MUSIC

Emeriti: (Professors) John M. Chowning, Albert Cohen, George Houle, Wolfgang E. Kuhn, William H. Ramsey, Leonard G. Ratner, Sandor Salgo, Leland C. Smith; *(Professors, Performance)* Arthur P. Barnes, Marie Gibson, Andor Toth
Chair: Stephen Hinton
Professors: Karol Berger, Brian Ferneyhough
Associate Professors: Jonathan Berger, Chris Chafe, Thomas Grey, Stephen Hinton, William P. Mahrt, Julius O. Smith
Assistant Professors: Mark Applebaum, Heather Hadlock (on leave Autumn), Melissa Hui, Tobias Plebuch
Professor (Research): Max V. Mathews
Associate Professors (Teaching): George Barth (Piano), Stephen Sano (Director of Choral Studies)
Associate Professor (Performance): Karla Lemon (Director of Orchestras)
Senior Lecturers: Stephen Harrison (Violoncello), Gennady Kleyman (Violin, Viola), Jennifer Lane (Voice), Gregory A. Wait (Voice), Frederick R. Weldy (Piano)
Lecturers: Giancarlo Aquilanti (Theory, Symphonic Band), Talya Berger (Theory), Fredrick Berry (Jazz Ensemble), Frances Blaisdell (Flute), Mark Brandenburg (Clarinet), Marjorie Chauvel (Harp), Robert Claire (Baroque Flute), Floyd O. Cooley (Tuba), Laura Dahl (Resident Collaborative Pianist), John Dornenburg (Viola da Gamba), Charles A. Ferguson (Guitar), Nolan Gasser (Music History), Claire Giovannetti (Voice), Dawn Harms (Violin), Robert Hubbard (Oboe), Joyce Johnson-Hamilton (Trumpet), Jay Kadis (Audio Recording), McDowell Kenley (Trombone), Fernando Lopez-Lezcano (CCRMA), Janet Maestre (Flute), Anthony Martin (Baroque Violin), James Matheson (Oboe), Robert Huw Morgan (Organ), Bruce Moyer (Contrabass), Herbert Myers (Early Winds), James Nadel (Jazz), Kären Nagy (Bibliography), Rufus Olivier (Bassoon), Larry S. Ragent (French Horn), Gary Scavone (CCRMA), Thomas Schultz (Piano), Malcolm Slaney (CCRMA), Harold Stein (Saxophone), Frank Sumares (Jazz Piano), Elaine Thornburgh (Harpsichord), Linda Uyechi (Taiko), Mark Veregge (Percussion), William L. Verplank (Human Computer Interface Design), Timothy Zerlang (Piano)
Consulting Professors: Marina Bosi (CCRMA), Elizabeth Cohen (CCRMA), Walter Hewlett (Computer-Assisted Research in the Humanities), Eleanor Selfridge-Field (Computer-Assisted Research in the Humanities)
Acting Instructors: Robert Lucero, Russell Rodriguez (Mariachi)
Artists-in-Residence (St. Lawrence String Quartet): Marina Hoover (Cello), Geoff Nuttall (Violin 1), Lesley Robertson (Viola), Barry Shiffman (Violin 2)

The Department of Music's aims are to provide specialized training for those who plan careers in music as composers, performers, teachers, and research scholars; and to promote the understanding and enjoyment of music in the University at large through its courses and abundant performance offerings.

Varied opportunities for instrumental and vocal study and performance are available to majors and nonmajors alike. Students wishing to obtain individual instruction, to participate in chamber music, or to play in department ensembles should note that auditions are held during registration week in Autumn Quarter. While there may be openings in some private studios for qualified students during other quarters, it is to the student's advantage to audition in autumn, as most slots are filled for the entire year.

The department is housed in Braun Music Center, Dinkelspiel Auditorium, and The Knoll, including two theaters for concert and recital productions, two rehearsal halls, and a small chamber hall. Pianos, organs, harpsichords, and a variety of early stringed and wind instruments are available for student use. In addition, advanced students may use fine old stringed instruments and bows from the Harry R. Lange Historical Collection.

The Music Library contains a comprehensive collection of scores, books, and recordings with an emphasis on Western art music. In addition, the Department of Special Collections holds an invaluable collection of musical manuscripts and first and early editions, and the Archive of Recorded Sound has a superb collection of historical recordings of all types.

For more information on the Department of Music, see the Music Department home page at http://www.stanford.edu/group/Music.

The Stanford Center for Computer Research in Music and Acoustics (CCRMA) is a multi-disciplinary facility where composers and researchers work together using computer-based technology both as an artistic medium and as a research tool. Areas of ongoing interest at CCRMA include: composition, applications hardware, applications software, synthesis techniques and algorithms, physical modeling, real-time controllers, signal processing, digital recording and editing, psychoacoustics and musical acoustics, music manuscripting by computer, and real-time applications.

The CCRMA community consists of administrative and technical staff, faculty, research associates, graduate research assistants, graduate and undergraduate students, visiting scholars, visiting researchers and composers, and industrial associates. Center activities include academic courses, seminars, small interest-group meetings, summer workshops, and colloquia. Concerts of computer music are presented several times each year with an annual outdoor computer-music festival in July.

CCRMA houses studios, computing facilities, and a networked system of software that includes programs and tools for editing, viewing, synthesizing, and analyzing sound. For a detailed and up-to-date description of facilities available, see the CCRMA home page at http://www-ccrma.stanford.edu.

The Center for Computer-Assisted Research in the Humanities (CCARH), located in Braun Music Center, conducts research focused on constructing computer databases for music and on creating programs that allow student and staff researchers to access, analyze, print, and electronically perform the music. For more information, see the CCARH home page at http://www.ccarh.org.

UNDERGRADUATE PROGRAMS

BACHELOR OF ARTS

The undergraduate major in Music is built around a series of foundation courses in theory, musicianship, and music history, in addition to performance and the proficiency requirements outlined below. Because of the sequence of courses, it takes more than two years to complete the requirements for the major. Prospective majors are urged to consult the undergraduate student services officer in the department as early as possible in order to plan a program that allows sufficient time for major course work, practice, and University requirements outside the major. Early planning is especially important for students wishing to double-major, for those contemplating overseas study during their undergraduate years, for those wishing to do an in-depth concentration in the music major, and for those with particular musical talents and interests. All required courses for the B.A. in Music and in the Music, Science, and Technology specialization must be taken for a letter grade. Electives may be taken credit/no credit, but any courses taken towards concentration requirements must also carry a letter grade.

1. Students are required to include the following foundation courses in their programs:
   a) Theory: Music 21, 22, 23
   b) History: Music 40, 41, 42, and three from the series 140-145 Writing in the Major (WIM) courses
   c) Analysis: Music 121 and two from 122A,B,C
2. Additionally, music majors must fulfill the following two performance requirements:
   a) Individual studies in performance: minimum of five quarters, comprising a minimum of ten units.
   b) Ensemble: five quarters (5 units minimum) of work in one or more of the department's organizations or chamber groups. Music 157 (Mariachi Band) does not satisfy this requirement. Music 181 may count for up to two of the ensemble-unit

requirements for the music major. To fulfill the ensemble requirement, music majors need to participate at least three quarters in the department's traditional "large ensembles" (Music 159–167), with the exception of students whose primary instrument is keyboard or guitar, who need to participate at least one quarter in the ensembles above but who may fulfill the rest of the requirement with chamber music (171).

3. Majors are required to pass a Piano Proficiency examination as a part of the requirements to complete Music 23. Offered separately from the course at the end of the Autumn and Spring quarters or at other times by appointment, it consists of scales and arpeggios, performance of a simple tune (to be set by the examiner), sight reading, and the performance of prepared pieces (consult the Music office for details). Remedial skills are taught in Music 12A,B,C.
4. Majors must also pass an Ear Training Proficiency examination, which is part of the requirements to complete Music 23. It can be taken by arrangement, demonstrating a student's ability to hear music accurately and to perform it at sight.

RECOMMENDED SCHEDULE FOR THE MUSIC MAJOR

The following sample schedule shows how a student may include substantial work on a major in music while also fulfilling the University General Education Requirements during the freshman and sophomore years. The schedule also includes foreign language study, which is strongly recommended for all music majors and especially for those expecting to continue into graduate work in any area of music.

FIRST YEAR

Course No. and Subject	*Units*		
	A	*W*	*S*
Freshman English	3		3
Music 19 (if needed), 21, 22	(3)	4	4
Individual Instruction and/or Ensemble	1-4	1-4	1-4
Introduction to the Humanities	3-5	3-5	3-5
Choice of Foreign Language, General Education Requirement, or Stanford Introductory Seminar	3-5	3-5	3-5

SECOND YEAR

Music 23, 40; 41; 42	8	4	4
Individual Instruction and/or Ensemble	1-4	1-4	1-4
General Education Requirement, or Stanford Introductory Seminar	3-5	3-5	3-5
Elective	(3)	(3)	(3)

THIRD AND FOURTH YEARS

Music 121 and two from 122A, B, or C	4	4	4
Three from Music 140-145	4-8	4-8	4-8
Elective	(4)	(4)	(4)
Sr. Year: Concentration Project (if selected)	(4)		

MUSIC, SCIENCE, AND TECHNOLOGY

The specialization in Music, Science, and Technology is designed for those students with a strong interest in the musical ramifications of rapidly evolving computer technology and digital audio, and in the acoustic and psychoacoustic foundations of music. The program entails a research project under faculty guidance and makes use of the highly multidisciplinary environment at CCRMA. This program can serve as a complementary major to students in the sciences and engineering.

1. Students in the program are required to include the following courses in their studies:
   a) Theory: 21, 22, 23, 121, 151 (WIM) (4 units each); 150 (3 units); 220A,B,C (4 units each); 250A (4 units)
   b) History: two from 40, 41, 42
   c) Applied: individual studies in performance (6 units) or Music 192A,B; and Ensemble or 192C (5 units)
   d) Research project: 220D (4 units)
2. Students in Music, Science, and Technology must also pass the Piano and Ear-training Proficiency examinations required of all Music majors.

MINORS

Minors in Music and in the Music, Science, and Technology specialization provide the student 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.

MUSIC

Course No. and Subject	*Units*
Music 21, 22, 23. Elements of Music	12
Music 40, 41, 42. Music-History Survey	12
Choice of one (WIM):	
Music 140-145. Studies in Music History	4
Two quarters:	
Music 158-171. Ensemble	2
Music 172-177. Individual Instruction	6
Academic Elective in Music	4
Total	40

MUSIC, SCIENCE, AND TECHNOLOGY

Music 21, 22, 23. Elements of Music	12
Music 150. Musical Acoustics	3
Music 151. Psychophysics and Cognitive Psychology for Musicians (WIM)	4
Music 220A,B. Fundamentals of Computer-Generated Sound	8
Two quarters:	
Music 192A,B. Theory and Practice of Audio Recording	6
Music 192C. Session Recording (1 or 2 units/qtr.)	3
Academic Elective in Computer Music	4
Total	40

CONCENTRATIONS

Concentrations are offered in performance, conducting, composition, or history and theory. In each concentration, 6 additional course units in the area of concentration beyond the basic requirements for the major are required. In addition, each concentrator registers for an independent project (198, 4 units) in the senior year under faculty supervision, leading to a senior recital, a composition, a conducting project, or a senior research paper. Specific guidelines and information on the concentration tracks are available from the Department of Music office.

HONORS PROGRAM

Honors in music is awarded by the faculty to concentrators who have produced an independent project of exceptional quality and meet certain department standards in musicianship, scholarship, and academic standing. The conferral of honors is done solely through faculty consultation. Students do not petition for honors.

OVERSEAS STUDIES

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

GRADUATE PROGRAMS

University requirements for the M.A., D.M.A., and Ph.D. degrees 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—Applicants are required to submit evidence of accomplishment (scores, recordings, and/or research papers, according to the proposed field of concentration) when they return the application form. Applicants should arrange to take the Graduate Record Examination (GRE) well in advance of the December 31 application deadline. All applicants, except those applying for the M.A. in Music, Science, and Technology (M.A./MST), are also required to submit a departmental entrance test in theory and musicianship, which is only available from the Music Department. All components of the application are due by

December 31. International students whose first language is not English are required to take the TOEFL exam (with certain exceptions: see the departmental web site).

Department Examinations—All entering graduate students except those in the M.A./MST program are required to take: (1) a diagnostic examination testing the student in theory (counterpoint, harmony, and analysis) and (for musicologists only) the history of Western art music, and (2) a proficiency examination in sight-singing and piano sight-reading. These exams are given at the beginning of study in the department (usually the week before school begins).

None of Stanford's required undergraduate courses may be credited toward an advanced degree unless specifically required for both degrees. Only work that receives a grade of 'A,' 'B,' or 'Satisfactory' (a passing grade in an *instructor-mandated* pass/no credit course) in music courses taken as a graduate student is recognized as fulfilling the advanced-degree requirements. Students may need to devote more than the minimum time in residence if preparation for graduate study is inadequate.

MASTER OF ARTS

Residence—A minimum of 45 academic units is required for both master's degrees in Music.

MUSIC

Foreign-Language Requirement—Reading knowledge of a language other than English, and the ability to translate into idiomatic English, must be demonstrated in the first quarter of graduate study.

Study Program—Students may concentrate in composition, history, or computer-based music theory and acoustics. Depending on the concentration, the M.A. project (optional) is an investigative essay or a composition.

Students in the doctoral programs who enter directly from the bachelor's level may, upon completion of 45 units and the doctoral qualifying examinations, be recommended for the M.A. degree. 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.

MUSIC, SCIENCE, AND TECHNOLOGY

This is a one-year program of 45 units focusing on the integration of music perception, music-related signal processing and controllers, and synthesis. The program is designed for students having an undergraduate engineering or science degree or a degree that includes course work in engineering mathematics.

Required are:

Music 151. Psychophysics and Cognitive Psychology for Musicians	4
Music 192A. Foundations of Sound-Recording Technology	3
Music 192B. Advanced Sound-Recording Technology	3
Music 220A. Fundamentals of Computer-Generated Sound	4
Music 220B. Compositional Algorithms, Psychoacoustics, and Spatial Processing	4
Music 220C. Seminar in Computer-Music Research	4
Music 250A. HCI Theory and Practice	4
Music 250B. HCI Performance Systems	4
Music 320. Introduction to Digital Audio Signal Processing and the Discrete Fourier Transform	4
Music 420. Applications of the Fast Fourier Transform	2
Music 421. Signal Processing Methods in Musical Acoustics	2
Elective	7
Total	45

DOCTORAL PROGRAMS

Residence—The candidate must complete a minimum of 135 academic units (see Residency under the "Graduate Degrees" 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 reached the required 135 academic units and have completed their Special Area examinations.

Foreign Language Requirement—At the time of advancement to candidacy, all D.M.A. students, and Ph.D. students in the Computer-Based Theory and Acoustics program, are required to have demonstrated a reading knowledge of a language other than English and the ability to translate into idiomatic English. Ph.D. students in Musicology are required to demonstrate proficiency in German and a similar competence in a second language, chosen from French, Italian, or Latin (or, on a case-by-case basis, another language, if it has significant bearing on the candidate's field of study).

Qualifying Examination—A written and oral examination for admission to candidacy is given just prior to the fourth quarter of residence for D.M.A. students, and Ph.D. students in the Computer-Based Music Theory and Acoustics programs; for Ph.D. students in Musicology, the exams are given just prior to the seventh quarter of residence. This exam tests knowledge of history, theory, repertory, and analysis.

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 their supervised teaching at half time. Music 280 (given in Autumn Quarter this year for doctoral students who entered in 2000-01 and in Spring Quarter for those who enter in 2001-02) is a required course for Teaching Assistants.

Basic Requirements—Doctoral programs in the Department of Music do not require a master's degree as a prerequisite. All students entering directly from the bachelor's degree level are required to take the following course (which is, however, required of *all* students in musicology, regardless of entering degree level):

Course No. and Subject	*Units*
200. Graduate Proseminar	4

All doctoral candidates must take:

301A,B,C. Music Analysis: Modal, Tonal, and Post-Tonal	12

DOCTOR OF MUSICAL ARTS IN 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.

Examinations—A written Special Area examination in the candidate's field of concentration, including a final project proposal, is required to be completed during the fourth year of study, no later than the last day of classes in Spring quarter of that year and preferably in Autumn or Winter quarter. A public lecture-demonstration is also required during the last quarter of residence. It should be one hour in length, treating aspects of the final project.

Requirements—Besides those requirements listed above, candidates are expected to produce a number 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. The final project in composition is an extended work for instruments, voices, electronic media, or a combination of these. Music 323, Doctoral Seminar in Composition (16 units) is a required course.

DOCTOR OF PHILOSOPHY

The Ph.D. in Music can be pursued in two concentrations: Musicology or Computer-Based Music Theory and Acoustics.

Examinations—

1. Special Areas: 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 Spring quarter of that year and preferably before Spring quarter. This includes an oral defense of the dissertation proposal. The examining committee comprises prospective readers of the dissertation.
2. Ph.D. Orals: the University oral examination, taken once the dissertation is substantially underway, is an oral presentation and defense of dissertation research methods and results.

Requirements—Besides those requirements listed above, Music 221A and B, History of Music Theory (8 units), are required courses for all Ph.D. students. Other requirements by concentration are:

MUSICOLOGY

Course No. and Subject	*Units*
269A. Seminar in Performance Practices	4
300A,B. Seminar in Notation	8
310. Research Seminars in Musicology*	24-40
312A,B. Aesthetics and Criticism of Music	8

* The requirement is for eight seminars of 3-5 units each. Students may petition to take up to two graduate seminars in other departments, in consultation with their adviser.

COMPUTER-BASED MUSIC THEORY AND ACOUSTICS

220A,B,C. Computer-Generated Music Seminars	12
220D. Research in Computer Music	12
320. The Discrete Fourier Transform	4

JOINT Ph.D. IN MUSIC AND HUMANITIES

The department participates in the Graduate Program in Humanities leading to a joint Ph.D. degree in Music and Humanities. For a description of the program, see the "Interdisciplinary Studies in Humanities" section of this bulletin.

COURSES

(WIM) indicates that the course meets the Writing in the Major requirements.

(AU) indicates that the course is subject to the University Activity Unit limitations (8 units maximum).

Many Department of Music courses have pages on the world wide web, which are linked to the Music home page (see above). Courses with web pages at press time are noted in their entries below.

GENERAL

1. Introduction to Music—Techniques of active listening for an enhanced understanding of various musical styles. Awareness of the basic elements of music is applied to the appreciation of Western art music from the Middle Ages to the present, and to traditions of popular and non-art music. Questions of musical form, style, expression, and meaning are compared in different historical and cultural contexts.

3 units, not given 2001-02

4C. The Music of Beethoven—The musical works of Ludwig van Beethoven in the context of his life and times. The role of a "classical" heritage (the style of Haydn and Mozart) in Beethoven's musical development, his participation in an emerging Romantic view of music and the arts, the impact of Enlightenment thought and the French Revolution (and its cultural-political consequences) on Beethoven's music, psychoanalytic interpretations of the composer's biography, the critical reception of the composer in the 19th and 20th centuries and its relation to Romantic and Modernist ideologies of music and aesthetics. GER:3a

3 units, Win (Grey)

7C. Cultural Activism through P'ungmul—Hwimori/Okada Seminar. The development of p'ungmul, two-thousand-year-old Korean indigenous music. Focus is on the evolution of p'ungmul from its agrarian and religious roots to an instrument of social and cultural activism in both Korea and the U.S. Hands-on experience, reading, discussion, oral presentation. Ravi Faiia, student initiator.

2 units, Aut (Sano)

8A. Rock, Sex, and Rebellion—Development of critical listening skills and an understanding of musical parameters through an introduction to select genres within 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, careful listening, and video screenings. GER:3a,4b

3 units, Spr (Applebaum)

11,13,14,15,16,17. Stanford Introductory Seminars

11N. Stanford Introductory Seminar: Conducting—Power and Perspective—Preference to freshmen. Defining the art of symphonic conducting; history of the "great" conductors, exploration of what power is, how power presents itself, and how power is perceived in the symphonic conducting profession; discussion of gender, race, and homophobia in the conducting profession. GER:3a

3 units, Aut (Lemon)

13N. Stanford Introductory Seminar: Art vs. Pop—Preference to freshmen. Examination and critique of "high vs. low" and "prestigious vs. vernacular" constructs in 20th-century Western musical culture. The functions these boundaries serve; how authority and legitimacy are conferred within each; the marginality (or not) of the art world; whether these divisions are appropriate descriptions of our current cultural landscape. Survey of pop/art "transgressions" journeying through baroque, heavy metal, the romantic symphony, art rock, surrealism, psychedelia, opera, glam rock, Varèse, Zappa, Stockhausen, The Beatles, King Crimson, minimalism, jazz, Stravinsky, and Babbitt. Lectures, demonstrations, readings, careful listening, critical discussions, and a paper presentation. GER:3a

3 units, Aut (Applebaum)

14N. Stanford Introductory Seminar: Women Making Music—Preference to freshmen. Women's musical activities as composers, performers, and patrons. Women's music in traditional cultures, e.g., Finnish and Greek lamenters; composers of Western art music from Hildegard von Bingen in the Middle Ages to Libby Larsen in the present; the "mystique" of performers from cloistered nuns to operatic divas like Maria Callas; self-made women in pop music from Bessie Smith to Madonna. GER:3a,4c

3 units, Spr (Hadlock)

15N. Stanford Introductory Seminar: The Role of Technology in the Arts—Preference to freshmen. The history and theory of cinema in comparison to electronic music, looking at the changing roles of composer/performer/audience, and investigating the effect of recording on the art and industry of music. GER:3a

3 units, Spr (J. Berger)

15Q. Stanford Introductory Seminar: Topics in American Music—Preference to sophomores. American music as a central element in the quest for a national artistic expression that reflects the very social order that forms it: pluralistic, multicultural, largely immigrant, and democratic, combining elements of the cultivated and vernacular traditions that constitute its roots. Ballads, blues, band music, musical comedy, minstrel, missions music, American Indian music, country music, rags, rock, rhythm-and-blues, jazz, spirituals, swing, shape-notes, etc. GER:3a,4b

3 units, Win (A. Cohen)

16N. Stanford Introductory Seminar: Explorations in World Music—Preference to freshmen. Introduction to select musical traditions of the world, including Japanese, Indonesian, Indian, Ghanaian, and Pygmy music, examining diverse musical languages, styles, and aesthetics within their cultural and social contexts. Develops critical listening and analytic skills in understanding each tradition, focusing on the perception of musical time. GER:3a,4a

3 units, Aut (Hui)

16Q. Stanford Introductory Seminar: Ki ho'alu—The New Renaissance of Hawaiian Musical Tradition—Preference to sophomores. The Hawaiian tradition of slack-key guitar, Hawaiian history and the culture surrounding its development, and subsequent evolution. Hands-on experience, reading, discussion, and workshops. Recommended: guitar-playing abilities. GER:3a,4b

3 units, Aut (Sano)

17N. Stanford Introductory Seminar: The Operas of Mozart—Preference to freshmen. Four of Mozart's mature operas have held the stage uninterruptedly since their premieres, the earliest works in the operatic repertoire never to go out of fashion. What accounts for this extraordinary staying power? Close reading of selected operas, with attention to the history of their composition, performance, and reception, and to their changing significance from Mozart's time to ours. GER:3a

3 units, Win (K. Berger)

17Q. Stanford Introductory Seminar: Perspectives in North American Taiko—Preference to sophomores. The musical, cultural, historical, and political perspectives of taiko through drumming, readings, class discussion, workshops, and original research. Japanese music and Japanese American history: relations between performance, cultural expression, community, and identity. GER:3a,4b

4 units, Spr (Sano)

18. Jazz History

18A. Ragtime to Bebop (1900-1940)—From the beginning of jazz to the war years. GER:3a

3 units, Win (Berry)

18B. Bebop to Present (1940-)—Modern jazz styles from Bebop to the current scene. Emphasis is on the significant artists of each style. GER:3a

3 units, Spr (Berry)

19. Introduction to Music Theory—For non-music majors and music majors or minors unable to pass the proficiency test for entry to 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. See web site. GER:3a

3 units, Aut, Spr (T. Berger)

20A. Jazz Theory—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. GER:3a

3 units, Aut (Nadel)

20B. Advanced Jazz Theory—Analysis of a variety of approaches to improvisation through listening and transcribing, and developing familiarity with important contributors to this music. Topics: scale theory, altered dominants, and substitute harmony. Prerequisite: 20A or consent of instructor.

3 units, not given 2001-02

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

3 units, Win (Nadel)

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

3 units, not given 2001-02

FOUNDATION FOR B.A. MAJOR

21,22,23. Elements of Music—Melody, harmony, counterpoint, and rhythm are studied through analysis, composition, and exercises in practical musicianship. Emphasis is on tonal theory with components in melody, counterpoint, and harmony. Analytical and practical musicianship skills are taught, with analysis and compositional projects in historical styles. Students with previous training in theory should take a placement exam given at the beginning of each quarter for admission to more advanced courses.

21. Elements of Music I—Introduction to tonal theory. Practice and analysis. Diatonic harmony focusing on melodic and harmonic organization, functional relationships, voice-leading, and tonal structures. Development of ear-training and keyboard-harmony skills; acquisition of a variety of analytical methods and development of listening strategies. Students intending to continue with 22-23 who do not have piano proficiency should begin 12 (class piano) concurrently. See web site. Enrollment limited to 40. Prerequisite: pass proficiency examination in basic musical skills given on first day of class (students who do not pass have the option of taking 19). GER:3a

4 units, Aut (Aquilanti)
Win (Applebaum)

22. Elements of Music II—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 is complemented by harmonic and melodic dictation, sight singing, and other practical skills. See web site. Prerequisite: 21 or consent of instructor. GER:3a

4 units, Win (Aquilanti)
Spr (Staff)

23. Elements of Music III—Continuation of chromatic harmony, complex forms, and introduction to early 20th-century techniques. Satisfactory passage of ear-training proficiency exam, part of the course's final, is a requirement for course completion and for continuation in the major sequence. Passage of departmental piano-proficiency exam is also required to pass this course. Prerequisite: 22 or consent of instructor. GER:3a

4 units, Aut (Hui)
Spr (Aquilanti)

40,41,42. Music History—The history of Western art music from Gregorian chant to the present, stressing major styles and genres in their intellectual and institutional settings.

40. Music History to 1600—Prerequisite: 23 (may be taken concurrently). GER:3a

4 units, Aut (Gasser)

41. Music History 1600–1830—Prerequisite: 40. GER:3a

4 units, Win (Hadlock)

42. Music History since 1830—Prerequisite: 41. GER:3a

4 units, Spr (Hinton)

121. Analysis of Tonal Music—Complete movements, or entire shorter works of the 18th and 19th centuries, are analyzed in a variety of theoretical approaches. Prerequisites: 23, successful completion of the ear-training and piano-proficiency examinations. GER:3a

4 units, Aut (Barth)

122A. 18th-Century Counterpoint—Analysis and composition of two- and three-part inventions and three- and four-voice fugues. Use of keyboard, ear training, and sight singing underlies all written work. Prerequisites: 23, successful completion of the ear-training and piano-proficiency examinations.

4 units, Aut (Aquilanti)

122B. Harmonic Materials of the 19th Century—Analysis of 19th-century music, with compositional exercises based on 19th-century models. Prerequisites: 121 or consent of instructor, successful completion of the ear-training and piano-proficiency examinations.

4 units, Win (Grey)

122C. Introduction to 20th-Century Composition—Analysis of contemporary works, with an emphasis on music since 1945. Projects in free composition based on 20th-century models. Prerequisites: 121 or consent of instructor, successful completion of the ear-training and piano-proficiency examinations.

4 units, Spr (Ferneyhough)

COMPOSITION

123. Undergraduate Seminar in Composition—Weekly discussion on current trends in composition. May be repeated for credit. Prerequisite: music major, and 23 or consent of instructor.

3 units, Win (Hui)

125. Individual Undergraduate Projects in Composition—Individual projects in creative work. May be repeated for credit. Prerequisites: music major, and at least one quarter of 123.

1-3 units, Aut, Win, Spr (Staff)

323. Doctoral Seminar in Composition—Illustrated discussions of compositional issues and techniques. Students present their own work to the class, and individually to the instructor.

4 units, Aut (Ferneyhough)
Win (Hui)
Spr (Applebaum)

325. Individual Graduate Projects in Composition

1-5 units, Aut, Win, Spr (Staff)

HISTORY AND LITERATURE

140,141,142,143,144,145. Seminars in Music History—Specialized topics in music history are each offered at least once within any two-year period. Topics vary each year. May be repeated for credit.

140. Studies in Medieval Music—Prerequisite: 40. (WIM)
4 units, not given 2001-02

141. Studies in Renaissance Music—Prerequisite: 40. (WIM)
4 units, not given 2001-02

142. Studies in Baroque Music—Prerequisite: 41. (WIM)
4 units, Win (K. Berger)

143. Studies in Classic Music—Prerequisite: 41. (WIM)
4 units, not given 2001-02

144. Studies in Romantic Music—Prerequisite: 42. (WIM)
4 units, Aut (Grey)

145. Studies in Modern Music—Prerequisite: 42. (WIM)
4 units, Spr (Plebuch)

148. Musical Shakespeare—Theater, Song, Opera, and Film—(Same as Interdisciplinary Studies in Humanities 192G.) The role of music in productions and adaptations of Shakespeare's plays as theater, opera, and film in the 18th, 19th, and 20th centuries. Emphasis is on the role(s) of music in performance and interpretation of Shakespearean works in various media; musical settings of individual songs from the plays may be considered. Plays: *Romeo and Juliet, Othello, Macbeth, The Tempest, Midsummer Night's Dream, Merry Wives of Windsor*.

5 units Spr (Grey)

221. History of Music Theory—The principal theories, theorists, and treatises of Western art music. A survey of issues and controversies. Two-quarter sequence.

221A. *4 units, Win (Plebuch)*

221B. *4 units, Spr (Hinton)*

240,241,242,243,244,245. Seminars in Music History—For graduate students; topics as in 140-145. Participation in upper-class seminars, with additional in-depth research. Specialized topics in music history are each offered at least once within any two-year period. Topics vary each year.

242. Studies in Baroque Music
4 units, Win (K. Berger)

244. Studies in Romantic Music
4 units, Aut (Grey)

245. Studies in Modern Music
4 units, Spr (Plebuch)

310. Research Seminar in Musicology—For graduate students. Specialized topics vary each quarter.

3-5 units, Aut (K. Berger)
Win (Mahrt)
Spr (Hadlock)

312A,B. Aesthetics and Criticism of Music—For graduate students. Selected primary texts focusing on the nature, purposes, and uses of music and other arts.

312A. Ancients and Moderns: Plato to Nietzsche
4 units, alternate years, given 2002-03

312B. Contemporaries: Heidegger to Today
4 units, alternate years, given 2002-03

COMPUTER MUSIC AND APPLICATIONS

150. Musical Acoustics—The elementary physics of vibrating systems, waves, and wave motion. Time- and frequency-domain analysis of sound. Room acoustics, reverberation, and tuning systems. The acoustics of musical instruments—voice, strings, and winds. Emphasis is on the practical aspects of acoustics in making music. Hands-on and computer-based lab. Prerequisites: music performance/composition experience, basic algebra, and physics. See web site. GER:3a

3 units, Aut (Scavone)

151. Psychophysics and Cognitive Psychology for Musicians—Basic concepts and experiments relevant to the use of sound, especially synthesized, in music. Introduction to elementary concepts. Listening to sound examples. Emphasis is on salience and the importance of various auditory phenomena in music. Prerequisite: some basic knowledge of music. See web site. GER:3a (WIM)

4 units, Spr (J. Berger)

192. Theory and Practice of Audio Recording

192A. Foundations of Sound Recording Technology—For upperclass undergraduates and graduate students; preference given to music majors with MST specialization. Topics: elementary electronics, the physics of sound transduction and microphone operation, selection and placement; mixing consoles; connectors and device interconnection; grounding and shielding; the principles of analog magnetic recording; operation maintenance of recording equipment; the basic principles of recording engineering. Enrollment limited. Prerequisites: 151; algebra, physics basics, and consent of instructor.

3 units, Aut (Kadis)

192B. Advanced Sound Recording Technology—Topics: noise reduction techniques; dynamics and time-delay audio effects; the principles of digital audio; disk- and tape-based digital recorders; digital audio workstations and editing; advanced multitrack techniques; SMPTE and MIDI time code and device synchronization; MIDI sequencing and synchronization. See web site. Prerequisite: 192A.

3 units, Win (Kadis)

192C. Session Recording—Independent engineering of recording sessions. May be repeated for credit. See web site. Prerequisites: 192A,B.

1-2 units, Aut, Win, Spr (Kadis)

220. Computer-Generated Music

220A. Fundamentals of Computer-Generated Sound—Techniques for digital sound synthesis, effects, and reverberation. Topics: summary of digital synthesis techniques (additive, subtractive, nonlinear, wavetable, spectral-modeling, and physical-modeling); digital effects algorithms (phasing, flanging, chorus, pitch-shifting, and vocoding); and techniques for digital reverberation. Majors (undergraduate or graduate) must take for 4 units. See web site. Prerequisite: 22 or equivalent, or consent of instructor.

2-4 units, Aut (Chafe)

220B. Compositional Algorithms, Psychoacoustics, and Spatial Processing—The use of high-level programming language as a compositional aid in creating musical structures. Studies in the physical correlates to auditory perception and a review of psychoacoustic literature. Simulation of a reverberant space and control of the position of sound within the space. See web site. Prerequisite: 220A.

4 units, Win (Lopez-Lezcano)

220C. Seminar in Computer-Music Research—Individual projects in composition, psychoacoustics, or signal processing. See web site. Prerequisite: 220B.

4 units, Spr (Chafe)

220D. Research—Independent research projects in composition, psychoacoustics, or signal processing. May be repeated for credit. Prerequisite: 220C. See web site.

1-4 units, any quarter (Staff)

250. Seminar in Human/Computer Interfaces for Musical Purposes—If student is also taking the full 220 series, both 250A and B must be taken before 220C.

250A. HCI Theory and Practice—HCI issues as they relate to music applications in composition and performance. Project-oriented, examining issues from the technical and theoretical perspectives of computer science, haptics, and music theory. See web site.

4 units, Aut (Mathews, Verplank)

250B. HCI Performance Systems—Continuation of 250A, concentrating on interactive computer-music performance systems. See web site. Prerequisite: 250A.

4 units, Win (J. Berger, Mathews , Verplank)

252. Seminar: Topics in Computer Music—Preservation, archiving, and digital music libraries**,** evolving the best practices in preservation and access. Topics: cultural perspectives on media collection and access, fair use in a variety of cultural contexts; preservation of physical media (wire; records; tape, analog and digital; optical disc; CD, DVD, DVD-R, etc.; MO discs); preservation of content; data migration; metadata development (descriptive/high level, technical/low level); data mining; data access; management; emulation technologies; music-library testbed projects. See web site.

4 units, Spr (E. Cohen)

253. Musical Information: An Introduction—The kinds of musical information used in sound, graphical, and analytical applications. Emphasis is on independent concepts and principles in music representation and research objectives (repertory analysis, performance analysis, theoretical models, similarity, and stylistic simulation). Examples from Western art music. Prerequisites: one year of music theory or equivalent; methods courses in such fields as musical analysis, symbolic systems, information processing, sound engineering, or intellectual property issues.

1-4 units, Win (Selfridge-Field)

254. Seminar: Musical Representation and Computer Analysis—Participants explore the issues introduced in 253 in greater depth and take initiative for research projects related to a theoretical or methodological issue, a software project, or a significant analytical result. Prerequisite: 253 or consent of instructor.

1-4 units, Spr (Selfridge-Field)

255. Orchestration and Timbral Analysis—Introduction to the art and craft of orchestration and timbral analysis. Combines a hands-on approach to orchestration with applied computational timbral analysis. Geared for music majors with a concentration or interest in composition or MST. Weekly assignments in orchestration and timbre analysis, along with computer-based timbre analysis. Final project involving either computer-based analysis or an advanced orchestration assignment. See web site.

1-4 units, Win (J. Berger)

319. Research Seminar on Computational Models of Sound Perception—Weekly research seminar on all aspects of auditory perception, often with a emphasis on computational models. Topics: music perception, signal processing, auditory models, pitch perception, speech, binaural hearing, auditory scene analysis, basic psychoacoustics, and neurophysiology. See web site.

1-3 units, Aut, Win, Spr (Slaney)

320. Introduction to Digital Audio Signal Processing and the Discrete Fourier Transform (DFT)—Introduction to the mathematics of digital signal processing and spectrum analysis for music and audio research. Topics: complex numbers, sinusoids, spectra, aspects of audio perception, the DFT, and basic Fourier time-frequency relationships in the discrete-time case. MA/MST students must take this course for 4 units. See web site.

2-4 units, Aut (J. Smith)

420. Applications of the Fast Fourier Transform (FFT) in Digital Audio Signal Processing—Spectrum analysis and signal processing using FFT, with emphasis on audio applications. Topics: FFT windows; cyclic and acyclic convolution; zero padding and other spectrum analysis parameters; FIR filter design; phase and channel vocoders; the overlap-add and filter-bank-summation methods for short-time Fourier analysis, modification, and resynthesis; tracking sinusoidal peaks across FFT frames; modeling time-varying spectra as sinusoids plus filtered noise; FFT-based sound synthesis; brief overviews of and introductions to transform coders (as used in MPEG audio compression), perfect-reconstruction filter banks, and wavelet transforms. See web site. Prerequisite: 320 or Electrical Engineering 261, or equivalent. Recommended: Electrical Engineering 264.

2-4 units, Win (J. Smith)

421. Signal Processing Methods in Musical Acoustics—Computational models of musical instruments, primarily in the wind and string families, based on physical models implemented using signal processing methods. The models are designed to capture only the "audible physics" of musical instruments using computationally efficient algorithms. Topics: mass-spring systems and their discrete-time simulation, sampled traveling waves, lumping of losses and dispersion, delay-line interpolation methods, applications of allpass filters and lattice/ladder digital filters in acoustic models, models of winds and strings using delay lines, scattering junctions, digital filters, and nonlinear junctions implementing oscillation sources such as bow-string and reed-bore couplings. See web site. Prerequisites: 150 or equivalent; Electrical Engineering 264.

2-4 units, Spr (J. Smith)

422. Perceptual Audio Coding—The history and basic principles: the 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 (e.g., AC-3, MPEG, etc.) 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; overview of other coding standards (AC-3 etc.). Prerequisites: knowledge of digital audio principles; familiarity with C programming. Recommended: 320 and/or Electrical Engineering 261. See web site.

3 units, Win (Bosi)

423. Graduate Seminar in Signal Processing Research—See web site.

1 unit, Aut, Win, Spr (J. Smith)

PERFORMANCE

GROUP INSTRUCTION

Note—Special fee of $100 per quarter for 12A,B,C (non-majors); 65A,B; 72, 73, 74, 75, 76, 77.

12A,B,C. Piano Class (Beginning)—(A=level 1; B=level 2; C=level 3) Preference given to music majors.

1 unit, Aut, Win, Spr (Zerlang)

65A,B. Voice Class I, II—Group (7 students to a section) beginning voice for the non-major (A = level 1; B = level 2).

1 unit, Aut, Win, Spr (Giovannetti)

65C. Voice Class—For music majors and non-majors who are members of departmental choral ensembles.
1 unit, Aut, Win, Spr (Wait)

72,73,74,75,76,77. Small-Group Intermediate-Level Instruction—Minimum enrollment required. May be repeated for credit.
1 unit, Aut, Win, Spr

72A. Piano Class—For intermediate students. Prerequisites: 12C or equivalent, audition.
(Zerlang)

72B. Organ Class—For beginning organ students who have keyboard skills.
(R. Morgan)

72C. Harpsichord Class—For beginning harpsichord students who have keyboard skills.
(Thornburgh)

72D. Jazz Piano Class—By invitation only; priority to majors and jazz-ensemble participants.
(Sumares)

73. Voice Class—For intermediate students. Admission by audition.
(Giovannetti)

74C. Classical Guitar Class
(Ferguson)

74D. Harp Class
(Chauvel)

75A. Flute Class
(Staff)

75B. Renaissance Wind Instruments Class
(Myers)

76. Brass Instruments Classes
(Kenley)

77. Percussion Class
(Veregge)

INDIVIDUAL INSTRUCTION

172/272, 173/273, 174/274, 175/275, 176/276, 177/277. Individual Vocal and Instrumental Instruction—270-level courses are for advanced students. Weekly lessons throughout the academic quarter. Special fee of $175 per quarter for majors and $350 for non-majors (fees remain the same for 1, 2, or 3 units). Prospective students must demonstrate, by audition with the appropriate teacher, a minimum proficiency on instrument. Minimum proficiency requirements for each instrument are available at department office. May be repeated for credit.
1-3 units, Aut, Win, Spr

172/272. Keyboard Instruments

172A/272A. Piano—Private lessons and group masterclass weekly.
(Barth, Dahl, Schultz, Weldy)

172B/272B. Organ
(R. Morgan)

172C/272C. Harpsichord
(Thornburgh)

172D/272D. Jazz Piano—By invitation only; priority to majors and jazz-ensemble participants.
(Sumares)

172E/272E. Early Piano
(Barth)

173/273. Voice
(Giovannetti, Lane, Wait)

174/274. Stringed Instruments

174A/274A. Violin
(Kleyman, Harms, Nuttall, Shiffman)

174B/274B. Viola
(Kleyman, Robertson)

174C/274C. Violoncello
(S. Harrison, Hoover)

174D/274D. Contrabass
(Moyer)

174E/274E. Viola da Gamba
(Dornenburg)

174F/274F. Classical Guitar
(Ferguson)

174G/274G. Harp
(Chauvel)

174H/274H. Baroque Violin
(Martin)

174I/274I. Early Plucked Strings
(Staff)

175/275. Woodwind Instruments

175A/275A. Flute
(Blaisdell, Hawley, Maestre)

175B/275B. Oboe
Aut (Hubbard)
Win, Spr (Matheson)

175C/275C. Clarinet
(Brandenburg)

175D/275D. Bassoon
(Olivier)

175E/275E. Renaissance Wind Instruments
(Myers)

175F/275F. Saxophone
(Stein)

175G/275G. Baroque Flute
(Claire)

176/276. Brass Instruments

176A/276A. French Horn
(Ragent)

176B/276B. Trumpet
(Johnson-Hamilton)

176C/276C. Trombone
(Kenley)

176D/276D. Tuba
(Cooley)

177/277. Percussion
(Veregge)

PERFORMANCE PRACTICES

126. Introduction to Thoroughbass—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.
3 units, Win (T. Berger)

130. Elementary Conducting

130A. Introduction to Conducting—The fundamentals of baton techniques and rehearsal procedures. The development of coordination of the members of the body involved in conducting; fluency in the various beat patterns and meters; dynamics, tempi, cueing, and use of the left hand in conducting. Prerequisites: 121 and diagnostic musicianship exam given first day of class; preference given to students who have also completed 122B.
3 units, Win (Aquilanti)

130B. Elementary Orchestral Conducting—Techniques specific to the conducting of orchestral ensembles. Prerequisites: 127 or previous orchestral performance experience, 130A.
3 units, not given 2001-02

130C. Elementary Choral Conducting—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.

3 units, not given 2001-02

181. Performance of Vocal Literature—Expands the student's knowledge of classical solo voice music, and develops critical listening facilities and communicative performing abilities. Listening: introduction to a diverse vocal repertoire; distinguishing qualities of technique and interpretation. Performing: understanding, communicating text, style. Meant to accompany individual instruction in voice (173/273). Fulfills an ensemble unit requirement for majors (up to a maximum of 2 credits). Enrollment limited by audition. May be repeated for credit. See web site.

181A. Voice and Instruments—Repertoire for advanced singers and solo instruments (strings and woodwinds particularly, also trumpet). Repertoire by Bach, Brahms, Ibert, Spohr, and others.

1 unit, Aut (Lane)

181B. Solo vocal music of the Baroque—Sample repertoire: Bach, Handel, Telemann, Purcell, and Italian composers. Particularly suited for harpsichordists, gambists/other string players, and flutists. Features a presentation and master class with members of Tafelmusik Baroque Orchestra, in conjunction with Lively Arts.

1 unit, Win (Lane)

181C. Opera scenes—A number of scenes from larger operatic works in a staged performance. Sample repertoire to be studied includes scenes by Mozart, Poulenc, Humperdinck, Beethoven, Rossini, others. Open to advanced singers.

1 unit, Spr (Lane)

182. Diction for Singers—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.

1 unit, Win (Dahl)

183. Art Song Interpretation—For advanced singers and pianists as partners. Performance class in a workshop setting. Prerequisite: consent of instructor. Recommended: 170 or 182.

183A. German Lied—Including composers from Beethoven and Schubert to Wolf and Strauss.

1 unit, Spr (Dahl)

183B. French Mélodie—Including composers from Fauré and Debussy to Ravel and Poulenc.

1 unit, alternate years, given 2002-03

230. Advanced Orchestral Conducting—May be repeated for credit. Prerequisite: 130B.

2-4 units, Aut, Win, Spr (Lemon)

231. Advanced Choral Conducting—May be repeated for credit. Prerequisite: 130C.

2-4 units, Aut, Win, Spr (Sano)

269A. Seminar in Performance Practices—Performance techniques, theoretical principles, aesthetics, and musical resources of various historical periods.

4 units, Win (Plebuch)

ENSEMBLE

An audition is required for admission to any University musical ensemble; audition schedules are posted during the registration period in Autumn Quarter. Audition is by appointment in Winter and Spring quarters: contact the ensemble director. Membership is open to all students including those who do not register for credit, although these courses may be repeated for credit. Many Department of Music ensembles tour on a regular basis, usually after commencement in June.

157. Introduction to Mariachi Ensemble—Introduction to the practice of mariachi music, tradition, and history. Focus is on learning traditional *sones, rancheras, huapangos,* and *boleros*. Requirements: ability to play and access to instruments (violin, trumpet, guitar, vihuela, and guitarron). (AU)

1 unit, Aut, Win, Spr (Rodriguez)

158. Contemporary Performance Ensemble—Alea II. A workshop for performance of works by Stanford and contemporary composers. Rehearsals arranged according to performance requirements. One concert per quarter.

1 unit, Aut, Win, Spr (Lemon)

159. Early Music Singers—Small choir specializing in Medieval, Renaissance, and early Baroque vocal music. One major concert per quarter.

1 unit, Aut, Win, Spr (Mahrt)

160. University Orchestra—70- to 100-member ensemble performing major orchestral works; minimum one concert per quarter.

1 unit, Aut, Win, Spr (Lemon)

161. University Bands

161A. Symphonic Band—40- to 50-member ensemble performing transcriptions of symphonic, brass band music, and repertoire composed specifically for symphonic band. One concert per quarter.

1 unit, Aut, Win, Spr (Aquilanti)

161B. Jazz Orchestra—Big-band format. Repertoire drawn primarily from the contemporary jazz-ensemble literature. One formal concert per quarter.

1 unit, Aut, Win, Spr (Berry)

Note—The Leland Stanford Junior University Marching Band is now under the aegis of the Department of Athletics. See the "Athletics, Physical Education, and Recreation" section in this bulletin.

162. Symphonic Chorus—100- to 150-voice ensemble, performing major choral masterworks with orchestra. One concert per quarter.

1 unit, Aut, Win, Spr (Sano)

163. University Choir—Official choir of Memorial Church, furnishing music for Sunday services and special occasions in the church calendar.

2 units, Aut, Win, Spr (Wait)

165. Stanford Chamber Chorale—Select 24-voice chamber ensemble, specializing in virtuoso choral repertoire from all periods of Western art music.

1 unit, Aut, Win, Spr (Sano)

167. University Singers—Mixed-repertory chorus, performing a variety of choral repertoire from all periods of Western art music and from other world cultures.

1 unit, Aut, Win, Spr (Sano)

169. Stanford Taiko—Select North American taiko ensemble, performing traditional and contemporary repertoire for Japanese drums. Multiple performances in Winter and Spring Quarters, also touring; instrument construction and maintenance.

1 unit, Aut, Win, Spr (Sano, Uyechi)

170. Collaborative Piano—Performance class in a workshop setting. Techniques of collaboration with vocalists and instrumentalists in repertoire ranging from songs and arias to sonatas and concertos. Prerequisite: private-lesson proficiency level in piano, or consent of instructor.

1 unit, Aut (Dahl)

171. Chamber Music—Small combinations for strings, winds, and keyboard instruments. Open to students at the private-lesson-proficiency level to hone ensemble skills, preferably while taking private lessons. Selected string-instrument participants are invited to participate in a chamber orchestra, led by members of the St. Lawrence String Quartet, without conductor. Winter Quarter: chamber orchestra in conjunction with chamber chorale performing choral sacred music of the baroque period, led by members of the St. Lawrence and conducted by Karla Lemon. All new and returning students are required to audition.

1 unit, Aut, Win, Spr (Staff)

UNDERGRADUATE DIRECTED READING AND RESEARCH

198. Concentrations Project—For concentration program participants only. Must be taken in senior year.

4 units, Aut, Win, Spr (Staff)

199. Independent Study—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.

1-4 units, Aut, Win, Spr (Staff)

GRADUATE RESEARCH AND SPECIAL STUDIES

200. Graduate Proseminar—Required of first-year graduate students in music. Introduction to research in music, bibliographical materials, major issues in the field, philosophy, and methods in music history. Guest lecturers and individual research topics.

4 units, Aut (K. Berger, Nagy)

269B. Research in Performance Practices—Directed reading and research.

1-5 units, Aut, Win, Spr (Staff)

280. TA Training Course—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 Autumn, 2000, should take 280 in the Autumn, as they begin teaching. Students who entered in Autumn, 2001, should take 280 in Spring. See web site.

1 unit, Aut (Zagorski)
Spr (McCarthy)

299. Master of Arts Project

4 units, Aut, Win, Spr (Staff)

300A,B. Seminar in Notation—Western notation of the Middle Ages and Renaissance: principles, purposes, and transcription.

300A. Medieval Notation

4 units, alternate years, given 2002-03

300B. Renaissance Notation

4 units, Aut (Mahrt)

301. Music Analysis—Current analytical trends, issues, and methods. Intensive analysis of selected works.

301A. Modal Analysis

4 units, Spr (Mahrt)

301B. Tonal Analysis

4 units, Aut (Barth)

301C. Post-Tonal Analysis

4 units, Win (Ferneyhough)

302. Research in Musicology—Directed reading and research.

1-5 units, Aut, Win, Spr (Staff)

321. Readings in Music Theory—Directed reading and research.

1-5 units, Aut, Win, Spr (Staff)

341. Ph.D. Dissertation

1-9 units, Aut, Win, Spr (Staff)

399. D.M.A. Final Project

1-9 units, Aut, Win, Spr (Staff)

OVERSEAS STUDIES

The following courses are taught overseas at the campus indicated. Students are encouraged to discuss with their major advisers on campus which courses would best meet individual educational needs. Descriptions can be found in the "Overseas Studies Program" section of the bulletin or in the Overseas Studies Program office, 126 Sweet Hall.

MOSCOW

178/278. Individual Vocal and Instrumental Instruction

3 units, Aut (Orbelian)