee (chair is optional; see #6 below) as often as is possible in the months leading up to the exam. Be sure that they understand what you are doing, agree with your thesis statement and evaluation plan, and believe that what you are proposing is worthy of a Stanford PhD.

4. Develop your oral defense in consultation with your thesis advisor. Decide in advance what points you need to make, what background needs to be provided to the audience, and what you can leave out or save for questions (since you will always have more to say than is possible to include in an hour's talk). Practice the talk. Make sure it times out. Go over the slides with your advisor. Avoid glibness, or excessive informality; this is one time when a presentation needs to be rather formal – you are trying to demonstrate that you are already master of a field and are striking out to break new and important ground of some kind. Even though you will have shared your proposal with your committee and often with other members of the audience, do not assume that everyone will have digested it in detail. Be sure that your talk is accessible to someone who has a technical background but knows little about your precise topic and is thus starting out cold at the beginning of your presentation. State your goals clearly; make sure people understand the motivation for what you are doing, as well as the technical details. The defense should close with a summary of what remains to be done before your dissertation will be complete, including a detailed time line of tasks, milestones, and their anticipated completion dates.

5. The proposal document is supposed to be a complete and compelling document that outlines the problem, the literature review, and the plan going forward. It should be polished and have a full set of references, figures etc. It is NOT a draft dissertation but should be a compelling and complete proposal for work to be done. Although this document may yield significant fragments that end up in the final dissertation, it should present a defendable proposal. Its acceptability is judged by the oral defense committee, using their judgment. In general, "Acceptable" would be a complete document (text, figures, tables, complete references) that makes a scholarly case for the problem being addressed, relevant previous work, and presents a scientifically logical plan for how it will be approached. One possible outline would be:

   a. Ch. 1: Introduce the problem you are addressing, why it is important, why it may be solvable, and what you consider to be the key things you will investigate and try to make contributions to.
   b. Ch. 2: Deep, critical and scholarly literature review of the relevant areas.
   c. Ch. 3: Preliminary work that has been completed.
   d. Ch. 4: Proposed work to be done in detail with validation, possible problems, and backup plans, along with a schedule/timeline.
   e. Ch. 5: Summary of anticipated contributions to biomedicine and biomedical informatics.

19

The document should be fully referenced, with figures, tables, complete sentences, and no sections that are empty.

As an alternative to Ch. 3, you can have 3A, 3B (but not numbered that way) which are papers you have published (as first author) presenting pieces of work. The key thing there is that the writing should be your own, and so your full draft is better than something that was heavily edited by co-authors.

There is no length requirement (or limit) but most proposals are between 30-50 1.5-spaced typed pages.

In general, the primary advisor should read and approve the proposal document before it is sent to the committee. This is to ensure that the student and the advisor have a clear and shared understanding of the proposed work plan, and that it has been captured by the student in the written proposal document.

In the case where one or more committee members is not satisfied by the written proposal, there are several options:

    a. The oral defense can be postponed (this would be an extraordinary event based on conversations with the advisor and program director, and would have to be considered well in-advance of the scheduled date of the oral defense).

    b. The oral defense can go on, and if the oral defense and Q&A is an otherwise passing performance, the committee can either

        (1) provide informal feedback about how to improve the document, or

        (2) grant a "conditional pass" conditioned on submission within a designated time of an acceptable proposal document.

6. Work out an arrangement with your thesis advisor to assure that he or she has read all chapters of your proposal and has agreed that they are adequate no later than THREE WEEKS PRIOR TO YOUR EXAM. If your advisor has not seen drafts of all chapters by this time, and agreed that everything is on track, it is his or her responsibility to notify Student Services Officer that the scheduled exam should be cancelled; you will need to reschedule it at a time when the 3-week window is likely to be achievable.

7. Incorporate comments from your advisor and generate a final thesis proposal for delivery to your committee no later than TWO WEEKS PRIOR TO YOUR EXAM. This provides your committee with enough time to have a reasonable chance of reading the document prior to your oral defense. Failure to meet this deadline will also trigger a cancellation of the oral exam by your thesis advisor so that the exam can be rescheduled for a time when the committee will have had adequate time to read the proposal.

8. It is a courtesy to provide your orals committee chair with a copy of the proposal and the Orals Guidelines, and to offer to meet with him/her before the event. They will generally not require that you do this, but make the offer. Also, be sure they understand that you will be defending a proposal and not a completed dissertation.

9. Dissertation defenses should be serious scientific presentations of a student's dissertation research, similar to a postdoc interview talk, rather than a talk aimed at a lay audience. Students should limit acknowledgements to one slide and a couple of minutes, saving more extended acknowledgements of friends and family for the Final Talk.

Thesis Proposal Defense Oral Presentation Guidelines

1. What is the scientific problem (biological/medical) that motivated your research?
2. Why is that problem important to solve?
3. What other research has been previously attempted to solve the problem described in Question 2 above?
4. What are the limitations of the existing approaches described in Question 4 above?
5. What are your hypotheses about how to overcome the limitations in Step 5, and how well do you predict it will resolve the problems described in Step 2?
6. In a few minutes describe the **underlying computational approach** that you have taken to address a biological/ medical data analysis problem. (Note: the answer is not "I did N different projects")
7. Describe in depth the details of your research aimed at the level of expertise of your committee.
8. How will you show that the research described in Question 7 resolves the problems described in Question 2?
9. How do you propose to complete your research and evaluation during the time remaining before you graduate?
10. What are the Biomedical Informatics and Biomedical contributions to the scientific community?

Note: Click headers within the document to return to the Contents Page.

Thesis/Dissertation Preparation

University regulations specify the composition of the examination committee and the format of the dissertation defense. Students should refer to the Registrar's Directions for Preparing Doctoral Dissertations, available online, for specific information. These guidelines should be read carefully before final preparation of the manuscript to avoid costly and time-consuming revisions. The BMI thesis should include an acknowledgement of your funding sources (SGF, NSF, NLM. NLM support can be noted as "Stanford Biomedical Informatics Training Grant from the National Library of Medicine (LM-07033)"). Published papers may be included in dissertations; however, they must meet the University's format guidelines. Ask questions if you are uncertain about anything having to do with the preparation of your thesis.

A thesis draft should be submitted to your thesis committee four weeks before the deposit deadline. The thesis committee should have no less than two additional weeks to read the final dissertation before the deadline for signing off and deposit with the registrar's office.

Dissertation Formatting and Printing

Once your thesis has been submitted to the Registrar, the Stanford University libraries will provide electronic access through the **SearchWorks Web** catalog in the **ProQuest Digital Database**. Bound copies of dissertations can be purchased through the HF Group Thesis on Demand in contract with the University to provide the standard red binding.

The BMI program will purchase a bound copy of each dissertation published by a program graduate to be shelved in our program library. When your thesis has been signed-off and submitted to the Registrar's Office send an electronic version to BMI **Student** Services so that we can order our copy.
Please check the **Registrar's** website for current information and instructions.

Final Talk

The Final Talk is a summary of the work accomplished on the PhD research, and should occur when the student is still matriculated. The final talk should primarily emphasize the research that has been completed since your thesis proposal defense presentation. It lasts about an hour, including time for questions. Extended acknowledgements of family and friends are appropriate in this celebratory venue.

The student's Final Talk must be scheduled during the regular academic quarter, and may not be scheduled during finals week or during the break between quarters. We note that there is no mandatory attendance by the committee (although this is encouraged) and therefore there should be no particularly onerous scheduling constraints, other than allowing all interested members of the BMI community to attend the talk during a time when they could reasonably be expected to attend a talk.

Graduation Photo

All PhD students should have their photograph taken before they will be permitted to defend their proposal. Photos will be hung with the BMI photo gallery in the MSOB x275 conference room. Photos sittings held in the hospital atrium can be scheduled with Steve Gladfelter at sg@stevegladfelter.com . The BMI program will pay for the photographs. See the Student Services Officer for additional information and to provide your name as you want it to appear on the brass plate.

GRADUATION

Degree Conferral

In order to have your degree conferred, you must have completed all of the University and Department requirements, and submitted all work before the deadlines. The University imposes requirements such as residency, submission of official scores and transcripts, payment of fees, return of library books, etc. that the BMI program has no control over and

Note: Click headers within the document to return to the Contents Page.

sometimes no knowledge of – so we cannot "fix it up". Please pay attention to the messages, letters, and notes you receive and respond to them in a timely manner.

Notice of Intention to Graduate

You must file a Notice of Intention to Graduate ("apply to graduate") through AXESS for the quarter you complete the degree requirements. If you do not finish in time, you will need to annul the initial Intention to Graduate and submit a new one for the quarter in which you intend to finish. Please refer to the University calendar for deadlines. There are no exceptions for missed deadlines. This is a University rule. The deadlines are listed in AXESS and on the academic calendar.

Graduation Quarter (aka Grace Quarter)

If you have completed everything except for depositing the report, thesis or dissertation, you may submit that and graduate while registered for a "Graduation Quarter" your very last quarter. THIS "GRADUATION QUARTER" OPTION IS ONLY AVAILABLE FOR ONE QUARTER. You must be an Active student registered the quarter prior to this or on an approved Leave of Absence and you must have filed TGR papers and defended your thesis before this. You will still need to file an Intention to Graduate for that last quarter in AXESS. A small tuition fee will be charged and you will be considered a full-time student for various administrative purposes.

Commencement

All BMI students (full time, co-terms, part-time HCP) are encouraged to participate in Medical School Commencement, which is coordinated by the Office of Student Services in the School of Medicine. If you complete your degree in June or in a previous quarter during that academic year, you will be encouraged to attend the ceremony.

If you intend to finish your degree in Summer or next Fall quarter, or have unusual personal circumstances which would make going through the ceremony in a particular year most meaningful, permission may be granted for you to "walkthrough" the Commencement ceremony. The Office of Student Services also handles the walkthrough process. Please submit the following form: http://www.stanford.edu/dept/registrar/pdf/walkthrough.pdf

PUBLICATIONS

Review of Publications

ALL papers and abstracts submitted to journals, conferences, books or other publications must be reviewed by the PI or designee. This policy applies to all publications, regardless of authorship, that deal with work that has been done at Stanford or that mention a Stanford affiliation.

If a paper must be mailed in time to meet a deadline, it is the responsibility of the first author to ensure that sufficient time is allocated both for this review process and for making any necessary revisions. The senior person who reviews a proposed publication must later be given an opportunity to examine the revised publication before that paper leaves the laboratory. No publication may be mailed to a journal or conference without final approval from a senior staff person.

Note that a **PMCID** is required and must be requested within 3 months of publication.

Appropriateness of Publishing

BMI PhD students are often offered the opportunity to prepare papers for conferences or for incorporation as book chapters. Although we in general encourage publication, PhD students are advised to consider turning down such opportunities unless such writing has relevance to their dissertations (for example, as potential thesis chapters). The time required for such writing commitments would probably be better used for research or for the writing of papers for submission to refereed journals.

Note: Click headers within the document to return to the Contents Page.

Authorship

There are no hard and fast rules regarding which colleagues to include in a publication's author list and the order in which the authors' names should appear. The following guidelines should be considered:
First, an overriding principle is "when in doubt, include". There is simply no reason to resist the inclusion of an author who may have a legitimate claim to having contributed to the work described. A paper generally is associated with the first author (or sometimes the first two), so the first author's contribution is not "diluted" by adding other members of the research team as co-authors. All coauthors, however, must be prepared to present and defend the paper – or at least a portion of the paper – in a public forum, such as a research conference.

These points must be balanced against the responsibilities of co-authorship. Coauthors of a paper should take the time to read draft versions and to comment substantively – perhaps even to write portions. Similarly, it is the responsibility of the first author to show papers to all co-authors and to seek their approval before sending off the final version for review. The first author of a paper is the person who takes primary responsibility for coordinating the publication, and usually does the lion's share of the writing. Co-authors should generally include (1) anyone else who has contributed substantively to the writing, (2) anyone whose work is described in the paper as original research, (3) senior staff who oversaw the work, and 4 other colleagues who may have contributed substantively to the ideas and issues discussed (especially if the paper presents novel ideas). If someone joined a project after the work described in the paper was performed, they generally need not be included as authors unless they have participated actively in the writing.

The author listed last on a paper will generally be the senior person who oversaw the research. The order of authorship is settled ideally at the beginning of the project, and is finalized before writing begins. Sometimes it is appropriate for authors who contributed equally to be asterisked to that affect.

If there are problems with authorship or the development of the paper, then talk to the PI, your academic advisor or the Office of the Ombudsperson.

Acknowledgments

Anyone involved in the work described in a paper and not listed as an author should be included in the acknowledgments section. The acknowledgment section represents the only mechanism by which contributors who are not authors can be recognized for their efforts.

NLM requires that each publication, press release, or other document about research supported by an NIH award must include an acknowledgment of NIH award support and a disclaimer such as:

> "Research reported in this publication was supported by the National Library Of Medicine of the National Institutes of Health under Award Number T15LM007033. The content is solely the responsibility of the authors and does not necessarily represent the official views of the National Institutes of Health."

Similar acknowledgements of support such as gifts of equipment from industry should be made for other sources. The primary author of the paper should confer with all co-authors to make sure that all appropriate grant support is acknowledged.

Mailing costs

The BMI program will pay for regular mail charges, but not Express Mail or Federal Express costs, unless specifically approved by a member of the senior staff. Please take this constraint into consideration when working against a deadline for mailing an abstract or other publication.

Access to publications

All government award recipients are required to comply with the NIH Public Access Policy. This includes submission to PubMed Central (PMC) upon acceptance for publication, an electronic version of a final peer-reviewed manuscript resulting from research supported in whole or in part with direct costs from the National Institutes of Health.
In addition, all publications should be listed on-line at Stanford, usually under the umbrella of the research advisor.

Note: Click headers within the document to return to the Contents Page.

"The NIH Public Access Policy ... requires scientists to <u>submit final peer-reviewed journal manuscripts that arise from NIH funds to the digital archive PubMed Central</u> **immediately upon acceptance** for publication."
http://publicaccess.nih.gov/

If you used and acknowledged any NIH grants (lab grants, training grants, grants of collaborators, etc.) for a paper you've published, and you **must begin in process within 3 months to be in compliance or else grants funds will be withheld**. So this is pretty serious.

If you are now or have been funded by the NLM training grant while at Stanford, you must associate your publication with T15 LM007033.

Non-open-access journals will probably require you to put a hold on the posting until 6 months post-publication, but you have to get the ball rolling early, because it takes 8 weeks to process and <u>you are out-of-compliance at the 3-month mark</u>. Journals will most likely require that you submit the "accepted" (i.e., pre-copy-editing, typesetting, etc.) version. But talk to the individual journals to get a sense of their requirements.

Instructions: **http://publicaccess.nih.gov/submit_process.htm** (method C)
Video tutorial: **http://publicaccess.nih.gov/submit_process.htm**
Portal: **http://www.nihms.nih.gov/**

EXTERNAL EMPLOYMENT

Past experiences with our program have taught us that external work commitments, especially in areas that overlap with research interests in the lab, essentially always lead to problems. We accordingly ask that you think carefully before accepting such positions and avoid jobs that will put undue time pressures on you or will create potential conflicts at the scientific level with work going on in the lab here. Such involvements are not in your best interest, and they can significantly delay the completion of your training.

If you do take part-time or hourly positions outside the university, our guidelines require that the BMI Exec group be fully informed. Such work is definitely your right to pursue, but it is also appropriate for us to be aware of such involvements when they exist. A maximum of eight hours per week is allowed for outside work. Failure to get approval before doing work off campus is a cause for concern about progress towards degree. Students must register for all quarters and be on campus, unless specifically approved otherwise.

The University restricts students on fellowships to no more than 8-10 hours per week of on-campus assistantships (such as a paid Teaching Assistantship in a different department). International students also have strict limits on work hours – please check with the Student Services Officer or Bechtel International Center.

INTERNSHIPS

BMI Internships Policy and Procedures

Internships can be a great learning opportunity, but also can cause delays in your research or potential conflicts of interest. Here are rules that we ask you to follow in arranging for summer internships:

1. Talk to your research and academic advisors to see if a summer internship makes sense given your status in the program.
2. While internships must be clearly related to your field of study, make sure that the area of proposed internship research is distinct from your Stanford research so that there are no intellectual property issues.
3. Ask your research advisor and academic advisor to send an email to the BMI student services officer supporting your plan.
4. Notify the BMI student services officer well in advance about the details of your summer plans (location, contact information, dates). 3 months is reasonable lead time.
5. For US citizens and permanent residents participating in a summer internship: You are taking a break from full-time registration in the BMI program and will not be funded by the BMI program in the summer quarter while

Note: Click headers within the document to return to the Contents Page.

participating in a full-time internship. Internships may affect your University benefits, such as health insurance and Vaden services.

6. If you are on the NLM training grant, you will have to go off the grant for the summer quarter, and permission will need to be obtained in advance from the NLM. The NLM allows this for only one summer during your degree program. You might be eligible to extend your NLM support for one extra quarter if you do an internship, with prior NLM approval.

7. If you are supported on any other type of fellowship or grant, such as the NSF, SGF, NDSEG, etc., you need to verify the rules for summer internships.

8. You cannot receive payment from the internship and your Stanford sources for the same time period.

9. If your proposed internship is not during summer quarter, then you need to make special arrangements. Please see the section of this document about taking a leave of absence.

Special Notes for International Students

International students with internships in the US need to sign up for Curricular Practical Training (BIOMEDIN 390 A,B,C) and receive authorization through Bechtel International Center to maintain their visa status. Carefully read and follow the instructions at http://icenter.stanford.edu/students/current/curr_prac_train.html

International students who have already completed all course/unit requirements for their degree are not eligible for curricular practical training. CPT may not be used as a reason for delaying graduation.

International students who are offered internships outside of the US will need to allow **significant lead time** to consult with Bechtel and multiple embassies. The conditions for visas and internships will depend on individual treaties signed between nations.

Special Notes for Co-terms and Other Students Not Supported by Federal Funds

You are encouraged to explore internship possibilities as part of your program. Complete the steps above that apply to you, especially checking any rules about scholarships and internships.

Unpaid Internships

Organizations must comply with Federal and State law in order to offer unpaid internships. Generally, there are six criteria that must apply in order to qualify as a legitimate unpaid internship http://wdr.doleta.gov/directives/attach/TEGL/TEGL12-09acc.pdf

1. The training, even though it includes actual operation of the facilities of the employer, is similar to what would be given in a vocational school or academic educational instruction;
2. The training is for the benefit of the trainees;
3. The trainees do not displace regular employees, but work under their close observation;
4. The employer that provides the training derives no immediate advantage from the activities of the trainees, and on occasion the employer's operations may actually be impeded;
5. The trainees are not necessarily entitled to a job at the conclusion of the training period; and
6. The employer and the trainees understand that the trainees are not entitled to wages for the time spent in training.

Unpaid internship positions are especially vulnerable to exploitation because the intern is not an employee. The intern is ineligible for employee benefits, such as health, liability or other insurance. Many employee legal protections do not apply to interns. Instances where the intern was clearly sexually harassed but unable to obtain legal redress are documented. This recent article in the New York Times describes the hazards of unpaid internships: http://www.nytimes.com/2010/04/03/business/03intern.html?emc=eta1

Although these criteria apply most strictly to unpaid internships, you should consider the quality and type of the training for any proposed internship. If you do not derive significant benefit from the experience, then you are jeopardizing your progress on time-sensitive projects for a potential diversion.

Note: Click headers within the document to return to the Contents Page.

Internships and Academic Credit

University policy does not allow students to earn academic credit for internships. However, classes with nominal academic credit, designed to integrate the internship experience with the student's academic training (Curricular Practical Training), may be paired with the internship experience. International students must register for BIOMEDIN 390 A, B or C for Curricular Practical Training internships.

Leave of Absence

An internship opportunity may or may not require a leave of absence. Please review this brief summary. Conditions and restrictions about leaves of absence vary for undergraduates, Masters and PhD candidates. Consult the Registrar's website for exact details.

Students are automatically granted leaves of absence during the Summer Quarter and are not required to submit a Request for a Leave of Absence. For all other quarters, the Request is required and you must obtain permission from your advisors and the program before you go on leave. Please note there is a limit on the cumulative amount of time you may spend on leave.

International students should not take leave of absence for the purpose of internships and must make special arrangements to retain their visa status by signing up for Curricular Practical Training (CPT). Register for BIOMEDIN 390 A, B, or C and contact Bechtel International Center to receive authorization to proceed.

FINANCES

1. **Fellowship Stipends**

   Students on fellowships (NLM, SGF, NSF, etc.) receive stipend payments at the beginning of each quarter for the entire quarter. If you are living in campus housing, the system is set up to automatically subtract the housing fees from the stipend amount. Stipends for living expenses usually are taxable but income taxes are not withheld.

2. **Assistantships** (Salary)

Students being paid on any type of assistantship, usually a Research Assistantship funded by the PI, or students paid on any other type of hourly appointment that requires submission of hourly time sheets, are paid on the same schedule as the staff and faculty: work completed on the 1st-15th will be paid on the 22nd of the month, and work completed on the 15th through the end of the month will be paid on the 7th of the next month.

- The **I-9** form must be completed before assistantship checks can begin. Make an appointment to see the Student Services Officer and bring appropriate identification to complete this mandatory paperwork.
- Please note that housing and other fees are not automatically deducted from your salary.
- Your salary is taxable and taxes will be withheld as you request on the W-4 Tax Data form, submitted through Axess.

Switching between the two payment systems requires careful budgeting. For example: Switching from a fellowship (SGF, NLM) stipend to an assistantship salary: If the fellowship ends after Summer Quarter, and you have an RA appointment for Fall Quarter, you will receive your Summer stipend payment at the beginning of that quarter in June. You will not receive your first paycheck until October 22, as the Fall Quarter does not begin until October 1 (in Payroll terms), and you are paid for the first half of the month (October 1-15) on October 22nd and for the second half of the month (October 16-31) the following month on November 7th.

Direct Deposit

Fellowship stipends and assistantships payments are best handled through direct deposit to your bank account. To set up your direct deposit, login to Axess – Employee Information tab – Financial Information – Direct Deposit and follow the directions.

Holds

Checks and other types of payments to the student will not be issued if the student has unpaid fees from previous quarters (housing, activity fee, etc.), has not submitted the federal employment eligibility form (I-9 for employee Payroll only), federal and state tax withholding certificate, and patent agreement form (SU-18, done online in Axess). Outstanding bills from the library, University, or Vaden Health Center will also result in holds. Holds must be cleared with the originating office before stipend checks will be issued. Please pay your housing and other miscellaneous fees.

If you owe money for tuition or health insurance and receive funding from BMI, please see Student Services Officer. If another department is responsible for your funding, please contact the appropriate department. The BMI Student Services Officer is happy to help in those situations too.
Check your account in Axess often!

Please see Student Services Officer if you need help resolving any issues.

Taxes

Some References for Tax Information
- Please see "Identifying Funding Awarded and Qualified Charges on your Student Account" on this website **http://studentaffairs.stanford.edu/sfs/tax/resources-funding**
  According to this site you do NOT have to pay income taxes on Vaden Health Services Fee, Health Insurance, or Required Fees (such as 1st year student Document Fee or ASSU Fee).
- Stanford issues an annual tuition statement, IRS Form 1098-T, to provide information necessary for students or parents to claim educational tax credits **(http://www.irs.gov/uac/Tax-Benefits-for-Education:-Information-Center**). It has come to our attention that some online accounting programs (i.e., Turbo Tax) inappropriately refer to Form 1098-T as an income form. Using the 1098-T form to determine income rather than claim educational tax credits can cause misunderstanding and errors. Do NOT use the 1098-T form to determine fellowship/scholarship income. Visit Stanford's website for some guidelines for dealing with taxes for stipends.
  - The **Office of the Vice Provost for Graduate Education (VPGE) and Student Financial Services**
  - The **Bechtel International Center** (for international students)
  - The **Controller's Office**
  - IRS website: **http://www.irs.gov/**

The Student Services Officer is not permitted to give tax advice.

BMI EVENTS & OPPORTUNITIES

Biomedical Informatics Student Seminar. BIOMEDIN 201 is described above under Academics.

Biomedical Computing Colloquium
You should attend one colloquium series related broadly to Biomedical Computing each quarter. Your academic advisor can suggest possible colloquia to attend. One option is the Biomedical Informatics Colloquium (BIOMEDIN 200). The colloquia are held Thursday afternoons in the BMI conference room, concentrating on the research topics being explored by the Stanford Center for Biomedical Informatics Research (BMIR). To receive class credit, sign up for BIOMEDIN 200.

BMI Annual Retreat
Each year in September the BMI program holds an annual three day retreat attended by current students, faculty and alumnae/alumni. All students, except incoming first years, are required to a present poster and bullet presentation. The retreat also includes discussion sessions, panels, new student orientation, student entertainment and a Keynote Speaker. All students are expected to attend and participate in the retreat. Food and lodging are covered by the department. However, carpooling is suggested as transportation is not reimbursed.

BMI New Student Orientation
New Student Orientation is held prior to the beginning of Autumn Quarter on an annual basis. The Orientation usually includes a picnic and Scavenger Hunt which is coordinated by the 2nd Year BMI students.

BMI Lunches
A periodic pizza or similar menu lunch is held in the conference room. Students, faculty, and staff gather together to socialize and sometimes hear a guest speaker or discuss topics of mutual interest.

Gifts to the program
Generous donations from alumni and other donors support "student well-being" and czar-sponsored activities throughout the year. These activities and events include pizza lunches, dinners during grant-writing sessions, the graduation BBQ, turkey and trimmings for the annual holiday party, pumpkin-carving contest supplies, and BMI logo items such as T-shirts. In addition, these gifts to the program provide Maker's Faire and entertainment supplies as well as awards for the poster sessions at the annual BMI retreat. There are 3 funds to which donations may be directed:

      Robert P. Tirrell Memorial Fund (expendable)
      Biomedical Informatics Gift Fund (expendable)
      Darlene Vian Memorial Student Fund (endowment)

Please contact the Student Services Officer if you would like information about any of these funds.

HEALTH INSURANCE

BMI pays either all or a portion of the health insurance for all full time, funded MS and PhD students. If a student is enrolled full time and receives sufficient funding from any department or program, the University provides a subsidy for the other portion, if needed.

Students who have insurance coverage from another source should fill out the INSURANCE WAIVER in Axess prior to the deadline.

Insurance coverage is carried through the summer. If you plan to graduate autumn or winter quarter, check with the Vaden Health Center about ending coverage.

Students are automatically enrolled in **Cardinal Care** during registered quarters unless health insurance is waived through Axess. If you intend to waive the Cardinal Care, do so BEFORE the deadline or you will be charged for health insurance! BMI will not pay the fee if you have your own coverage and miss the deadline.

Effective September 1, 2015, the **2015-16 Cardinal Care plan will include dental benefits**, administered by Delta Dental of California. Students may visit any licensed dentist under this plan. For more information about the Delta plan, please visit the Vaden web site at https://vaden.stanford.edu/insurance/dental-vision.

Since this will be a transition year with the new dental benefit, BMI will continue to offer up to a $100 dental stipend for those students who request it – preferably before January 15, 2016. Since some of you are not enrolled in Cardinal Care or might prefer to see a non-Delta dentist, we have been asked to track the number of students who request the dental stipend and if they are enrolled in Cardinal Care or not.

No special form is required for the dental stipend. Provide the Student Services officer with proof of the amount you paid (paid invoice, credit card statement, canceled check) and proof of insurance coverage (copy of member card or electronic communication with your name and insurance information).

All students are required to pay the Vaden Student Health Services fee, which is separate from health insurance. This is true for all on-campus students, even if health insurance coverage is waived, with the one exception of students who are NSF fellows. The University will pay the Vaden fee for NSF fellows.

For **Vaden Student Health Insurance assistance,** contact 723-2135 or email healthinsurance@stanford.edu

FAMILY LEAVE

Childbirth academic accommodation, maternity and parental leaves are discussed at length in the Graduate Academic Policies and Procedures section on **childbirth accommodations** http://gap.stanford.edu/5-9.html

VACATION POLICY

Students may have up to 4 weeks of vacation a year. You must check with your PI or research advisor before making travel arrangements; First Year students should check with the Student Services Officer. All students should contact the Student Services Officer and let her know if the travel will take place in an increment longer than one week, in case we need to contact you. Students should plan their personal travel carefully. It is not advised to travel during the quarter if you are taking courses, around the time of the Qualifying Exam, or other important milestones. Senior students may participate in various trips to support their research or job search.

TRAVEL

Student Travel & Reimbursement Policy

Prior to any BMI travel, read the **Stanford travel policy t**o review the reimbursement policies that are strictly enforced. **http://www.stanford.edu/group/fms/fingate/students/index.html**

Obtaining Permission PRIOR to travel

Prior to booking any reservations, submit the signed Travel Request & Student Certification forms to BMI Student Services.

The BMI program is most interested in supporting students for broad conferences that provide a wide range of relevant informatics materials, such as the annual AMIA meeting, ISMB, PSB or MedINFO. This is particularly true in the first two years, when students are not yet deeply involved in their research. In the latter years of training, the BMI program can support attendance at more specialized meetings when the research advisor does not have funds for these, but recommends them as an important training component. In those cases, presentation of research, as discussed below with papers or posters, becomes even more critical.

NLM-supported students must attend the annual NLM meeting, usually held in June. Up to$1000 is usually available for a second trip each year (July 1-June 30 for NLM funds).
Non-NLM students currently have a $1000 allocation from funds designed to support student expenses. The allocation of $1000 is NOT automatic, and requires careful adherence to the BMI travel flowsheet algorithm.

If a NLM-supported student wishes to travel to a conference hosted in a foreign country, he/she MUST contact the Student Services Officer at least 3 MONTHS prior to registering to allow time for the Student Services Officer to request permission from the NIH for the international travel. In most cases, permission is given as long as the student purchases the airfare from an approved American carrier or their foreign partner. Refer to the Fly America Alliances Policy before booking a flight.

Other funded BMI students must also request permission for international travel 3 months in advance of the travel so that coordination between the advisor's department and BMI can be arranged before booking your reservations since your research advisor will be asked to contribute toward the travel.   If the trip includes foreign travel, refer to the Fly America Alliances Policy before booking a flight.

AT LEAST two months BEFORE making travel plans that will require BMI funds, each student must obtain a *Travel Request Form* from the BMI website: http://bmi.stanford.edu/biomedical-informatics-students/forms.html and submit it to the BMI program director for an approval signature before returning the form to the Student Services Officer. If the meeting has a poster or talk session, then students must submit a poster or talk application to the Conference coordinators in order to qualify for funding. Failure to submit the travel request form BEFORE the travel will mean that the student is responsible for the entire cost of the trip. A "**Certification for Student Travel**" form signed by the PI must also be submitted, so that the travel reimbursement will not be considered taxable income to the student. This is a University requirement. Funding for trips will be affected if the student has not submitted completed Progress Reports prior to the travel request.

If a student has not completed the appropriate paperwork, including the permission form prior to travel, and completes the travel, the student will not be reimbursed post travel. No exceptions.

Travel Logistics

Students, except for the annual NLM meeting, are responsible for making their own reservations for approved travel to conferences. All students are expected to arrange for the lowest, restricted fare, using a U.S. air carrier under the Fly America Act. Tickets can be charged to the BMI Travel card or the student's credit card. If the BMI travel card is used the flight must be booked directly with the airline. If the student uses a personal credit card reimbursement will be issued to the student upon completion of the travel.

Students should complete the required travel request forms and certification as well as registration forms for meetings well in advance, and attempt to qualify for early registration discounts whenever possible. Normally only the Early Bird registration amount will be reimbursed. The registration fee, if it is an approved expense, is often charged directly to the grant supporting the travel and therefore is not a liability to the student. Membership fees will be reimbursed if required for an early registration discount.

It is also the student's responsibility to arrange for lodging at most conferences. Again, frugality is encouraged, both because there is a maximum per diem that the University will pay for living expenses away from Stanford, and because the ability of other students to travel in the future will depend on each student working to keep travel costs low. Students should ordinarily stay two to a room, and should not expect reimbursement for items such as dry cleaning, room service, telephone calls, pay-per-view movies, and other sorts of entertainment. Students should carefully consider if a car rental is really necessary. Since the travel policies can be confusing, please ask the Student Services Officer for clarification.

If you plan other trips around business travel please check with Student Services in advance of your booking to discuss the potential cost adjustment. Subsequent changes could result in you being responsible for change fees.

If there is a problem with the travel itinerary such as cancelled flights, fees for changing dates or times of travel, or change of date of the conference, you must contact the Student Services Officer or your academic advisor to get guidance about changing the flights and/or hotel and still maintain the requirements of the travel guidelines. Failure to get approval for these types of changes may mean that you will be responsible for the expenses.

Receipts

Please save all ORIGINAL receipts! It is almost impossible to reimburse a student if we do not have the original receipts of all expenses (food, lodging, registration, etc). Yes, please keep your receipts for purchases under $25. When purchasing the airline ticket online, the student MUST provide proof of payment for the ticket to us. If the receipt from the vendor does not clearly state how the ticket was paid for, the student needs to provide a copy of the credit card statement for proof of payment. Travel and Reimbursement have strict rules about reimbursements and they will not reimburse a student unless they have the required back up paperwork. If a group of students are eating together, it is preferred that each student receives his or her own bill OR that one student pays the entire bill. Each student's name should be written on the back of the receipt. This will not be counted against the student's overall travel budget if one student pays for the whole bill for 8 students, for example. Students are encouraged to take turns at each meal, however, when paying for the entire bill. We do not reimburse for alcoholic beverages.

Note: Airline tickets may be purchased using the BMI Travel Card, so you will not be "out-of-pocket" for airline expenses. Out-of-pocket expenses cannot be reimbursed until after travel, and require an itemized receipt. See Nancy Lennartsson for procedures.

Reimbursements

   The following packet of back up paperwork found on the BMI website http://bmi.stanford.edu/biomedical-informatics-students/forms.html#travel should be submitted to Student Services Officer or Student Services Specialist:

1.   Student Certification Form – required by Stanford for any travel being funded by Stanford
2.   Travel Request Form with your P.I or BMI Executive Director signature (person signing the form must identify the source of funding on the travel form or it will be returned to the student)

3. Spreadsheet of daily costs, including amounts
4. Electronic or print of airline receipt, including proof that you paid for it (Copy of credit card statement, Expedia receipt, etc., showing the amount with your name and method of payment.)
5. Boarding passes from the airline
6. Registration receipt, including proof that you paid for it
7. Lodging receipt
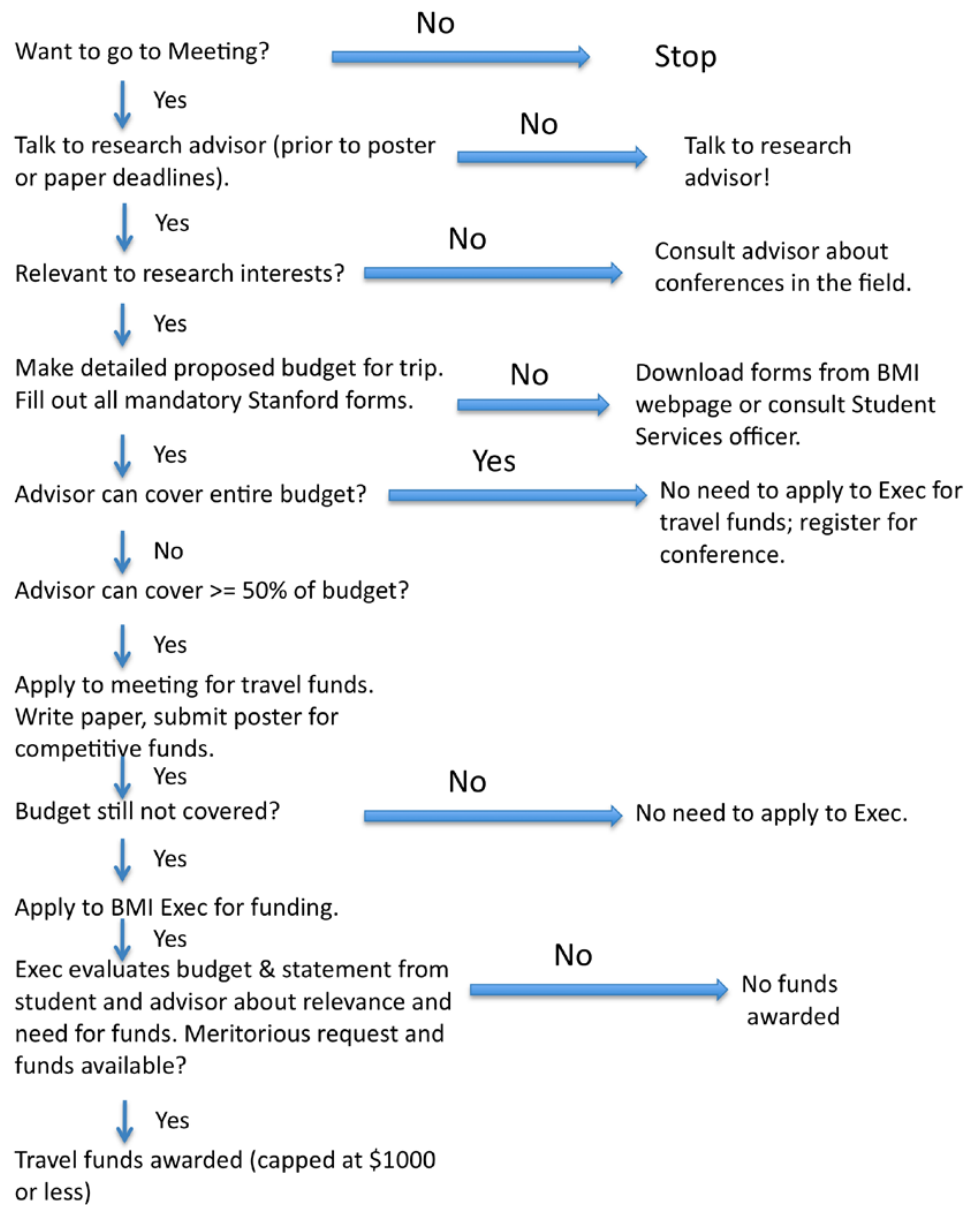8. All original receipts for other purchases
9. Program of the conference

It takes 2 weeks for Stanford Financials to issue the reimbursement deposit. Students should enroll in direct deposit through AXESS.

Note: You may be reimbursed for the registration fee as soon as it is paid (prior to travel) and you submit the appropriate documentation. You may not be reimbursed for the other expenses until your return from the trip. Submit all documentation promptly. If submission is completed more than 60 days after travel, the reimbursement is taxable income.

Local Travel

Stanford policy is that conference or other travel to San Francisco, San Jose or other local cities less than 50 miles one way from Stanford does not qualify for overnight stay nor reimbursable meals. Students may be reimbursed for mileage and parking or train fare (with receipt). Students will not be reimbursed for food or lodging, unless there is a particular circumstance. Please read the Travel Policy on the website and see the Student Services Officer if you have additional questions. Consult with the Student Services Officer *before* you travel if you have questions about reimbursement policy. We are not able to reimburse students for gas mileage to the annual BMI retreat. We encourage carpooling.

Note: Click headers within the document to return to the Contents Page.

Travel Flowchart

Want to go to Meeting? —— No ——> Stop

↓ Yes

Talk to research advisor (prior to poster or paper deadlines). —— No ——> Talk to research advisor!

↓ Yes

Relevant to research interests? —— No ——> Consult advisor about conferences in the field.

↓ Yes

Make detailed proposed budget for trip. Fill out all mandatory Stanford forms. —— No ——> Download forms from BMI webpage or consult Student Services officer.

↓ Yes

Advisor can cover entire budget? —— Yes ——> No need to apply to Exec for travel funds; register for conference.

↓ No

Advisor can cover >= 50% of budget?

↓ Yes

Apply to meeting for travel funds. Write paper, submit poster for competitive funds.

↓ Yes

Budget still not covered? —— No ——> No need to apply to Exec.

↓ Yes

Apply to BMI Exec for funding.

↓ Yes

Exec evaluates budget & statement from student and advisor about relevance and need for funds. Meritorious request and funds available? —— No ——> No funds awarded

↓ Yes

Travel funds awarded (capped at $1000 or less)

Note: Click headers within the document to return to the Contents Page.