

MUSIC

Courses offered by the Department of Music are listed under the subject code MUSIC on the Stanford Bulletin's ExploreCourses (<http://explorecourses.stanford.edu/CourseSearch/search/?view=catalog&catalog=&page=0&q=MUSIC&filter-catalognumber-MUSIC=on>) web site.

Mission of the Department of Music

The Department of Music at Stanford brings together music-making and scholarly research in composition, conducting, performance, music history, ethnomusicology, music theory, cognitive science, intermedia, and computer-based technologies.

Departmental activities serve a broad and diverse constituency on campus and in local communities, with an abundance of courses, concerts, performance opportunities, research projects, workshops, and lectures throughout the year. Ensembles from a variety of world cultures are open to all students: orchestras, jazz and chamber ensembles, taiko, guzheng, steelpan, and several choral groups. Many of the faculty have affiliations with other departments, programs, and interdisciplinary centers, such as Computer Science, Electrical Engineering, Art and Art History, German Studies, Neuroscience, Symbolic Systems, Comparative Studies in Race and Ethnicity, and Islamic Studies. Alumni include faculty in universities and conservatories around the world, researchers in the technologies of music and acoustics, members of major orchestras, soloists, chamber musicians, and sound artists, composers and arrangers in contemporary, film and game music.

Learning Outcomes (Undergraduate)

The department expects undergraduate majors in the program to be able to demonstrate the following learning outcomes. These learning outcomes are used in evaluating students and the department's undergraduate program. The department's aim is to educate students to be:

1. artists and scholars who research, interpret, and create music in an informed and thoughtful way.
2. literate in fundamentals of music, aesthetics, and historical thought.
3. prepared to engage in musical and scholarly discourse.
4. sensitive to cultural and historical perspectives in thinking about music analytically and critically.

Learning Outcomes (Graduate)

The purpose of the master's program is to further develop knowledge and skills in Music, including concentration in the fields of Composition, Music History, Computer-Based Music Theory and Acoustics, or Music, Science, and Technology, and to prepare students for a professional career or doctoral studies. This is achieved through completion of courses, in the primary field as well as related areas, and experience with independent work and specialization.

Through completion of advanced course work and rigorous skills training, the doctoral program prepares students to make original contributions to the knowledge and practice of Music and to interpret and present the results of such work in appropriate venues and publications.

The Doctor of Philosophy (Ph.D.) is conferred upon candidates who have demonstrated substantial scholarship and the ability to conduct independent research and analysis in Ethnomusicology, Musicology, or Computer-Based Music Theory and Acoustics, based at the Center for Computer Research in Music and Acoustics (CCRMA).

The Doctor of Musical Arts (D.M.A.) in Composition is conferred upon candidates who have demonstrated substantial abilities in creating new

musical works as demonstrated by their completed works under the supervision of composition faculty.

Bachelor of Arts in Music

The Department of Music offers a Bachelor of Arts in Music. Students have the option of pursuing one of eleven possible subplans associated with the major. Eligible students may also be awarded a Bachelor of Arts with Honors (p. 7). The department also offers a minor in Music (p. 8).

Suggested Preparation for the Major

Recommended prerequisites for students without prior experience in reading music in standard Western notation. The appropriate level of entry into music theory coursework is determined by a placement evaluation on the first day of instruction.

Suggested Preparation for the Major:

		Units
MUSIC 19A	Introduction to Music Theory	3
MUSIC 19B	Intermediate Music Theory	3

Requirements for the minimum levels of proficiency in each instrument for private instruction are posted on the department's Lessons (<http://music.stanford.edu/ensembles-lessons/lessons/>) website.

Students should allow more than two years for completion of the major, in part because of sequential courses with prerequisite requirements. Early planning is especially important for students who plan to double-major, study abroad or pursue any of the concentrations described below. Music majors should attempt to complete sequential courses in the order below.

Degree Requirements

The undergraduate major in Music is based on a course of study that combines breadth of musical experiences across multiple dimensions with depth in a chosen area, allowing students to develop an array of tools as part of their aesthetic and musical formation. Theory, performance, history, cultural contextualization, technology, and science all contribute to a curricular foundation for all majors. Of the required 62 units, 42 comprise the shared foundation. The remaining 20 minimum required units can be devoted either to an area of focus, including Composition, Conducting, Performance, Music History, Ethnomusicology, Music Theory, MST (Music, Science, & Technology), or to broadly based exploration. Mentorship under the guidance of a faculty advisor is an indispensable component of this 20-unit requirement.

Students with little or no prior musical literacy who wish to pursue the music major (or minor) can take gateway classes (specifically MUSIC 19A and 19B) aimed at providing basic skills. All required courses for the B.A. in Music must be taken for a letter grade. Electives above the minimum number of required courses may be taken credit/no credit.

Majors must complete 62 units to meet the general requirements for a Bachelor of Arts in Music, and must achieve a minimum GPA of 2.0 in all coursework.

MUSIC 21 - 23 should be completed no later than Autumn Quarter junior year.

Students pursuing multiple concentrations must fulfill all the requirements of each.

Prospective majors are required to choose a faculty advisor and submit a course plan. (Course plans and advisor agreement forms are available from the undergraduate student services officer.) It is recommended

that students schedule a consultation meeting with the undergraduate student services officer as early as possible to plan a program of study.

Course Requirements

All required courses for the B.A. in Music must be taken for a letter grade, as must all courses taken toward concentration requirements. Electives may be taken credit/no credit. Upper Division History Courses (MUSIC 141 - 148) taken for at least 4 units satisfy the Writing In the Major (WIM requirement).

	Units
Lower Division Theory/Ear Training	
Take 6 courses for at least 12 units	12
MUSIC 21 Elements of Music I	
MUSIC 22 Elements of Music II	
MUSIC 23 Elements of Music III	
MUSIC 24A Ear Training I	
MUSIC 24B Ear Training II	
MUSIC 24C Ear Training III	
Piano Proficiency Exam	
See "Optional Coursework" for introductory piano proficiency course sequence	
Ear Training Exit Exam	
See "Proficiency Exams" for information about the ear training exit examination	
Lower Division History	
Take 3 courses	
MUSIC 40 Music History to 1600	4
MUSIC 41 Music History 1600-1830	4
MUSIC 42 Music History Since 1830	4
Upper division History & Analysis	
Take 3 courses, one of each Analysis and History, plus one by choice	12
1. Upper Division Analysis Courses	
MUSIC 122A Counterpoint	
MUSIC 122B Analysis of Tonal Music	
MUSIC 122C Introduction to 20th-Century Composition	
2. Upper Division History Courses	
MUSIC 141: Studies in Music of the Renaissance	
MUSIC 142: Studies in Music of the Baroque	
MUSIC 143: Studies in Music of the Classical Period	
MUSIC 144: Studies in Music of the Romantic Period	
MUSIC 145: Studies in Western Art Music Since 1900	
MUSIC 146: Studies in Ethnomusicology	
MUSIC 147: Studies in Music, Media, and Popular Culture	
MUSIC 148: Studies in Performance Practice	
Performance	
Take 3 units	3
MUSIC 126A Thoroughbass Accompaniment	1-3
MUSIC 130B Elementary Instrumental Conducting	2
MUSIC 130C Elementary Choral Conducting	2
MUSIC 156 "sic": Improvisation Collective	
MUSIC 157 Cardinal Calypso–Steelpan Ensemble	
MUSIC 159 Early Music Singers	
MUSIC 160 Stanford Symphony Orchestra	
MUSIC 161 Stanford Wind Symphony (anything in the 161 series except for 161D)	
MUSIC 162 Symphonic Chorus	
MUSIC 163 Memorial Church Choir	

MUSIC 165 Chamber Chorale	
MUSIC 167 University Singers	
MUSIC 171 Chamber Music	
MUSIC 172/272 - Keyboard Instruments	
MUSIC 173/273 - Voice	
MUSIC 174/274 - String Instruments	
MUSIC 175/275 - Wind Instruments	
MUSIC 176/276 - Brass Instruments	
MUSIC 177/277 - Percussion	
MUSIC 181 Jazz Combos	
MUSIC 183A German Art Song Interpretation	
MUSIC 183B French Art Song Interpretation	
MUSIC 183C Interpretation of Musical Theater Repertoire	
MUSIC 183D Musical Theater	
MUSIC 183E Singing for Musicals	
MUSIC 184A Editing and Performing Early Music	
MUSIC 184B Topics on the Musical Stage	
MUSIC 184C Dramatic Vocal Arts: Songs and Scenes Onstage	
See "Optional Coursework" for introductory instrumental and voice course sequences	
Composition/MST/MUSIC 127	
Take 3 units	3
MUSIC 20C Jazz Arranging and Composition	
MUSIC 101 Introduction to Creating Electronic Sounds	
MUSIC 112 Film Scoring	
MUSIC 113 Introduction to Instrumental Composition	
MUSIC 120E Advanced Jazz Improvisation	
MUSIC 123A Undergraduate Seminar in Composition: Rhythmic Design	
MUSIC 123B Undergraduate Seminar in Composition: Pitch Design	
MUSIC 123C Undergraduate Seminar in Composition: World Music	
MUSIC 124A Songwriters Workshop	
MUSIC 124B Songwriters Workshop	
MUSIC 125 Individual Undergraduate Projects in Composition	
MUSIC 127A Instrumentation and Orchestration	
MUSIC 127B Advanced Orchestration	
MUSIC 127C Band Arranging	
MUSIC 128 Stanford Laptop Orchestra: Composition, Coding, and Performance	
MUSIC 155 Intermedia Workshop	
MUSIC 192A Foundations of Sound-Recording Technology	
MUSIC 192B Advanced Sound Recording Technology	
MUSIC 192C Session Recording	
MUSIC 220A Fundamentals of Computer-Generated Sound	
MUSIC 220B Compositional Algorithms, Psychoacoustics, and Computational Music	
MUSIC 220C Research Seminar in Computer-Generated Music	
MUSIC 220D Research in Computer-Generated Music	
MUSIC 223B Sonic Experiments in Composition	
MUSIC 250A Physical Interaction Design for Music	

MUSIC 250C	Interaction - Intermedia - Immersion
MUSIC 256A	Music, Computing, Design: The Art of Design
MUSIC 256B	Music, Computing, Design II: Virtual and Augmented Reality for Music

Concentration 20

Courses taken to fulfill Core Breadth requirements may not be double-counted towards the fulfillment of concentration requirements.

Total Units 67-69

Optional Coursework

Piano Proficiency

MUSIC 12A	Introductory Piano Class	1
MUSIC 12B	Introductory Piano Class	1
MUSIC 12C	Introductory Piano Class	1

Voice Introductory Course Sequence

MUSIC 65A	Voice Class I	1
MUSIC 65B	Voice Class II	1

Piano Introductory Course Sequence

MUSIC 12A	Introductory Piano Class	1
MUSIC 72A	Intermediate Piano Class	1

Guitar Introductory Course

MUSIC 74C	Classical Guitar Class	1
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Proficiency Exams

- *Piano Proficiency:* Majors are required to pass a piano proficiency examination as part of the music theory core (MUSIC 21 Elements of Music I, MUSIC 22 Elements of Music II, MUSIC 23 Elements of Music III). The examination is given in the first two weeks of MUSIC 21. Students who do not pass the piano proficiency examination are required to enroll in either MUSIC 12A Introductory Piano Class, MUSIC 12B Introductory Piano Class, or MUSIC 12C Introductory Piano Class concurrently with the music theory core until they are able to pass the examination. The examination consists of scales and arpeggios, performance of a simple tune to be set by the examiner, sight-reading, and the performance of prepared pieces. Download additional information regarding the proficiency examination (http://exploreddegrees.stanford.edu/schoolofhumanitiesandsciences/music/pianoprofexaminfo_0.pdf).
- *Ear Training Exit Exam:* in conjunction with the music theory series, majors are required to pass an aural skills proficiency examination administered at the end of their junior year. This assesses the ability to transcribe, represent, and reproduce music vocally and at the keyboard, and must be passed before June of the senior year. The exam is scheduled once a year in Spring Quarter for a date and time in Braun Music Center announced a few weeks ahead of time by the ear training advisor. Visit the Music website for additional information about ear training (<https://music.stanford.edu/academics/undergraduates/current/major/>).

Subplans

Subplans (concentrations) are offered in eleven areas: Composition; Conducting; Music, Science, and Technology; Musicology and Ethnomusicology; Musicology/Ethnomusicology and Performance; Performance in Keyboard Studies; Performance in String Studies; Performance in Vocal Studies; Performance in Woodwind, Brass, and Percussion Studies; Theory; and a self-designed concentration. Subplans are declared in Axxs, and appear on the student’s transcript and diploma. Guidelines and application information are explained the “Declare a Concentration ([programs/undergraduate/current-undergraduates/major/declare-concentration/\)” pages of the department website. In order to complete requirements in a timely manner, students are urged to select this option no later than the beginning of the junior year. Students pursuing multiple concentrations must fulfill all the requirements of each. Requests to declare a concentration must be approved by the undergraduate student services officer in Music.](https://music.stanford.edu/academic-</p>
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Composition Subplan

Courses taken to fulfill Core Breadth requirements may not be double-counted towards the fulfillment of concentration requirements.

Composition Seminar

Enroll in each course for a minimum of 1 unit		2
MUSIC 123A	Undergraduate Seminar in Composition: Rhythmic Design	
MUSIC 123B	Undergraduate Seminar in Composition: Pitch Design	

Orchestration

Choose one of the following		3
MUSIC 127A	Instrumentation and Orchestration	
MUSIC 127B	Advanced Orchestration	

Individual composition lessons

Enroll in MUSIC 125 a minimum of three times		3
MUSIC 125	Individual Undergraduate Projects in Composition	

Computer Music

Complete at least 4 units from the following		4
MUSIC 101	Introduction to Creating Electronic Sounds	
MUSIC 155	Intermedia Workshop	
MUSIC 192A	Foundations of Sound-Recording Technology	
MUSIC 192B	Advanced Sound Recording Technology	
MUSIC 192C	Session Recording	
MUSIC 220A	Fundamentals of Computer-Generated Sound	
MUSIC 220B	Compositional Algorithms, Psychoacoustics, and Computational Music	
MUSIC 220C	Research Seminar in Computer-Generated Music	
MUSIC 223B	Sonic Experiments in Composition	
MUSIC 223D	Sound Practice: Embodiment and the Social	
MUSIC 250A	Physical Interaction Design for Music	
MUSIC 250C	Interaction - Intermedia - Immersion	
MUSIC 256A	Music, Computing, Design: The Art of Design	
MUSIC 256B	Music, Computing, Design II: Virtual and Augmented Reality for Music	

Concentration Electives

Complete at least 6 units from the following		6
MUSIC 20C	Jazz Arranging and Composition	
MUSIC 112	Film Scoring	
MUSIC 122A	Counterpoint	
MUSIC 122B	Analysis of Tonal Music	
MUSIC 122C	Introduction to 20th-Century Composition	
MUSIC 123C	Undergraduate Seminar in Composition: World Music	

MUSIC 127B	Advanced Orchestration
MUSIC 128	Stanford Laptop Orchestra: Composition, Coding, and Performance
MUSIC 155	Intermedia Workshop
MUSIC 156	"sic": Improvisation Collective
MUSIC 160B	Stanford New Ensemble
MUSIC 161B	Jazz Orchestra
MUSIC 161E	Stanford Afro-Latin Jazz Orchestra
MUSIC 192A	Foundations of Sound-Recording Technology
MUSIC 192B	Advanced Sound Recording Technology
MUSIC 192C	Session Recording
MUSIC 220A	Fundamentals of Computer-Generated Sound
MUSIC 220B	Compositional Algorithms, Psychoacoustics, and Computational Music
MUSIC 220C	Research Seminar in Computer-Generated Music
MUSIC 223B	Sonic Experiments in Composition
MUSIC 250A	Physical Interaction Design for Music
MUSIC 250C	Interaction - Intermedia - Immersion
MUSIC 251	Psychophysics and Music Cognition
MUSIC 256A	Music, Computing, Design: The Art of Design
MUSIC 256B	Music, Computing, Design II: Virtual and Augmented Reality for Music

Capstone experience: recital

MUSIC 198	Concentrations Project	2
Total Units		20

Conducting Subplan**Units**

Courses taken to fulfill Core Breadth requirements may not be double-counted towards the fulfillment of concentration requirements.

Conducting Course Requirement

Complete at least 10 units from among the following courses in these two groups 10

1. Complete one of the following

MUSIC 130B	Elementary Instrumental Conducting
MUSIC 130C	Elementary Choral Conducting
MUSIC 136	Intermediate Conducting: Music Since 1900

2. Complete all of the following for a total of 8 units

MUSIC 230	Advanced Orchestral Conducting
MUSIC 231	Advanced Choral Conducting *

*Conducting concentrators with instrumental focus take MUSIC 230 twice and MUSIC 231 once; those with choral focus take MUSIC 231 twice and MUSIC 230 once. The total unit count for MUSIC 230/231 is thus 6 units

Concentration Theory/Analysis/Ear-Training Requirement

Complete at least 5 units from among the following courses in these two groups 5

1. Complete any of these courses that were not taken to fulfill the Core Requirement

MUSIC 122A	Counterpoint
MUSIC 122B	Analysis of Tonal Music
MUSIC 122C	Introduction to 20th-Century Composition

2. Complete this course for at least 1 unit

MUSIC 129	Advanced Ear-Training/Musicianship *
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*MUSIC 129 is offered for 1 or 2 units. Conducting concentrators must take it for 1 unit to fulfill the Conducting Concentration requirement, but are strongly urged to take it for 2 units, if possible.

Concentration Performance Requirement

Complete three quarters in any combination of these ensembles, 1 unit per quarter; these Performance units are in addition to the 3 units that satisfy the Core Breadth Performance requirement. 3

MUSIC 159	Early Music Singers
MUSIC 160	Stanford Symphony Orchestra
MUSIC 160A	Stanford Philharmonia
MUSIC 161A	Stanford Wind Symphony
MUSIC 161B	Jazz Orchestra
MUSIC 162	Symphonic Chorus
MUSIC 163	Memorial Church Choir
MUSIC 165	Chamber Chorale
MUSIC 167	University Singers
MUSIC 171	Chamber Music

Or another ensemble (with advisor's permission)

Capstone experience: recital

MUSIC 198	Concentrations Project	2
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Total Units 20

Music, Science, and Technology (MST) Subplan**Units**

Courses taken to fulfill Core Breadth requirements may not be double-counted towards the fulfillment of concentration requirements.

Complete all the following courses for a minimum of 4 units per course

MUSIC 220A	Fundamentals of Computer-Generated Sound	4
MUSIC 220B	Compositional Algorithms, Psychoacoustics, and Computational Music	4
MUSIC 220C	Research Seminar in Computer-Generated Music *	4
MUSIC 251	Psychophysics and Music Cognition	4

*Capstone project to be completed in MUSIC 220C.

Complete one of the following for a minimum of 4 units. 4

MUSIC 256A	Music, Computing, Design: The Art of Design
MUSIC 320A	Introduction to Audio Signal Processing Part I: Spectrum Analysis
MUSIC 320B	Introduction to Audio Signal Processing Part II: Digital Filters

Total Units 20

Musicology and Ethnomusicology Subplan**Units**

Courses taken to fulfill Core Breadth requirements may not be double-counted towards the fulfillment of concentration requirements.

Complete at least 10 units from among the following courses* 10

MUSIC 141: Studies in Music of the Renaissance
MUSIC 142: Studies in Music of the Baroque
MUSIC 143: Studies in Music of the Classical Period

- MUSIC 144: Studies in Music of the Romantic Period
- MUSIC 145: Studies in Western Art Music Since 1900
- MUSIC 146: Studies in Ethnomusicology
- MUSIC 147: Studies in Music, Media, and Popular Culture
- MUSIC 148: Studies in Performance Practice

Any upper-level, writing-intensive course, plus relevant courses outside the department, is possible, in consultation with the advisor.

*These courses must cover at least two historical periods. At least one of these courses must be taken in the Department of Music.

Complete 6 units of concentration electives in any music-related course 6

In consultation with the advisor, language courses, too, can count toward concentration electives. Students are strongly encouraged to attain proficiency in at least one language relevant to their research interests.

Capstone project: Thesis

Complete 4 units of MUSIC 198 4

MUSIC 198	Concentrations Project
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Total Units 20

Musicology/Ethnomusicology and Performance Subplan

Units

Courses taken to fulfill Core Breadth requirements may not be double-counted towards the fulfillment of concentration requirements.

Complete at least 10 units from among the following courses* 10

MUSIC 141: Studies in Music of the Renaissance

MUSIC 142: Studies in Music of the Baroque

MUSIC 143: Studies in Music of the Classical Period

MUSIC 144: Studies in Music of the Romantic Period

MUSIC 145: Studies in Western Art Music Since 1900

MUSIC 146: Studies in Ethnomusicology

MUSIC 147: Studies in Music, Media, and Popular Culture

MUSIC 148: Studies in Performance Practice

Any upper-level, writing-intensive course, plus relevant courses outside the department, is possible, in consultation with the advisor.

*These courses must cover at least two historical periods. At least one of these courses must be taken in the Department of Music.

Complete at least 6 units from among the following courses 6

MUSIC 156 "sic": Improvisation Collective

MUSIC 159-171: Large and small ensembles

MUSIC 172A/272A Piano

MUSIC 182 Diction for Singers

MUSIC 183A German Art Song Interpretation

MUSIC 183B French Art Song Interpretation

MUSIC 183C Interpretation of Musical Theater Repertoire

MUSIC 183D Musical Theater

MUSIC 183E Singing for Musicals

MUSIC 184A Editing and Performing Early Music

MUSIC 184B Topics on the Musical Stage

MUSIC 184C Dramatic Vocal Arts: Songs and Scenes Onstage

MUSIC 184D Creating a Musical

In consultation with the advisor, the student can choose any performance course. Students are strongly encouraged to attain proficiency in at least one language relevant to their research interests.

Capstone project: Thesis

Complete 4 units of MUSIC 198 4

MUSIC 198	Concentrations Project
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Total Units 20

Performance in Keyboard Studies Subplan

Units

Courses taken to fulfill Core Breadth requirements may not be double-counted towards the fulfillment of concentration requirements.

Solo and Ensemble Techniques

Complete all of the following

Private lessons: Complete six quarters for at least 1 unit per quarter 6

MUSIC 172/272 Piano, Fortepiano, Harpsichord or Organ

Small, uncondacted ensemble: enroll in MUSIC 171 a minimum of three times 3

MUSIC 171 Chamber Music

Thoroughbass 1

MUSIC 126A Thoroughbass Accompaniment

Complete one of the following 1

MUSIC 160C Stanford Baroque Soloists

MUSIC 170 Collaborative Piano

MUSIC 183A German Art Song Interpretation

MUSIC 183B French Art Song Interpretation

Aural and analytical skills especially pertinent to performance

Complete all of the following

MUSIC 122D Analysis for Performance 2

MUSIC 129K Advanced Keyboard Musicianship 2

Awareness of repertoire and cultural history

MUSIC 155A Piano Literature (enroll a minimum of three times) 3

Capstone Project: Senior Keyboard Recital

The capstone project consists of an adjudicated solo recital supported by program preparation, program notes supervised by musicology faculty member, and dress rehearsal.

MUSIC 198 Concentrations Project 2

Total Units 20

Performance in String Studies Subplan

Units

Courses taken to fulfill Core Breadth requirements may not be double-counted towards the fulfillment of concentration requirements.

Solo and Ensemble Techniques

Complete all of the following

Private lessons: Complete six quarters for at least 1 unit per quarter 6

MUSIC 174/274 Piano, Fortepiano, Harpsichord or Organ

Chamber Music

Complete six quarters* 6

MUSIC 171 Chamber Music

*Chamber Music refers to a small, uncondacted ensemble. Up to 2 units in MUSIC 160B or 160C may also apply toward the Chamber Music requirement

Aural and analytical skills especially pertinent to performance

Complete all of the following

MUSIC 122D	Analysis for Performance	2
MUSIC 129	Advanced Ear-Training/Musicianship	2

Large, conducted ensemble

Complete at least 2 units from among the following

MUSIC 160	Stanford Symphony Orchestra	1
MUSIC 160A	Stanford Philharmonia	1

Capstone Project: Senior String Recital

The capstone project consists of an adjudicated solo recital supported by program preparation, program notes supervised by musicology faculty member, and dress rehearsal.

MUSIC 198	Concentrations Project	2
Total Units		20

Performance in Vocal Studies Subplan

Units

Courses taken to fulfill Core Breadth requirements may not be double-counted towards the fulfillment of concentration requirements.

Private Lessons

Complete six quarters for at 2 units per quarter		12
MUSIC 173/273	Voice	

Voice Repertoire

Complete three courses for 1 unit among the following		3
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Aural and analytical skills especially pertinent to performance

MUSIC 182	Diction for Singers	
MUSIC 183A	German Art Song Interpretation	
MUSIC 183B	French Art Song Interpretation	
MUSIC 183C	Interpretation of Musical Theater Repertoire	

Voice Pedagogy

MUSIC 60	How We Sing: The Voice, How It Functions, and the Singer's Mind	1
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Vocal Stage Performance

Complete one course for 2 units among the following		2
MUSIC 184A	Editing and Performing Early Music	
MUSIC 184B	Topics on the Musical Stage	
MUSIC 184C	Dramatic Vocal Arts: Songs and Scenes Onstage	

Capstone Project

MUSIC 198	Concentrations Project	2
Total Units		20

Performance in Woodwind, Brass, and Percussion Studies Subplan

Units

Courses taken to fulfill Core Breadth requirements may not be double-counted towards the fulfillment of concentration requirements.

Develop solo and ensemble techniques: 15 units

Complete six quarters for 1 unit per quarter		6
MUSIC 175/275	Woodwinds	
MUSIC 176/276	Brass	
MUSIC 177/277	Percussion	

Complete at least 6 total units from among the following

MUSIC 160	Stanford Symphony Orchestra	6
MUSIC 160A	Stanford Philharmonia	

MUSIC 160B	Stanford New Ensemble	
MUSIC 161A	Stanford Wind Symphony	
MUSIC 161B	Jazz Orchestra	
MUSIC 161D	Stanford Brass Ensemble	

Complete at least 3 units		3
MUSIC 171	Chamber Music	

Analysis Skills for Performance

Complete all of the following

MUSIC 6F	Art is My Occupation: Professional Development in Music	1
MUSIC 122D	Analysis for Performance	2

Capstone Project

MUSIC 198	Concentrations Project	2
Total Units		20

Theory Subplan

Units

Courses taken to fulfill Core Breadth requirements may not be double-counted towards the fulfillment of concentration requirements.

Complete one course from among the following

MUSIC 122A	Counterpoint	4
MUSIC 122B	Analysis of Tonal Music	
MUSIC 122C	Introduction to 20th-Century Composition	

Complete one course from among the following

MUSIC 140		4
MUSIC 141:	Studies in Music of the Renaissance	
MUSIC 142:	Studies in Music of the Baroque	
MUSIC 143:	Studies in Music of the Classical Period	
MUSIC 144:	Studies in Music of the Romantic Period	
MUSIC 145:	Studies in Western Art Music Since 1900	
MUSIC 146:	Studies in Ethnomusicology	
MUSIC 147:	Studies in Music, Media, and Popular Culture	

Complete one course from among the following

MUSIC 126A	Thoroughbass Accompaniment	2
MUSIC 127A	Instrumentation and Orchestration	
MUSIC 129	Advanced Ear-Training/Musicianship	
MUSIC 129K	Advanced Keyboard Musicianship	

Complete one course for at least 3 units from among the following

MUSIC 184A	Editing and Performing Early Music	3
MUSIC 251	Psychophysics and Music Cognition	
MUSIC 269	Research in Performance Practices	

Complete one course from among the following

MUSIC 18A	Jazz History: Ragtime to Bebop, 1900-1940	3
MUSIC 18B	Jazz History: Bebop to Present, 1940-Present	

Concentration Electives

Choose any 2 units in a music-related course

Capstone project: Thesis		2
MUSIC 198	Concentrations Project	2

Total Units

Self-Designed Subplan

The self-designed music major allows the student to choose the courses to take beyond the shared 42-unit core. They develop a focus area in consultation with the Program Advisor. They are allocated 16 units

toward courses in this focus area; the remaining 4 units are reserved for the capstone project (see below).

If necessary for the focus area, 3 of the 16 units may be taken outside the Music Department, with the permission of the advisor.

Focus areas may center on courses in established areas of the department for which there is no existing subplan (e.g., jazz, musical theater), or they may delineate a path that moves across different programs within the department. Focal areas may have a creative or critical emphasis, or take a blended approach. The 16 units in the focus area should provide a spur and grounding for the 4-unit capstone project.

	Units
Courses taken to fulfill Core Breadth requirements may not be double-counted towards the fulfillment of concentration requirements.	
Take 16 units in a focal area in consultation with the Program Advisor	16
Capstone Project	
Take 4 units of independent study in support of a thesis	4
MUSIC 199	Independent Study
Total Units	20

Capstone project guidelines

Beginning ideally in the junior year, students should choose one or two capstone advisors, and plan regular meetings to develop a capstone project. If a student has two capstone advisors, one may be a faculty member outside the Music Department.

The capstone can be understood as a culmination of the 16 units of coursework in the focus area.

Where possible the student should, beginning in Spring Quarter of the junior year, allocate 1 or 2 units per quarter to independent studies, for a total of 4 units by graduation. Otherwise the units can spread over as few as two quarters.

Advising meetings should take place at least twice per quarter, and at least three times per quarter during the two quarters leading up to graduation.

Capstone projects may take a variety of forms. In consultation with the capstone advisor(s), the student determines whether the project culminates in creative work, an academic paper or other research output, a recital or lecture-recital, or a mix.

Additional Information

Overseas Study or Study Abroad

Courses in Music are often available at Stanford overseas programs, especially in Berlin, Paris, Florence, and Oxford. See the "Overseas Studies Program" section of this bulletin for this year's listings. Music majors and minors should talk to the Department of Music undergraduate administrator prior to going overseas.

Honors

Honors in Music are awarded by the faculty to majors who have produced an independent project of exceptional quality through a concentration. Students who wish to pursue honors must declare their concentration(s) by May 31 of their junior year (see the undergraduate student services officer for concentration-specific requirements). To receive honors, students must also have earned an overall GPA of 3.6 or higher and a GPA of 3.7 or higher in courses required for the Music major. Honors are conferred through faculty adjudication. For students concentrating in multiple areas, a single jury will be convened.

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Joint Major Program in Music and Computer Science

The joint major program (JMP) was discontinued at the end of the academic year 2018-19. Students may no longer declare this program. All students with declared joint majors are permitted to complete their degree; faculty and departments are committed to providing the necessary advising support.

See the "Joint Major Program (<http://exploreddegrees.stanford.edu/undergraduatedegreesandprograms/#jointmajortext>)" section of this bulletin for a description of University requirements for the JMP. See also the Undergraduate Advising and Research JMP (<https://majors.stanford.edu/more-ways-explore/joint-majors-csx/>) web site and its associated FAQs.

Students completing the JMP receive a B.A.S. (Bachelor of Arts and Science).

Music Major Requirements in the Joint Major Program

Because the Joint Major Program is new and experimental, some changes to the following may occur. Questions concerning a concentration project in addition to the basic requirements for a Joint Major in Music and Computer Science should be directed to the Department of Music student services office in Braun Music Center, Room 101.

See the "Computer Science Joint Major Program (<http://exploreddegrees.stanford.edu/schoolofengineering/computerscience/#jointmajorprogramtext>)" section of this bulletin for details on Computer Science requirements.

Students majoring in the joint major program in Computer Science and Music must complete the following:

1. Music Theory

		Units
MUSIC 21	Elements of Music I	3
MUSIC 22	Elements of Music II	3
MUSIC 23	Elements of Music III	3
MUSIC 24A	Ear Training I	1
MUSIC 24B	Ear Training II	1
MUSIC 24C	Ear Training III	1
Total Units		12

Students enrolled in 21, 22, or 23 must concurrently enroll in an ear-training and musicianship lab, MUSIC 24A, 24B, or 24C.

Additional Music Theory Requirements

- *Piano Proficiency:* Majors are required to pass a piano proficiency examination as part of the music theory core (MUSIC 21 Elements of Music I, MUSIC 22 Elements of Music II, MUSIC 23 Elements of Music III). The examination is given in the first two weeks of MUSIC 21. Students who do not pass the piano proficiency examination are required to enroll in either MUSIC 12A Introductory Piano Class, MUSIC 12B Introductory Piano Class, or MUSIC 12C Introductory Piano Class concurrently with the music theory core until they are able to pass the examination. The examination consists of scales and arpeggios, performance of a simple tune to be set by the examiner, sight-reading, and the performance of prepared pieces. For additional information about this requirement, see Piano Proficiency Examination (http://exploreddegrees.stanford.edu/schoolofhumanitiesandsciences/music/pianoprofexaminfo_0.pdf).
- *Ear Training Elective:* In addition to the theory requirements listed above, majors must successfully complete one unit of an ear training elective course from the list below:

		Units
MUSIC 20B	Advanced Jazz Theory	3
MUSIC 65A	Voice Class I	1
MUSIC 126A	Thoroughbass Accompaniment	1-3
MUSIC 127A	Instrumentation and Orchestration	3
MUSIC 127B	Advanced Orchestration	3
MUSIC 129	Advanced Ear-Training/Musicianship	1-2
Or any course upon approval of the Ear Training adviser		
MUSIC 130A	Introduction to Conducting	3

- *Ear Training Exit Exam*: in conjunction with the music theory series, majors are required to pass an aural skills proficiency examination administered at the end of their junior year. This assesses the ability to accurately transcribe, represent, and reproduce music vocally and at the keyboard, and must be passed before June of the senior year.

2. Music History

		Units
Select 2 of 3 from the list below		8
MUSIC 40	Music History to 1600	4
MUSIC 41	Music History 1600-1830	4
MUSIC 42	Music History Since 1830	4

3. Analysis

		Units
MUSIC 122B	Analysis of Tonal Music	4

4. Computing and Music

		Units
MUSIC 220A	Fundamentals of Computer-Generated Sound	4
MUSIC 256A	Music, Computing, Design: The Art of Design	4
Total Units		8

5. WIM

One WIM-designated course must be taken for a minimum of 4 units. The course below is recommended, but can be replaced with any Music WIM course depending on student's area of interest.

		Units
MUSIC 251	Psychophysics and Music Cognition	4
Total Units		4

6. Electives

Students must submit 12 unit elective course plan to the JMP faculty adviser for approval no later than the beginning of the junior year. MUSIC 220B and MUSIC 250A are recommended, but elective course plan can consist of any courses from list below, or other Music department course(s) with permission of adviser.

		Units
MUSIC 122A	Counterpoint	4
MUSIC 122C	Introduction to 20th-Century Composition	4
MUSIC 128	Stanford Laptop Orchestra: Composition, Coding, and Performance	4
MUSIC 150		3
MUSIC 220B	Compositional Algorithms, Psychoacoustics, and Computational Music	4
MUSIC 220C	Research Seminar in Computer-Generated Music	4
MUSIC 250A	Physical Interaction Design for Music	4

		Units
MUSIC 256B	Music, Computing, Design II: Virtual and Augmented Reality for Music	4

7. Applied Music

Students may elect to take either of the following to fulfill the applied music requirement:

7.1 Lesson and Ensemble Study

- 6 units of individual studies in performance, MUSIC 172/272-177/277 and
- 5 quarters totaling 5 units of work in one or more of the department's ensembles or chamber music groups. To fulfill the ensemble requirement, Music majors need at least three quarters of participation in the department's traditional large ensembles (MUSIC 159-167) with the exception of students whose primary instrument is guitar, harp, or keyboard, who need to participate at least one quarter in the ensembles above, but who may fulfill the rest of the requirement with chamber music.

7.2 Sound Recording

- 1 quarter (3 units) of MUSIC 192A Foundations of Sound-Recording Technology
- 1 quarter (3 units) of MUSIC 192B Advanced Sound Recording Technology
- 5 units of MUSIC 192C Session Recording

8. Capstone Project

		Units
MUSIC 220D	Research in Computer-Generated Music (3 units taken in conjunction with CS Capstone)	3

9. Optional Concentrations

Students who would also like to complete an additional capstone project in Performance, Conducting, Composition, Music History and Theory, or Music, Science, and Technology must consult the Department of Music student services office in Braun Music Center, Room 101 to submit a proposal for an optional concentration.

Dropping a Joint Major Program

To drop the joint major, students must submit the Declaration or Change of Undergraduate Major, Minor, Honors, or Degree Program (<https://stanford.box.com/change-UG-program/>). Students may also consult the Student Services Center (<http://studentservicescenter.stanford.edu/>) with questions concerning dropping the joint major.

Transcript and Diploma

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

Minor in Music

The Music minor allows students to explore music through a flexible program of study. The minor can focus on Composition, History, Music, Science & Technology (MST), Performance/Conducting, or Theory, or on areas not currently served by the major, such as Ethnomusicology, Jazz, or Musical Theater. The minor can also focus on musical aspects of a non-Music major such as American Studies, Anthropology, Area Studies, Computer Science, CSRE, TAPS, etc. Courses used to fulfill the minor may not be used to fulfill any other department degree requirements (major or minor).

Minor Requirements – 24 units total for the minor

Within the minimum 24-unit requirement:

- All courses must be taken for a letter grade, except where letter grades are not offered.
- 6 courses must be for 3 units each or more.
- Students must complete at least 3 units of coursework in 3 of the following 5 areas:
 - Composition (<https://explorecourses.stanford.edu/search/?view=catalog&filter-coursestatus-Active=on&page=0&catalog=&academicYear=&q=MUSIC%3A%3AUGComp&collapse=>)
 - History/Ethnomusicology (<https://explorecourses.stanford.edu/search/?view=catalog&filter-coursestatus-Active=on&page=0&catalog=&academicYear=20192020&q=MUSIC%3A%3Aminorhistethno&collapse=>)
 - MST/Computer Music (<https://explorecourses.stanford.edu/search/?view=catalog&filter-coursestatus-Active=on&page=0&catalog=&academicYear=&q=MUSIC%3A%3Aminormst&collapse=>)
 - Performance/Conducting (<https://explorecourses.stanford.edu/search/?q=MUSIC%3A%3Aminorperfcond&view=catalog&page=0&filter-coursestatus-Active=on&collapse=&academicYear=20192020>)
 - Theory (<https://explorecourses.stanford.edu/search/?view=catalog&filter-coursestatus-Active=on&page=0&catalog=&academicYear=20192020&q=MUSIC%3A%3ATheory&collapse=>)

The elective units may be fulfilled in either breadth or depth in any area(s) desired, and may be selected from any of the Department of Music's courses. Prospective minors are required to choose a faculty adviser and submit a course plan. Course plans and adviser agreement forms are available from the undergraduate student services officer.

The Department of Music has adopted the above requirements for students declaring the minor starting September 2019. Students who declared a Music minor prior to September 2019 should refer to previous guidelines and requirements for the minor below. If interested in changing to the new requirements, contact the undergraduate student services officer.

Minor Requirements prior to September 2019

The Music minor provides students with a core of essential Music courses in the disciplines that establish both a foundation for informed appreciation of music and a basis for more advanced study, should the student wish to pursue it. Two options are available for the minor: General Music and Music, Science, and Technology.

Total of 36 units required course work as delineated in each of the two options below, and passage of the piano proficiency and ear training examinations. To fulfill Music minor requirements, courses must be taken for a letter grade.

- Piano Proficiency:** minors are required to pass a piano proficiency examination as part of the music theory core (MUSIC 21 Elements of Music I, MUSIC 22 Elements of Music II, MUSIC 23 Elements of Music III). The examination is given in the first two weeks of MUSIC 21. Students who do not pass the piano proficiency examination are required to enroll in either MUSIC 12A Introductory Piano Class, MUSIC 12B Introductory Piano Class, or MUSIC 12C Introductory Piano Class concurrently with the music theory core until they are able to pass the examination. The examination consists of scales and arpeggios, performance of a simple tune

to be set by the examiner, sight-reading, and the performance of prepared pieces. Download additional information regarding the proficiency examination (http://exploreddegrees.stanford.edu/schoolofhumanitiesandsciences/music/pianoprofexaminfo_0.pdf).

- Ear Training Exit Exam:** in conjunction with the music theory series, minors are required to pass an aural skills proficiency examination administered at the end of their junior year. This examination tests the ability to accurately transcribe, represent, and reproduce music vocally and at the keyboard, and must be passed before June of the senior year.

Required Courses: General Music

1. Theory

		Units
MUSIC 21	Elements of Music I	3
MUSIC 22	Elements of Music II	3
MUSIC 23	Elements of Music III	3
MUSIC 24A	Ear Training I	1
MUSIC 24B	Ear Training II	1
MUSIC 24C	Ear Training III	1

Students enrolled in 21, 22, or 23 must concurrently enroll in an ear-training and musicianship lab, MUSIC 24A, 24B, or 24C.

2. History

		Units
MUSIC 40	Music History to 1600	4
MUSIC 41	Music History 1600-1830	4
MUSIC 42	Music History Since 1830	4

3. Applied: Ensemble

Two quarters, 2 units total.

4. Applied: Individual

Two quarters at 3 units per quarter, 6 units total.

5. WIM, 4 units

		Units
4 units in any course numbered Music 140-149, except MUSIC 140G, or MUSIC 251. Offerings in 2018-2019 include:		
MUSIC 142K	Studies in Music of the Baroque: Handel the Cosmopolitan	4-5
MUSIC 145K	Studies in Western Art Music Since 1900: Concepts of New Music	4
MUSIC 147K	Studies in Music, Media, and Popular Culture: Music and Urban Film	4
MUSIC 149J		4
MUSIC 251	Psychophysics and Music Cognition	4

Required Courses: Music, Science and Technology

1. Theory

		Units
MUSIC 21	Elements of Music I	3
MUSIC 22	Elements of Music II	3
MUSIC 23	Elements of Music III	3
MUSIC 24A	Ear Training I	1
MUSIC 24B	Ear Training II	1
MUSIC 24C	Ear Training III	1
MUSIC 150		
MUSIC 220A	Fundamentals of Computer-Generated Sound	2-4

MUSIC 220B	Compositional Algorithms, Psychoacoustics, and Computational Music	2-4
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2. Applied

		Units
MUSIC 192A	Foundations of Sound-Recording Technology	3
MUSIC 192B	Advanced Sound Recording Technology	3
MUSIC 192C	Session Recording (two quarters, 3 units total)	1-2

Alternatively, students pursuing the MST minor may elect to fulfill the applied music requirement with ensemble units and individual lessons as described in the Applied requirements for the General Music minor above.

3. WIM, 4 units

		Units
MUSIC 251	Psychophysics and Music Cognition	4

Performance Certificate Program for Non Music Majors

As a locus of great academic and artistic depth and diversity, the Department of Music's performance programs have long engaged students who, even though they are not music majors, are serious and dedicated to furthering their skills in music performance. The Certificate in Music Performance program provides a select cohort of these students the opportunity for further recognition of their artistic achievement.

This program is open by audition to undergraduate students who already demonstrate a high degree of accomplishment in their area of music performance, study privately with one of the Department of Music's faculty, and who wish to bolster their performance studies with coursework that may be drawn from the Department of Music's other areas of academic focus: history, theory, computer music, and composition. The Certificate in Music Performance is issued by the Department of Music and will not appear on any University record, including the student's transcript.

Admission

Students are admitted to the Certificate in Music Performance program based on an audition adjudicated by Department of Music faculty at the beginning of Winter Quarter. To request an audition, the student should speak with the private lesson instructor and the Department of Music's undergraduate student services officer. Email ugmusicinquiries@lists.stanford.edu for additional information. At the time of the audition, students must have already declared a major outside of music.

Requirements

Once admitted into the program, students must complete a course plan to be approved by department faculty based on the requirements below.

1. Performance

- A minimum of six quarters of individual lessons of private instruction and/or vocal performance (MUSIC 172/272-177/277). Any quarters of instruction taken prior to admission into the program may also count towards these requirements. Requirements for the minimum levels of proficiency in each instrument for private instruction are posted on the department's web site (<https://music.stanford.edu/ensembles-lessons/lessons/>). All six quarters of lesson study must be in the same instrument area.
- A minimum of six quarters of ensemble experience in the Department of Music's ensembles and chamber groups. For students whose primary instrument area is guitar, keyboard or harp, at least one

quarter of ensemble experience must be in one of the department's traditional large ensembles (MUSIC 159-167, MUSIC 184). The remaining ensemble requirements may be filled with chamber music (MUSIC 171). Keyboard students may also take MUSIC 171 Chamber Music, MUSIC 171 Chamber Music, and MUSIC 171 Chamber Music to fulfill this requirement. All non-keyboard, guitar or harp students must successfully complete three quarters in the department's traditional large ensembles (MUSIC 159-167, MUSIC 184), and three quarters in conductor-less, small ensembles such as chamber music or jazz combos MUSIC 171 Chamber Music. MUSIC 156 "sic": Improvisation Collective may count for up to two of the ensemble unit requirements. Any quarters of ensemble taken prior to admission into the program may also count towards these requirements.

2. Music Theory

Students are required to complete one course in music theory (MUSIC 21 Elements of Music I, MUSIC 22 Elements of Music II, or MUSIC 23 Elements of Music III). For the purposes of the Performance Certificate, the student may elect to take these courses on a Credit/No Credit grading basis. However, students must also pass the associated piano proficiency exam (http://exploreddegrees.stanford.edu/schoolofhumanitiesandsciences/music/pianoprofexaminfo_0.pdf) and take one course in ear training.

3. Elective Courses

Six or more total units in Music, dependent upon course plan document submitted following acceptance into the program.

4. Final Project

To complete the Performance Certificate, students must enroll in a 4-unit MUSIC 199 Independent Study or 4-unit MUSIC 198 Concentrations Project and complete a final, performance-based capstone project. Students must pass faculty adjudication, and, in addition, complete a writing project (essay or program notes) pre-approved by the lesson instructor. Students should refer to the Department of Music website's Recitals-at-a-Glance (<https://sites.stanford.edu/music-dept/venues-spaces/reserve/recitals/>) page for reservation deadlines and calendar links.

Master of Arts in Music

University requirements for the M.A. are described in the "Graduate Degrees (<http://exploreddegrees.stanford.edu/graduatedegrees/>)" section of this bulletin.

The Department of Music accepts M.A. applications into the Music, Science, and Technology program. The M.A. in Music, Science, and Technology is available to current Stanford undergraduates as a coterminal M.A. as well as to current Stanford graduate students and external applicants.

Music does not accept direct applications for an M.A. degree in Composition, Musicology, or Computer-Based Music Theory and Acoustics. Students admitted to doctoral programs may receive an M.A. in Composition, Musicology, or Computer-Based Music Theory and Acoustics under certain circumstances (see below).

Degree Options

All of the following fields of study are declarable as subplans in Axess via the "Declaration or Change to a Field of Student" form; they appear on the transcript and the diploma:

- Master of Arts degree (M.A.) in Music—Composition subplan.
- Master of Arts degree (M.A.) in Music—Music History subplan.
- Master of Arts degree (M.A.) in Music—Computer-Based Music Theory and Acoustics subplan.

- Master of Arts degree (M.A.) in Music—Music, Science, and Technology subplan

Degree Requirements

A minimum of 45 academic units is required for a master’s degree in Music. At least half of those units must in courses with the career GR code in the Bulletin; all must be at the 100-level or higher.

No course used to fulfill degree requirements for the BA in Music may be used to fulfill degree requirements for a graduate degree in Music, unless specifically required for both degrees.

Only work that receives a grade of ‘A,’ ‘B,’ or ‘S’ (a passing grade in an instructor-mandated credit/no credit course) in Music courses numbered 100 or higher taken as a graduate student is recognized as fulfilling the advanced-degree requirements.

Courses numbered 100 or higher taken as electives in other departments may be taken for credit or letter grade.

The expectation is that a student will be able to complete the required 45 units of coursework by the end of their second year.

M.A. in Music, Science, and Technology

The M.A. in Music, Science, and Technology is the department’s only terminal master’s degree. This is a two-year program of 45 graduate-level units focusing on the integration of music perception, music-related signal processing and controllers, synthesis, performance, and composition. The program is designed for students who have an undergraduate music, engineering, or science degree.

Admission to the Master of Arts in Music, Science and Technology

All components of the M.A./MST application are due by the second Tuesday in December, including evidence of accomplishment (scores, recordings, and/or research papers). The Graduate Record Examination (GRE) is optional for Master’s applications. Applicants who choose to take the GRE should arrange to take it well in advance of the application deadline of the second Tuesday in December to ensure that test scores are received in a timely manner. International students whose first language is not English are required to take the TOEFL exam (with certain exceptions: see the Office of Graduate Admissions (<http://studentaffairs.stanford.edu/gradadmissions/>) web site.)

Required Courses (units determined in consultation with advisor)		Units
MUSIC 201	CCRMA Colloquium	
MUSIC 220A	Fundamentals of Computer-Generated Sound	
MUSIC 251	Psychophysics and Music Cognition	
MUSIC 256A	Music, Computing, Design: The Art of Design	
MUSIC 320A	Introduction to Audio Signal Processing Part I: Spectrum Analysis	3-4
MUSIC 320B	Introduction to Audio Signal Processing Part II: Digital Filters	3-4
Electives		
The remaining units of graduate level work are determined in consultation with the student’s advisor, must include three CCRMA electives, and may include courses taken outside the department.		
Capstone Project		

MA MST students can choose to pursue the Capstone project as part of their electives, by enrolling either in MUSIC 298 (MA capstone, 1-5 units per quarter, repeatable 3 times), or in a course plan devised in consultation with their advisor(s), totaling at least 6 units. The MA/MST capstone is intended to gather and focus skills acquired throughout the program toward an exploratory project aimed at bridging between your residency as a student and whatever will follow beyond your MA. For example, students interested in applied research might do design projects and/or mentored internships. For students considering going on to PhD research the capstone can be considered a more flexible form of a master’s thesis, producing research and publication(s) that will strengthen your PhD application. For students wishing to continue in a DMA or another MFA program the capstone can be the core of your creative portfolio. Mentorship can include your advisor augmented, should you chose, by any other faculty member from CCRMA or in other programs.

University Coterminial Requirements

Coterminal master’s degree candidates are expected to complete all master’s degree requirements as described in this bulletin. University requirements for the coterminal master’s degree are described in the “Coterminal Master’s Program (<http://exploreddegrees.stanford.edu/cotermdegrees/>)” section. University requirements for the master’s degree are described in the “Graduate Degrees (<http://exploreddegrees.stanford.edu/graduatedegrees/#masterstext>)” section of this bulletin.

After accepting admission to this coterminal master’s degree program, students may request transfer of courses from the undergraduate to the graduate career to satisfy requirements for the master’s degree. Transfer of courses to the graduate career requires review and approval of both the undergraduate and graduate programs on a case by case basis.

In this master’s program, courses taken during or after the first quarter of the sophomore year are eligible for consideration for transfer to the graduate career; the timing of the first graduate quarter is not a factor. No courses taken prior to the first quarter of the sophomore year may be used to meet master’s degree requirements.

Course transfers are not possible after the bachelor’s degree has been conferred.

The University requires that the graduate advisor be assigned in the student’s first graduate quarter even though the undergraduate career may still be open. The University also requires that the Master’s Degree Program Proposal be completed by the student and approved by the department by the end of the student’s first graduate quarter.

Required course work is listed above. A complete program with an individually-tailored list of electives will be formed in consultation with the student’s advisor.

M.A. in Composition, Musicology, and Computer-Based Music Theory and Acoustics

A minimum of 45 academic units is required for the master’s degree in Music. The Department of Music does not accept students for study only towards the M.A. degree except in the Music, Science, and Technology program, described below.

Students in the D.M.A. program in composition and the Ph.D. programs in Musicology and Computer-Based Music Theory and Acoustics who enter with a Bachelor’s degree may request and received the M.A. degree

in their program at any time after completing 45 units of graduate coursework and advancing to Candidacy.

A doctoral student who has completed 45 units of graduate coursework in Music, but does not advance to doctoral candidacy, may petition for a terminal M.A. in their program. A terminal M.A. in Composition, Musicology and Computer-Based Music Theory and Acoustics is granted on an individual basis and at the discretion of the Music Academic Council faculty.

Doctor of Musical Arts (D.M.A.) and Doctor of Philosophy (Ph.D.) in Music

University requirements for the D.M.A. and Ph.D. are described in the "Graduate Degrees" section of this bulletin. The following statements apply to all the graduate degrees described below, unless otherwise indicated.

Admission

All components of the application are due by the second Tuesday in December. Applicants are required to submit evidence of accomplishment (scores, recordings, and/or research papers, according to the proposed field of concentration) with their application. The Graduate Record Examination (GRE) is optional for doctoral applications. Applicants who choose to take the GRE should arrange to take it well in advance of the application deadline of the second Tuesday in December to ensure that test scores are received in a timely manner. International students whose first language is not English are also required to take the TOEFL exam (with certain exceptions: see the Office of Graduate Admissions (<https://gradadmissions.stanford.edu/applying/starting-your-application/required-exams/exam-requirements-international-applicants/>) web site).

Department Examinations

All entering doctoral graduate students are required to take and pass:

1. a proficiency examination in dictation and sight-singing; a diagnostic examination in theory (counterpoint, harmony, and analysis); AND,
2. for musicologists and composers only, a proficiency examination in piano; for ethnomusicologists, a proficiency examination in piano or another instrument; AND
3. for ethnomusicologists only, a test on musical traditions outside of Western art music; OR
4. for musicologists only, a test on history and repertoire of Western art music.

These exams are given the week before classes begin in September each year. Teaching Assistant assignments are made on the basis of diagnostic exam results.

Graduate Credit

A minimum of 135 units are required for a doctoral degree. No course used to fulfill degree requirements for the BA in Music may be used to fulfill degree requirements for a graduate degree in Music, unless specifically required for both degrees. Only work that receives a grade of 'A,' 'B,' or 'S' (a passing grade in an instructor-mandated credit/no credit course) in music courses numbered 100 or higher taken as a graduate student is recognized as fulfilling the advanced-degree requirements. The expectation is that a student will be able to complete the required 135 units of coursework by the end of Autumn Quarter of their 4th year.

The following may be taken as electives for graduate credit:

1. any course in another department or school numbered 100 or over (with advisor's consent); OR

2. any Music course with the Career: GR code in the Bulletin. A letter grade of A, B, or S (a passing grade in an instructor-mandated credit/no credit course) is required; OR
3. Music Department group instruction (MUSIC 72A Intermediate Piano Class through MUSIC 77 Percussion Class). Enroll as MUSIC 299 Independent Study after consulting with instructor.

Degree Options

The following fields of study are declarable as subplans in Axxess via the "Declaration or Change to a Field of Study for Graduate Students" form; they appear on the transcript and the diploma:

• Doctor of Musical Arts degree (D.M.A.) in Composition

The D.M.A. is offered to a limited number of students who demonstrate substantial experience in composition, sonic and intermedial arts, with high promise of attainment in their respective fields. Breadth is given through studies in other branches of music and in relevant fields outside music, as desirable. The final project for the D.M.A. degree is a creative project, which may consist of a large-scale composition for ensemble, a series of compositions, or a substantial sonic or intermedial project.

• Doctor of Philosophy degree (Ph.D.) in Ethnomusicology

Ethnomusicology at Stanford prepares students to study sound, listening, and musical practices in diverse social and cultural contexts. Intensive training in fieldwork and ethnographic methods as well as critical theory, performance studies, anthropology, and area studies are central to the program. A vital aspect of students' experience is collaboration with historical musicology, composition, Euro-American music theory, and creative music-making.

• Doctor of Philosophy degree (Ph.D.) in Musicology

Musicology at Stanford prepares students for the historical and critical study of music and musical practices. Intensive training in archival, textual, analytical, and interpretive methods as well as critical theory, performance studies, and cultural studies are central to the program. A vital aspect of students' experience is collaboration with ethnomusicology, composition, and performance.

• Doctor of Philosophy degree (Ph.D.) in Computer-Based Music Theory and Acoustics

The Ph.D. is offered in areas of the research of Stanford's graduate faculty: Musicology, Ethnomusicology, and Computer-Based Music Theory and Acoustics (CBMTA) at the Center for Computer Research in Music and Acoustics (CCRMA). The department seeks students who demonstrate substantial scholarship, high promise of attainment, and the ability to do independent investigation and present the results of such research in a dissertation.

Degree Requirements

Residence

The candidate must complete a minimum of 135 academic units (see Residency under the Graduate Degrees (<http://exploreddegrees.stanford.edu/graduatedegrees/>) section of this bulletin). Doctoral candidates working on Ph.D. dissertations or Doctor of Musical Arts (D.M.A.) final projects that require consultation with faculty members continue enrollment in the University under Terminal Graduate Registration (TGR), after they have earned the required 135 academic units and have completed their Special Area Examinations.

Qualifying Examination

D.M.A. students and Ph.D. students in the Computer-Based Music Theory and Acoustics programs take a written and oral Qualifying Examination just prior to the fourth funded quarter of study.

D.M.A. students submit a Special Area Examination topic proposal by the end of their fifth quarter.

Ph.D. students in Ethnomusicology take their written and oral Qualifying Exams just prior to the eighth funded quarter of study.

Ph.D. students in Musicology take their written and oral Qualifying Exams just prior to the eighth funded quarter of study.

Admission to Doctoral Candidacy

Faculty review the doctoral student’s progress and academic achievement annually. Admission to candidacy for the doctoral degree is a judgment by the faculty in the department or school of the student’s potential to successfully complete the requirements of the degree program. Students are expected to complete department qualifying procedures and apply for candidacy by the end of their second year in the Ph.D. program. If the student’s progress and potential are deemed sufficient to advance to Candidacy, the student must complete the Application for Candidacy for Doctoral Degree (<https://stanford.box.com/s/wlcmlt9bw2ztv6r3rlphp0rwwy7iapzs/>). A student who does not advance to Candidacy will be dismissed from the program.

Teaching

All students in the Ph.D. or D.M.A. degree programs, regardless of sources of financial support, are required to complete six quarters of supervised teaching (Teaching Assistantship) at half time. MUSIC 280 TA Training Course (offered in Spring Quarter and taken at the end of the first year) is required preparation for Teaching Assistants. The department may offer additional quarters of teaching to students beyond the third year, depending on teaching needs and student qualifications. Teaching Assistants are required to be present on campus during the instruction period and until their duties in exam week are fulfilled. A TA who needs to take a short absence related to professional development (no more than one week in a quarter) should ask the instructor to approve that absence at least one month before the quarter begins. Absences during midterms and finals are not acceptable.

I. Composition

The Doctor of Musical Arts (D.M.A.) degree in Composition is given breadth through collateral studies in other branches of music and in relevant studies outside music as seems desirable. In addition to degree requirements required of all doctoral graduate students and listed above, students must complete the following required courses:

Required Courses		Units
MUSIC 280	TA Training Course	1
MUSIC 300G	Analysis and Repertoire: Late-Romantic to Contemporary	3-4
MUSIC 305D	Analysis from a Compositional Perspective	4
MUSIC 323	Doctoral Seminar in Composition (6 quarters during the first 3 years of study) ¹	3-4
MUSIC 324	Graduate Composition Forum	1-9
MUSIC 325	Individual Graduate Projects in Composition ²	1-5
One elective course from the CBMTA curriculum chosen from the following or similar, with advisor’s approval:		
MUSIC 220A	Fundamentals of Computer-Generated Sound	
MUSIC 250C	Interaction - Intermedia - Immersion	
MUSIC 300G	Analysis and Repertoire: Late-Romantic to Contemporary	
MUSIC 251	Psychophysics and Music Cognition	
MUSIC 255	Intermedia Workshop	
MUSIC 256A	Music, Computing, Design: The Art of Design	

¹ In addition to the nine required terms (to be complete in the first three years), participation in classmates’ Portfolio Reviews, Area Exams, and Final Project Presentations is strongly encouraged. We find that attending others’ milestone events increases student’s preparedness for their own. Attendance at Final Project Presentations is particularly important; students are expected to communicate with their adviser in the case that they must miss a Final Project Presentation. Students are also encouraged to attend presentations by invited composers beyond the 9-quarter requirement.

² Two or more quarters per year are required until advancement to candidacy. By the end of the second year the student shall have enrolled with a minimum of two different faculty members. By the end of the third year the student shall have enrolled with a minimum of three different faculty.

- Besides those requirements listed above, candidates are expected to produce a portfolio of works demonstrating their ability to compose in a variety of forms and for the common media: vocal, instrumental, and electronic music. If possible, the works submitted are presented in public performance prepared by the composer. Annual progress is reviewed by the composition faculty, with a major portfolio review during the Autumn Quarter of the third year.
- Foreign Language Requirement*—At the time of advancement to candidacy, all D.M.A. students are required to have demonstrated a reading knowledge of one language other than English and the ability to translate it into idiomatic English.
- Special-Area Examination*—During the Winter Quarter of the fourth year of study (no later than the ninth week of classes), the DMA student completes the following: a written examination on their planned field of concentration; a one-hour presentation followed by questions in MUSIC 324 Graduate Composition Forum; a sample course syllabus; and the final project proposal.
- Final Project Presentation*—Required during the last quarter of residence, no later than the ninth week of classes, the purpose of the presentation is to demonstrate the ability of the candidate to organize and present the topic of their final project for public review. It should be one hour in length, followed by questions, treating aspects of the final project, followed by questions. Details regarding the D.M.A. final project presentation may be found in the Department of Music Graduate Handbook.
- Final Project*—Candidate’s D.M.A. work culminates in a required Final Project. The final project in composition must be a substantial composition, the scope of which shall be agreed upon by the members of the committee. This may consist of a single large-scale work, or a series of compositions unified by an artistic theme or process. Typically, work on the final project encompasses several quarters.
- Reading Committee*—The membership of the reading committee is the principal final project advisor and a minimum of two additional members. The notice of appointment of a D.M.A. Final Project Reading Committee should be submitted to the department at the same time as the approved final project proposal and the completion of the Special Area Exam. It is the responsibility of the student, with the advice of his or her advisor, to approach appropriate faculty members and obtain their consent to serve on the reading committee. Download the D.M.A. reading committee form (<https://stanford.box.com/s/5irt1a01fti7lkebpq6sr93lxvr6oqtp/>); fill it out; obtain committee members’ signatures; return to the graduate student administrator.
- The faculty expect doctoral students to engage deeply with the on-campus composition community above and beyond TA requirements. This includes engagement with new music by faculty and fellow students and participation in critical discourse. We strongly encourage students to attend peers’ milestone events such as Portfolio Reviews, Area Exam Presentations, and Final Project Presentations.

8. Students are expected to be in residence during their studies, to fully profit from and contribute to the Music Department. However, students may request research and artistic practice-based leaves when specific activities warrant it, as long as they do not interfere with the above stated requirements. Leave requests must be reviewed by the full composition faculty and approved by a majority, in consultation with the Department Chair. Leave requests should be made to the adviser at least two weeks before relevant University deadlines.

II. Ethnomusicology

In addition to the degree requirements required of all doctoral graduate students and listed above, students in the PhD Ethnomusicology subplan must complete the following courses:

Required Courses

MUSIC 200A	Proseminar in Musicology and Music Bibliography	3-4
MUSIC 200B	Proseminar in Ethnomusicology	3-5
MUSIC 280	TA Training Course	1
MUSIC 300D	Music Ethnography	3-5
MUSIC 300(X)	Methods for Graduate Music Study ¹	3-5
MUSIC 310	Research Seminar in Musicology ²	3-5
	GR-coded course in Anthropology	3-5
	GR-coded course in TAPS	3-5
	GR-coded course in global/regional/linguistic area	3-5
	GR-coded course in race/ethnicity/gender/sexuality	3-5
	Course, lessons, or ensemble in "non-Western" musics	0-3
MUSIC 330	Musicology Dissertation Colloquium ³	1

¹ The requirement is for one 300(X) seminar of 3-4 units, in addition to MUSIC 300D Music Ethnography. A student may request to take another 310 in lieu of 300(X).

² The requirement is for three 310 seminars of 3-5 units each, to be taken in the first three years of study.

³ The requirement is for enrollment each quarter offered during Candidacy, EXCEPT when conducting ethnographic fieldwork.

- Foreign Language Requirement**—By the time of advancement to Candidacy, all Ph.D. students in Ethnomusicology must demonstrate proficiency in one field language, and EITHER one "classical" language (Latin, German, Italian, French, Spanish, or Russian) OR a second field language. If one of these languages is the student's native language, the student may be exempted from an examination.
- Special-Area Examination**—During Autumn quarter of the fourth year of study, the student submits a dissertation proposal and takes a written and oral examination of their knowledge of musics and literature of the student's area of concentration. The examination will also test students on the conceptual foundations of the field of Ethnomusicology, as well as a theoretical topic that is central to the student's dissertation. The Special Area exam concludes with an oral defense of the written answers and the dissertation proposal. The Special Area exam committee comprises prospective readers of the dissertation.
- Reading Committee**—The dissertation reading committee is constituted according to the G.A.P., section 4.8.1 (<https://gap.stanford.edu/handbooks/gap-handbook/chapter-4/subchapter-8/page-4-8-1/>). It includes, at minimum: the principal dissertation advisor; a second reader from the Music faculty; a third reader from a department outside of Music. It is the responsibility of the student, with the advice of his or her advisor, to approach appropriate faculty members and obtain their consent to serve on the reading committee. The student must file a completed and signed

Doctoral Dissertation Reading Committee form with the Student Services Officer at the same time as the approved dissertation proposal and the completion of the Special Area Exam.

- Dissertation**—After the first two years of graduate study, the student concentrates on researching and writing the dissertation. The dissertation demonstrates the student's ability to produce a work of original and excellent scholarship
- University Oral Examination**—When the dissertation is substantially complete, as judged by the candidate and their principal dissertation advisor, the candidate gives a public oral presentation on the research, method, and results. Immediately following the presentation, there is a closed-session examination of the candidate by a University Orals Committee constituted according to the G.A.P., section 4.7.1 (<https://gap.stanford.edu/handbooks/gap-handbook/chapter-4/subchapter-7/page-4-7-1/>).

III. Musicology

In addition to degree requirements required of all doctoral graduate students and listed above, students must complete the following required courses:

Required Courses		Units
MUSIC 200A	Proseminar in Musicology and Music Bibliography	3-4
MUSIC 200B	Proseminar in Ethnomusicology	3-5
MUSIC 280	TA Training Course	1
MUSIC 310	Research Seminar in Musicology ¹	3-5
MUSIC 330	Musicology Dissertation Colloquium ²	1
MUSIC 300(X)	Methods for Graduate Music Study ³	3-5

¹ The requirement is for five 310 seminars of 3-5 units each, to be taken in the first three years of study.

² Student must enroll in MUSIC 330 Musicology Dissertation Colloquium each quarter offered while they are TGR and continuing to graduation.

³ The requirement is for six 300(X) seminars of 3-4 units each, to be taken in the first two years of study.

- Foreign Language Requirement**—By the time of advancement to Candidacy, all Ph.D. students in Musicology must pass Ph.D. language reading examinations in German and in a second language chosen from French, Italian, or Latin. A student may petition to substitute a different second language necessary for their planned doctoral research. If one of these languages is the student's native language, the student may be exempted from an examination.
- Special-Area Examination**—During Autumn quarter of the fourth year of study, the student submits a dissertation proposal and takes a written examination on repertoire and scholarly literature in their proposed area of dissertation research. The Special Area exam concludes with an oral defense of the written answers and the dissertation proposal. The Special Area exam committee comprises prospective readers of the dissertation.
- Reading Committee**—The dissertation reading committee is constituted according to the G.A.P., section 4.8.1 (<https://gap.stanford.edu/handbooks/gap-handbook/chapter-4/subchapter-8/page-4-8-1/>). It includes, at minimum: the principal dissertation advisor; a second reader from the Music faculty; a third reader from Music or another department. It is the responsibility of the student, with the advice of his or her advisor, to approach appropriate faculty members and obtain their consent to serve on the reading committee. The student must file a completed and signed Doctoral Dissertation Reading Committee form with the Student Services Officer at the same time as the approved dissertation proposal and the completion of the Special Area Exam.

4. *Dissertation*—After the first two years of graduate study, the student concentrates on researching and writing the dissertation. The dissertation demonstrates the student's ability to produce a work of original and excellent scholarship.
5. *University Oral Examination*—When the dissertation is substantially complete, as judged by the candidate and their principal dissertation advisor, the candidate gives a public oral presentation on the research, method, and results. Immediately following the presentation, there is a closed-session examination of the candidate by a University Orals Committee constituted according to the G.A.P., section 4.7.1 (<https://gap.stanford.edu/handbooks/gap-handbook/chapter-4/subchapter-7/page-4-7-1/>).

IV. Computer-Based Music Theory and Acoustics

In addition to degree requirements required of all doctoral graduate students and listed above, students must complete the following required courses:

Required Courses

MUSIC 220A	Fundamentals of Computer-Generated Sound ¹	4
MUSIC 220B	Compositional Algorithms, Psychoacoustics, and Computational Music ¹	4
MUSIC 220C	Research Seminar in Computer-Generated Music ¹	2-4
MUSIC 220D	Research in Computer-Generated Music ²	1-10
MUSIC 251	Psychophysics and Music Cognition	1-5
MUSIC 280	TA Training Course	1
MUSIC 305D	Analysis from a Compositional Perspective	4
MUSIC 300G	Analysis and Repertoire: Late-Romantic to Contemporary	3-4
MUSIC 320A	Introduction to Audio Signal Processing Part I: Spectrum Analysis	3-4
MUSIC 320B	Introduction to Audio Signal Processing Part II: Digital Filters	3-4
MUSIC 341	Ph.D Dissertation ²	1-10
MUSIC 398	PhD Dissertation Proposal ⁴	1-3

¹ Recommend taking this in the first year.

² 220D and 341 can be taken multiple times for 1-10 units each time, for a combined total of 9 units or more.

³ Must take in first year.

⁴ Recommend taking this in the third year.

1. *Foreign Language Requirement*—At the time of advancement to Candidacy, all Ph.D. students in Computer-Based Music Theory and Acoustics are required to have demonstrated a reading knowledge of one language other than English and the ability to translate it into idiomatic English.
2. *Special-Area Examination*—A written and oral examination testing the student's knowledge of music and research in the student's field of concentration is completed during the fourth year of study, no later than the last day of classes in Autumn Quarter of that year. This includes an oral defense of the dissertation proposal. The examining committee comprises prospective readers of the dissertation.
3. *Reading Committee*—The dissertation reading committee is constituted according to the G.A.P., section 4.8.1 (<https://gap.stanford.edu/handbooks/gap-handbook/chapter-4/subchapter-8/page-4-8-1/>). It includes, at minimum: the principal dissertation advisor; a second reader from the Music faculty; a third reader from Music or another department. It is the responsibility of the student, with the advice of his or her advisor, to approach appropriate faculty members and obtain their consent to serve on the

reading committee. The student must file a completed and signed Doctoral Dissertation Reading Committee (<https://stanford.box.com/docdiss-reading-committee-form/>) form with the Student Services Officer at the same time as the approved dissertation proposal and the completion of the Special Area Exam.

4. *Dissertation*—After the first two years of graduate study, the student concentrates on research and writing of the dissertation. The dissertation demonstrates the student's ability to work systematically and independently to produce an essay of competent scholarship.
5. *University Oral Examination*—When the dissertation is substantially complete, as judged by the candidate and their principal dissertation advisor, the candidate gives a public oral presentation on the research, method, and results. Immediately following the presentation, there is a closed-session examination of the candidate by a University Orals Committee constituted according to the G.A.P., section 4.7.1 (<https://gap.stanford.edu/handbooks/gap-handbook/chapter-4/subchapter-7/page-4-7-1/>).

Doctoral Certificate in Composition

Admission

Students are admitted to the Certificate in Composition program based on a selection process adjudicated by Department of Music composition faculty at the start of the student's second year in Ph.D. program in Music. To request consideration for the Doctoral Certificate Program in Composition, the student should speak with a member of the composition faculty and the Department of Music's graduate student services officer. At the time of consideration, the student must be in good standing in the Department of Music.

Requirements

Once admitted into the program, students must complete a course plan to be approved by department faculty based on the requirements below.

		Units
MUSIC 323	Doctoral Seminar in Composition (Doctoral Seminar in Composition (3 quarters required, 2 of which must be completed by the end of the second year of the doctoral program)) ¹	9-12
MUSIC 324	Graduate Composition Forum (Graduate Composition Forum1 (3 quarters required by the end of the second year, plus 6 additional quarters, for a total of 9 quarters))	9
MUSIC 325	Individual Graduate Projects in Composition (Individual Graduate Projects in Composition (7 quarters of individual instruction in composition for any number of units, minimum of 7 units); two quarters must be taken by the end of the second year; the student must have studies with two different composition professors by the end of the second year of the doctoral program, and three different professors by the end of year three of the doctoral program)	7

¹ The Graduate Composition Forum requirement includes participating in group discussions and presentations by guest artists, attending Composition Advising Council (CAC) meetings and helping produce CAC concerts, and attending milestone events associated with the Doctoral Certificate in Composition and the DMA in Composition (i.e. portfolio reviews, special area exam presentations, and final project presentations). There is, however, no residency requirement other than completing 3 of 9 quarters of Music 324 by the end of the second year. A quarter of second-year participation in Music 324 may be deferred if there are pressing research needs or other extenuating circumstances.

Other Requirements and Opportunities

A final project presentation in the fifth year of doctoral study, with or without a written component. Co-supervision (a DCC advisor), by a composition faculty member.

Undertaking the Doctoral Certificate in Composition entitles the student to participate in the Composition Advising Council's selection of visiting ensembles. In addition, it entitles the student to engage in collaborations with, at a minimum, half the number of collaborations with artists invited by the CAC in which a typical DMA student would participate.

Optional Requirements and Expectations

Qualifying Exam: optional but recommended; to be completed no later than the first term of year three. [See Qualifying Exam information under the DMA program tab.]

Third-year Portfolio Review: optional but recommended. [See Portfolio Review information under the DMA program tab.]

COVID-19 Policies

On July 30, the Academic Senate adopted grading policies effective for all undergraduate and graduate programs, excepting the professional Graduate School of Business, School of Law, and the School of Medicine M.D. Program. For a complete list of those and other academic policies relating to the pandemic, see the "COVID-19 and Academic Continuity (<http://exploreddegrees.stanford.edu/covid-19-policy-changes/#tempdeptemplatetabtext>)" section of this bulletin.

The Senate decided that all undergraduate and graduate courses offered for a letter grade must also offer students the option of taking the course for a "credit" or "no credit" grade and recommended that deans, departments, and programs consider adopting local policies to count courses taken for a "credit" or "satisfactory" grade toward the fulfillment of degree-program requirements and/or alter program requirements as appropriate.

Undergraduate Degree Requirements

Grading

The Department of Music counts all courses taken in academic year 2020-21 with a grade of 'CR' (credit) or 'S' (satisfactory) towards satisfaction of undergraduate degree requirements that otherwise require a letter grade.

Graduate Degree Requirements

Grading

The Department of Music counts all courses taken in academic year 2020-21 with a grade of 'CR' (credit) or 'S' (satisfactory) towards satisfaction of graduate degree requirements that otherwise require a letter grade provided that the instructor affirms that the work was done at a 'B' or better level.

Graduate Advising Expectations

The Department of Music is committed to providing academic advising in support of graduate student scholarly and professional development. When most effective, this advising relationship entails collaborative and sustained engagement by both the adviser and the advisee. As a best practice, advising expectations should be periodically discussed and reviewed to ensure mutual understanding. Both the adviser and the advisee are expected to maintain professionalism and integrity.

Faculty advisers guide students in key areas such as selecting courses, designing and conducting research, developing of teaching pedagogy, navigating policies and degree requirements, and exploring academic opportunities and professional pathways.

The faculty program adviser is the primary source of information for the duration of a student's graduate career. Program adviser assignments are made based on perceived best fit at the time of acceptance to a degree program. Only Academic Council Teaching Faculty ("ACTFac" – any tenure-track faculty, i.e., Assistant, Associate, and full Professors), are eligible to serve as graduate program advisers; however, non-ACTFac instructors may serve as co-advisers in conjunction with an ACTFac instructor. See the faculty listing on the Music website (<https://music.stanford.edu/people/faculty/>).

Graduate students are active contributors to the advising relationship, proactively seeking academic and professional guidance and taking responsibility for informing themselves of policies and degree requirements for their graduate program. Graduate students are encouraged to meet with their program adviser at least once each quarter, and are actively encouraged to communicate frequently with their advisers. It is valuable to set clear mutual expectations for the advising process, and to revisit those expectations periodically. While developing a proposal for the Ph.D. dissertation or DMA final project, the student should invite a reading committee in consultation with the program adviser and other relevant faculty.

At the start of graduate study, each student is assigned a program adviser. Should you feel it necessary to change advisers, the following procedure should be followed:

1. Discuss this with your current adviser. With their permission,
2. Solicit agreement from your proposed new adviser.
3. Email the Graduate Student Services Officer with a notification of this change; cc both your old and new advisers.

If there are problems with the advising relationship, please contact the Department Chair or the Graduate Student Services Officer.

Advising Expectations for Ph.D. Students

A student should be an active advisee and should not wait for your adviser to email. Students should arrange for meetings to discuss coursework, summer plans, quals preparation, language study, and, later, the dissertation topic, fellowship applications, and other aspects of professional development. Students should prepare for these meetings carefully, recognizing that the adviser's time is limited.

Advising Expectations for Master of Art in Music (M.S.T.) Students

The same expectations guiding the doctoral advisees guide advising relationships for master's students as well.

Stanford Advising Documents and Resources

The Office of the Vice Provost for Graduate Education (VPGE (<http://vpge.stanford.edu/>)) works collaboratively with Stanford's schools and departments to enhance the quality of graduate education at Stanford University. Among the many resources at their site is a set of graduate

advising resources (<https://vpge.stanford.edu/academic-guidance/advising-mentoring/>).

The Graduate Academic Policies and Procedures (GAP) section on advising (<https://gap.stanford.edu/handbooks/gap-handbook/chapter-3/subchapter-3/page-3-3-1/>) is available on the GAP website.

For a statement of University policy on graduate advising, see the "Graduate Advising (<http://exploreddegrees.stanford.edu/graduatedegrees/#advisingandcredentialstext>)" section of this bulletin.

Emeriti: (Professors) George Barth, Karol Berger, John M. Chowning, Brian Ferneyhough, William H. Ramsey; *(Professors, Performance)* Arthur P. Barnes, Marie Gibson

Chair: Stephen Hinton

Director of Graduate Studies: Heather Hadlock

Director of Undergraduate Studies: Charles Kronengold

Professors: Mark Applebaum, Jonathan Berger, Chris Chafe, Thomas Grey, Stephen Hinton, Julius O. Smith (on leave AW)

Associate Professors: Takako Fujioka, Heather Hadlock, Jaroslaw Kapuscinski (on leave), William P. Mahrt, Jesse Rodin, Ge Wang

Assistant Professors: Patricia Alessandrini, Denise Gill (on leave), Charles Kronengold

Professor (Teaching): Stephen M. Sano (Director of Choral Studies)

Associate Professor (Teaching): Paul Phillips (Director of Orchestral Studies)

Courtesy Professors: Paul DeMarinis, Elizabeth Erikson-DiRenzo, Doug L. James, C. Kwang Sung

Senior Lecturers: Giancarlo Aquilanti (Director of Theory; Wind Ensemble), Talya Berger (Theory), Laura Dahl (Resident Collaborative Pianist), Stephen Harrison (Cello), François Rose (Theory and Composition), Thomas Schultz (Piano), Greg Wait (Voice; Director of Vocal Studies), Frederick R. Weldy (Piano)

Lecturers: Akwasi Papa Abrefah (Steelman), Kumaran Arul (Piano), Erika Arulanantham (Theory), Mark Brandenburg (Clarinet), Marie-Louise Catsalis (Voice), Hongchan Choi (CCRMA), Tony Clements (Tuba), Anthony Doheny (Violin), Greer Ellison (Flute, Baroque Flute), Charles A. Ferguson (Guitar), Debra Fong (Violin), Michael Galisatus (Jazz Ensemble), Russell Gavin (LSJUMB), Dawn Harms (Violin, Viola), Alexandra Hawley (Flute), David Henderson (Classical Saxophone), Wendy Hillhouse (Voice), Melody Holmes-Vedder (Flute), Kathryn Jennings (Voice), Nova Jiménez (Voice), McDowell Kenley (Trombone), Hans Kretz (SNE), Joo-Mee Lee (Violin), Mary Linduska (Voice, Summer), Murray Low (Jazz & Jazz Piano), Adam Luftman (Trumpet), Anthony Martin (Baroque Violin), Robin May (Oboe), Charles McCarthy (Jazz Saxophone), Robert Huw Morgan (University Organist, Organ), Bruce Moyer (Contrabass), Stan Muncy (Percussion), Herbert Myers (Early Winds), James Nadel (Jazz), Rufus Olivier (Bassoon), Rafael Ornes (Summer Chorus) Lawrence Ragent (French Horn), Joshua Redman (Jazz), David Rokeach (Drum Set), Robin Sharp (Violin), Annabelle Taubl (Harp), Elaine Thornburgh (Harpsichord), Josh Thurston-Milgrom (Jazz Bass), Erik Ulman (Composition, Theory), Linda Uyechi (Taiko), Rick Vandivier (Jazz Guitar), John Worley (Jazz Trumpet), Hui (Daisy) You (Gu-Zheng), Timothy Zerlang (University Carillonneur, Piano)

Adjunct Professors: Jonathan Abel (CCRMA), David Berners (CCRMA), Marina Bosi (CCRMA), Poppy Crum (CCRMA), Pierre Divenyi (CCRMA), Walter Hewlett (Computer-Assisted Research in the Humanities), Blair Kaneshiro (CCRMA), Gautham Mysore (CCRMA), Craig Sapp (Computer-

Assisted Research in the Humanities), Eleanor Selfridge-Field (Computer-Assisted Research in the Humanities), Malcolm Slaney (CCRMA)

Artists-in-Residence (St. Lawrence String Quartet): Geoff Nuttall (Violin), Owen Dalby (Violin), Lesley Robertson (Viola), Christopher Costanza (Cello)

Courses

MUSIC 1. Musical Genius: Exemplars in the History of Organized Sound. 3 Units.

How does music work? A broad exploration of music as defined by three major components (i) Theories of Music (elements and parameters), (ii) Histories of Music (cultures and people), and (iii) Practitioners of Music (musicians and scholars). Lecture, discussion, guided critical listening and viewing of audio, video, and live performance, and creation of self-curated mini-projects.

MUSIC 1A. Music, Mind, and Human Behavior. 3 Units.

An introductory exploration of the question of why music is a pervasive and fundamental aspect of human existence. The class will introduce aspects of music perception and cognition as well as anthropological and cultural considerations.

MUSIC 1SI. Introduction to Indian Classical Music. 1 Unit.

This is an introductory course in the classical music of India, with emphasis on learning to listen to and appreciate Indian classical music concerts. It will cover a broad overview of the two main genres of Indian classical music - Carnatic and Hindustani. We will have several in-class demonstrations of instruments unique to the Indian classical music tradition. Class meetings will include discussions of landmark performances and artists as well as fundamentals of this music style, such as Raaga (melody), Taala (rhythm), song structure, and improvisation.

MUSIC 2A. The Symphony. 3 Units.

Symphonic literature 1750 to the present, with emphasis on developing listening skills and preparation for attending a live performance. Ability to read music not required.

MUSIC 2C. An Introduction to Opera. 3 Units.

The lasting appeal of opera as a lavishly hybrid genre from the 1600s to the present. How and why does opera set its stories to music? What is operatic singing? Who is the audience? How do words, music, voices, movement, and staging collaborate in different operatic eras and cultures? Principal works by Monteverdi, Handel, Mozart, Verdi, Wagner, Strauss, Britten, and Adams. Class studies and attends two works performed by the San Francisco Opera.

MUSIC 4SI. Interactive Introduction to North American Taiko. 1 Unit.

Taught by Stanford Taiko members. Techniques and history. No experience necessary. May be repeated for credit. This course was initiated by Mitchell Fukumoto and Stanford Taiko.

MUSIC 6F. Art is My Occupation: Professional Development in Music. 1 Unit.

Open to majors and non-majors. This course is designed for students who are considering careers in performance or the music industry to explore their personal and artistic identity. Weekly guest speakers provide real world insight on topics related to professional advancement.

MUSIC 7B. Musical Cultures of the World. 2-3 Units.

Ethnomusicologists study music in human life. Music is with us as we articulate and define social identities – punk rocker, student, Japanese-American, member of a sorority, Catholic, radical, etc. – and as we acquire new identities through rites of passage such as weddings, graduations, and initiation ceremonies. Many of life's most intense moments are accompanied or created by music, but music can also be part of the everyday, with us as we work, move, and socialize. This course is about what music does in human life and what it means to participants. In other words, it is about the myriad ways that music makes us human. We will address musical meanings and practices in selected regions of Africa, Asia, Europe, and the Americas. As you encounter music in an increasingly connected world, this course will provide you with a new awareness of musical diversity and of the social implications of music making. To satisfy a Ways requirement, this course must be taken for at least 3 units. In AY 2020-21, a letter grade or CR grade satisfies the Ways requirement.

MUSIC 8A. Rock, Sex, and Rebellion. 3 Units.

Development of critical listening skills and musical parameters through genres in the history of rock music. Focus is on competing aesthetic tendencies and subcultural forces that shaped the music. Rock's significance in American culture, and the minority communities that have enriched rock's legacy as an expressively diverse form. Lectures, readings, listening, and video screenings. Attendance at all lectures is required.

MUSIC 11N. Harmonic Convergence: Music's Intersections with Science, Mathematics, History, and Literature. 3 Units.

Topics include music and the brain; tuning and temperament; musical form; connections between music and mathematics; and readings in history and literature with strong musical elements. Readings include "The Power of Music" (Mannes), "Musicophilia" (Sacks), "From Music to Mathematics" (Roberts), "The Kreutzer Sonata" (Tolstoy), "A Clockwork Orange" and "Honey for the Bears" (Burgess). Compositions by Bach, Mozart, Beethoven, Debussy, Schoenberg, Stravinsky, Shostakovich, and others will be studied. Goals: increased understanding of music's relationship to other fields; improved writing skills. While ability to read music is not required, students with musical ability will be encouraged to perform relevant works in class.

MUSIC 11Q. Art in the Metropolis. 3 Units.

This seminar is offered in conjunction with the annual "Arts Immersion" trip to New York that takes place over the spring break and is organized by the Stanford Arts Institute (SAI). Participation in the trip is a requirement for taking part in the seminar (and vice versa). The trip is designed to provide a group of students with the opportunity to immerse themselves in the cultural life of New York City guided by faculty and SAI staff. Students will experience a broad range and variety of art forms (visual arts, theater, opera, dance, etc.) and will meet with prominent arts administrators and practitioners, some of whom are Stanford alumni. For further details and updates about the trip, see <https://arts.stanford.edu/for-students/academics/arts-immersion/new-york/>.

Same as: ARTSINST 11Q, ENGLISH 11Q, TAPS 11Q

MUSIC 12A. Introductory Piano Class. 1 Unit.

(A=level 1; B=level 2; C=level 3) There is a fee for this class. Please visit <http://music.stanford.edu/Academics/LessonSignups.html> for class fee and signup information. Class is closed by design. Please register on the waitlist and show up on the first day of class to receive a permission number for enrollment. Preference to department majors. Zero unit enrollment option available with instructor permission. See website: (<http://music.stanford.edu>) for policy and procedure.

MUSIC 12AS. Introductory Piano Class, Level 1. 1 Unit.

Piano: Introductory Level 1 (Group; 10 students to a section) (A=Level 1; B=Level 2; C=Level 3). Class is closed by design. Please register on the wait-list and show up on the first day of class to receive a permission number for enrollment. Complete registration form available for download at: <http://tinyurl.com/q43c48g>. May be repeated for credit 5 times. Zero unit enrollment option available with instructor permission. See website: (<http://tinyurl.com/posmuhn>) for policy and procedure. By enrolling in this course you are giving consent for the video and audio recording and distribution of your image and performance for use by any entity at Stanford University.

Same as: Group

MUSIC 12AZ. Introductory Piano Class. 0 Units.

(A=level 1; B=level 2; C=level 3) There is a fee for this class. Please visit <http://music.stanford.edu/Academics/LessonSignups.html> for class fee and signup information. Class is closed by design. Please register on the waitlist and show up on the first day of class to receive a permission number for enrollment. Preference to department majors. Zero unit enrollment option available with instructor permission. See website: (<http://music.stanford.edu>) for policy and procedure. May be repeat for credit for 0 unit and total completion allowed 99.

MUSIC 12B. Introductory Piano Class. 1 Unit.

This class is closed by design. To enroll, please sign up on the Axxess waitlist and show up on the first day to receive a permission number for re-enrollment. Your place on the waitlist will be considered a reservation. If the waitlist is closed, there are no more spaces in the class. (A=level 1; B=level 2; C=level 3) There is a fee for this class. Please visit <http://music.stanford.edu/Academics/LessonSignups.html> for class fee and signup information. Zero unit enrollment option available with instructor permission. See website: (<http://music.stanford.edu>) for policy and procedure.

MUSIC 12BS. Introductory Piano Class, Level 2. 1 Unit.

Piano: Introductory Level 2 (Group; 10 students to a section) (A=Level 1; B=Level 2; C=Level 3). Class is closed by design. Please register on the wait-list and show up on the first day of class to receive a permission number for enrollment. Complete registration form available for download at: <http://tinyurl.com/q43c48g>. May be repeated for credit 5 times. Zero unit enrollment option available with instructor permission. See website: (<http://tinyurl.com/posmuhn>) for policy and procedure. By enrolling in this course you are giving consent for the video and audio recording and distribution of your image and performance for use by any entity at Stanford University.

Same as: Group

MUSIC 12BZ. Introductory Piano Class. 0 Units.

This class is closed by design. To enroll, please sign up on the Axxess waitlist and show up on the first day to receive a permission number for re-enrollment. Your place on the waitlist will be considered a reservation. If the waitlist is closed, there are no more spaces in the class. (A=level 1; B=level 2; C=level 3) There is a fee for this class. Please visit <http://music.stanford.edu/Academics/LessonSignups.html> for class fee and signup information. Zero unit enrollment option available with instructor permission. See website: (<http://music.stanford.edu>) for policy and procedure.

MUSIC 12C. Introductory Piano Class. 1 Unit.

This class is closed by design. To enroll, please sign up on the Axxess waitlist and show up on the first day to receive a permission number for re-enrollment. Your place on the waitlist will be considered a reservation. If the waitlist is closed, there are no more spaces in the class. (A=level 1; B=level 2; C=level 3.) May be repeated for credit a total of 14 times. There is a fee for this class. Please visit <http://music.stanford.edu/Academics/LessonSignups.html> for class fee and signup information. Zero unit enrollment option available with instructor permission. See website: (<http://music.stanford.edu>) for policy and procedure.

MUSIC 12CS. Introductory Piano Class, Level 3. 1 Unit.

Piano: Introductory Level 3 (Group; 10 students to a section) (A=Level 1; B=Level 2; C=Level 3). Class is closed by design. Please register on the wait-list and show up on the first day of class to receive a permission number for enrollment. Complete registration form available for download at: <http://tinyurl.com/q43c48g>. May be repeated for credit 5 times. Zero unit enrollment option available with instructor permission. See website: (<http://tinyurl.com/posmuhn>) for policy and procedure. By enrolling in this course you are giving consent for the video and audio recording and distribution of your image and performance for use by any entity at Stanford University.
Same as: Group

MUSIC 12CZ. Introductory Piano Class. 0 Units.

This class is closed by design. To enroll, please sign up on the Axxess waitlist and show up on the first day to receive a permission number for re-enrollment. Your place on the waitlist will be considered a reservation. If the waitlist is closed, there are no more spaces in the class. (A=level 1; B=level 2; C=level 3.). There is a fee for this class. Please visit <http://music.stanford.edu/Academics/LessonSignups.html> for class fee and signup information. Zero unit enrollment option available with instructor permission. See website: (<http://music.stanford.edu>) for policy and procedure.

MUSIC 12SZ. Introductory Piano. 0 Units.

Introductory Piano (zero-unit option). Complete registration form available for download at: <http://tinyurl.com/q43c48g>. Zero unit enrollment option available with instructor permission. See website: (<http://tinyurl.com/posmuhn>) for policy and procedure. By enrolling in this course you are giving consent for the video and audio recording and distribution of your image and performance for use by any entity at Stanford University.

MUSIC 13N. Music and Politics: From Mozart to Miranda. 3 Units.

This course examines the relationship between music and politics. It will view music within an historical context, exploring how music can reflect and sometimes influence major political issues of the day. Topics will include "The Marriage of Figaro" and the French Revolution; Verdi's operas and politics in 19th-century Italy; Wagner controversies; Stravinsky and fascism; *¿Degenerate Music¿* in Nazi Germany; Shostakovich in the USSR; Radical Chic *¿* Leonard Bernstein's fundraiser for the Black Panthers; "The Death of Klinghoffer" and the Israeli-Palestinian conflict; and Hamilton and its 21st-century view of the American Revolution. The ability to read music, while beneficial, is not required.

MUSIC 14N. Women Making Music. 3 Units.

Preference to freshmen. Women's musical activities across times and cultures; how ideas about gender influence the creation, performance, and perception of music.
Same as: FEMGEN 13N

MUSIC 15N. The Aesthetics of Data. 3 Units.

Focus on visual and auditory display of data, specifically, the importance of aesthetic principles in effective data display, and the creative potential of scientific, biological, environmental and other data as inspiration for artistic expression.

MUSIC 16Q. Listening to Climate Change. 3 Units.

Today, it seems that evidence of climate change is everywhere. But, climate change is not new, nor is public consciousness of it. As early as 1840, climate change had become a subject of cultural fascination—especially for musicians and composers. This course will focus on five musical works from a range of time periods and traditions that reflect contemporary consciousness of and reactions to climate change. What ideas about power, race, and identity are reflected in music about the changing environment? How has the history of musical encounters with climate shaped that mode of engagement today?.

MUSIC 18A. Jazz History: Ragtime to Bebop, 1900-1940. 3 Units.

From the beginning of jazz to the war years.
Same as: AFRICAAM 18A

MUSIC 18B. Jazz History: Bebop to Present, 1940-Present. 3 Units.

Modern jazz styles from Bebop to the current scene. Emphasis is on the significant artists of each style.
Same as: AFRICAAM 18B

MUSIC 19A. Introduction to Music Theory. 3 Units.

For non-music majors and Music majors or minors unable to pass the proficiency test for entry to MUSIC 21. The fundamentals of music theory and notation, basic sight reading, sight singing, ear training, keyboard harmony; melodic, rhythmic, and harmonic dictation. Skill oriented, using piano and voice as basic tools to develop listening and reading skills.

MUSIC 19B. Intermediate Music Theory. 3 Units.

This course is an introduction to music theory geared toward students who have basic literacy skills (i.e. fundamental notation, identifying major and minor scales, keys, etc). Using musical materials from repertoire selected from campus and area concerts, and incorporating the opportunity to attend these concerts, the course will introduce elements of harmony, melody, form, orchestration and arrangement. The course is an appropriate successor to Music 19A. Students who successfully complete Music 19B can go on directly to Music 21.

MUSIC 20A. Jazz Theory. 3 Units.

Introduces the language and sounds of jazz through listening, analysis, and compositional exercises. Students apply the fundamentals of music theory to the study of jazz. Prerequisite: 19 or consent of instructor.
Same as: AFRICAAM 20A

MUSIC 20B. Advanced Jazz Theory. 3 Units.

Approaches to improvisation and composed jazz lines through listening, transcribing, analysis, and compositional exercises. Topics include: chord/scale theory, melodic minor harmony, altered chords, and substitute harmony. Prerequisite: 20A or consent of instructor.

MUSIC 20C. Jazz Arranging and Composition. 3 Units.

Jazz arranging and composition for small ensembles. Foundation for writing for big band. Prerequisite: 20A or consent of instructor.

MUSIC 21. Elements of Music I. 3 Units.

Preference to majors. Introduction to tonal theory. Practice and analysis. Diatonic harmony focusing on melodic and harmonic organization, functional relationships, voice-leading, and tonal structures. Students must concurrently enroll in an Ear-training and musicianship lab (MUSIC 24a, 24b, or 24c as appropriate). Music majors must take 4 courses in ear training, and pass an ear training exit exam in their Junior year. Enrollment limited to 40. Prerequisites: (1) Piano Proficiency Exam (must be passed within the first two weeks of the term) or MUSIC 12A (may be taken concurrently); (2) Passing grade on a basic musical skills proficiency examination on the first day of class or MUSIC 19.

MUSIC 22. Elements of Music II. 3 Units.

Preference to majors. Introduction to chromatic harmony focusing on secondary functions, modulations, harmonic sequences, mode mixture, and the Neapolitan, and augmented sixth chords. Analysis of musical forms and harmonizations complemented by harmonic and melodic dictation, sight singing, and other practical skills. Students must concurrently enroll in an Ear-training and musicianship lab (MUSIC 24a, 24b, or 24c as appropriate). Music majors must take 4 courses in ear training, and pass an ear training exit exam in their Junior year. Prerequisites: (1) MUSIC 21; (2) Piano Proficiency Exam or MUSIC 12B (may be taken concurrently).

MUSIC 23. Elements of Music III. 3 Units.

Preference to majors. Continuation of chromatic harmony and complex forms of late Romantic period. Students must concurrently enroll in an Ear-training and musicianship lab (MUSIC 24a, 24b, or 24c as appropriate). Music majors must take 4 courses in ear training, and pass an ear training exit exam in their Junior year. Prerequisites: (1) MUSIC 22; (2) Piano Proficiency Exam or MUSIC 12C (may be taken concurrently).

MUSIC 24A. Ear Training I. 1-2 Unit.

Class is closed by design. Please contact instructor Erika Arul (mailto:earul@stanford.edu) for permission to enroll. Preference to Music majors and minors.

MUSIC 24B. Ear Training II. 1-2 Unit.

Class is closed by design. Please contact instructor Erika Arul (mailto:earul@stanford.edu) for permission to enroll. Preference to Music majors and minors.

MUSIC 24C. Ear Training III. 1-2 Unit.

Class is closed by design. Please contact instructor Erika Arul (mailto:earul@stanford.edu) for permission to enroll. Preference to Music majors and minors.

MUSIC 24Z. Ear Training. 0 Units.

Class is closed by design. Please contact instructor Erika Arul (mailto:earul@stanford.edu) for permission to enroll. Preference to Music majors and minors.

MUSIC 25. Decoding Anime. 3 Units.

Anime as an artistic form often boasts highly imaginative graphics, striking music, vibrant characters, and fantastical stories. The course aims at decoding the expressive power of anime by applying a method of multimedia analysis that focuses on the interaction between its component elements: story, image, sound and music. Through close reading of works by five leading and innovative directors the students will develop tools to analyze anime and interpret it in a larger cultural context.

MUSIC 27N. The British Invasion. 3 Units.

Examination of three generations of British popular music in the '60s and '70s: the Beatles (and the Rolling Stones, the Kinks, the Who); progressive rock (art rock) as embodied in Pink Floyd, Yes, King Crimson, Genesis, and Emerson, Lake, and Palmer; the emergence of punk in its revolutionary (the Clash) and nihilistic (the Sex Pistols) forms. Among other issues, the manner in which marginal American culture (particularly African-American blues) is neglected by Americans and venerated by foreigners and the subsequent mainstream consumption of a transformed and repackaged American minority culture is discussed.

MUSIC 31N. Behind the Big Drums: Exploring Taiko. 3 Units.

Preference to Freshman. Since 1992 generations of Stanford students have heard, seen, and felt the power of taiko, big Japanese drums, at Admit Weekend, NSO, or Baccalaureate. During a time of COVID, this online version of the seminar takes students behind the taiko. Taiko is a relative newcomer to the American music scene. The contemporary ensemble drumming form, or kumidaiko, developed in Japan in the 1950s. The first North American taiko groups emerged from the Japanese American community shortly after and coincided with increased Asian American activism. In the intervening years, taiko has spread into communities in the UK, Europe, Australia, and South America. What drives the power of these drums? In this course, we explore the musical, cultural, historical, and political perspectives of taiko through readings and discussion, conversations with taiko artists, and online taiko lessons. With the taiko as our focal point, we find intersections of Japanese music, Japanese American history, and Asian American activism, and explore relations between performance, cultural expression, community, and identity.

Same as: ASNAMST 31N

MUSIC 32N. Sculpting with Sounds, Images, and Words. 3 Units.

Throughout history and from East to West, cultures abound in multimedia forms. Whether in Coldplay's Music Video or Fantasia, Pepsi TV ads or Wagner's opera, Miyazaki anime or traditional Noh Theater of Japan, the three modes of expression (sounds, images, and word) are interwoven in distinctive ways. What are their individual and combined powers? How can one harness them in an online context? Can Web be a stage for multimedia theater? What is unique about the poetry of intermodal metaphor? The course will be an opportunity to face these questions in creative web-based projects as well as through in-class viewing of multimedia works, analysis and debates, readings, and student presentations. The seminar will be taught at the Center for Computer Research in Music and Acoustics where students will have access to new media technologies. Prior experience in music, literature, art practice or computer programming is welcome but not required.

MUSIC 33N. Beethoven. 3 Units.

This seminar is designed as an in-depth introduction to the music of Ludwig van Beethoven. In addition to exploring the composer's principal works in a variety of genres (symphonies, piano sonatas, string quartets, opera, etc.), we will consider broader questions of biography and reception history. How have images of the composer and the fortunes of his music changed over time? How did his compositions come to define the paradigm of Western classical music? What impact has he had on popular culture? The class is open to all levels of musical expertise; the ability to read music is not a requirement. Come prepared to discover – or rediscover – some great music!.

MUSIC 34N. Performing America: The Broadway Musical. 3 Units.

Musical theater as a site for the construction of American identity in the twentieth century to the present. Issues of class, race, gender, and sexuality; intersections with jazz, rock, and pop; roles of lyricist, composer, director, choreographer, producer, performers. Individual shows (Showboat, Oklahoma, South Pacific, Guys and Dolls, West Side Story, Wicked, Book of Mormon, Hamilton, Dear Evan Hansen), show tunes in jazz performance, film musicals, and television. Opportunities for performance and attendance at local productions.

MUSIC 36H. Dangerous Ideas. 1 Unit.

Ideas matter. Concepts such as revolution, tradition, and hell have inspired social movements, shaped political systems, and dramatically influenced the lives of individuals. Others, like immigration, universal basic income, and youth play an important role in contemporary debates in the United States. All of these ideas are contested, and they have a real power to change lives, for better and for worse. In this one-unit class we will examine these "dangerous" ideas. Each week, a faculty member from a different department in the humanities and arts will explore a concept that has shaped human experience across time and space. Some weeks will have short reading assignments, but you are not required to purchase any materials.

Same as: ARTHIST 36, COMPLIT 36A, EALC 36, ENGLISH 71, ETHICSOC 36X, FRENCH 36, HISTORY 3D, PHIL 36, POLISCI 70, RELIGST 36X, SLAVIC 36

MUSIC 37N. Ki ho'alu: The New Renaissance of a Hawaiian Musical Tradition. 2 Units.

Preference to freshman. A style of guitar playing originally developed in the Hawaiian Islands during the early 1800s, ki ho alu, or Hawaiian slack key guitar, is an art form that has experienced exposure and popularity in Hawai'i and worldwide. Its rise in popularity coincides with the increased awareness, dissemination, and growth of political activism directly relating to Hawaiian culture. In this on-line, synchronously-taught seminar we will explore the musical, cultural, historical, and political perspectives of Hawaiian music in general, and ki ho alu in particular, through critical listening, readings, discussion, and a conversation with guest slack key artist and 6-time Grammy winner Daniel Ho. With ki ho alu as the focus, we will learn about Hawaiian music and history, and explore the relationship between performance, cultural expression, community, and identity.

MUSIC 39B. Music and Healing. 3 Units.

To what extent can sound or music heal? This interdisciplinary course asks questions about music and healing around the world, drawing on the fields of medical ethnomusicology, medical anthropology, sound studies, and music therapy. Our case studies will be multi-sited, as we interrogate sound-based healings and healing sounds from diverse cross-cultural, global, and historic perspectives. No musical background is needed to interrogate these issues. We begin with the knowledge that the social, cultural, and political contexts where definitions of music and healing are created inform sound and its various and often conflicting interpretations and meanings.

Same as: HUMBIO 179B

MUSIC 40. Music History to 1600. 4 Units.

Pre- or corequisite: 21.

MUSIC 41. Music History 1600-1830. 4 Units.

Pre- or corequisite: 22.

MUSIC 42. Music History Since 1830. 4 Units.

Pre- or corequisite: 23.

MUSIC 60. How We Sing: The Voice, How It Functions, and the Singer's Mind. 1 Unit.

A weekly lecture course for singers, pianists, directors, conductors, and anyone who is interested in the art and craft of the voice. The voice is an instrument whose sounds are determined by its structure and the choices the singer makes. Students will learn how the voice works: the physiology of the instrument, breathing, resonance, and adjustments the singer makes to the instrument to produce sounds appropriate for various styles of vocal music. This course is intended for singers, pianists, conductors, musical directors and directors of groups that include singers, regardless of style or size of ensemble, with the goal of promoting excellent and healthy vocal performance. Ability to sing and/or read music is not required; this is not a voice class.

Same as: TAPS 60

MUSIC 65A. Voice Class I. 1 Unit.

Group (7 students to a section) beginning voice (A = level 1; B = level 2). May be repeated for credit. There is a fee for this class. Please visit <http://music.stanford.edu/Academics/LessonSignups.html> for class fees and signup information. This class is closed by design. Please register on the waitlist and show up on the first day of class to receive a permission number for enrollment. Zero unit enrollment option available with instructor permission. See website: (<http://music.stanford.edu>) for policy and procedure.

MUSIC 65AS. Voice Class 1: Beginning Voice, Level 1. 1 Unit.

Group (6 students to a section) beginning voice. By enrolling in this course you are giving consent for the video and audio recording and distribution of your image and performance for use by any entity at Stanford University.

Same as: Group

MUSIC 65AZ. Voice Class I. 0 Units.

Group (7 students to a section) beginning voice (A = level 1; B = level 2). There is a fee for this class. Please visit <http://music.stanford.edu/Academics/LessonSignups.html> for class fees and signup information. This class is closed by design. Please register on the waitlist and show up on the first day of class to receive a permission number for enrollment. Zero unit enrollment option available with instructor permission. See website: (<http://music.stanford.edu>) for policy and procedure. May be repeated for credit for 0 unit and total completion allowed 99.

MUSIC 65B. Voice Class II. 1 Unit.

Group (7 students to a section) beginning voice for the non-major (A = level 1; B = level 2). May be repeated for credit. There is a fee for this class. Please visit <http://music.stanford.edu/Academics/LessonSignups.html> for class fees and signup information. This class is closed by design. Please register on the waitlist and show up on the first day of class to receive a permission number for enrollment. Zero unit enrollment option available with instructor permission. See website: (<http://music.stanford.edu>) for policy and procedure.

MUSIC 65BS. Voice Class 2: Beginning Voice, Level 2. 1 Unit.

Group (6 students to a section) beginning voice (A = level 1; B = level 2). Complete registration form available for download at: <http://tinyurl.com/q43c48g>. May be repeated for credit 5 times. Zero unit enrollment option available with instructor permission. See website: (<http://tinyurl.com/posmuhn>) for policy and procedure. By enrolling in this course you are giving consent for the video and audio recording and distribution of your image and performance for use by any entity at Stanford University.

Same as: Group

MUSIC 65BZ. Voice Class II. 0 Units.

Group (7 students to a section) beginning voice for the non-major (A = level 1; B = level 2). There is a fee for this class. Please visit <http://music.stanford.edu/Academics/LessonSignups.html> for class fees and signup information. This class is closed by design. Please register on the waitlist and show up on the first day of class to receive a permission number for enrollment. Zero unit enrollment option available with instructor permission. See website: (<http://music.stanford.edu>) for policy and procedure. May be repeat for credit for 0 units and total completion of 99.

MUSIC 65SZ. Beginning Voice. 0 Units.

Beginning Voice (zero-unit option). Complete registration form available for download at: <http://tinyurl.com/q43c48g>. May be repeated 5 times. Zero unit enrollment option available with instructor permission. See website: (<http://tinyurl.com/posmuhn>) for policy and procedure. By enrolling in this course you are giving consent for the video and audio recording and distribution of your image and performance for use by any entity at Stanford University.

MUSIC 70. Stories and music of refugees. 3 Units.

As part of a creative project to gather cultural materials of people who inhabited the shores of the Mekong River, this course will combine ethnomusicology, anthropology, and cultural history with creative projects based upon gathering and compiling first hand materials through interviews and recordings of people around the Bay Area, and perhaps beyond, who were transplanted from their native homes in the Mekong region.

MUSIC 72A. Intermediate Piano Class. 1 Unit.

For intermediate students. May be repeated for credit a total of 14 times. Prerequisites: 12C or equivalent, audition. There is a fee for this class. Please visit <https://music.stanford.edu/ensembles-lessons/applied-music-policies/applied-music-fees-and-policies> for class fee information. This class is closed by design. Please register on the waitlist and meet with Dr. Zerlang in room 111, or contact him at timzer@stanford.edu or (650) 723-1549 to receive a permission number for enrollment. Zero unit enrollment option available with instructor permission. See website: (<http://music.stanford.edu>) for policy and procedure.

MUSIC 72AS. Intermediate Piano Class. 1 Unit.

Piano: Intermediate Level (Group; 10 students to a section) Class is closed by design. Please register on the wait-list and show up on the first day of class to receive a permission number for enrollment. Complete registration form available for download at: <http://tinyurl.com/q43c48g>. May be repeated for credit 5 times. Zero unit enrollment option available with instructor permission. See website: (<http://tinyurl.com/posmuhn>) for policy and procedure. By enrolling in this course you are giving consent for the video and audio recording and distribution of your image and performance for use by any entity at Stanford University.

Same as: Group

MUSIC 72AZ. Intermediate Piano Class. 0 Units.

For intermediate students. Prerequisites: 12C or equivalent, audition. There is a fee for this class. Please visit <https://music.stanford.edu/ensembles-lessons/applied-music-policies/applied-music-fees-and-policies> for class fee information. This class is closed by design. Please register on the waitlist and show up on the first day of class to receive a permission number for enrollment. Zero unit enrollment option available with instructor permission. See website: (<http://music.stanford.edu>) for policy and procedure.

MUSIC 72C. Harpsichord Class. 1 Unit.

For beginning harpsichord students who have keyboard skills. May be repeated for credit a total of 14 times. There is a fee for this class. Please visit <http://music.stanford.edu/Academics/LessonSignups.html> for class fees and signup information. Admission based on instructor consent. Contact instructor prior to enrolling to discuss availability. Class meets in Braun 201. Zero unit enrollment option available with instructor permission. See website: (<http://music.stanford.edu>) for policy and procedure.

MUSIC 72CZ. Harpsichord Class. 0 Units.

For beginning harpsichord students who have keyboard skills. There is a fee for this class. Please visit <http://music.stanford.edu/Academics/LessonSignups.html> for class fees and signup information. Admission based on instructor consent. Contact instructor prior to enrolling to discuss availability. Class meets in Braun 201. Zero unit enrollment option available with instructor permission. See website: (<http://music.stanford.edu>) for policy and procedure.

MUSIC 72D. Jazz Piano Class. 1 Unit.

There is a fee for this class. Please visit <http://music.stanford.edu/Academics/LessonSignups.html> for class fee and signup information. To enroll, please register on the waitlist and contact the instructor (murlow@stanford.edu) to receive a permission number for enrollment. Priority to majors and jazz-ensemble participants. Zero unit enrollment option available with instructor permission. For prerequisites and full description, please visit <https://music.stanford.edu/music-72d-introductory-jazz-piano>. Course meets for one hour per week at the mutual convenience of the class participants, sometime on Wed 10-9 PM or Friday 10-3 PM. Exact time to be determined during first week of instruction. Course to be taught online when COVID restrictions are in effect. Live class meeting participation is encouraged, but all classes will be recorded for convenience. Student should have access to a piano to complete assignments. Students on campus who do not have such access, please contact instructor for further information.

MUSIC 72DZ. Jazz Piano Class. 0 Units.

There is a fee for this class. Please visit <http://music.stanford.edu/Academics/LessonSignups.html> for class fee and signup information. To enroll, please register on the waitlist and contact the instructor (murlow@stanford.edu) to receive a permission number for enrollment. Priority to majors and jazz-ensemble participants. Zero unit enrollment option available with instructor permission. For prerequisites and full description, please visit <https://music.stanford.edu/music-72d-introductory-jazz-piano>. Course meets for one hour per week at the mutual convenience of the class participants, sometime on Wed 10-9 PM or Friday 10-3 PM. Exact time to be determined during first week of instruction. Course to be taught online when COVID restrictions are in effect. Live class meeting participation is encouraged, but all classes will be recorded for convenience. Student should have access to a piano to complete assignments. Students on campus who do not have such access, please contact instructor for further information.

MUSIC 72G. Gu-Zheng Class. 1 Unit.

Introduction to Chinese music through learning how to play Gu-Zheng, a 21-stringed traditional Chinese instrument. The cultural, social, and historical significance of Gu-Zheng. 15 Gu-Zheng techniques, how to read Chinese music and Gu-Zheng notation, and two simple classic Gu-Zheng pieces. There is a fee for this class. Please visit <http://music.stanford.edu/Academics/LessonSignups.html> for class fee information. All participants must enroll. May be repeated for credit a total of 14 times. Zero unit enrollment option available with instructor permission. See website: (<http://music.stanford.edu>) for policy and procedure. By enrolling in this course you are giving consent for the video and audio recording and distribution of your image and performance for use by any entity at Stanford University.

MUSIC 72GZ. Gu-Zheng Class. 0 Units.

Introduction to Chinese music through learning how to play Gu-Zheng, a 21-stringed traditional Chinese instrument. The cultural, social, and historical significance of Gu-Zheng. 15 Gu-Zheng techniques, how to read Chinese music and Gu-Zheng notation, and two simple classic Gu-Zheng pieces. There is a fee for this class. Please visit <http://music.stanford.edu/Academics/LessonSignups.html> for class fee information. All participants must enroll. May be repeated for credit a total of 14 times. Zero unit enrollment option available with instructor permission. See website: (<http://music.stanford.edu>) for policy and procedure. By enrolling in this course you are giving consent for the video and audio recording and distribution of your image and performance for use by any entity at Stanford University.

MUSIC 72SZ. Intermediate Piano. 0 Units.

Intermediate Piano (zero-unit option). Zero unit enrollment option available with instructor permission. See website: (<http://tinyurl.com/posmuhn>) for policy and procedure. By enrolling in this course you are giving consent for the video and audio recording and distribution of your image and performance for use by any entity at Stanford University.

MUSIC 73. Intermediate Voice Class. 1 Unit.

For intermediate students. Admission by audition. May be repeated for credit a total of 14 times. There is a fee for this class. Please visit <http://music.stanford.edu/Academics/LessonSignups.html> for class fees and signup information. This class is closed by design. Please register on the Axxess waitlist and show up on the first day of class to receive a permission number for enrollment. Zero unit enrollment option available with instructor permission. See website: (<http://music.stanford.edu>) for policy and procedure.

MUSIC 73Z. Intermediate Voice Class. 0 Units.

For intermediate students. Admission by audition. There is a fee for this class. Please visit <http://music.stanford.edu/Academics/LessonSignups.html> for class fees and signup information. This class is closed by design. Please register on the Axxess waitlist and show up on the first day of class to receive a permission number for enrollment.

MUSIC 74AA. Introductory Violin Class Level 1: Beginner. 1 Unit.

Open to majors and non-majors. Focus is on beginning violin skills. Topics include brief history and physics of the instrument, and survey of repertoire. There is a fee for this class. Please visit <http://music.stanford.edu> for class fees and signup information. Zero unit enrollment option available with instructor permission. See website: (<http://music.stanford.edu>) for policy and procedure.

MUSIC 74AB. Introductory Violin Class Level 2: Intermediate. 1 Unit.

Open to majors and non-majors. Focus is on beginning violin skills. Topics include brief history and physics of the instrument, and survey of repertoire. There is a fee for this class. Please visit <http://music.stanford.edu> for class fees and signup information. Zero unit enrollment option available with instructor permission. See website: (<http://music.stanford.edu>) for policy and procedure.

MUSIC 74AC. Introductory Violin Class Level 3: Advanced Intermediate. 1 Unit.

Open to majors and non-majors. Focus is on beginning violin skills. Topics include brief history and physics of the instrument, and survey of repertoire. There is a fee for this class. Please visit <http://music.stanford.edu> for class fees and signup information. Zero unit enrollment option available with instructor permission. See website: (<http://music.stanford.edu>) for policy and procedure.

MUSIC 74AZ. Introductory Violin Class. 0 Units.

(74A.1=Level 1 beginners; 74A.2=Level 2 continuing) Open to majors and non-majors. Focus is on beginning violin skills. Topics include brief history and physics of the instrument, and survey of repertoire. There is a fee for this class. Please visit <http://music.stanford.edu> for class fees and signup information. Zero unit enrollment option available with instructor permission. See website: (<http://music.stanford.edu>) for policy and procedure.

MUSIC 74C. Classical Guitar Class. 1 Unit.

May be repeated for credit a total of 14 times. There is a fee for this class. Please visit <https://music.stanford.edu/ensembles-lessons/applied-music-policies/applied-music-fees-and-policies> for class fee information. Zero unit enrollment option available with instructor permission. See website: (<http://music.stanford.edu>) for policy and procedure.

MUSIC 74CZ. Classical Guitar Class. 0 Units.

There is a fee for this class. Please visit <http://music.stanford.edu/Academics/LessonSignups.html> for class fees and signup information. Zero unit enrollment option available with instructor permission. See website: (<http://music.stanford.edu>) for policy and procedure.

MUSIC 74D. Harp Class. 1 Unit.

May be repeated for credit a total of 14 times. There is a fee for this class. Please visit <http://music.stanford.edu/Academics/LessonSignups.html> for class fees and signup information. Zero unit enrollment option available with instructor permission. See website: (<http://music.stanford.edu>) for policy and procedure.

MUSIC 74DZ. Harp Class. 0 Units.

There is a fee for this class. Please visit <http://music.stanford.edu/Academics/LessonSignups.html> for class fees and signup information. Zero unit enrollment option available with instructor permission. See website: (<http://music.stanford.edu>) for policy and procedure.

MUSIC 75B. Renaissance Wind Instruments Class. 1 Unit.

May be repeated for credit. There is a fee for this class. Please visit <http://music.stanford.edu> for class fees and signup information. Zero unit enrollment option available with instructor permission. See website: (<http://music.stanford.edu>) for policy and procedure.

MUSIC 75BZ. Renaissance Wind Instruments Class. 0 Units.

May be repeated for credit. There is a fee for this class. Please visit <http://music.stanford.edu> for class fees and signup information. Zero unit enrollment option available with instructor permission. See website: (<http://music.stanford.edu>) for policy and procedure.

MUSIC 76. Brass Instruments Class. 1 Unit.

May be repeated for credit a total of 14 times. There is a fee for this class. Please visit <http://music.stanford.edu> for class fees and signup information. Zero unit enrollment option available with instructor permission. See website: (<http://music.stanford.edu>) for policy and procedure.

MUSIC 76A. Tuba Class. 1 Unit.

Basic brass techniques as they apply to the tuba including warmups, breathing, and developing a daily routine. For beginning through intermediate players. There is a fee for this class. Please visit <http://music.stanford.edu/Academics/LessonSignups.html> for class fees and audition information. All participants must enroll. Zero unit enrollment option available with instructor permission. See website: (<http://music.stanford.edu>) for policy and procedure. May be repeated for credit.

MUSIC 76AZ. Tuba Class. 0 Units.

Basic brass techniques as they apply to the tuba including warmups, breathing, and developing a daily routine. For beginning through intermediate players. This course includes a fee of \$175 for Music majors and minors, and \$200 for non Music majors. Zero unit enrollment option available with instructor permission. See website: (<http://music.stanford.edu>) for policy and procedure. May be repeated for credit for 0 unit.

MUSIC 76Z. Brass Instruments Class. 0 Units.

May be repeated for credit a total of 14 times. There is a fee for this class. Please visit <http://music.stanford.edu> for class fees and signup information. Zero unit enrollment option available with instructor permission. See website: (<http://music.stanford.edu>) for policy and procedure.

MUSIC 77. Percussion Class. 1 Unit.

May be repeated for credit a total of 14 times. There is a fee for this class. Please visit <http://music.stanford.edu> for class fees and signup information. Zero unit enrollment option available with instructor permission. See website: (<http://music.stanford.edu>) for policy and procedure.

MUSIC 77Z. Percussion Class. 0 Units.

There is a fee for this class. Please visit <http://music.stanford.edu> for class fees and signup information. Zero unit enrollment option available with instructor permission. See website: (<http://music.stanford.edu>) for policy and procedure.

MUSIC 80. Russian Modernists: Stravinsky & Shostakovich. 3 Units.

An examination and comparison of the lives and music of Igor Stravinsky and Dmitri Shostakovich, two of the most important Modernist composers of the 20th century. Although both composers were Russians closely affiliated with St. Petersburg, their lives diverged dramatically, with Stravinsky pursuing an international career in the West while Shostakovich spent his entire life in the USSR after the Russian Revolution. Major compositions, including symphonies, operas, chamber music, and keyboard works, will be covered, as well as key writings by and about both composers. The ability to read music, while beneficial, is not required. This course must be taken for a letter grade to be eligible for Ways credit.

MUSIC 101. Introduction to Creating Electronic Sounds. 3-4 Units.

Introduction to Creating Electronic Sounds enables students from a wide variety of backgrounds to cultivate conceptual and technical skills within the production of electronic sound and music composition. Lectures, readings, and group discussions will examine the evolution of recording technology and industrialization as it relates to music within historical, social, and contemporary contexts. Over the course of ten weeks students will develop and produce a portfolio of creative projects, wherein the integration of one's life experiences, imagination, and musical preferences are encouraged. In addition to regular coursework, students who choose to enroll in the class for 4 units will create and publish a 12-20 minute EP according to their own musical taste and technical abilities. This course is a prerequisite for MUSIC 192A: Foundations of Sound Recording Technology. Enrollment by permission number only. No previous experience required.

MUSIC 102. The Art of Music Video: Practice and Analysis. 2-4 Units.

Making and understanding music videos and other short audiovisual genres. This course is a critical and creative exploration of music and performing bodies in moving media. Listening/viewing includes music videos from the 1980s to today, along with musicals, dance, and opera on film, experimental film and video, and segments from feature film. We'll attend to both music and image, focusing on gesture, rhythm, and affect, and considering visual parameters like décor, lighting, texture, camera movement, and editing. Requirements include choosing and documenting a live performance; producing a short audiovisual work involving post-production; several short writing assignments; and weekly reading and viewing/listening assignments. No prerequisites; no previous videomaking experience required. This course must be taken for a minimum of 3 units for Ways-All and a letter grade to be eligible for Ways-All credit.

Same as: MUSIC 202

MUSIC 103. Music Listening Lab. 1 Unit.

How do we listen differently to different musical genres? How do the technologies with which we listen shape our experience? What's the difference between attending a live concert and listening to a recording? How do we communicate our own private listening experiences with others? In this one-unit course, we will explore these questions by listening to recorded and live-streamed performances, discussing our listening experiences and aesthetic preferences, and thinking critically about how we listen across different genres and media. Assessment will be based on attendance, discussion participation, and short written reflections. No prior experience in music is expected—just bring your ears. Same as: TAPS 130M

MUSIC 112. Film Scoring. 3 Units.

Through analysis and technical exercises that involve click tracks, spotting, scoring under dialogue and picture, and the creative use of overlap cues, among others, students will learn how to develop and synchronize an engaging music score that supports visual events. Prerequisite: The students will be expected to: Know how to read and write music; Know how to create scores using a music editor such as Finale, Sibelius, among others; Be familiar with MIDI sequencing; and, Be familiar with DAW such as Logic Pro X, Pro Tools, among others.

MUSIC 113. Introduction to Instrumental Composition. 2-3 Units.

Students compose weekly exercises to improve creative fluency and develop basic control of instruments. Audio examples of diverse compositional techniques are introduced, analyzed and emulated. Prerequisite: Music 19A or Instructor's permission.

MUSIC 115. Individual Undergraduate Projects in Jazz. 1-3 Unit.

Students may pursue individual projects in jazz performance, theory, history, etc. Prerequisite: Music 20A or permission of instructor.

MUSIC 118. Musics and Appropriation Throughout the World. 3 Units.

This course critically examines musical practices and appropriation through the amplification of intersectionality. We consider musics globally through recourse to ethnomusicological literature and critical race theories. Our approach begins from an understanding that the social and political contexts where musics are created, disseminated, and consumed inform disparate interpretations and meanings of music, as well as its sounds. Our goal is to shape our ears to hear the effects of slavery, colonialism, capitalism, nationalism, class, gender difference, militarism, and activism. We interrogate the process of appropriating musics throughout the world by making the power structures that shape privileges and exclusions audible.

Same as: AFRICAAM 218, CSRE 118D

MUSIC 120D. Jazz Improvisation. 1-3 Unit.

This class will focus on developing a deeper understanding of, and capacity for, jazz improvisation – as it relates to individual expression as well as group interaction, communication, and cohesion. In-class soloing and ensemble playing; guided listening; ear training; internalization; personalization; and an awareness of the historical evolution of the jazz improvisational language will all be emphasized. The coursework will be primarily based on actual instrumental performance and practice; with an extensive listening list; and possibly some complementary composition, transcribing, self-evaluation; reading and writing assignments. Limited enrollment: Audition required. Students auditioning for Music 120D may submit the same audition material for consideration for Music 120E and vice-versa, but they are asked to make clear that they are applying for both (or, alternatively, for just one of the two, and if so, which one.) This class will be closed to enrollment, so students wishing to enroll must join the Axess waiting list. You will then be contacted with audition instructions. By enrolling in this course you are giving consent for the video and audio recording and distribution of your image and performance for use by any entity at Stanford University.

MUSIC 120DZ. Jazz Improvisation. 0 Units.

This class will focus on developing a deeper understanding of, and capacity for, jazz improvisation – as it relates to individual expression as well as group interaction, communication, and cohesion. In-class soloing and ensemble playing; guided listening; ear training; internalization; personalization; and an awareness of the historical evolution of the jazz improvisational language will all be emphasized. The coursework will be primarily based on actual instrumental performance and practice; with an extensive listening list; and possibly some complementary composition, transcribing, self-evaluation; reading and writing assignments. Limited enrollment: Audition required. Students auditioning for Music 120D may submit the same audition material for consideration for Music 120E and vice-versa, but they are asked to make clear that they are applying for both (or, alternatively, for just one of the two, and if so, which one.) This class will be closed to enrollment, so students wishing to enroll must join the Axess waiting list. You will then be contacted with audition instructions. Zero unit enrollment option available with instructor permission. See website: (<http://music.stanford.edu>) for policy and procedure. By enrolling in this course you are giving consent for the video and audio recording and distribution of your image and performance for use by any entity at Stanford University.

MUSIC 120E. Advanced Jazz Improvisation. 1-3 Unit.

This class will focus on broadening the participants' fluency with established improvisational languages, encouraging them to trust and develop their own unique improvisational voices, and deepening their capacities for integrating those individual voices into a collaborative musical framework – working and playing together as a group, forging a collective identity, finding a band sound. In-class soloing and ensemble playing; guided listening; ear training; internalization; personalization; transcription, composition and arranging will all be emphasized. The coursework will be primarily based on actual instrumental performance and practice; with an extensive list of tracks to listen to and tunes to learn. The class will spend ample time focusing on the repertoire from the jazz "canon" (works by jazz masters such as Ellington, Monk, Parker, Shorter, Mingus, Coltrane, Coleman, etc, as well as "standards" from the American popular songbook). Participants will be encouraged to submit for consideration by the group their own ideas for material, including, but not limited to, their own original compositions or arrangements. Limited enrollment: Audition required. Students auditioning for Music 120E may submit the same audition material for consideration for Music 120D and vice-versa, but they are asked to make clear that they are applying for both (or, alternatively, for just one of the two, and if so, which one.) All who are interested are strongly encouraged to apply, with the understanding that some priority may be given to those who have already completed Music 120D. This class will be closed to enrollment, so students who would like to enroll must join the Axess wait list. You will then be contacted with audition instructions.

MUSIC 122A. Counterpoint. 4 Units.

Analysis and composition of contrapuntal styles from the Renaissance and Baroque periods. Use of keyboard, ear training, and sight singing underlies all written work. Prerequisites: MUSIC 23 and MUSIC 24C; passing piano-proficiency examination; or, consent of instructor.

MUSIC 122B. Analysis of Tonal Music. 4 Units.

Complete movements, or entire shorter works of the 18th and 19th centuries, are analyzed in a variety of theoretical approaches. Prerequisites: MUSIC 23 and MUSIC 24C; passing piano-proficiency examination; or, consent of instructor.

MUSIC 122C. Introduction to 20th-Century Composition. 4 Units.

Contemporary works, with emphasis on music since 1945. Projects in free composition based on 20th-century models. Prerequisites: MUSIC 23 and MUSIC 24C; passing piano-proficiency examination; or, consent of instructor.

MUSIC 122D. Analysis for Performance. 2 Units.

Prerequisites: 23 or consent of instructor, successful completion of the ear-training and piano-proficiency examinations.

MUSIC 123A. Undergraduate Seminar in Composition: Rhythmic Design. 1-2 Unit.

Students compose weekly exercises to develop creative fluency and personal style. The course focuses on listening to examples, analysis and emulation of diverse compositional techniques involving rhythm.

MUSIC 123B. Undergraduate Seminar in Composition: Pitch Design. 1-2 Unit.

Students compose weekly exercises to develop creative fluency and personal style. The course focuses on listening to examples, analysis and emulation of diverse compositional techniques involving pitch.

MUSIC 123C. Undergraduate Seminar in Composition: World Music. 1-2 Unit.

The course introduces composition techniques used in traditional music from Bali, Central African Republic, India, and Japan, that the students use as inspiration to explore and develop their own composition techniques. Prerequisite: Music 19A or Instructor's permission.

MUSIC 124A. Songwriters Workshop. 1-2 Unit.

Laboratory for composers of any kind of vernacular music: singer-songwriters; folk singers; laptop dance music composers; rock and pop bands; rappers; writers of instrumentals or music with lyrics; solo artists and collaborators; etc. Compositional strategies for songwriting, overview of exemplars, discussion of aesthetic issues, and development of artistic personae. Weekly critique session for students and faculty to share work and offer feedback. Music theory and literacy not required. Aimed, however, at those with at least some experience as writers, whether casual or extensive. For bands at least half of members must be enrolled.

MUSIC 124B. Songwriters Workshop. 3 Units.

Laboratory for composers of any kind of vernacular music: singer-songwriters; folk singers; laptop dance music composers; rock and pop bands; rappers; writers of instrumentals or music with lyrics; solo artists and collaborators; etc. Compositional strategies for songwriting, overview of exemplars, discussion of aesthetic issues, and development of artistic personae. Weekly critique session for students and faculty to share work and offer feedback. Music theory and literacy not required. Aimed, however, at those with at least some experience as writers, whether casual or extensive. For bands at least half of members must be enrolled. Enrollment in 3-unit course is by permission of, and invites lessons with instructor.

MUSIC 125. Individual Undergraduate Projects in Composition. 1-3 Unit. May be repeated for credit a total of 14 times. Prerequisites: Music123A and Music123B or Instructor's permission.

MUSIC 126A. Thoroughbass Accompaniment. 1-3 Unit.

The development of continuo techniques and skills for figured-bass realization. Performance and analysis of selected repertoire, using thoroughbass principles and exercises based on historical theoretical treatises. Prerequisite: 21.

MUSIC 127A. Instrumentation and Orchestration. 3 Units.

Individual instruments, instrumental groups within the orchestra, and combinations of groups. Arrangements from piano to orchestral music. Score analysis with respect to orchestration. Practical exercises using chamber ensembles and school orchestra. Prerequisite: 23.

MUSIC 127B. Advanced Orchestration. 3 Units.

Through analysis and writing exercises, students develop proficiency in advanced orchestration practices. The course covers techniques currently used in film scoring as well as form basis for new experimental orchestral composition.

MUSIC 127C. Band Arranging. 3 Units.

Develop skills and techniques related to arranging for marching and concert bands; emphasizes instrumentation, transposition, and voicing.

MUSIC 128. Stanford Laptop Orchestra: Composition, Coding, and Performance. 1-5 Unit.

Classroom instantiation of the Stanford Laptop Orchestra (SLOrk) which includes public performances. An ensemble of more than 20 humans, laptops, controllers, and special speaker arrays designed to provide each computer-mediated instrument with its sonic identity and presence. Topics and activities include issues of composing for laptop orchestras, instrument design, sound synthesis, programming, and live performance. May be repeated four times for credit. Space is limited; see <https://ccrma.stanford.edu/courses/128> for information about the application and enrollment process. May be repeat for credit. Same as: CS 170

MUSIC 129. Advanced Ear-Training/Musicianship. 1-2 Unit.

A course in advanced aural analysis and musicianship skills for students who have completed the Music 24 series. Topics of study include analysis by ear of large scale forms, chromatic or extended-tertian harmony, modulations to distantly related keys, chromatic or atonal melodies, modal harmony and melody, as well as alternative forms of aural analysis.

MUSIC 129K. Advanced Keyboard Musicianship. 1-2 Unit.

Score-reading at the keyboard, for pianists. Students will learn to read and reduce as necessary, score examples from a variety of ensembles, including music for strings, choir, winds, and orchestra. Practice reading associated clefs and transpositions will enable students to demonstrate short passages from ensemble repertoire effectively at the keyboard.

MUSIC 130A. Introduction to Conducting. 3 Units.

Baton techniques and rehearsal procedures. The development of coordination of the members of the body involved in conducting; fluency in beat patterns and meters; dynamics, tempi, cueing, and use of the left hand in conducting. Prerequisites: 122B and diagnostic musicianship exam given first day of class.

MUSIC 130B. Elementary Instrumental Conducting. 2 Units.

The theory, technique, and practice of instrumental conducting, with training in the art of physical gesture. Studies in clef reading, transposition, and structural analysis to develop the skills needed to read orchestral scores. Topics include baton technique; rehearsal procedure; working with soloists, singers, and composers; and conducting symphonic works as well as concertos, oratorio, opera, and Broadway musicals. Selected repertoire from the Baroque through contemporary periods will be studied and conducted in class. Prerequisite: MUSIC 130A or instructor's permission.

MUSIC 130C. Elementary Choral Conducting. 2 Units.

Techniques specific to the conducting of choral ensembles: warm-ups, breathing, balance, blend, choral tone, isolation principles, recitative conducting, preparation, and conducting of choral/orchestral works. Prerequisite: 130A.

MUSIC 132. Music Education: Then, Now, and Then Again. 3 Units.

Explores the presence and impact of music across a variety of educational settings, with a focus on the historical function of music education, the current role of music education, and potential future models of music education.

Same as: EDUC 132

MUSIC 133. Food, Text, Music: A Multidisciplinary Lab on the Art of Feasting. 3-5 Units.

Students cook a collection of unfamiliar recipes each week while learning about the cultural milieus in which they originated. The course focuses on the fourteenth and fifteenth centuries, a time of great banquets that brought together chefs, visual artists, poets, musicians, and dancers. Students read late-medieval cookbooks under the guidance of professional chefs, learn songs and poetry with the help of visiting performers, and delve into a burgeoning scholarly literature on food history and sensory experience. We will also study trade routes and food networks, the environmental impact of large-scale banquets, the science of food, and the politics of plenty. This course may count towards the Medieval component of the French major, and corresponds to DLCL 121, a course requirement for the Medieval Studies Minor. Students interested in applying for course must email the professor (jrodin@stanford.edu) by 20 September with a statement of up to 350 words that includes: (a) reasons for wanting to take the class; (b) relevant background in cooking/medieval studies/etc.; (c) stated commitment to attend all ten course meetings; and (d) any dietary restrictions/preferences.

Same as: FRENCH 166, FRENCH 266, FRENCH 366, MUSIC 333

MUSIC 136. Intermediate Conducting: Music Since 1900. 2 Units.

The art of reading and conducting scores from the Impressionist, late Romantic, and Modern periods to the present, with emphasis on orchestral and choral works that involve changing meters, advanced harmonic vocabulary, and modern instrumental and vocal practices. Topics include clef reading and transposition, baton technique, and rehearsal procedure. Prerequisite: MUSIC 130A, 130B, or 130C; or instructor's permission.

MUSIC 142K. Studies in Music of the Baroque: Handel the Cosmopolitan. 4-5 Units.

Music history seminar on the operatic, sacred, and instrumental works of G.F. Handel as examples of the diversity, cosmopolitanism, expression, formal and technical features, and social uses of music in the first half of eighteenth century. Traces Handel's career from his native Germany to an elite Roman circle of musical connoisseurs, and to the Italian opera company he founded in London and his transformation of Italian opera into a new genre of English oratorio. By analyzing Handel's works in context, we examine the aesthetic, harmonic, and dramatic principles of the major European Baroque art-music genres. Prerequisites: MUSIC 22, MUSIC 41. (WIM at 4-unit level only.)

Same as: MUSIC 242K

MUSIC 143J. Studies in Music of the Classical Period: Haydn and Mozart: Music in the Age of Enlightenment. 3-4 Units.

Music and Musicians in the Age of Enlightenment Prerequisites: MUSIC 22, MUSIC 41. (WIM at 4-unit level only.)

Same as: MUSIC 243J

MUSIC 144M. Robert Schumann and the Interpretation of Musical Romanticism. 3-4 Units.

The creative personality, compositions, and writings of Robert Schumann (1810-1856) as exemplars of musical Romanticism in early nineteenth century European culture. Musical "interpretation" explored through a writing focus and a performance focus. Weekly writing assignments interpret compositions as texts, performances, and cultural documents. Students study and interpret up to three works (solo piano, chamber music, art-songs) by Schumann and/or contemporary figures (Schubert, Mendelssohn, Chopin, Brahms, Clara Schumann) for in-class presentation and final lecture-recital. Prerequisites: Music 42, and Music 22 or equivalent (intermediate music theory), intermediate or higher performance ability in piano, strings, or voice. (WIM at 4-unit level only.)

Same as: MUSIC 244M

MUSIC 145K. Studies in Western Art Music Since 1900: Concepts of New Music. 4 Units.

A survey of the history of Western classical music in the twentieth century, concentrating on shifts in the concept of New Music in the first half of the century. The aim is twofold: to study in depth a representative selection of works and to develop a historiographical framework for that study. Relevant concepts to be examined include Expressionism, Neo-Classicism, New Objectivity, Serialism, Aleatoricism, and Minimalism – all of them key terms used by music historians and critics to describe and delineate the multifaceted phenomenon of "New Music." Composers to be studied include Schoenberg, Stravinsky, Berg, Weill, Shostakovich, Reich and Glass, and others. Prerequisites: MUSIC 23, MUSIC 42. (WIM course for Music majors.)

Same as: MUSIC 245K

MUSIC 146M. New Keywords in African Sound. 3-4 Units.

This course identifies and considers new keywords for the study of contemporary African music and sound. Each week we will foster discussion around a keyword and a constellation of case studies. The sonic practices we will encounter range from South African house music to Ghanaian honk horns; from Congolese rumba bands to Tunisian trance singers; from listening to the radio in a Tanzanian homestead to making hip hop music videos on the Kenyan coast. By exploring the unexpected interconnections between contemporary African musical communities, we will discuss new keywords arising in current scholarship, including technologies like the amplifier and the hard drive, spaces like the studio and the city, and analytics like pleasure and hotness. We will also engage with established concepts for the study of postcolonial African cultures, including nationalism, cosmopolitanism, globalization, diaspora, and Pan-Africanism. This is a seminar-based course open to graduate students, upper level undergraduate students, and other students with consent of the instructor. Proficiency in music is not required. WIM at 4 units only. Same as: AFRICAAM 146D, AFRICAST 146M, CSRE 146D, MUSIC 246M

MUSIC 146N. Transcultural Perspectives of South-East Asian Music and Arts. 2-4 Units.

This course will explore the links between aspects of South-East Asian cultures and their influence on modern and contemporary Western art and literature, particularly in France; examples of this influence include Claude Debussy (Gamelan music), Jacques Charpentier (Karnatak music), Auguste Rodin (Khmer art) and Antonin Artaud (Balinese theater). In the course of these interdisciplinary analyses - focalized on music and dance but not limited to it - we will confront key notions in relation to transculturality: orientalism, appropriation, auto-ethnography, nostalgia, exoticism and cosmopolitanism. We will also consider transculturality interior to contemporary creation, through the work of contemporary composers such as Tran Kim Ngoc, Chinary Ung and Tôn-Thât Tiêt. Viewings of sculptures, marionette theater, ballet, opera and cinema will also play an integral role. To satisfy a Ways requirement, this course must be taken for at least 3 units. In AY 2020-21, a letter grade or `CR` grade satisfies the Ways requirement. WIM credit in Music at 4 units and a letter grade.

Same as: COMPLIT 148, COMPLIT 267, FRENCH 260A, MUSIC 246N

MUSIC 147J. Studies in Music, Media, and Popular Culture: The Soul Tradition in African American Music. 3-4 Units.

1960s and 70s Black music, including rhythm and blues, Motown, Southern soul, funk, Philadelphia soul, and disco. Its origins in blues, gospel, and jazz to its influence on today's r&b, hip hop, and dance music. Soul's cultural influence and global reach; its interaction with politics, racism, gender, place, technology, and the economy. Synchronous and asynchronous remote learning, with class discussions, small-group activities, guest presenters, and opportunities for activism. Pre-/co-requisite (for music majors): MUSIC 22. (WIM at 4 units only.)

Same as: AFRICAAM 19, AMSTUD 147J, CSRE 147J, MUSIC 247J

MUSIC 147K. Studies in Music, Media, and Popular Culture: Music and Urban Film. 3-4 Units.

How music and sound work in urban cinema. What happens when music's capacity to transform everyday reality combines with the realism of urban films? Provides an introduction to traditional theories of film music and film sound; considers how new technologies and practices have changed the roles of music in film. Readings discuss film music, realistic cinema, urban musical practices and urban culture. Viewing includes action/adventure, Hindi film, documentary, film noir, hip hop film, the musical, and borderline cases by Jean-Luc Godard, Spike Lee, Wong Kar-Wai and Tsai Ming-Liang. Pre- or corequisite (for music majors): MUSIC 22. (WIM at 4 unit level only). Same as: CSRE 147D, MUSIC 247K

MUSIC 150P. The Changing World of Popular Music. 2 Units.

This course will cover changes in the business, economics, and practices of the popular music industry. It will provide a brief historical overview of the industry and its business models. The majority of the course will focus on the industry as it works today and on forces that are causing it to change rapidly. The course will feature guest artists and executives with current experience in the field, as well as project-based assignments designed to give students hands-on experience. Topics will include: economics and business models of commercial music business, music production, music distribution, marketing, leadership in the music industry and artist management. Same as: ARTSINST 150

MUSIC 151B. Red Vest Band. 1 Unit.

A small ensemble of the Leland Stanford Junior University Marching Band open to members of the LSJUMB by audition and consent of instructor. Members perform at multiple Stanford Athletics events, multiple community events, and travel to some away and post-season games. Weekly rehearsals focus on introduction of new student arrangements and the LSJUMB's repertoire of rock, funk, and traditional styles. May be repeated for credit a total of 12 times.

MUSIC 151BZ. Red-Vest Band. 0 Units.

A small ensemble of the Leland Stanford Junior University Marching Band open to members of the LSJUMB by audition and consent of instructor. Members perform at multiple Stanford Athletics events, multiple community events, and travel to some away and post-season games. Weekly rehearsals focus on introduction of new student arrangements and the LSJUMB's repertoire of rock, funk, and traditional styles. May be repeated for credit a total of 12 times.

MUSIC 151C. Stanford University Ragtime Ensemble. 1 Unit.

Performance ensemble of twelve musicians (5 winds, 5 strings, drums, piano) playing repertoire by Scott Joplin and other ragtime composers. The make-up of the ensemble is based on the Red Back Book arrangements of Joplin rags for flute/piccolo, clarinet, cornet (trumpet), trombone, tuba, 2 violins, viola, cello, double bass, drums, and piano.

MUSIC 151CZ. Stanford University Ragtime Ensemble. 0 Units.

Performance ensemble of twelve musicians (5 winds, 5 strings, drums, piano) playing repertoire by Scott Joplin and other ragtime composers. The make-up of the ensemble is based on the Red Back Book arrangements of Joplin rags for flute/piccolo, clarinet, cornet (trumpet), trombone, tuba, 2 violins, viola, cello, double bass, drums, and piano.

MUSIC 151D. Orchestra Online. 1-2 Unit.

An inquiry into orchestral music, through videos, recordings, and readings, with live discussions with prominent individuals from the musical world. Topics may also include opera, musical theatre, and other non-orchestral aspects of music. All classes will be recorded and available to all participants in order to make it possible for anyone to take the course, even if they have a conflict with the meeting time or reside in a time zone that precludes them from participating in the live sessions.

MUSIC 151DZ. Orchestra Online. 0 Units.

An inquiry into orchestral music, through videos, recordings, and readings, with live discussions with prominent individuals from the musical world. Topics may also include opera, musical theatre, and other non-orchestral aspects of music. All classes will be recorded and available to all participants in order to make it possible for anyone to take the course, even if they have a conflict with the meeting time or reside in a time zone that precludes them from participating in the live sessions.

MUSIC 152B. Black Music Revealed: Black composers, performers, and themes from the 18th century to the present. 3 Units.

Online seminar on the achievements of Black composers and performers in ragtime, jazz, and classical music, from Chevalier de Saint-Georges, whose music influenced Mozart, and George Bridgetower, for whom Beethoven composed his "Kreutzer" Sonata, to Anthony Davis's opera "The Central Park Five". Students will examine issues of cultural borrowing in operas by Mozart and Verdi, and shows like *Showboat* and *Porgy and Bess*. Guest speakers will include composers and performers. Students will work together in groups to produce materials on course topics in coordination with the African American Museum & Library at Oakland. (Cardinal Course certified by the Haas Center). Same as: CSRE 152B

MUSIC 153A. Network Performance Practice. 2-4 Units.

JackTrip software, developed at Stanford, provides the means for ultra-low-latency, uncompressed sound transmission for live music-making. Remote ensemble rehearsals, coaching, music lessons, jamming and concert broadcasting during the COVID-19 pandemic are making use of the technology. The open-source project has developed rapidly in the past 6 months, especially in its ability to support large ensembles of home-to-home connections. The course will cover recent features, history and theory of JackTrip and engage in a series of practical, participatory performance sessions. Students will learn the software and related network and audio principles with a focus on intuition building and ear training. Course participants will work from home and be able to use CCRMA facilities remotely. The course can be audited or coordinated with another course. Same as: ARTSINST 141

MUSIC 153AZ. Network Performance Practice. 0 Units.

JackTrip software, developed at Stanford, provides the means for ultra-low-latency, uncompressed sound transmission for live music-making. Remote ensemble rehearsals, coaching, music lessons, jamming and concert broadcasting during the COVID-19 pandemic are making use of the technology. The open-source project has developed rapidly in the past 6 months, especially in its ability to support large ensembles of home-to-home connections. The course will cover recent features, history and theory of JackTrip and engage in a series of practical, participatory performance sessions. Students will learn the software and related network and audio principles with a focus on intuition building and ear training. Course participants will work from home and be able to use CCRMA facilities remotely. The course can be audited or coordinated with another course.

MUSIC 153B. Internet Ensemble Tech Force. 1 Unit.

This course inaugurates an Internet Ensemble Tech Force which is needed urgently worldwide and locally to support music ensembles going online. Calling it urgent is not an exaggeration. We can provide a valuable service and that's the purpose of the course. Course participants will quickly come up to speed on low-latency audio collaboration technology and will then pair with ensembles interested in using it. Ensemble rehearsals, coaching and concert broadcasting are planned for the quarter. 153B participants will work from home and be able to use CCRMA facilities remotely. The course can be audited or coordinated with another course. Let's help make group playing possible during this public health challenge. Same as: ARTSINST 141B

MUSIC 154A. Sound Art I. 4 Units.

Acoustic, digital and analog approaches to sound art. Familiarization with techniques of listening, recording, digital processing and production. Required listening and readings in the history and contemporary practice of sound art. (lower level).

Same as: ARTSTUDI 131

MUSIC 154E. Creative Agency in the Pandemic World. 3 Units.

Distributed workshop for creative invention and artistic collaboration within radical pandemic constraints. Students imagine, design, and explore emergent creative strategies for art-making under quarantine conditions. Small art projects—in ANY artistic medium—will be made every two weeks, some collaborative. By reframing sub-optimal working conditions as super-optimal, participants create a modest canon of pieces that serve as a manual for sustaining creative vibrancy during stressful periods. Weekly synchronous conversation about artistic strategies and an overview of historical artistic constraints (both necessitated and voluntarily adopted); breakout group collaborations; consultations with professor; sharing of work; mutual critique, support, and mentorship.

MUSIC 155. Intermedia Workshop. 3-4 Units.

Students develop and produce intermedia works. Musical and visual approaches to the conceptualisation and shaping of time-based art. Exploration of sound and image relationship. Study of a wide spectrum of audiovisual practices including experimental animation, video art, dance, performance, non-narrative forms, interactive art and installation art. Focus on works that use music/sound and image as equal partners. Limited enrollment. Prerequisites: consent of instructors, and one of FILMPROD 114, ARTSTUDI 131, 138, 167, 177, 179, or MUSIC 123, or equivalent. May be repeated for credit.

Same as: ARTSTUDI 239, MUSIC 255

MUSIC 155A. Piano Literature. 1 Unit.

An exploration of the repertoire for piano and keyboards, providing experience with and context for this literature while engaging practical, technical and analytical features of the works. Each quarter will cover focused areas defined by time, place, composer, stylistic tradition, formal type, etc. Students will perform works in class, as well as listen to and compare performances through videos and recordings. Assignments include reading, listening, and a final project. Prerequisite: Private lesson proficiency level in piano, or consent of instructor.

Same as: MUSIC 255A

MUSIC 155AZ. Piano Literature. 0 Units.

An exploration of the repertoire for piano and keyboards, providing experience with and context for this literature while engaging practical, technical and analytical features of the works. Each quarter will cover focused areas defined by time, place, composer, stylistic tradition, formal type, etc. Students will perform works in class, as well as listen to and compare performances through videos and recordings. Assignments include reading, listening, and a final project. Prerequisite: Private lesson proficiency level in piano, or consent of instructor.

MUSIC 155S. String Literature. 1 Unit.

An exploration of the repertoire for stringed instruments, providing experience with and context for this literature while engaging practical, technical and analytical features of the works. Each quarter will cover focused areas defined by time, place, composer, stylistic tradition, formal type, etc. Students will perform works in class, as well as listen to and compare performances through videos and recordings. Assignments include reading, listening, and a final project. Prerequisite: Private lesson proficiency level in piano, or consent of instructor.

Same as: MUSIC 255S

MUSIC 156. "sic": Improvisation Collective. 1 Unit.

Small ensemble devoted to learning trans-idiomatic improvisation techniques and composing indeterminate pieces in a workshop setting. One major concert. Prerequisite: access to an instrument. Improvisational experience and conventional instrumental virtuosity not required. May be repeated for credit for a total of 3 times.

MUSIC 156Z. "sic": Improvisation Collective. 0 Units.

Small ensemble devoted to learning trans-idiomatic improvisation techniques and composing indeterminate pieces in a workshop setting. One major concert. Prerequisite: access to an instrument. Improvisational experience and conventional instrumental virtuosity not required. May be repeated for credit for a total of 3 times.

MUSIC 157. Cardinal Calypso--Steelpan Ensemble. 1 Unit.

This course introduces students to steelpan as an instrument and as a culture. Over the course of the year students will gain fundamental knowledge of the pitched percussion instrument, background knowledge of the culture of Trinidad and Tobago that created this instrument, and the opportunity to expand and share that knowledge through rehearsals, lecture topics/discussion, performances, and guest performers. Soca and Calypso music are genres of focus, but we will cover a diverse range of other genres as well.

MUSIC 157Z. Cardinal Calypso -- Steelpan Ensemble. 0 Units.

This course introduces students to steelpan as an instrument and as a culture. Over the course of the year students will gain fundamental knowledge of the pitched percussion instrument, background knowledge of the culture of Trinidad and Tobago that created this instrument, and the opportunity to expand and share that knowledge through rehearsals, lecture topics/discussion, performances, and guest performers. Soca and Calypso music are genres of focus, but we will cover a diverse range of other genres as well.

MUSIC 159. Early Music Singers. 1 Unit.

Small choir specializing in Medieval, Renaissance, and early Baroque vocal music. One major concert per quarter. May be repeated for credit for a total of 15 times. Zero unit enrollment option available with instructor permission. See website: (<http://music.stanford.edu>) for policy and procedure. By enrolling in this course you are giving consent for the video and audio recording and distribution of your image and performance for use by any entity at Stanford University.

MUSIC 159J. Performance as Analysis: Late-Medieval Music in Action. 1-3 Unit.

This experimental course channels embodied musical knowledge into text-based analysis. Centered around a group of Italian manuscripts recently deposited at Stanford (the Burke Collection), Part I features an intensive period of workshops and rehearsals: working with members of Cut Circle (<http://cutcircle.org>) as well as specialists in computer science and art history, students prepare a concert to be held during Week 2 of the quarter. In Part II (Weeks 3–4) students perform "embodied analysis," channeling their experiences performing into deepening engagement with the repertoire. Regular meetings conclude after Week 5; a paper is due in Week 7. Prerequisites: good sight-singing skills; at least one quarter's experience in MUSIC 165 (Chamber Chorale) or an ensemble of a similar caliber. By enrolling in this course you are giving consent for the video and audio recording and distribution of your image and performance for use by any entity at Stanford University. All meetings at Green Library Rotunda except Weeks 3-5 meetings which will be in Braun 131. Week 1: Mon 6 January: 4:30 - 7:00; Wed 8 January: 4:30 - 7:00; Fri 10 January; Sat 11 and Sun 12 January: 2:30 - 6pm; Week 2: Tues 14 January: 4:30 - 7:00; Wed 15 January: 5:30pm call for 7:30p concert; Weeks 3-5: Tues/Thurs, 3:00-4:30, Braun 131; Weeks 6-10: No class meeting.

MUSIC 159Z. Early Music Singers. 0 Units.

Small choir specializing in Medieval, Renaissance, and early Baroque vocal music. One major concert per quarter. May be repeated for credit for a total of 15 times for 0 unit. Zero unit enrollment option available with instructor permission. See website: (<http://music.stanford.edu>) for policy and procedure. By enrolling in this course you are giving consent for the video and audio recording and distribution of your image and performance for use by any entity at Stanford University.

MUSIC 160. Stanford Symphony Orchestra. 1 Unit.

Large symphony orchestra (ca. 100 members) that rehearses two evenings per week (M/Th) and performs repertoire primarily from the Classical Period to the present. Usually prepares 1-2 programs per quarter, and presents 2-3 performances each quarter in Bing Concert Hall. Enrollment based on audition; for audition information, please refer to the Stanford Orchestra website at <https://web.stanford.edu/group/sso/cgi-bin/orchestras/how-to-join/auditions/>. May be taken for credit up to 15 times. Zero-unit enrollment option (MUSIC 160Z) available with instructor permission. See website (orchestra.stanford.edu) for further information. By enrolling in this course you are giving consent for the video and audio recording and distribution of your image and performance for use by any entity at Stanford University.

MUSIC 160A. Stanford Philharmonia. 1 Unit.

Chamber orchestra (ca. 45 members) that rehearses one evening per week (Tu) and performs repertoire primarily from the Baroque Period to the present. Usually prepares 1-2 programs per quarter, and presents 1-2 performances each quarter in Bing Concert Hall. Enrollment based on audition; for audition information, please refer to the Stanford Orchestra website at <https://web.stanford.edu/group/sso/cgi-bin/orchestras/how-to-join/auditions/>. May be taken for credit up to 15 times. Zero-unit enrollment option (MUSIC 160AZ) available with instructor permission. See website (orchestra.stanford.edu) for further information. By enrolling in this course you are giving consent for the video and audio recording and distribution of your image and performance for use by any entity at Stanford University.

MUSIC 160AZ. Stanford Philharmonia. 0 Units.

Chamber orchestra (ca. 45 members) that rehearses one evening per week (Tu) and performs repertoire primarily from the Baroque Period to the present. Usually prepares 1-2 programs per quarter, and presents 1-2 performances each quarter in Bing Concert Hall. Enrollment based on audition; for audition information, please refer to the Stanford Orchestra website at <https://web.stanford.edu/group/sso/cgi-bin/orchestras/how-to-join/auditions/>. May be taken for credit up to 15 times. Zero-unit enrollment option (MUSIC 160AZ) available with instructor permission. See website (orchestra.stanford.edu) for further information. By enrolling in this course you are giving consent for the video and audio recording and distribution of your image and performance for use by any entity at Stanford University.

MUSIC 160B. Stanford New Ensemble. 1 Unit.

Performing compositions of the 20th century, recent works of this century, and new works by Stanford faculty and student composers. Musicians collaborate with composers and artists visiting and performing at Stanford. One concert per quarter. Admission and enrollment based on audition. For audition and contact information, please refer to the SSO/SPO/SNE website at (<http://www.stanford.edu/group/sso/cgi-bin/wordpress/member-login/>). All participants must register. May be repeated for credit a total of 14 times. Zero unit enrollment option available with instructor permission. See website: (<http://music.stanford.edu>) for policy and procedure. By enrolling in this course you are giving consent for the video and audio recording and distribution of your image and performance for use by any entity at Stanford University.

MUSIC 160BZ. Stanford New Ensemble. 0 Units.

Performing compositions of the 20th century, recent works of this century, and new works by Stanford faculty and student composers. Musicians collaborate with composers and artists visiting and performing at Stanford. One concert per quarter. Admission and enrollment based on audition. For audition and contact information, please refer to the SSO/SPO/SNE website at (<http://www.stanford.edu/group/sso/cgi-bin/wordpress/member-login/>). All participants must register. May be repeated for credit a total of 14 times. Zero unit enrollment option available with instructor permission. See website: (<http://music.stanford.edu>) for policy and procedure. By enrolling in this course you are giving consent for the video and audio recording and distribution of your image and performance for use by any entity at Stanford University.

MUSIC 160C. Stanford Baroque Soloists. 1 Unit.

Elite string group focusing on chamber music of the Baroque era, c. 1600-1750. Solo & trio sonatas for your instrument, quartet music from the pre-history of the string quartet. Coaching will emphasize leadership and ensemble techniques, intonation and blend, particulars of seventeenth & eighteenth century notation & performance practice. Modern instruments, modern pitch, baroque bows are available. Limited enrollment, admission by audition. Zero unit enrollment option available with instructor permission. See website: (<http://music.stanford.edu>) for policy and procedure. Contact instructor for audition and enrollment information: apmartin@stanford.edu. May be repeated for credit for total completion of 15 and total 15 units. By enrolling in this course you are giving consent for the video and audio recording and distribution of your image and performance for use by any entity at Stanford University.

MUSIC 160CZ. Stanford Baroque Soloists. 0 Units.

Elite string group focusing on chamber music of the Baroque era, c. 1600-1750. Solo & trio sonatas for your instrument, quartet music from the pre-history of the string quartet. Coaching will emphasize leadership and ensemble techniques, intonation and blend, particulars of seventeenth & eighteenth century notation & performance practice. Modern instruments, modern pitch, baroque bows are available. Limited enrollment, admission by audition. Zero unit enrollment option available with instructor permission. See website: (<http://music.stanford.edu>) for policy and procedure. Contact instructor for audition and enrollment information: apmartin@stanford.edu. May be repeated for credit for total completion of 15 and total 15 units. By enrolling in this course you are giving consent for the video and audio recording and distribution of your image and performance for use by any entity at Stanford University.

MUSIC 160S. Stanford Summer Orchestra. 1 Unit.

See website for details: <https://music.stanford.edu/academic-programs/summer-studies-stanford-music/summer-session-ensembles-chorus-and-symphony>. Zero unit enrollment option available with instructor permission. See website: (<http://music.stanford.edu>) for policy and procedure. By enrolling in this course you are giving consent for the video and audio recording and distribution of your image and performance for use by any entity at Stanford University.

MUSIC 160SZ. Summer Orchestra. 0 Units.

See website for details: <https://music.stanford.edu/academic-programs/summer-studies-stanford-music/summer-session-ensembles-chorus-and-symphony>. Zero unit enrollment option available with instructor permission. See website: (<http://music.stanford.edu>) for policy and procedure. By enrolling in this course you are giving consent for the video and audio recording and distribution of your image and performance for use by any entity at Stanford University.

MUSIC 160Z. Stanford Symphony Orchestra. 0 Units.

Large symphony orchestra (ca. 100 members) that rehearses two evenings per week (M/Th) and performs repertoire primarily from the Classical Period to the present. Usually prepares 1-2 programs per quarter, and presents 2-3 performances each quarter in Bing Concert Hall. Enrollment based on audition; for audition information, please refer to the Stanford Orchestra website at <https://web.stanford.edu/group/sso/cgi-bin/orchestras/how-to-join/auditions/>. May be taken for credit up to 15 times. Zero-unit enrollment option (MUSIC 160Z) available with instructor permission. See website (orchestra.stanford.edu) for further information. By enrolling in this course you are giving consent for the video and audio recording and distribution of your image and performance for use by any entity at Stanford University.

MUSIC 161A. Stanford Wind Symphony. 1 Unit.

40- to 50-member ensemble performing transcriptions of symphonic music, brass band music, and repertoire composed specifically for symphonic band. One concert per quarter. May be repeated for credit a total of 14 times. Zero unit enrollment option available with instructor permission. See website: (<http://music.stanford.edu>) for policy and procedure. By enrolling in this course you are giving consent for the video and audio recording and distribution of your image and performance for use by any entity at Stanford University.

MUSIC 161AZ. Stanford Wind Symphony. 0 Units.

40- to 50-member ensemble performing transcriptions of symphonic music, brass band music, and repertoire composed specifically for symphonic band. One concert per quarter. Zero unit enrollment option available with instructor permission. See website: (<http://music.stanford.edu>) for policy and procedure. By enrolling in this course you are giving consent for the video and audio recording and distribution of your image and performance for use by any entity at Stanford University.

MUSIC 161B. Jazz Orchestra. 1 Unit.

Jazz Orchestra will begin a hybrid approach for the upcoming Fall Quarter. The first four weeks will be conducted in a virtual format, and will be dedicated to the production of a virtual recording. Weekly virtual meetings either as a group, or section within the group, will serve to discuss, prepare, and evaluate selections for the recording assignments. In-person sectional rehearsals could resume when appropriate to university Covid-19 protocols and necessary on an artistic and preparatory basis.

MUSIC 161BZ. Jazz Orchestra. 0 Units.

Jazz Orchestra will begin a hybrid approach for the upcoming Fall Quarter. The first four weeks will be conducted in a virtual format, and will be dedicated to the production of a virtual recording. Weekly virtual meetings either as a group, or section within the group, will serve to discuss, prepare, and evaluate selections for the recording assignments. In-person sectional rehearsals could resume when appropriate to university Covid-19 protocols and necessary on an artistic and preparatory basis.

MUSIC 161D. Stanford Brass Ensemble. 1 Unit.

Zero unit enrollment option available with instructor permission. See website: (<http://music.stanford.edu>) for policy and procedure. Performance of works for full brass choir and for smaller ensembles of brass instruments. Once weekly rehearsals. May be repeated for credit. Prerequisite: audition and consent of instructor. By enrolling in this course you are giving consent for the video and audio recording and distribution of your image and performance for use by any entity at Stanford University.

MUSIC 161DZ. Stanford Brass Ensemble. 0 Units.

Performance of works for full brass choir and for smaller ensembles of brass instruments. Once weekly rehearsals. May be repeated for credit. Prerequisite: audition and consent of instructor. Zero unit enrollment option available with instructor permission. See website: (<http://music.stanford.edu>) for policy and procedure. By enrolling in this course you are giving consent for the video and audio recording and distribution of your image and performance for use by any entity at Stanford University.

MUSIC 161E. Stanford Afro-Latin Jazz Orchestra. 1 Unit.

Ensemble dedicated to the performance, interpretation and study of Afro-Latin music and its fusion with North American jazz. Repertoire includes the music of Brazil, Cuba, Dominican Republic, Puerto Rico, Peru and Argentina, as well as the United States. Idioms studied include Latin Jazz, Danzon, Son Montuno, Samba, Bossa, Traditional and Modern Salsa, Timba, Lando, and Candombe. African roots of the music are also presented including songs and rhythms from the Lucumi and Arara traditions. Focus is placed on learning rhythms, associated syncopations and also clave phrasing. One weekly rehearsal and a concert are required per quarter. Other playing opportunities available at the discretion of the group. Regular openings for brass/wind players, drummers, percussionists, pianists, bassists, and vocalists. Guest openings on violin, guitar and vibraphone. Inclusion of other instruments at the discretion of the director. Members should have basic reading ability and some related ensemble experience (e.g. jazz band). Ability to read and play complex syncopations are mandatory. Percussionists with experience in bongo, congas, timbales and pandeiro desired. Vocalists with fluency or exposure to Spanish and/or Portuguese also preferred. May be repeat for credit. Zero unit enrollment option available with instructor permission. See website: (<http://music.stanford.edu>) for policy and procedure. By enrolling in this course you are giving consent for the video and audio recording and distribution of your image and performance for use by any entity at Stanford University. While COVID restrictions are in effect, class will be a mixture of live sectionals, interactive sessions over Zoom and Jacktrip, and a possible live stream concert.

MUSIC 161EZ. Stanford Afro-Latin Jazz Orchestra. 0 Units.

Ensemble dedicated to the performance, interpretation and study of Afro-Latin music and its fusion with North American jazz. Repertoire includes the music of Brazil, Cuba, Dominican Republic, Puerto Rico, Peru and Argentina, as well as the United States. Idioms studied include Latin Jazz, Danzon, Son Montuno, Samba, Bossa, Traditional and Modern Salsa, Timba, Lando, and Candombe. African roots of the music are also presented including songs and rhythms from the Lucumi and Arara traditions. Focus is placed on learning rhythms, associated syncopations and also clave phrasing. One weekly rehearsal and a concert are required per quarter. Other playing opportunities available at the discretion of the group. Regular openings for brass/wind players, drummers, percussionists, pianists, bassists, and vocalists. Guest openings on violin, guitar and vibraphone. Inclusion of other instruments at the discretion of the director. Members should have basic reading ability and some related ensemble experience (e.g. jazz band). Ability to read and play complex syncopations are mandatory. Percussionists with experience in bongo, congas, timbales and pandeiro desired. Vocalists with fluency or exposure to Spanish and/or Portuguese also preferred. May be repeat for credit. Zero unit enrollment option available with instructor permission. See website: (<http://music.stanford.edu>) for policy and procedure. By enrolling in this course you are giving consent for the video and audio recording and distribution of your image and performance for use by any entity at Stanford University. While COVID restrictions are in effect, class will be a mixture of live sectionals, interactive sessions over Zoom and Jacktrip, and a possible live stream concert.

MUSIC 161F. Ottoman Music ensemble. 1 Unit.

Stanford's Ottoman Music Ensemble introduces select music played in the present day that hearkens back to musical practices from diverse communities of Ottoman Constantinople or Istanbul. Much of this music has now fallen under the guise of Turkish art, folk, or classical music. Through oral transmission and collective practice, we will attune our voices, instruments, and ears to hear and play select Ottoman pieces. Ensemble members will additionally be introduced to the microtonal (makam) music theory system and to the arts of solo improvisation (taksim) during the course. No previous experience required. The course culminates in a final end-of-quarter concert.

MUSIC 161FZ. Ottoman Music Ensemble. 0 Units.

Stanford's Ottoman Music Ensemble introduces select music played in the present day that hearkens back to musical practices from diverse communities of Ottoman Constantinople or Istanbul. Much of this music has now fallen under the guise of Turkish art, folk, or classical music. Through oral transmission and collective practice, we will attune our voices, instruments, and ears to hear and play select Ottoman pieces. Ensemble members will additionally be introduced to the microtonal (makam) music theory system and to the arts of solo improvisation (taksim) during the course. No previous experience required. The course culminates in a final end-of-quarter concert.

MUSIC 162. Symphonic Chorus. 1 Unit.

180- to 200-voice choral ensemble, performing major choral masterworks with orchestra. One concert per quarter. May be repeated for credit a total of 14 times. Zero unit enrollment option available with instructor permission. See website: (<http://music.stanford.edu>) for policy and procedure. By enrolling in this course you are giving consent for the video and audio recording and distribution of your image and performance for use by any entity at Stanford University.

MUSIC 162Z. Symphonic Chorus. 0 Units.

180- to 200-voice choral ensemble, performing major choral masterworks with orchestra. One concert per quarter. Zero unit enrollment option available with instructor permission. See website: (<http://music.stanford.edu>) for policy and procedure. By enrolling in this course you are giving consent for the video and audio recording and distribution of your image and performance for use by any entity at Stanford University.

MUSIC 163. Memorial Church Choir. 1 Unit.

Official choir of Memorial Church, furnishing music for Sunday services and special occasions in the church calendar. May be repeated for credit a total of 14 times. Zero unit enrollment option available with instructor permission. See website: (<http://music.stanford.edu>) for policy and procedure. By enrolling in this course you are giving consent for the video and audio recording and distribution of your image and performance for use by any entity at Stanford University.

MUSIC 163Z. Memorial Church Choir. 0 Units.

Official choir of Memorial Church, furnishing music for Sunday services and special occasions in the church calendar. Zero unit enrollment option available with instructor permission. See website: (<http://music.stanford.edu>) for policy and procedure. By enrolling in this course you are giving consent for the video and audio recording and distribution of your image and performance for use by any entity at Stanford University.

MUSIC 165. Chamber Chorale. 1 Unit.

Select 24-voice choral ensemble, specializing in virtuoso choral repertoire from all periods of Western art music. Annual touring commitment required. May be repeated for credit a total of 14 times. Zero unit enrollment option available with instructor permission. See website: (<http://music.stanford.edu>) for policy and procedure. By enrolling in this course you are giving consent for the video and audio recording and distribution of your image and performance for use by any entity at Stanford University.

MUSIC 165Z. Chamber Chorale. 0 Units.

Select 24-voice choral ensemble, specializing in virtuoso choral repertoire from all periods of Western art music. Annual touring commitment required. Zero unit enrollment option available with instructor permission. See website: (<http://music.stanford.edu>) for policy and procedure. By enrolling in this course you are giving consent for the video and audio recording and distribution of your image and performance for use by any entity at Stanford University.

MUSIC 167. University Singers. 1 Unit.

Select, 50-voice choral ensemble, performing choral repertoire from all periods of Western art music. May be repeated for credit a total of 14 times. Zero unit enrollment option available with instructor permission. See website: (<http://music.stanford.edu>) for policy and procedure. By enrolling in this course you are giving consent for the video and audio recording and distribution of your image and performance for use by any entity at Stanford University.

MUSIC 167S. Summer Chorus. 1 Unit.

80- to 100-voice non-auditioned ensemble, performing major choral masterworks and choral repertoire from all periods of Western art music. For details see: <https://music.stanford.edu/academic-programs/summer-studies-stanford-music/summer-session-ensembles>. Zero unit enrollment option available with instructor permission. See website: (<http://music.stanford.edu>) for policy and procedure. May be repeated for credit for a total of 0 (zero) unit. By enrolling in this course you are giving consent for the video and audio recording and distribution of your image and performance for use by any entity at Stanford University.

MUSIC 167SZ. Summer Chorus. 0 Units.

80- to 100-voice non-auditioned ensemble, performing major choral masterworks and choral repertoire from all periods of Western art music. For details see: <https://music.stanford.edu/academic-programs/summer-studies-stanford-music/summer-session-ensembles>. Zero unit enrollment option available with instructor permission. See website: (<http://music.stanford.edu>) for policy and procedure. May be repeated for credit for a total of 0 (zero) unit. By enrolling in this course you are giving consent for the video and audio recording and distribution of your image and performance for use by any entity at Stanford University.

MUSIC 167Z. University Singers. 0 Units.

Select, 50-voice choral ensemble, performing choral repertoire from all periods of Western art music. Zero unit enrollment option available with instructor permission. See website: (<http://music.stanford.edu>) for policy and procedure. By enrolling in this course you are giving consent for the video and audio recording and distribution of your image and performance for use by any entity at Stanford University.

MUSIC 169. Stanford Taiko. 1 Unit.

Select 15- to 18-member North American taiko ensemble, performing all-original repertoire for Japanese drums. Multiple performances in Winter and Spring quarters, also touring; instrument construction and maintenance. Admission by audition in Autumn Quarter only. May be repeated for credit a total of 14 times. Zero unit enrollment option available with instructor permission. See website: (<http://music.stanford.edu>) for policy and procedure. By enrolling in this course you are giving consent for the video and audio recording and distribution of your image and performance for use by any entity at Stanford University.

MUSIC 169Z. Stanford Taiko. 0 Units.

Select 15- to 18-member North American taiko ensemble, performing all-original repertoire for Japanese drums. Multiple performances in Winter and Spring quarters, also touring; instrument construction and maintenance. Admission by audition in Autumn Quarter only. Zero unit enrollment option available with instructor permission. See website: (<http://music.stanford.edu>) for policy and procedure. By enrolling in this course you are giving consent for the video and audio recording and distribution of your image and performance for use by any entity at Stanford University.

MUSIC 170. Collaborative Piano. 1 Unit.

Performance class in a workshop setting, exploring the art of collaboration with other musicians. Practical techniques will be addressed in highly varied repertoire. Admission is by audition only. Private-lesson proficiency level in piano is a prerequisite.

MUSIC 171. Chamber Music. 1 Unit.

Admission based on audition. Placements according to availability. 3 hr/weekly time commitment minimum. (Two hours of in-person or remote ensemble rehearsal plus one-hour remote coaching from Music department faculty.) Classical string quartets and piano/string groups supervised by the SLSQ. All participants must enroll. Zero unit enrollment option available with instructor permission. See website for policy, procedure, and audition sign up: <http://music.stanford.edu/>. By enrolling in this course you are giving consent for the video and audio recording and distribution of your image and performance for use by any entity at Stanford University.

MUSIC 171Z. Chamber Music. 0 Units.

Admission based on audition. Placements according to availability. 3 hr/weekly time commitment minimum. (Two hours of in-person or remote ensemble rehearsal plus one-hour remote coaching from Music department faculty.) Classical string quartets and piano/string groups supervised by the SLSQ. All participants must enroll. Zero unit enrollment option available with instructor permission. See website for policy, procedure, and audition sign up: <http://music.stanford.edu/>. By enrolling in this course you are giving consent for the video and audio recording and distribution of your image and performance for use by any entity at Stanford University.

MUSIC 172A. Piano. 1-3 Unit.

Private lessons and group master class weekly. May be repeated for credit a total of 14 times. Admission is by audition only. There is a fee for this class. Please visit <http://music.stanford.edu/Academics/LessonSignups.html> for class fees and audition information. All participants must enroll. Zero unit enrollment option available with instructor permission. See website: (<http://music.stanford.edu/>) for policy and procedure.

MUSIC 172B. Organ. 1-3 Unit.

May be repeated for credit a total of 14 times. Admission is by audition only. There is a fee for this class. Please visit <http://music.stanford.edu/Academics/LessonSignups.html> for class fees and audition information. All participants must enroll. Zero unit enrollment option available with instructor permission. See website: (<http://music.stanford.edu/>) for policy and procedure.

MUSIC 172C. Harpsichord. 1-3 Unit.

May be repeated for credit a total of 14 times. Admission is by audition only. There is a fee for this class. Please visit <http://music.stanford.edu/Academics/LessonSignups.html> for class fees and audition information. All participants must enroll. Zero unit enrollment option available with instructor permission. See website: (<http://music.stanford.edu/>) for policy and procedure.

MUSIC 172D. Jazz Piano. 1-3 Unit.

Admission is by audition and/or invitation only; priority to majors and jazz-ensemble participants. All participants must enroll. There is a fee for this class. Please visit <http://music.stanford.edu/Academics/LessonSignups.html> for class fees and audition information. Zero unit enrollment option available with instructor permission. May be repeated for credit a total of 14 times. Lessons meet for one hour per week at the mutual convenience of the instructor and student. Exact time to be determined during the first week of classes. Course to be taught online when COVID restrictions are in effect as a live private interactive session. Student should have access to a piano during the lesson. Students on campus who do not have such access, please contact instructor for further information.

MUSIC 172E. Fortepiano. 1-3 Unit.

May be repeated for credit a total of 14 times. Admission is by audition only. There is a fee for this class. Please visit <http://music.stanford.edu/Academics/LessonSignups.html> for class fees and audition information. All participants must enroll. Zero unit enrollment option available with instructor permission. See website: (<http://music.stanford.edu/>) for policy and procedure.

MUSIC 172F. Carillon. 1-3 Unit.

May be repeated for credit a total of 14 times. Admission is by audition only. There is a fee for this class. Please visit <http://music.stanford.edu/Academics/LessonSignups.html> for class fees and audition information. All participants must enroll. Zero unit enrollment option available with instructor permission. See website: (<http://music.stanford.edu/>) for policy and procedure.

MUSIC 172G. Gu-Zheng. 1-3 Unit.

Private lessons weekly. May be repeated for credit a total of 14 times. Admission is by audition only. There is a fee for this class. Please visit <http://music.stanford.edu/Academics/LessonSignups.html> for class fees and audition information. All participants must enroll. Zero unit enrollment option available with instructor permission. See website: (<http://music.stanford.edu/>) for policy and procedure.

MUSIC 173. Voice. 1-3 Unit.

Private lessons and group master classes weekly. May be repeated for credit a total of 14 times. Admission is by audition only. There is a fee for this class. Please visit <http://music.stanford.edu/Academics/LessonSignups.html> for class fees and audition information. All participants must enroll. Zero unit enrollment option available with instructor permission. See website: (<http://music.stanford.edu/>) for policy and procedure.

MUSIC 174A. Violin. 1-3 Unit.

May be repeated for credit a total of 14 times. Admission is by audition only. There is a fee for this class. Please visit <http://music.stanford.edu/Academics/LessonSignups.html> for class fees and audition information. All participants must enroll. Zero unit enrollment option available with instructor permission. See website: (<http://music.stanford.edu/>) for policy and procedure.

MUSIC 174B. Viola. 1-3 Unit.

May be repeated for credit a total of 14 times. Admission is by audition only. There is a fee for this class. Please visit <http://music.stanford.edu/Academics/LessonSignups.html> for class fees and audition information. All participants must enroll. Zero unit enrollment option available with instructor permission. See website: (<http://music.stanford.edu/>) for policy and procedure.

MUSIC 174C. Violoncello. 1-3 Unit.

May be repeated for credit a total of 14 times. Admission is by audition only. There is a fee for this class. Please visit <http://music.stanford.edu/Academics/LessonSignups.html> for class fees and audition information. All participants must enroll. Zero unit enrollment option available with instructor permission. See website: (<http://music.stanford.edu/>) for policy and procedure.

MUSIC 174D. Contrabass. 1-3 Unit.

May be repeated for credit a total of 14 times. Admission is by audition only. There is a fee for this class. Please visit <http://music.stanford.edu/Academics/LessonSignups.html> for class fees and audition information. All participants must enroll. Zero unit enrollment option available with instructor permission. See website: (<http://music.stanford.edu/>) for policy and procedure.

MUSIC 174E. Viola Da Gamba. 1-3 Unit.

Admission is by audition only. There is a fee for this class. Please visit <http://music.stanford.edu/Academics/LessonSignups.html> for class fees and audition information. All participants must enroll. Zero unit enrollment option available with instructor permission. See website: (<http://music.stanford.edu/>) for policy and procedure.

MUSIC 174F. Classical Guitar. 1-3 Unit.

May be repeated for credit a total of 14 times. Admission is by audition only. There is a fee for this class. Please visit <http://music.stanford.edu/Academics/LessonSignups.html> for class fees and audition information. All participants must enroll. Zero unit enrollment option available with instructor permission. See website: (<http://music.stanford.edu>) for policy and procedure.

MUSIC 174G. Harp. 1-3 Unit.

May be repeated for credit a total of 14 times. Admission is by audition only. There is a fee for this class. Please visit <http://music.stanford.edu/Academics/LessonSignups.html> for class fees and audition information. All participants must enroll. Zero unit enrollment option available with instructor permission. See website: (<http://music.stanford.edu>) for policy and procedure.

MUSIC 174H. Baroque Violin. 1-3 Unit.

May be repeated for credit a total of 14 times. Admission is by audition only. There is a fee for this class. Please visit <http://music.stanford.edu/Academics/LessonSignups.html> for class fees and audition information. All participants must enroll. Zero unit enrollment option available with instructor permission. See website: (<http://music.stanford.edu>) for policy and procedure.

MUSIC 174I. Jazz Bass. 1-3 Unit.

May be repeated for credit a total of 14 times. Admission is by audition only. There is a fee for this class. Please visit <http://music.stanford.edu/Academics/LessonSignups.html> for class fees and audition information. All participants must enroll. Zero unit enrollment option available with instructor permission. See website: (<http://music.stanford.edu>) for policy and procedure.

MUSIC 174J. Jazz & Contemporary Guitar. 1-3 Unit.

An application of the performance techniques developed by the innovative, genius, and radical guitarists from 1930 to 2020. Improvising, comping, reading, repertoire, and technique will be studied in depth. Rhythm styles, the application of modern theory, transcribing solos, and chord melody arranging are developed through the course of study. May be repeated for credit a total of 14 times. Admission is by audition only. There is a fee for this class. Please visit <http://music.stanford.edu/Academics/LessonSignups.html> for class fees and audition information. All participants must enroll. Zero unit enrollment option available with instructor permission. See website: (<http://music.stanford.edu>) for policy and procedure.

MUSIC 175A. Flute. 1-3 Unit.

May be repeated for credit a total of 14 times. Admission is by audition only. There is a fee for this class. Please visit <http://music.stanford.edu/Academics/LessonSignups.html> for class fees and audition information. All participants must enroll. Zero unit enrollment option available with instructor permission. See website: (<http://music.stanford.edu>) for policy and procedure.

MUSIC 175B. Oboe. 1-3 Unit.

May be repeated for credit a total of 15 times. Admission is by audition only. There is a fee for this class. Please visit <http://music.stanford.edu/Academics/LessonSignups.html> for class fees and audition information. All participants must enroll. Zero unit enrollment option available with instructor permission. See website: (<http://music.stanford.edu>) for policy and procedure.

MUSIC 175C. Clarinet. 1-3 Unit.

May be repeated for credit a total of 14 times. Admission is by audition only. There is a fee for this class. Please visit <http://music.stanford.edu/Academics/LessonSignups.html> for class fees and audition information. All participants must enroll. Zero unit enrollment option available with instructor permission. See website: (<http://music.stanford.edu>) for policy and procedure.

MUSIC 175D. Bassoon. 1-3 Unit.

May be repeated for credit a total of 14 times. Admission is by audition only. There is a fee for this class. Please visit <http://music.stanford.edu/Academics/LessonSignups.html> for class fees and audition information. All participants must enroll. Zero unit enrollment option available with instructor permission. See website: (<http://music.stanford.edu>) for policy and procedure.

MUSIC 175E. Recorder/Early Winds. 1-3 Unit.

May be repeated for credit a total of 14 times. Admission is by audition only. There is a fee for this class. Please visit <http://music.stanford.edu/Academics/LessonSignups.html> for class fees and audition information. All participants must enroll. Zero unit enrollment option available with instructor permission. See website: (<http://music.stanford.edu>) for policy and procedure.

MUSIC 175F. Saxophone. 1-3 Unit.

May be repeated for credit a total of 14 times. Admission is by audition only. There is a fee for this class. Please visit <http://music.stanford.edu/Academics/LessonSignups.html> for class fees and audition information. All participants must enroll. Zero unit enrollment option available with instructor permission. See website: (<http://music.stanford.edu>) for policy and procedure.

MUSIC 175G. Baroque Flute. 1-3 Unit.

May be repeated for credit a total of 14 times. Admission is by audition only. There is a fee for this class. Please visit <http://music.stanford.edu/Academics/LessonSignups.html> for class fees and audition information. All participants must enroll. Zero unit enrollment option available with instructor permission. See website: (<http://music.stanford.edu>) for policy and procedure.

MUSIC 175H. Jazz Saxophone. 1-3 Unit.

May be repeated for credit a total of 15 times. Admission is by audition only. There is a fee for this class. Please visit <http://music.stanford.edu/Academics/LessonSignups.html> for class fees and audition information. All participants must enroll. Zero unit enrollment option available with instructor permission. See website: (<http://music.stanford.edu>) for policy and procedure.

MUSIC 176A. French Horn. 1-3 Unit.

May be repeated for credit a total of 14 times. Admission is by audition only. There is a fee for this class. Please visit <http://music.stanford.edu/Academics/LessonSignups.html> for class fees and audition information. All participants must enroll. Zero unit enrollment option available with instructor permission. See website: (<http://music.stanford.edu>) for policy and procedure.

MUSIC 176B. Trumpet. 1-3 Unit.

May be repeated for credit a total of 14 times. Admission is by audition only. There is a fee for this class. Please visit <http://music.stanford.edu/Academics/LessonSignups.html> for class fees and audition information. All participants must enroll. Zero unit enrollment option available with instructor permission. See website: (<http://music.stanford.edu>) for policy and procedure.

MUSIC 176C. Trombone. 1-3 Unit.

May be repeated for credit a total of 14 times. Admission is by audition only. There is a fee for this class. Please visit <http://music.stanford.edu/Academics/LessonSignups.html> for class fees and audition information. All participants must enroll. Zero unit enrollment option available with instructor permission. See website: (<http://music.stanford.edu>) for policy and procedure.

MUSIC 176D. Tuba. 1-3 Unit.

May be repeated for credit a total of 14 times. Admission is by audition only. There is a fee for this class. Please visit <http://music.stanford.edu/Academics/LessonSignups.html> for class fees and audition information. All participants must enroll. Zero unit enrollment option available with instructor permission. See website: (<http://music.stanford.edu>) for policy and procedure.

MUSIC 176E. Jazz Trumpet. 1-3 Unit.

May be repeated for credit a total of 14 times. Admission is by audition only. There is a fee for this class. Please visit <http://music.stanford.edu/Academics/LessonSignups.html> for class fees and audition information. All participants must enroll. Zero unit enrollment option available with instructor permission. See website: (<http://music.stanford.edu>) for policy and procedure.

MUSIC 177. Percussion. 1-3 Unit.

May be repeated for credit a total of 14 times. Admission is by audition only. There is a fee for this class. Please visit <http://music.stanford.edu/Academics/LessonSignups.html> for class fees and audition information. All participants must enroll. Zero unit enrollment option available with instructor permission. See website: (<http://music.stanford.edu>) for policy and procedure.

MUSIC 177A. Drum Set Lessons. 1-3 Unit.

These lessons will be geared toward the individual student's desires and needs. All levels are welcome, but students should contact instructor to set up initial meeting, prior to enrolling in the course. Students will explore drumset technique, coordination, reading and a study various styles including, Jazz, Rock, R&B, Blues, Latin and Brazilian music. Students will use different texts as needed. These texts may include: Syncopation by Ted Reed, Modern Reading Text in 4/4 by Louis Bellson, A Funky Primer by Charles Dowd, Advanced Techniques for the Modern Drummer by Jim Chapin, and others. Students will also use material created by David for his classes "Around the World on a Drumset" and "Chart Reading Demystified." These lessons are designed to be both fun and challenging. Students will play along with recordings and are encouraged to bring in recordings of music that they enjoy. May be repeated for credit a total of 15 times. There is a fee for this class. Please visit <http://music.stanford.edu/Academics/LessonSignups.html> for class fees and audition information. All participants must enroll. Zero unit enrollment option available with instructor permission. See website: (<http://music.stanford.edu>) for policy and procedure.

MUSIC 179Z. Applied Music Private Lessons. 0 Units.

Students enroll in appropriate instructor section for private instrumental/vocal lessons using this zero unit enrollment option. Available only with instructor permission. See website: (<http://music.stanford.edu>) for policy and procedure. Admission is by audition only. There is a fee for this class. Please visit <http://music.stanford.edu/Academics/LessonSignups.html> for class fees and audition information.

MUSIC 181. Jazz Combos. 1 Unit.

Admission based on audition. These small jazz ensembles meet weekly and typically include coaching, one masterclass and one performance per quarter. May be repeated for credit. All participants must enroll. Zero unit enrollment option available with instructor permission. See website for policy, procedure, and audition information: <https://music.stanford.edu/stanford-jazz-combos>.

MUSIC 181Z. Jazz Combo. 0 Units.

Admission based on audition. These small jazz ensembles meet weekly and typically include coaching, one masterclass and one performance per quarter. May be repeated for credit. All participants must enroll. Zero unit enrollment option available with instructor permission. See website for policy, procedure, and audition information: <https://music.stanford.edu/stanford-jazz-combos>.

MUSIC 182. Diction for Singers. 1 Unit.

The international phonetic alphabet and its application to German, French, and Italian vocal literature. Open also to pianists interested in vocal coaching and choral conducting.

MUSIC 183A. German Art Song Interpretation. 1 Unit.

By audition only. For advanced singers and pianists as partners. Performance class in a workshop setting. Composers include Beethoven, Schubert, Wolf and Strauss. May be repeated for credit a total of 2 times. Enrollment limit: 20 (ten singers maximum). Prerequisite: consent of instructor. Recommended prerequisite: 170 (pianists) or 182 (singers).

MUSIC 183B. French Art Song Interpretation. 1 Unit.

By audition only. For advanced singers and pianists as partners. Performance class in a workshop setting. Composers include Fauré, Debussy, Ravel and Poulenc. May be repeated for credit a total of 2 times. Enrollment limit: 20 (ten singers maximum). Prerequisite: consent of instructor. Recommended prerequisite: 170 (pianists) or 182 (singers).

MUSIC 183C. Interpretation of Musical Theater Repertoire. 1-2 Unit.

By audition only. Contact instructor prior to enrolling (mlcats@stanford.edu). Ability to read music expected, but students with experience singing in musical theater can be accepted. For singers and pianists as partners. Performance class in a workshop setting along with lecture/discussion of important eras of musical theater history. Composers include Kern, Porter, Gershwin, Rodgers, Sondheim, Lloyd Weber, Jason Robert Brown and others. May be repeated for credit a total of 2 times. Enrollment limit: 20 (ten singers maximum). Prerequisite: consent of instructor. Recommended prerequisite: 170 (pianists). Same as: TAPS 183C

MUSIC 183CZ. Interpretation of Musical Theater Repertoire. 0 Units.

By audition only. Contact instructor prior to enrolling (mlcats@stanford.edu). Ability to read music expected, but students with experience singing in musical theater can be accepted. For singers and pianists as partners. Performance class in a workshop setting along with lecture/discussion of important eras of musical theater history. Composers include Kern, Porter, Gershwin, Rodgers, Sondheim, Lloyd Weber, Jason Robert Brown and others. May be repeated for credit a total of 2 times. Enrollment limit: 20 (ten singers maximum). Prerequisite: consent of instructor. Recommended prerequisite: 170 (pianists).

MUSIC 183D. Musical Theater. 1-3 Unit.

In this workshop we will traverse the landscape of world of Musical Theater. It will serve as an introduction for the beginning actor and singer, and expand the more experienced performer's range in this genre. The world of Musical Theater is filled with stories of love, passion, joy, violence, heartbreak and rage. The class will include an introduction to vocal and movement skills for musical theater, beginning with exercises to build an ensemble and encourage a sense of play and relaxation in supportive environment. Our class must be a place where everyone feels safe. As ensemble members, we will be responsible for each other in this environment. Students will choose one solo song, and perform in a group number from this exciting discipline. The instructor will work with the actors on technique, utilization of action, specificity of language, personalization, and emotional truth. A professional coach from the theater community will conduct vocal coaching. Physical warm-ups and choreography will be suited for both the dancer and non-dancer. The class will culminate in the last week with live performance for friends and family. STUDENTS ARE ENCOURAGED TO BRING THEIR OWN SUGGESTIONS. (Isn't there a role you've always wanted to sing?) Required text: Broadway Musicals Show by Show: Sixth Edition - Stanley Green; Paperback. Same as: TAPS 115

MUSIC 183E. Singing for Musicals. 2 Units.

Do you love singing in musicals? Do you know how to sing in musicals? This course provides training in vocal technique and acting for students interested in performing musical theater. Students will learn about the physical process of singing, including posture, breath support, and vocal exercises. They will incorporate vocal technique with the study of phrasing in different styles of Broadway repertoire, and apply both to the art of acting the song. Each student will work on solo selections and ensembles, and sing in most classes. Through understanding vocal technique, students will become more confident and joyful performers. The course will culminate in a final public workshop performance. Admission to course by audition or permission of the instructor. Due to the COVID-19 situation, the Singing for Musicals class will be taught online. As this can pose a problem with students in various time zones and internet arrangements, the instructor will contact all waitlisted students with more detailed information regarding video auditions and a questionnaire.

Same as: TAPS 183E

MUSIC 184A. Editing and Performing Early Music. 1-3 Unit.

This course is a practical workshop in early music vocal repertoire. The main focus of this course is to use original source material to explore editorial practice. Having prepared the score, students learn to perform the piece from an historically informed performance practice point of view. In addition to broadening the student's knowledge of vocal repertoire, the following skills are developed: text preparation, foreign language translation and diction; rehearsal for performance and/or recording. Enrollment by audition only. Prerequisite: vocal or instrumental instruction, as the class is open to singers or collaborative artists. May be repeated for credit a total of 4 times. Zero unit enrollment option available with instructor permission. See website: (<http://music.stanford.edu>) for policy and procedure. By enrolling in this course you are giving consent for the video and audio recording and distribution of your image and performance for use by any entity at Stanford University.

MUSIC 184AZ. Editing and Performing Early Music. 0 Units.

This course is a practical workshop in early music vocal repertoire. The main focus of this course is to use original source material to explore editorial practice. Having prepared the score, students learn to perform the piece from an historically informed performance practice point of view. In addition to broadening the student's knowledge of vocal repertoire, the following skills are developed: text preparation, foreign language translation and diction; rehearsal for performance and/or recording. Enrollment by audition only. Prerequisite: vocal or instrumental instruction, as the class is open to singers or collaborative artists. All participants must enroll. May be repeated for a total of 4 times. Zero unit enrollment option available with instructor permission. See website: (<http://music.stanford.edu>) for policy and procedure. By enrolling in this course you are giving consent for the video and audio recording and distribution of your image and performance for use by any entity at Stanford University.

MUSIC 184B. Topics on the Musical Stage. 1-3 Unit.

This course is a practical workshop in vocal repertoire for the stage. Each quarter's offering emphasizes a specific genre or period, therefore the course can be repeated with permission of the instructor. In addition to broadening the student's knowledge of vocal repertoire, the following skills are developed: text preparation, foreign language translation and diction; rehearsal etiquette for performance and/or recording. Enrollment by audition only. Prerequisite: vocal or instrumental instruction, as the class is open to singers or collaborative artists. May be repeated for credit a total of 4 times. Zero unit enrollment option available with instructor permission. See website: (<http://music.stanford.edu>) for policy and procedure. By enrolling in this course you are giving consent for the video and audio recording and distribution of your image and performance for use by any entity at Stanford University.

MUSIC 184BZ. Topics on the Musical Stage. 0 Units.

This course is a practical workshop in vocal repertoire for the stage. Each quarter's offering emphasizes a specific genre or period, therefore the course can be repeated with permission of the instructor. In addition to broadening the student's knowledge of vocal repertoire, the following skills are developed: text preparation, foreign language translation and diction; rehearsal etiquette for performance and/or recording. Enrollment by audition only. Prerequisite: vocal or instrumental instruction, as the class is open to singers or collaborative artists. May be repeated for credit a total of 4 times. Zero unit enrollment option available with instructor permission. See website: (<http://music.stanford.edu>) for policy and procedure. By enrolling in this course you are giving consent for the video and audio recording and distribution of your image and performance for use by any entity at Stanford University.

MUSIC 184C. Dramatic Vocal Arts: Songs and Scenes Onstage. 1-2 Unit.

Studies in stagecraft, acting and performance for singers, culminating in a public performance. Repertoire to be drawn from the art song, opera, American Songbook and musical theater genres. Enrollment by audition only. May be repeated for credit a total of 4 times. Zero unit enrollment option available with instructor permission. See website: (<http://music.stanford.edu>) for policy and procedure. By enrolling in this course you are giving consent for the video and audio recording and distribution of your image and performance for use by any entity at Stanford University.

Same as: TAPS 184C

MUSIC 184CZ. Dramatic Vocal Arts: Songs and Scenes Onstage. 0 Units.

Studies in stagecraft, acting and performance for singers, culminating in a public performance. Repertoire to be drawn from the art song, opera, American Songbook and musical theater genres. Enrollment by audition only. May be repeated for credit a total of 4 times. Zero unit enrollment option available with instructor permission. See website: (<http://music.stanford.edu>) for policy and procedure. By enrolling in this course you are giving consent for the video and audio recording and distribution of your image and performance for use by any entity at Stanford University.

MUSIC 184D. Creating a Musical. 4 Units.

This practical, hands on class in the making of musicals explores all aspects of creating musical theater, including writing, composing, producing, directing, designing, and casting this most American of theater genres. The class will include direct engagement and discussion with the producers and artists of TheatreWorks Silicon Valley's production of *The Bridges of Madison County*, book by Marsha Norman and music by Jason Robert Brown, including off-campus field trip to rehearsal of the show. The class will explore the creation of several renowned musicals including Stephen Sondheim's *Merrily We Roll Along*, and will include live Skype interviews with Broadway composers Andrew Lippa (*The Wild Party*), Paul Gordon (*Jane Eyre*), and David Hein and Irene Sankoff (*Come from Away*, winner of the 2017 Drama Desk Award for Best Musical). The quarter will culminate in the creation, production, and performance of several mini-musicals created by members of the class. Instructor Robert Kelley is the Founding Artistic Director of TheatreWorks Silicon Valley, where he has directed 170 productions, including many world and regional premieres.

Same as: TAPS 177C

MUSIC 184E. Musical Theater Dance Styles. 1 Unit.

Students will be able to demonstrate period specificity, character of style through learning different musical theater dances from the early 20th C. to the present. ALL students will participate in an end of quarter showing of the choreography developed and composed in class. Class will be supplemented with the occasional guest, DJ accompaniment and video viewing.

Same as: DANCE 102

MUSIC 184F. Introduction to Theater Sound Design. 4 Units.

This course explores the history and aesthetics of theatre sound design, and provides the basic technical knowledge to create your own work. Learn how to analyze a script for sound design elements, gain practical knowledge of microphones and loudspeakers, sound editing and cueing software, and put your knowledge to work creating your own design. Same as: TAPS 138

MUSIC 186B. American Song in the 20th Century and after. 3-4 Units.

Critical and creative exploration of song in the Americas. About twenty-five key examples will guide discussion of the interactions between words, music, performance and culture. Weekly listening, reading and assignments will be organized around central themes: love, sex and romance; war and politics; labor and money; place; identity; society and everyday life. Genres include art song; blues, gospel, jazz and country; pop, soul, rock and hip-hop; bossa nova, nueva canción and salsa; electronic and experimental. Takehome and in-class assignments will include critical and creative writing, and music composition, production and performance; final projects may emphasize any of the above. Same as: AMSTUD 186B, MUSIC 286B

MUSIC 186E. Sounds of Islam. 3 Units.

This course explores diverse intersections of sound and Islam in religious and secular contexts throughout the world. From studying Islamic philosophies about the art of listening to interrogating Muslim hip hop, we examine how sonic practices simultaneously reflect and shape different Muslim identities globally. Issues of nationalism, war and trauma, class, race and ethnicity, gender and sexualities, colonialism, social in/justice, and migration will remain central to our exploration of spirituality, secularism, piety, and religiosity for the individuals and communities making or listening to sounds of Islam. Same as: RELIGST 156X

MUSIC 186F. Broadway Songbook. 3 Units.

Close study of about two dozen of the songs from across the history of the Broadway musical: from the Tin Pan Alley era (Jerome Kern, the Gershwins, Cole Porter, Harold Arlen) through the so-called "Golden Age" (Rodgers & Hammerstein, Lerner & Lowe, Kander and Ebb) to Stephen Sondheim, Andrew Lloyd Webber, Stephen Schwartz, Lin-Manuel Miranda, Pasek and Paul. Analysis of lyrics, melody, harmony, instrumental/vocal arrangements, classic and contemporary performances. Workshop development of 2-3 songs per student including arrangement, performance, and discussion. Same as: TAPS 186F

MUSIC 187. Spiritual Sound of Central Asia: Introduction to the Music of Central Asia. 1-5 Unit.

In this course, master-musician Imamyar Hasanov teaches students to perform and appreciate music from Central Asia. Students learn a spectrum of traditional Azerbaijani, Kazakh, Kyrgyz, Uyghur and Uzbek folk melodies, including improvisational art music of mugham. The class is also a seminar, with discussions led by Professor Denise Gill on music of Central Asia, guest lectures and demonstrations, and Skype interviews with a musician in Kyrgyzstan and instrument maker in Istanbul. No prerequisites or prior knowledge of Azeri, Uzbek and Kyrgyz music for this course. Both a music workshop and seminar, this course is open to students who have experience playing musical instruments and those who do not. This course must be taken for a minimum of 3 units and a letter grade to be eligible for Ways-ED credit. For Ways-CE credit, it may be taken for any number of units.

MUSIC 192A. Foundations of Sound-Recording Technology. 3 Units.

This course serves as an introduction to recording technologies and practices in a studio, at home, and in the field. The facilities available at CCRMA provide a basis for learning studio operation, as well as a space for recording projects remotely. Students also receive a portable recording kit* to develop professional-sounding projects at home with audio recordings from inside and outside their location. The course addresses various audio engineering topics: room acoustics, analog and digital recording, microphone selection and placement, audio editing and mixing, audio effects processing (equalization, compression, convolution reverb, etc.), and sound design. (*subject to availability of funds). Prerequisite: MUSIC 101 or consent of instructor.

MUSIC 192B. Advanced Sound Recording Technology. 3 Units.

This course aims to heighten the listening skills of students. In a series of group sessions and discussions students compare and contrast a variety of dynamic based processes and other audio effects/plugin which might be used in their mixes. Students also explore recording concepts and technologies that will augment their studio practices such as making customized impulse response recordings, advanced equalization practices, and exploring additional advanced studio/non-studio techniques and software. Prerequisite: 192A or consent of instructor.

MUSIC 192C. Session Recording. 1-3 Unit.

Independent engineering of recording sessions combined with instruction in the use and maintenance of other CCRMA audio/studio facilities and equipment that is required for the realization of studio informed artistic projects. Students will explore how ideas such as acoustic phenomena, interactivity, or new instruments can augment their studio practice. May be repeated for credit a total of 14 times (1 unit per quarter throughout the year - recommended - or 3 units in Spring). Prerequisite: Consent of instructor.

MUSIC 192F. Sound Installation. 4 Units.

This class will cover creative, historical and theoretical aspects of sited artworks based in sound. We will create, install and critique new works that use sound with special attention the ways that sound intersects with time, space and architecture. Attention will be given both to sound as immaterial signal and to sound in its relation to visual environments and objects. The class is intended for artists, composers and others who want to explore the spatial, social and aesthetic dimensions of sound. Assigned readings will cover sound practices in the contexts of art, music, sound studies and anthropology. Experience in sound recording or production, signal processing and spatialization, or installation are valuable but not required. Curiosity and attention to sounds are. Same as: ARTSTUDI 175

MUSIC 196. Music Outside the Concert Hall. 1 Unit.

Some of the most engaging and important work we do as musicians is outside of the concert hall at the intersection of music and public service. Candidates will be encouraged to explore these intersections either by reviewing existing programs or by participating in or creating new initiatives. Some jumping off points may include exploring programming for incarcerated populations through the work of Arts on the Edge in Alaska, DeCoda in NY, Community Music Works and more locally, SLSQ's community programming. Quarterly informational meetings will be convened to point students to resources, programs, etc., they could research or in which they can become involved.

MUSIC 197. Undergraduate Teaching Apprenticeship. 1-2 Unit.

Work in an apprentice-like relationship with faculty teaching a student-initiated course. Prerequisite: consent of instructor. (Staff).

MUSIC 198. Concentrations Project. 2 Units.

For concentration program participants only. Must be taken in senior year. Multiple concentrators may enroll in one section of 198 per concentration.

MUSIC 199. Independent Study. 1-5 Unit.

For advanced undergraduates and graduate students who wish to do work outside the regular curriculum. Before registering, student must present specific project and enlist a faculty sponsor. May be repeated for credit a total of 14 times.

MUSIC 200A. Proseminar in Musicology and Music Bibliography. 3-4 Units.

Introduction to research in music, bibliographical materials, major issues in the field, philosophy, and methods in music history. Guest lecturers and individual research topics.

MUSIC 200B. Proseminar in Ethnomusicology. 3-5 Units.

A graduate-level introduction to the field of ethnomusicology. Issues and debates are traced through the history of the discipline, with emphasis on influences from anthropology, performance studies, linguistics, and cultural studies. Topics include music and: social organization, "culture," structure, practice, comparison, representation, globalization, identity, transcription, and embodiment.

MUSIC 201. CCRMA Colloquium. 1 Unit.

Weekly review of work being done in the field, research taking place at CCRMA, and tools to make the most of the CCRMA technical facilities.

MUSIC 202. The Art of Music Video: Practice and Analysis. 2-4 Units.

Making and understanding music videos and other short audiovisual genres. This course is a critical and creative exploration of music and performing bodies in moving media. Listening/viewing includes music videos from the 1980s to today, along with musicals, dance, and opera on film, experimental film and video, and segments from feature film. We'll attend to both music and image, focusing on gesture, rhythm, and affect, and considering visual parameters like décor, lighting, texture, camera movement, and editing. Requirements include choosing and documenting a live performance; producing a short audiovisual work involving post-production; several short writing assignments; and weekly reading and viewing/listening assignments. No prerequisites; no previous videomaking experience required. This course must be taken for a minimum of 3 units for Ways-All and a letter grade to be eligible for Ways-All credit.

Same as: MUSIC 102

MUSIC 203. Audiovisual Performance. 3-4 Units.

Students perform with music and video in synergy. This course explores theories and practices of engaging audiovisual media in performance on stage and online. Examples come from the scenes of experimental music and multimedia performance. Other audiovisual categories to be approached: avant-garde film, visual music, video art, music video, network art. Readings, listening-viewings, discussions, and analyses of relevant works provide a conceptual framework. Labs and assignments give students hands-on experience in crafting and performing their own audiovisual works. The course culminates with a public live streaming show. A background in either music or visual arts is recommended, but not required.

MUSIC 220A. Fundamentals of Computer-Generated Sound. 2-4 Units.

What are the basic tools that computer music researchers and artists use to create sound? This course will include a summary of digital synthesis techniques (additive, subtractive, wavetable, frequency modulation and physical-modeling), signal processing techniques for digital effects, (reverberation, panning, filters), and basic psychoacoustics. Programming experience is recommended, but not required. The course will use the Web Audio/MIDI API (JavaScript) for computer music programming. Majors (undergraduate or graduate) must take for 4 units. See <https://ccrma.stanford.edu/courses/220a/>.

MUSIC 220B. Compositional Algorithms, Psychoacoustics, and Computational Music. 2-4 Units.

The use of high-level programming language as a compositional aid in creating musical structures. Advanced study of sound synthesis techniques. Simulation of a reverberant space and control of the position of sound within the space. To satisfy a Ways requirement, this course must be taken for at least 3 units. In AY 2020-21, a letter grade or CR grade satisfies the Ways requirement. See <http://ccrma.stanford.edu/>. Prerequisite: 220A.

MUSIC 220C. Research Seminar in Computer-Generated Music. 2-4 Units.

Individual projects in composition, psychoacoustics, or signal processing. See <http://ccrma.stanford.edu>. May be repeated for credit. Prerequisite: 220B.

MUSIC 220D. Research in Computer-Generated Music. 1-10 Unit.

Independent research projects in composition, psychoacoustics, or signal processing. See <http://ccrma.stanford.edu/>. May be repeated for credit. Prerequisite: 220C.

MUSIC 221N. Deep Learning for Music and Audio. 1 Unit.

Seminar reviewing the development of deep-learning methods in music and audio fields.

MUSIC 222. Sound in Space. 1-4 Unit.

Historical background, techniques and theory on the use of space in music composition and diffusion. Listening and analysis of relevant pieces. Experimental work in spatialization techniques leading to short studies to be diffused in concert at the end of the quarter.

MUSIC 223B. Sonic Experiments in Composition. 2-3 Units.

The course will present post-1945 works with timbre serving as an organizing principle or compositional metaphor, in the context of historical works in which timbre plays a structural role. Composers considered may include: Alvin Lucier, Pauline Oliveros and other American experimentalists; Scelsi and his influence on the French Spectral school; the first and subsequent generations of French Spectralism; and contemporary composers of experimental music such as Peter Ablinger. Topics will include: process and form; timbre in relation to time and space; harmonicity and noise; and the influence of analog and digital technology on instrumental composition. This course must be taken for a minimum of 3 units and a letter grade to be eligible for Ways credit for All.

MUSIC 223C. Tradition, Experimentation, and Technology in String Quartet Composition and Performance. 1-3 Unit.

This course will explore string quartet composition and performance by focusing in on the act of composer-performer collaboration. It will investigate this relationship and its facets through the composition of a work for the Saint Lawrence String Quartet by Patricia Alessandrini based on the SLSQ's relationship with the Opus 76 quartets of Haydn employing Artificial Intelligence (AI) techniques, in addition to workshoping of student exercises and compositions. Students will have the opportunity to participate in the class as performers, composers, technologists, or musicologically, through analysis of the collaborative process informed by concepts such as agency, representation, interpretation, expression, and experimentation.

MUSIC 223D. Sound Practice: Embodiment and the Social. 2-3 Units.

How can sound-making impact interpersonal relations and institutional practices? This class offers space to creatively re-think and challenge received relationships between artists, audiences, technologies, and environments. In class, we will create, perform, and analyze sound and music. We will explore sound's potential to catalyze social change via experimental and embodied approaches to sound-making. We will engage with sound practices that compose communal solidarity, augment and transform vocal identities, and potentially, alter how we listen to and live in the world. Readings/listenings include Björk, Maria Chavez, Donna Haraway, Pauline Oliveros, George Lewis, Meredith Monk, Maurice Merleau-Ponty, Hildegard Westerkamp, and Pamela Z.

MUSIC 230. Advanced Orchestral Conducting. 2-3 Units.

Advanced study of orchestral conducting through individual weekly meetings with the instructor. Develop skills in score reading and analysis, baton technique and the physical art of conducting, performance practice, and rehearsal technique. Expand knowledge of the orchestral repertoire through score study plus reading and listening assignments. This course is intended primarily for juniors, seniors, and graduate students with prior conducting experience. Prerequisites: MUSIC 130B and MUSIC 136, or two equivalent beginning and intermediate conducting courses. May be taken for credit a maximum of 6 times.

MUSIC 231. Advanced Choral Conducting. 2-3 Units.

Individual instruction continuing trajectory of Music 130C. Focus on gestural technique and analysis of works by genre and historical period. May be repeated for credit a total of 8 times. Prerequisite: 130C.

MUSIC 236. Future Media, Media Archaeologies. 3-4 Units.

Hand-on. Media technologies from origins to the recent past. Students create artworks based on Victorian era discoveries and inventions, early developments in electronic media, and orphaned technologies. Research, rediscover, invent, and create devices of wonder and impossible objects. Readings in history and theory. How and what media technologies mediate.

Same as: ARTSTUDI 236

MUSIC 242K. Studies in Music of the Baroque: Handel the Cosmopolitan. 4-5 Units.

Music history seminar on the operatic, sacred, and instrumental works of G.F. Handel as examples of the diversity, cosmopolitanism, expression, formal and technical features, and social uses of music in the first half of eighteenth century. Traces Handel's career from his native Germany to an elite Roman circle of musical connoisseurs, and to the Italian opera company he founded in London and his transformation of Italian opera into a new genre of English oratorio. By analyzing Handel's works in context, we examine the aesthetic, harmonic, and dramatic principles of the major European Baroque art-music genres. Prerequisites: MUSIC 22, MUSIC 41. (WIM at 4-unit level only.)

Same as: MUSIC 142K

MUSIC 243J. Studies in Music of the Classical Period: Haydn and Mozart: Music in the Age of Enlightenment. 3-4 Units.

Music and Musicians in the Age of Enlightenment Prerequisites: MUSIC 22, MUSIC 41. (WIM at 4-unit level only.)

Same as: MUSIC 143J

MUSIC 244M. Robert Schumann and the Interpretation of Musical Romanticism. 3-4 Units.

The creative personality, compositions, and writings of Robert Schumann (1810-1856) as exemplars of musical Romanticism in early nineteenth century European culture. Musical "interpretation" explored through a writing focus and a performance focus. Weekly writing assignments interpret compositions as texts, performances, and cultural documents. Students study and interpret up to three works (solo piano, chamber music, art-songs) by Schumann and/or contemporary figures (Schubert, Mendelssohn, Chopin, Brahms, Clara Schumann) for in-class presentation and final lecture-recital. Prerequisites: Music 42, and Music 22 or equivalent (intermediate music theory), intermediate or higher performance ability in piano, strings, or voice. (WIM at 4-unit level only.)

Same as: MUSIC 144M

MUSIC 245K. Studies in Western Art Music Since 1900: Concepts of New Music. 4 Units.

A survey of the history of Western classical music in the twentieth century, concentrating on shifts in the concept of New Music in the first half of the century. The aim is twofold: to study in depth a representative selection of works and to develop a historiographical framework for that study. Relevant concepts to be examined include Expressionism, Neo-Classicism, New Objectivity, Serialism, Aleatoricism, and Minimalism – all of them key terms used by music historians and critics to describe and delineate the multifaceted phenomenon of "New Music." Composers to be studied include Schoenberg, Stravinsky, Berg, Weill, Shostakovich, Reich and Glass, and others. Prerequisites: MUSIC 23, MUSIC 42. (WIM course for Music majors.)

Same as: MUSIC 145K

MUSIC 246M. New Keywords in African Sound. 3-4 Units.

This course identifies and considers new keywords for the study of contemporary African music and sound. Each week we will foster discussion around a keyword and a constellation of case studies. The sonic practices we will encounter range from South African house music to Ghanaian honk horns; from Congolese rumba bands to Tunisian trance singers; from listening to the radio in a Tanzanian homestead to making hip hop music videos on the Kenyan coast. By exploring the unexpected interconnections between contemporary African musical communities, we will discuss new keywords arising in current scholarship, including technologies like the amplifier and the hard drive, spaces like the studio and the city, and analytics like pleasure and hotness. We will also engage with established concepts for the study of postcolonial African cultures, including nationalism, cosmopolitanism, globalization, diaspora, and Pan-Africanism. This is a seminar-based course open to graduate students, upper level undergraduate students, and other students with consent of the instructor. Proficiency in music is not required. WIM at 4 units only. Same as: AFRICAAM 146D, AFRICAST 146M, CSRE 146D, MUSIC 146M

MUSIC 246N. Transcultural Perspectives of South-East Asian Music and Arts. 2-4 Units.

This course will explore the links between aspects of South-East Asian cultures and their influence on modern and contemporary Western art and literature, particularly in France; examples of this influence include Claude Debussy (Gamelan music), Jacques Charpentier (Karnatak music), Auguste Rodin (Khmer art) and Antonin Artaud (Balinese theater). In the course of these interdisciplinary analyses - focalized on music and dance but not limited to it - we will confront key notions in relation to transculturality: orientalism, appropriation, auto-ethnography, nostalgia, exoticism and cosmopolitanism. We will also consider transculturality interior to contemporary creation, through the work of contemporary composers such as Tran Kim Ngoc, Chinary Ung and Tôn-Thất Tiêt. Viewings of sculptures, marionette theater, ballet, opera and cinema will also play an integral role. To satisfy a Ways requirement, this course must be taken for at least 3 units. In AY 2020-21, a letter grade or CR grade satisfies the Ways requirement. WIM credit in Music at 4 units and a letter grade.

Same as: COMPLIT 148, COMPLIT 267, FRENCH 260A, MUSIC 146N

MUSIC 247J. Studies in Music, Media, and Popular Culture: The Soul Tradition in African American Music. 3-4 Units.

1960s and 70s Black music, including rhythm and blues, Motown, Southern soul, funk, Philadelphia soul, and disco. Its origins in blues, gospel, and jazz to its influence on today's r&b, hip hop, and dance music. Soul's cultural influence and global reach; its interaction with politics, racism, gender, place, technology, and the economy. Synchronous and asynchronous remote learning, with class discussions, small-group activities, guest presenters, and opportunities for activism. Pre-/co-requisite (for music majors): MUSIC 22. (WIM at 4 units only.)

Same as: AFRICAAM 19, AMSTUD 147J, CSRE 147J, MUSIC 147J

MUSIC 247K. Studies in Music, Media, and Popular Culture: Music and Urban Film. 3-4 Units.

How music and sound work in urban cinema. What happens when music's capacity to transform everyday reality combines with the realism of urban films? Provides an introduction to traditional theories of film music and film sound; considers how new technologies and practices have changed the roles of music in film. Readings discuss film music, realistic cinema, urban musical practices and urban culture. Viewing includes action/adventure, Hindi film, documentary, film noir, hip hop film, the musical, and borderline cases by Jean-Luc Godard, Spike Lee, Wong Kar-Wai and Tsai Ming-Liang. Pre- or corequisite (for music majors): MUSIC 22. (WIM at 4 unit level only.)
Same as: CSRE 147D, MUSIC 147K

MUSIC 250A. Physical Interaction Design for Music. 3-4 Units.

This lab and project-based course explores how we can physically interact with real-time electronic sound. Students learn to use and design sensors, circuits, embedded computers, communication protocols and sound synthesis. Advanced topics include real-time media, haptics, sound synthesis using physical model analogs, and human-computer interaction theory and practice. Course culminates in musical performance with or exhibition of completed design projects. An \$80 lab fee will be added to your bill upon enrollment in this course. See <https://ccrma.stanford.edu/courses/250a>.

MUSIC 250C. Interaction - Intermedia - Immersion. 2-3 Units.

This course explores creative and technical approaches to the design of digital musical instruments (DMIs) and other systems for interactive performance, composition and/or installations in audio, audiovisual, and other intermedia practice. Various paradigms of Human Computer Interaction (HCI) and techniques such as motion tracking, biosignal analysis, Music Information Retrieval (MIR), concatenation, and machine learning will be considered through analysis of examples of historical and current intermedia practice, framed by key concepts such as affordances and embodiment. It will focus on individual creative output and process, with a final project consisting of the realization of a creative work applying these principles. Please note that attendance of both sessions listed here is not required: the weekly sessions will consist of a lecture and discussion in the first half, and lab time with optional attendance in the second. We plan to concentrate principally on digital - including online - interactive/intermedial/immersive projects. This course is in the P3D program and, therefore, each student has the possibility of receiving a personal 3D printer for their home use. Further equipment loans from CCRMA for student projects involving physical media may be possible. Feedback on projects will be provided by Denning Visiting Artist Pamela Z, in addition to tutorials/consultations with the course co-instructors and teaching assistant.

MUSIC 251. Psychophysics and Music Cognition. 1-5 Unit.

Lecture, lab and experiment-based course in perception, psychoacoustics, cognition, and neuroscience of music. (WIM at 4 or 5 units only.)

MUSIC 253. Symbolic Musical Information. 2-4 Units.

Focus on symbolic data for music applications including advanced notation systems, optical music recognition, musical data conversion, and internal structure of MIDI files.
Same as: CS 275A

MUSIC 254. Computational Music Analysis. 2-4 Units.

Leveraging off three synchronized sets of symbolic data resources for notation and analysis, the lab portion introduces students to the open-source Humdrum Toolkit for music representation and analysis. Issues of data content and quality as well as methods of information retrieval, visualization, and summarization are considered in class. Grading based primarily on student projects. Prerequisite: 253 or consent of instructor.
Same as: CS 275B

MUSIC 255. Intermedia Workshop. 3-4 Units.

Students develop and produce intermedia works. Musical and visual approaches to the conceptualisation and shaping of time-based art. Exploration of sound and image relationship. Study of a wide spectrum of audiovisual practices including experimental animation, video art, dance, performance, non-narrative forms, interactive art and installation art. Focus on works that use music/sound and image as equal partners. Limited enrollment. Prerequisites: consent of instructors, and one of FILMPROD 114, ARTSTUDI 131, 138, 167, 177, 179, or MUSIC 123, or equivalent. May be repeated for credit.
Same as: ARTSTUDI 239, MUSIC 155

MUSIC 255A. Piano Literature. 1 Unit.

An exploration of the repertoire for piano and keyboards, providing experience with and context for this literature while engaging practical, technical and analytical features of the works. Each quarter will cover focused areas defined by time, place, composer, stylistic tradition, formal type, etc. Students will perform works in class, as well as listen to and compare performances through videos and recordings. Assignments include reading, listening, and a final project. Prerequisite: Private lesson proficiency level in piano, or consent of instructor.
Same as: MUSIC 155A

MUSIC 255S. String Literature. 1 Unit.

An exploration of the repertoire for stringed instruments, providing experience with and context for this literature while engaging practical, technical and analytical features of the works. Each quarter will cover focused areas defined by time, place, composer, stylistic tradition, formal type, etc. Students will perform works in class, as well as listen to and compare performances through videos and recordings. Assignments include reading, listening, and a final project. Prerequisite: Private lesson proficiency level in piano, or consent of instructor.
Same as: MUSIC 155S

MUSIC 256A. Music, Computing, Design: The Art of Design. 3-4 Units.

Creative design for computer music software. Programming, audiovisual design, as well as software design for musical tools, instruments, toys, and games. Provides paradigms and strategies for designing and building music software, with emphases on interactive systems, aesthetics, and artful product design. Course work includes several programming assignments and a "design+implement" final project. Prerequisite: experience in C/C++ and/or Java. See <https://ccrma.stanford.edu/courses/256a/>.
Same as: CS 476A

MUSIC 256B. Music, Computing, Design II: Virtual and Augmented Reality for Music. 3-4 Units.

Aesthetics, design, and exploration of creative musical applications of virtual reality (VR) and augmented reality (AR), centered around VR and mobile technologies. Comparison between AR, VR, and traditional software design paradigms for music. Topics include embodiment, interaction design, novel instruments, social experience, software design + prototyping. Prerequisite: MUSIC 256A / CS 476A.
Same as: CS 476B

MUSIC 257. Neuroplasticity and Musical Gaming. 3-5 Units.

What changes in a musician's brain after hours and years of daily practice? How do skills that make a great violinist transfer to other abilities? Can directed neuroplasticity be used to target skill learning? This course will include fundamentals of psychoacoustics and auditory neuroscience. Focus will be development of video games that use perceptually motivated tasks to drive neural change. Emphasis will be on music, linguistic, and acoustic based skills. Programming experience is highly recommended, but not required.

MUSIC 258. Orchestration and Timbral Analysis. 1-4 Unit.

Hands-on approach to orchestration and applied computational timbral analysis. For Music majors with a concentration or interest in composition or MST. Assignments in orchestration and timbre analysis, and computer-based timbre analysis. Final project involving either computer-based analysis or an advanced orchestration assignment. See <http://ccrma.stanford.edu/courses/255/>.

MUSIC 258A. Computational Music Theory & Analysis. 1-3 Unit.

Topics in music analysis, with emphasis on perception and cognition. Topics include engagement, expectation formulation and processing, timbre and time perception, with particular relevance to computer applications in music.

MUSIC 269. Research in Performance Practices. 1-5 Unit.

Directed reading and research. May be repeated for credit a total of 5 times.

MUSIC 271. Chamber Music Discovery. 1 Unit.

Weekly class to include a series of presentations by Stanford's Ensemble-in-Residence the St. Lawrence String Quartet with live and recorded performances and live discussion. Students are expected to develop a final project in the style of Discovery for presentation at the end of the quarter.

MUSIC 272A. Advanced Piano. 1-3 Unit.

Private lessons and group masterclass weekly. May be repeated for credit a total of 14 times. Admission is by audition only. There is a fee for this class. Please visit <http://music.stanford.edu/Academics/LessonSignups.html> for class fees and audition information. All participants must enroll. Zero unit enrollment option available with instructor permission. See website: (<http://music.stanford.edu>) for policy and procedure.

MUSIC 272B. Advanced Organ. 1-3 Unit.

May be repeated for credit a total of 14 times. Admission is by audition only. There is a fee for this class. Please visit <http://music.stanford.edu/Academics/LessonSignups.html> for class fees and audition information. All participants must enroll. Zero unit enrollment option available with instructor permission. See website: (<http://music.stanford.edu>) for policy and procedure.

MUSIC 272C. Advanced Harpsichord. 1-3 Unit.

May be repeated for credit a total of 14 times. Admission is by audition only. There is a fee for this class. Please visit <http://music.stanford.edu/Academics/LessonSignups.html> for class fees and audition information. All participants must enroll. Zero unit enrollment option available with instructor permission. See website: (<http://music.stanford.edu>) for policy and procedure.

MUSIC 272D. Advanced Jazz Piano. 1-3 Unit.

Admission is by audition and/or invitation only; priority to majors and jazz-ensemble participants. All participants must enroll. There is a fee for this class. Please visit <http://music.stanford.edu/Academics/LessonSignups.html> for class fees and audition information. Zero unit enrollment option available with instructor permission. May be repeated for credit a total of 14 times. Lessons meet for one hour per week at the mutual convenience of the instructor and student. Exact time to be determined during the first week of classes. Course to be taught online when COVID restrictions are in effect as a live private interactive session. Student should have access to a piano during the lesson. Students on campus who do not have such access, please contact instructor for further information.

MUSIC 272E. Advanced Fortepiano. 1-3 Unit.

May be repeated for credit a total of 14 times. Admission is by audition only. There is a fee for this class. Please visit <http://music.stanford.edu/Academics/LessonSignups.html> for class fees and audition information. All participants must enroll. Zero unit enrollment option available with instructor permission. See website: (<http://music.stanford.edu>) for policy and procedure.

MUSIC 272F. Advanced Carillon. 1-3 Unit.

May be repeated for credit a total of 14 times. Admission is by audition only. There is a fee for this class. Please visit <http://music.stanford.edu/Academics/LessonSignups.html> for class fees and audition information. All participants must enroll. Zero unit enrollment option available with instructor permission. See website: (<http://music.stanford.edu>) for policy and procedure.

MUSIC 272G. Advanced Gu-Zheng. 1-3 Unit.

Private lesson weekly. May be repeated for credit a total of 14 times. Admission is by audition only. There is a fee for this class. Please visit <http://music.stanford.edu/Academics/LessonSignups.html> for class fees and audition information. All participants must enroll. Zero unit enrollment option available with instructor permission. See website: (<http://music.stanford.edu>) for policy and procedure.

MUSIC 273. Advanced Voice. 1-3 Unit.

Private lessons and group master class weekly. May be repeated for credit. Admission is by audition only. There is a fee for this class. Please visit <http://music.stanford.edu/Academics/LessonSignups.html> for class fees and audition information. All participants must enroll. Zero unit enrollment option available with instructor permission. See website: (<http://music.stanford.edu>) for policy and procedure.

MUSIC 274A. Advanced Violin. 1-3 Unit.

May be repeated for credit a total of 14 times. Admission is by audition only. There is a fee for this class. Please visit <http://music.stanford.edu/Academics/LessonSignups.html> for class fees and audition information. All participants must enroll. Zero unit enrollment option available with instructor permission. See website: (<http://music.stanford.edu>) for policy and procedure.

MUSIC 274B. Advanced Viola. 1-3 Unit.

May be repeated for credit a total of 14 times. Admission is by audition only. There is a fee for this class. Please visit <http://music.stanford.edu/Academics/LessonSignups.html> for class fees and audition information. All participants must enroll. Zero unit enrollment option available with instructor permission. See website: (<http://music.stanford.edu>) for policy and procedure.

MUSIC 274C. Advanced Violoncello. 1-3 Unit.

May be repeated for credit a total of 14 times. Admission is by audition only. There is a fee for this class. Please visit <http://music.stanford.edu/Academics/LessonSignups.html> for class fees and audition information. All participants must enroll. Zero unit enrollment option available with instructor permission. See website: (<http://music.stanford.edu>) for policy and procedure.

MUSIC 274D. Advanced Contrabass. 1-3 Unit.

May be repeated for credit a total of 14 times. Admission is by audition only. There is a fee for this class. Please visit <http://music.stanford.edu/Academics/LessonSignups.html> for class fees and audition information. All participants must enroll. Zero unit enrollment option available with instructor permission. See website: (<http://music.stanford.edu>) for policy and procedure.

MUSIC 274E. Advanced Viola da Gamba. 1-3 Unit.

May be repeated for credit a total of 14 times. Admission is by audition only. There is a fee for this class. Please visit <http://music.stanford.edu/Academics/LessonSignups.html> for class fees and audition information. All participants must enroll. Zero unit enrollment option available with instructor permission. See website: (<http://music.stanford.edu>) for policy and procedure.

MUSIC 274F. Advanced Classical Guitar. 1-3 Unit.

May be repeated for credit a total of 14 times. Admission is by audition only. There is a fee for this class. Please visit <http://music.stanford.edu/Academics/LessonSignups.html> for class fees and audition information. All participants must enroll. Zero unit enrollment option available with instructor permission. See website: (<http://music.stanford.edu>) for policy and procedure.

MUSIC 274G. Advanced Harp. 1-3 Unit.

May be repeated for credit a total of 14 times. Admission is by audition only. There is a fee for this class. Please visit <http://music.stanford.edu/Academics/LessonSignups.html> for class fees and audition information. All participants must enroll. Zero unit enrollment option available with instructor permission. See website: (<http://music.stanford.edu>) for policy and procedure.

MUSIC 274H. Advanced Baroque Violin. 1-3 Unit.

May be repeated for credit a total of 14 times. Admission is by audition only. There is a fee for this class. Please visit <http://music.stanford.edu/Academics/LessonSignups.html> for class fees and audition information. All participants must enroll. Zero unit enrollment option available with instructor permission. See website: (<http://music.stanford.edu>) for policy and procedure.

MUSIC 274I. Advanced Jazz Bass. 1-3 Unit.

Admission is by audition only. There is a fee for this class. Please visit <http://music.stanford.edu/Academics/LessonSignups.html> for class fees and audition information. All participants must enroll. Zero unit enrollment option available with instructor permission. See website: (<http://music.stanford.edu>) for policy and procedure.

MUSIC 274J. Advanced Jazz & Contemporary Guitar. 1-3 Unit.

An application of the performance techniques developed by the innovative, genius, and radical guitarists from 1930 to 2020. Improvising, comping, reading, repertoire, and technique will be studied in depth. Rhythm styles, the application of modern theory, transcribing solos, and chord melody arranging are developed through the course of study. May be repeated for credit a total of 14 times. Admission is by audition only. There is a fee for this class. Please visit <http://music.stanford.edu/Academics/LessonSignups.html> for class fees and audition information. All participants must enroll. Zero unit enrollment option available with instructor permission. See website: (<http://music.stanford.edu>) for policy and procedure.

MUSIC 275A. Advanced Flute. 1-3 Unit.

May be repeated for credit a total of 14 times. Admission is by audition only. There is a fee for this class. Please visit <http://music.stanford.edu/Academics/LessonSignups.html> for class fees and audition information. All participants must enroll. Zero unit enrollment option available with instructor permission. See website: (<http://music.stanford.edu>) for policy and procedure.

MUSIC 275B. Advanced Oboe. 1-3 Unit.

May be repeated for credit a total of 14 times. Admission is by audition only. There is a fee for this class. Please visit <http://music.stanford.edu/Academics/LessonSignups.html> for class fees and audition information. All participants must enroll. Zero unit enrollment option available with instructor permission. See website: (<http://music.stanford.edu>) for policy and procedure.

MUSIC 275C. Advanced Clarinet. 1-3 Unit.

May be repeated for credit a total of 14 times. Admission is by audition only. There is a fee for this class. Please visit <http://music.stanford.edu/Academics/LessonSignups.html> for class fees and audition information. All participants must enroll. Zero unit enrollment option available with instructor permission. See website: (<http://music.stanford.edu>) for policy and procedure.

MUSIC 275D. Advanced Bassoon. 1-3 Unit.

May be repeated for credit a total of 14 times. Admission is by audition only. There is a fee for this class. Please visit <http://music.stanford.edu/Academics/LessonSignups.html> for class fees and audition information. All participants must enroll. Zero unit enrollment option available with instructor permission. See website: (<http://music.stanford.edu>) for policy and procedure.

MUSIC 275E. Advanced Recorder/Early Winds. 1-3 Unit.

May be repeated for credit a total of 14 times. Admission is by audition only. There is a fee for this class. Please visit <http://music.stanford.edu/Academics/LessonSignups.html> for class fees and audition information. <http://music.stanford.edu/Academics/LessonSignups.html>.

MUSIC 275F. Advanced Saxophone. 1-3 Unit.

May be repeated for credit a total of 14 times. Admission is by audition only. There is a fee for this class. Please visit <http://music.stanford.edu/Academics/LessonSignups.html> for class fees and audition information. <http://music.stanford.edu/Academics/LessonSignups.html>.

MUSIC 275G. Advanced Baroque Flute. 1-3 Unit.

May be repeated for credit a total of 14 times. Admission is by audition only. There is a fee for this class. Please visit <http://music.stanford.edu/Academics/LessonSignups.html> for class fees and audition information. All participants must enroll. Zero unit enrollment option available with instructor permission. See website: (<http://music.stanford.edu>) for policy and procedure.

MUSIC 275H. Advanced Jazz Saxophone. 1-3 Unit.

May be repeated for credit a total of 14 times. Admission is by audition only. There is a fee for this class. Please visit <http://music.stanford.edu/Academics/LessonSignups.html> for class fees and audition information. All participants must enroll. Zero unit enrollment option available with instructor permission. See website: (<http://music.stanford.edu>) for policy and procedure.

MUSIC 276A. Advanced French Horn. 1-3 Unit.

May be repeated for credit a total of 14 times. Admission is by audition only. There is a fee for this class. Please visit <http://music.stanford.edu/Academics/LessonSignups.html> for class fees and audition information. All participants must enroll. Zero unit enrollment option available with instructor permission. See website: (<http://music.stanford.edu>) for policy and procedure.

MUSIC 276B. Advanced Trumpet. 1-3 Unit.

May be repeated for credit a total of 14 times. Admission is by audition only. There is a fee for this class. Please visit <http://music.stanford.edu/Academics/LessonSignups.html> for class fees and audition information. All participants must enroll. Zero unit enrollment option available with instructor permission. See website: (<http://music.stanford.edu>) for policy and procedure.

MUSIC 276C. Advanced Trombone. 1-3 Unit.

May be repeated for credit a total of 14 times. Admission is by audition only. There is a fee for this class. Please visit <http://music.stanford.edu/Academics/LessonSignups.html> for class fees and audition information. All participants must enroll. Zero unit enrollment option available with instructor permission. See website: (<http://music.stanford.edu>) for policy and procedure.

MUSIC 276D. Advanced Tuba. 1-3 Unit.

May be repeated for credit a total of 14 times. Admission is by audition only. There is a fee for this class. Please visit <http://music.stanford.edu/Academics/LessonSignups.html> for class fees and audition information. All participants must enroll. Zero unit enrollment option available with instructor permission. See website: (<http://music.stanford.edu>) for policy and procedure.

MUSIC 276E. Advanced Jazz Trumpet. 1-3 Unit.

May be repeated for credit a total of 14 times. Admission is by audition only. There is a fee for this class. Please visit <http://music.stanford.edu/Academics/LessonSignups.html> for class fees and audition information. All participants must enroll. Zero unit enrollment option available with instructor permission. See website: (<http://music.stanford.edu>) for policy and procedure.

MUSIC 277. Advanced Percussion. 1-3 Unit.

May be repeated for credit a total of 14 times. Admission is by audition only. There is a fee for this class. Please visit <http://music.stanford.edu/Academics/LessonSignups.html> for class fees and audition information. All participants must enroll. Zero unit enrollment option available with instructor permission. See website: (<http://music.stanford.edu>) for policy and procedure.

MUSIC 277A. Advanced Drum Set. 1-3 Unit.

May be repeated for credit a total of 15 times. There is a fee for this class. Please visit <http://music.stanford.edu/Academics/LessonSignups.html> for class fees and audition information. All participants must enroll. Zero unit enrollment option available with instructor permission. See website: (<http://music.stanford.edu>) for policy and procedure.

MUSIC 280. TA Training Course. 1 Unit.

Required for doctoral students serving as teaching assistants. Orientation to resources at Stanford, guest presentations on the principles of common teaching activities, supervised teaching experience. Students who entered in the Autumn should take 280 in the Spring prior to the Autumn they begin teaching.

MUSIC 285. Intermedia Lab. 1 Unit.

The Intermedia Lab is a space to develop projects bridging sound with other media through technology. Projects may involve instrument design, physical computing, audiovisual interaction, immersive audio engaging with acoustic environments, and/or other intermedial projects that engage listening in tandem with other senses. Students will be encouraged to develop creative projects using resources at CCRMA such as those of the Max Lab and Listening Room. Lab sessions will focus on skill-sharing, consideration of mapping strategies, critique sessions and problem-solving related to projects, contextualized by discussions of readings. It will feature guest-workshops and open studio project presentations. We plan to concentrate principally on digital - including online - intermedial projects in the Winter term, as the CCRMA spaces listed in the course description may not yet be accessible. This course is in the P3D program and, therefore, each student has the possibility of receiving a personal 3D printer for their home use. Further equipment loans from CCRMA for student projects involving physical media may be possible. This term we will be joined remotely by special guests, including Denning Visiting Artist Pamela Z.

MUSIC 286B. American Song in the 20th Century and after. 3-4 Units.

Critical and creative exploration of song in the Americas. About twenty-five key examples will guide discussion of the interactions between words, music, performance and culture. Weekly listening, reading and assignments will be organized around central themes: love, sex and romance; war and politics; labor and money; place; identity; society and everyday life. Genres include art song; blues, gospel, jazz and country; pop, soul, rock and hip-hop; bossa nova, nueva canción and salsa; electronic and experimental. Takehome and in-class assignments will include critical and creative writing, and music composition, production and performance; final projects may emphasize any of the above. Same as: AMSTUD 186B, MUSIC 186B

MUSIC 298. MA/MST CAPSTONE PROJECT. 1-5 Unit.

The MA/MST capstone is intended to gather and focus skills acquired throughout the program toward an exploratory project aimed at bridging between the student's residency and whatever will follow beyond the MA. Mentorship can include your advisor augmented, should you chose, by any other faculty member from CCRMA or in other programs. The project can be in applied research areas such as design projects and/or mentored internships. Also, the capstone can be considered as a more flexible form of a master's thesis, aiming to produce research and publication(s). Students can also pursue the artistic projects to enhance the creative portfolio.

MUSIC 299. Independent Study. 1-5 Unit.

For advanced undergraduates and graduate students who wish to do work outside the regular curriculum. Before registering, student must present specific project and enlist a faculty sponsor. May be repeated for credit a total of 14 times.

MUSIC 300A. Medieval Notation. 3-4 Units.

Western notation of the Middle Ages and Renaissance: principles, purposes, and transcription.

MUSIC 300B. Renaissance Notation. 3-4 Units.

Western notation of the Middle Ages and Renaissance: principles, purposes, and transcription.

MUSIC 300D. Music Ethnography. 3-5 Units.

This graduate seminar serves as an introduction to the methodologies and theoretical approaches for the ethnography of sound and musical practices. While we center on research problems, ethics, and methods in the field of ethnomusicology, ethnographic field research on sound and sounding has long been an interdisciplinary venture. We will additionally draw on performance studies, critical ethnography, anthropology, and critical race and gender studies to broaden our exposure to diverse methods and approaches. Throughout the seminar, we will pay close attention to the multiple ethical implications of crafting ethnographies about musicians, music-making, sound, performance, and listening practices.

MUSIC 300E. Analysis and Repertoire: Medieval and Renaissance. 3-4 Units.

Analytical approaches to genres, styles, forms, and techniques of Western music from [chant and early polyphony through the sixteenth century]. Issues of aesthetics, history, and interpretation viewed through representative repertoire, readings, and analytical methods.

MUSIC 300F. Analysis and Repertoire: Baroque to Early Romantic. 3-4 Units.

Analytical approaches to genres, styles, forms, and techniques of Western music from the seventeenth through the mid-nineteenth centuries. Issues of aesthetics, history, and interpretation viewed through representative repertoire, readings, and analytical methods.

MUSIC 300G. Analysis and Repertoire: Late-Romantic to Contemporary. 3-4 Units.

Analytical approaches to genres, styles, materials and techniques of Western music from the mid-nineteenth century through the present. Questions of aesthetics, history and performance explored through musical analysis. Representative repertoire and readings, and a range of analytical methods.

MUSIC 300H. Aesthetics and Criticism of Music, Ancients and Moderns: Plato to Nietzsche. 3-4 Units.

For graduate students. Primary texts focusing on the nature, purposes, and uses of music and other arts.

MUSIC 300I. Aesthetics and Criticism of Music, Contemporaries: Heidegger to Today. 3-4 Units.

For graduate students. Primary texts focusing on the nature, purposes, and uses of music and other arts.

MUSIC 300J. Methods for Studying Gender and Sexuality in Music. 3-5 Units.

Introduction to graduate-level study of gender and sexuality in music; includes feminist and queer critiques of musical canons, historiography, biography, and genius; feminist, queer, and trans perspectives on musical performance, performers, subcultures, and cultures. Methods for studying gender/sexuality in a variety of classical and vernacular musics.

MUSIC 302. Research in Musicology. 1-5 Unit.

Directed reading and research. May be repeated for credit a total of 14 times.

MUSIC 305D. Analysis from a Compositional Perspective. 4 Units.

Introduction to analysis, examining diverse examples in part chosen from, otherwise supplementing and illuminating, the graduate composers' qualifying exam list; consideration of aesthetic premises and motivations, and of implications for contemporary compositional practice.

MUSIC 310. Research Seminar in Musicology. 3-5 Units.

For graduate students. Topics vary each quarter. May be repeated for credit a total of 8 times.

MUSIC 319. Research Seminar on Computational Models of Sound Perception. 1-3 Unit.

All aspects of auditory perception, often with emphasis on computational models. Topics: music perception, signal processing, auditory models, pitch perception, speech, binaural hearing, auditory scene analysis, basic psychoacoustics, and neurophysiology. See <http://ccrma.stanford.edu/courses/>. May be repeated for credit a total of 14 times.

MUSIC 320A. Introduction to Audio Signal Processing Part I: Spectrum Analysis. 3-4 Units.

Digital signal representations and transforms for music and audio research. Topics: complex numbers, sinusoids, spectrum representation, sampling and aliasing, the Discrete Fourier Transform (DFT), Fourier theorems, z transform, Laplace transform, and introduction to the associated Python software. See <http://ccrma.stanford.edu/courses/320/>.

MUSIC 320B. Introduction to Audio Signal Processing Part II: Digital Filters. 3-4 Units.

Digital filters for music and audio research. Topics: digital filter structures, frequency response, z transforms, transfer-function analysis, and associated Matlab software. See <http://ccrma.stanford.edu/courses/320/>.

MUSIC 320C. Software Projects in Music/Audio Signal Processing. 3-10 Units.

Course focuses on developing an audio signal-processing plugin or stand-alone application in C++. Prior experience is assumed with programming in Matlab/Octave and C/C++, and signal processing theory on the level of Music 320. Class time is devoted to presenting use of the Faust programming language for generating C++, the JUCE framework for creating audio plugins or stand-alone applications, related theory and projects, project progress reports, and project final presentations.

MUSIC 321. Readings in Music Theory. 1-5 Unit.

Directed reading and research. May be repeated for credit a total of 15 times.

MUSIC 323. Doctoral Seminar in Composition. 3-4 Units.

Illustrated discussions of compositional issues and techniques. Presentation of relevant topics, including students' own compositional practice. May be repeated for credit a total of 14 times.

MUSIC 324. Graduate Composition Forum. 1 Unit.

Community forum for all graduate student composers. Discussion of completed and in-progress work by students, faculty, and visiting composers. Repertoire listening sessions. Planning of upcoming Department events. Special area exam topic presentations, final doctoral project presentations, and review of portfolios. Many sessions are open to the public. May be repeated for credit.

MUSIC 325. Individual Graduate Projects in Composition. 1-5 Unit.

May be repeated for credit.

MUSIC 330. Musicology Dissertation Colloquium. 1-4 Unit.

Weekly meetings for all musicology students 4th year and beyond to discuss research and writing strategies, share and critique work in progress, and discuss issues in professional development (preparing abstracts, conference papers, C.V. and job interviews, book reviews, submitting articles for publication). Open to 3rd-year students.

MUSIC 332. Philosophy, Literature, and the Arts Core Seminar. 2-4 Units.

This course serves as the Core Seminar for the PhD Minor in Philosophy, Literature, and the Arts. It introduces students to a wide range of topics at the intersection of philosophy with literary and arts criticism. The seminar is intended for graduate students. It is suitable for theoretically ambitious students of literature and the arts, philosophers with interests in value theory, aesthetics, and topics in language and mind, and other students with strong interest in the psychological importance of engagement with the arts. May be repeated for credit. In this year's installment, we focus on how artistic kinds or genres help set the terms on which individual works are experienced, understood, and valued, with special attention to lyric poetry and music.

Same as: DLCL 333, ENGLISH 333, PHIL 333

MUSIC 333. Food, Text, Music: A Multidisciplinary Lab on the Art of Feasting. 3-5 Units.

Students cook a collection of unfamiliar recipes each week while learning about the cultural milieus in which they originated. The course focuses on the fourteenth and fifteenth centuries, a time of great banquets that brought together chefs, visual artists, poets, musicians, and dancers. Students read late-medieval cookbooks under the guidance of professional chefs, learn songs and poetry with the help of visiting performers, and delve into a burgeoning scholarly literature on food history and sensory experience. We will also study trade routes and food networks, the environmental impact of large-scale banquets, the science of food, and the politics of plenty. This course may count towards the Medieval component of the French major, and corresponds to DLCL 121, a course requirement for the Medieval Studies Minor. Students interested in applying for course must email the professor (jrodin@stanford.edu) by 20 September with a statement of up to 350 words that includes: (a) reasons for wanting to take the class; (b) relevant background in cooking/medieval studies/etc.; (c) stated commitment to attend all ten course meetings; and (d) any dietary restrictions/preferences.

Same as: FRENCH 166, FRENCH 266, FRENCH 366, MUSIC 133

MUSIC 341. Ph.D Dissertation. 1-10 Unit.

May be repeated for credit a total of 5 times.

MUSIC 351A. Seminar in Music Perception and Cognition I. 1-3 Unit.

A seminar on topics in music perception and cognition. Students will study and discuss recent research as well as design and implement experiments.

MUSIC 390. Practicum Internship. 1 Unit.

On-the-job training under the guidance of experienced, on-site supervisors. Meets the requirements for curricular practical training for students on F-1 visas. Students submit a concise report detailing work activities, problems worked on, and key results. May be repeated for credit. Prerequisite: qualified offer of employment and consent of adviser.

MUSIC 398. PhD Dissertation Proposal. 1-3 Unit.

Students have to identify a research advisor and enroll in this course with her/him to develop the dissertation proposal. By the end of this required course or its series (repeatable for three times), students are expected to have identified a) a special area exam committee, b) the structure of the dissertation proposal, and c) the scope of the thesis with the depth and breadth of the research field.

MUSIC 399. D.M.A. Final Project. 1-10 Unit.

May be repeated for credit a total of 5 times.

MUSIC 408C. Architecture, Acoustics and Ritual in Byzantium. 1-3 Unit.

Onassis Seminar "Icons of Sound: Architecture, Acoustics and Ritual in Byzantium". This year-long seminar explores the creation and operations of sacred space in Byzantium by focusing on the intersection of architecture, acoustics, music, and ritual. Through the support of the Onassis Foundation (USA), nine leading scholars in the field share their research and conduct the discussion of their pre-circulated papers. The goal is to develop a new interpretive framework for the study of religious experience and assemble the research tools needed for work in this interdisciplinary field. NOTE: This course is only offered on the graduate level and undergraduates would be admitted by request (sending a letter expressing interest to the instructor and specifying what other courses in music or art history has prepared them to tackle this subject) and special permission only.

Same as: ARTHIST 408C, REES 408C, RELIGST 308C

MUSIC 420A. Signal Processing Models in Musical Acoustics. 3-4 Units.

Computational methods in musical sound synthesis and digital audio effects based on acoustic physical models. Topics: mass-spring-dashpot systems; electric circuit analogies; finite difference schemes; state-space models and the modal representation; impedance; ports; acoustic simulation using delay lines, digital filters, and nonlinear elements; interpolation and sampling-rate conversion; delay effects; wave digital filters; real-time computational models for musical instruments and effects, both acoustic and electronic. See <http://ccrma.stanford.edu/courses/420/>. Prerequisites: MUSIC 320A and MUSIC 320B or equivalent; PHYSICS 21 or equivalent course applying Newton's laws of motion; and CS 106B or equivalent programming in C and C++.

MUSIC 421A. Time-Frequency Audio Signal Processing. 3-4 Units.

Spectrum analysis and signal processing using Fast Fourier Transforms (FFTs) with emphasis on audio applications. Topics: Fourier theorems; FFT windows; spectrum analysis; spectrograms; sinusoidal modeling; spectral modeling synthesis; FFT convolution; FIR filter design and system identification; overlap-add and filter-bank-summation methods for short-time Fourier analysis, modification, and resynthesis. See <http://ccrma.stanford.edu/courses/421/>. Prerequisites: Music 320A and Music 320B or equivalent background in spectrum analysis and linear systems.

MUSIC 421N. Deep Learning for Music and Audio. 1 Unit.

Seminar reviewing the development of deep-learning methods in music and audio fields. See the course website for latest information: <http://ccrma.stanford.edu/courses/mus421n/>.

MUSIC 422. Perceptual Audio Coding. 3 Units.

History and basic principles: development of psychoacoustics-based data-compression techniques; perceptual-audio-coder applications (radio, television, film, multimedia/internet audio, DVD, EMD). In-class demonstrations: state-of-the-art audio coder implementations (such as AC-3, MPEG) at varying data rates; programming simple coders. Topics: audio signals representation; quantization; time to frequency mapping; introduction to psychoacoustics; bit allocation and basic building blocks of an audio codec; perceptual audio codecs evaluation; overview of MPEG-1, 2, 4 audio coding and other coding standards (such as AC-3). Prerequisites: knowledge of digital audio principles, familiarity with C programming. Recommended: 320, EE 261. See <http://ccrma.stanford.edu/>.

MUSIC 423. Graduate Research in Music Technology. 1-10 Unit.

Research discussion, development, and presentation by graduate students, visiting scholars, and CCRMA faculty in the areas of music and/or audio technology. Permission of instructor required. See <http://ccrma.stanford.edu/courses/423/> for latest information. May be repeated for credit.

MUSIC 424. Signal Processing Techniques for Digital Audio Effects. 3-4 Units.

Techniques for dynamic range compression, reverberation, equalization and filtering, panning and spatialization, digital emulation of analog processors, and implementation of time-varying effects. Single-band and multiband compressors, limiters, noise gates, de-essers, convolutional reverberators, parametric and linear-phase equalizers, wah-wah and envelope-following filters, and the Leslie. Students develop effects algorithms of their own design in labs. Prerequisites: digital signal processing, sampling theorem, digital filtering, and the Fourier transform at the level of 320 or EE 261; Matlab and modest C programming experience. Recommended: 420 or EE 264; audio effects in mixing and mastering at the level of 192.

MUSIC 451A. Basics in Auditory and Music Neuroscience. 2-5 Units.

Understanding basic concepts and techniques in cognitive neuroscience using electroencephalography (EEG) specific to auditory perception and music cognition via seminar and laboratory exercise work. Acquiring and practicing skills in experimental design, data analysis, and interpretation, writing for scientific reports and research proposals, and giving a critical review of others' scientific work. Seminar discusses related literature in neuroanatomy, neurophysiology, psychology, and neuroimaging. Laboratory focuses on electroencephalography (EEG) techniques, classic paradigms for recording evoked response, and associated data analysis methods.

MUSIC 451B. Neuroscience of Auditory Perception and Music Cognition II: Neural Oscillations. 2-5 Units.

Building on 451A, this course will review basic knowledge and EEG techniques of neural oscillations related to auditory perception and music cognition via seminar and laboratory work. Through reviewing and replicating findings using classic and recent paradigms, the laboratory exercises offer multiple ways to understand how to design experiments and analyze data to observe neural oscillatory activities in different frequency bands, then interpret their functional significance in sensorimotor processing, attention, and social interaction. Important aspects of music listening and performance. Seminar discusses literature in neurophysiology, neuropsychology, and brain-computer interface. Prerequisite: Music 451A or permission of instructor.

MUSIC 451C. Auditory EEG Research III: Coordinated Actions and Hyperscanning. 2-5 Units.

Advancing EEG research skills in cognitive neuroscience specific to music cognition by conducting a group research project. In particular, this course focuses on basics for 2-person EEG (hyperscanning) paradigms and explores how coordinated actions and social interactions during musical ensemble are processed in the two brains. Laboratory works covers advanced electroencephalography (EEG) recording and analysis techniques specifically for oscillation and phase coherence across brain areas and between subjects. Seminar activities include surveying literature, discussing research articles and giving criticisms, and writing research reports. Lab scheduled separately Prerequisite: Music 451A.

MUSIC 801. TGR Project. 0 Units.

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MUSIC 802. TGR Dissertation. 0 Units.

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