properties, molecular and genetic characteristics, and modes of replication. Cross-listed with BIOL 123 and PLPA 123. Ding, Rao

MCBL 124. Pathogenic Microbiology (4) S Lecture, 3 hours; discussion, 1 hour. Prerequisite(s): BIOL 121/MBL 121 with a grade of "C-" or better or consent of instructor. Introduction to nonpathogenic microorganisms in the environment. Topics include an introduction to the microbial world and metabolic and genetic diversity; methods; symbiotic interactions; biofilms; and genomics. Covers microbial interactions and the effects of the physical and chemical environment on microbes. Cross-listed with ENSC 133 and SWSC 133. Lanoll

MCBL 141. Public Health Microbiology (4) Lecture, 4 hours. Prerequisite(s): BIOL 002 or both BIOL 005A and BIOL 005B, or consent of instructor. Cross-listed with ENSC 141 and SWSC 141. Yates

MCBL 188. Microbiology Diagnostics (4) Lecture, 2 hours; laboratory, 6 hours. Prerequisite(s): BIOL 121/MBL 121, BIOL 121/MBL 121L. Covers microscopic and molecular diagnostic procedures used in a clinical/forensics microbiology laboratory. Cross-listed with ENSC 141 and SWSC 141. Yates

MCBL 197. Research for Undergraduates (1-4) Directed research, 3-12 hours. Prerequisite(s): consent of instructor; upper-division standing. Individual research in microbiology performed under the guidance of the staff or faculty. Letter grades are assigned to students presenting a research paper; other students are graded satisfactory (S) or no credit (NC). Course is repeatable.

Graduate Courses

MCBL 201. Functional Diversity of Prokaryotes (3) W Lecture, 3 hours. Prerequisite(s): BIOL 110B, BIOL 110B, or equivalent or consent of instructor. In-depth coverage of bacterial and archaeal bioenergetics, cell structure, diversity of metabolism, regulation of metabolism, growth, and biosynthesis, and cell-cell interactions between prokaryotes and eukaryotes. Project involves analysis of metabolic pathways from complete, annotated, prokaryotic genome sequences. Cross-listed with ENSC 205 and PLPA 205. Stein

MCBL 205. Signal Transduction Pathways in Microbes and Plants (4) Lecture, 3 hours; discussion, 1 hour. Prerequisite(s): graduate standing in the biological sciences, BIOL 107A or BIOL 113 or BIOL 114 or CBNS 101; or consent of instructor. Advanced topics in signal transduction pathways that regulate growth and development in plants and prokaryotic and eukaryotic microbes. Areas covered include two-component regulatory systems; quorum sensing; signaling via small and heterotrimeric G proteins; mitogen-activated protein kinase cascades; cAMP signaling; photoreceptors; plant hormone signaling; responses to low-oxygen stress; calcium signaling; and plant pathogenesis. Cross-listed with BCH 205, BPS 205, CMBD 205, GEN 205, and PLPA 205. Stein

MCBL 206. Gene Silencing (3) Lecture, 2 hours; discussion, 1 hour. Prerequisite(s): graduate standing. An in-depth coverage of mechanisms, functions, and applications of RNAi and related gene regulatory pathways guided by small RNAs such as siRNAs and miRNAs, in plants and animals. Cross-listed with CMBD 206 and GEN 206. Stein

MCBL 210. Molecular Biology of Human Disease Vectors (3) Lecture, 2 hours; seminar, 1 hour. Prerequisite(s): consent of instructor. Covers the molecular aspects of vectors transmitting diseases. Cross-listed with ENSC 211 and SWSC 211. Borneman, Crowley, Lanoll

MCBL 221. Microbial Genetics (4) W Lecture, 3 hours; discussion, 1 hour. Prerequisite(s): BIOL 107A or BIOL 107B; or consent of instructor. An in-depth coverage of mechanisms, functions, and applications of RNAi and related gene regulatory pathways guided by small RNAs such as siRNAs and miRNAs in plants and animals. Cross-listed with CMBD 206 and GEN 206. Stein

MCBL 224. Molecular Ecology (3) S, Odd Years Lecture, 3 hours. Prerequisite: consent of instructor. Application of ecological principles to microbial communities. Cross-listed with CMDB 210 and ENTM 210. Stein

MCBL 227. Directed Research (1-6) Cross-listed with ENSC 227 and SWSC 227. Stein

Music

Subject abbreviation: MUS
College of Humanities, Arts, and Social Sciences

Walter Aaron Clark, Ph.D., Chair
Department Office, 121 Arts Phone: (951) 827-3343; music.ucr.edu

Professors
Byron Adams, D.M.A.
Walter Aaron Clark, Ph.D.
Deborah A. Wong, Ph.D.

Professors Emeriti
Frederick K. Gable, Ph.D.
Anthony F. Ginter, Ph.D.
Donald C. Johns, Ph.D.

Associate Professors
Timothy Labor, Ph.D.
René T.A. Lysloff, Ph.D.
Leonora Sawedra, Ph.D.

Assistant Professors
Paulo C. Chagas, Ph.D.
Renee Coulombe, Ph.D.
Jonathan Ritter, Ph.D.

Lecturers
Janet Beazley, D.M.A. Collegium Musicum
Barbara A. Bennett, D.M.A.
Edward Bruner, D.M.A. Choral Society
Ruth Charlott, D.M.A. Orchestra and Chamber Singers
Tagumpay de Leon, M.S. Rondalla Ensemble
Willie F. Heims, M.A. Jazz and Concert Band
Rev. Shuchi Thomas Kurai, B.S., Taiko Ensemble
Audrey J. Lamprey, M.M.
Frances C. Moore, M.A. Chamber Music
Laura Sobrino, B.A. Mariachi Mexicatl

Lecturers in Vocal and Instrumental Instruction
Kimberly K. Amin, M.M. Piano
Catherine Card, M.M. Voice
William Casale, Ph.D. Double Bass Viol
Ralph Cato, D.M.A. Voice
David W. Christensen, M.M. Organ and Carillon
Robert D. Dominguez, Percussion
Timothy Emmons, B.A. Double Bass
Lisa Geening, B.A. Oboe
Larry Flahive, Jazz Piano
William Hanrahan, M.A. Voice
of electronic resources is provided through MELVYL (the UC online catalog) and the library's electronic catalog, INNOPAC.

Music Major
A Music major not only gains a knowledge and awareness of music as a worldwide cultural phenomenon but develops critical acumen through a manifold approach to sound in its many cultural settings. Historical, ethnographic and critical studies are complemented and deepened by music-writing and auditory skills (developed largely in the context of Western music), and by ensemble performance (available in Indonesian, Philippine, Japanese and Latin American as well as traditional Western forms) and by individual instrumental or vocal study.

Music and Culture Major
The Music and Culture major offers an approach predominantly scholarly and critical to music as culture from the perspective of research, criticism, and interpretation, with an emphasis on historical and ethnographic approaches. It is oriented primarily toward understanding music as a culturally expressive form. Courses in music and/or dance performance are required but are positioned more broadly within the major as a means to explore interrelationships between music and other forms of performance.

University Requirements
See Undergraduate Studies section.

College Requirements
See College of Humanities, Arts, and Social Sciences, Colleges and Programs section.

Major Requirements
Music Major
The major requirements for the B.A. degree in Music are as follows:
1. Lower-division requirements (13-15 units plus keyboard proficiency)
   a) MUS 030A, MUS 030B, MUS 030C
   b) MUS 031A, MUS 031B, MUS 031C or proficiency for MUS 131A
   c) Keyboard proficiency
2. Upper-division requirements (63 units plus quarterly ensemble)
   a) MUS 112A, MUS 112B, MUS 112C
   b) MUS 130A, MUS 130B
   c) MUS 131A, MUS 131B, MUS 131C or proficiency
   d) Six quarters of MUS 180 (E-Z) or MUS 181 (E-Z)
   e) Twenty-eight (28) additional upper-division units from the following. (No performance courses numbered MUS 160 to MUS 181 (E-Z) may be used to satisfy this requirement.)

(1) MUS 138
(2) One course in music in world cultures (MUS 122-129)
(3) One course from the MUS 113–119 series, MUS 187, or MUS 191 (E-Z)

Note Because of additional performance requirements appropriate to the music curriculum, Music majors have been granted an exemption from the 80-unit limit on courses in the major so that 102 music units may be counted toward the B.A.

Students emphasizing the study of music in world culture are advised to take at least two additional courses in the MUS 120 series in addition to MUS 168/AST 168.

Students emphasizing Western music history are advised to take at least two additional courses in that area.

Students emphasizing music theory and composition are advised to take MUS 137 and at least two additional courses in music theory or composition.

Students seeking a teaching credential are advised to take MUS 133, MUS 150A, MUS 150B, MUS 150C, MUS 150D, MUS 151, and MUS 152. Consult the Graduate School of Education for credential requirements.

Examinations and Auditions
The ability to play simple piano music is required of all majors. Students lacking keyboard proficiency when the major is declared must enroll in MUS 080P to prepare them for the proficiency examination. This examination should be passed by the junior year. Consult the department for examination requirements.

All students intending to enroll in MUS 030A must take a music theory diagnostic examination, which is given at the beginning of instruction.

MUS 031A, MUS 031B, and MUS 031C are taken until proficiency for admission to MUS 131A is achieved. The completion of MUS 131A, MUS 131B, and MUS 131C is required for graduation.

All students normally participate in a major ensemble each quarter. Admission to any ensemble course is by consent of instructor. All students intending to participate in an ensemble course must audition during registration.

Fees
All students enrolled in MUS 080 (E-Z), MUS 081 (E-Z), MUS 180 (E-Z), and MUS 181 (E-Z) must pay a lesson fee (check with the department office for current fee).

Enrollment in one section of MUS 180 (E-Z) or MUS 181 (E-Z) per quarter is provided at no additional cost to upper-division Music majors for a maximum of six quarters.

Music and Culture Major
All majors must enroll in at least one music major or one of the following courses:

- upper division Composition course
- upper division Theory course
- upper division History course
- upper division Ethnomusicology course
- upper division Performance course

...
ensemble each quarter. However, students may enroll in DNCE 067A through DNCE 075B instead of, or in addition to, any of the music ensemble courses.

In addition, the major requirements for the B.A. degree in Music and Culture are as follows:

1. Lower-division requirements (17–19 units)
   a) MUS 030A, MUS 030B, MUS 030C
   b) MUS 031A, MUS 031B, MUS 031C
   c) ANTH 001, SOC 001, DNCE 005, or DNCE 007

2. Upper-division requirements (59 units)
   a) Music courses (39–49 units)
      (1) Western Music History: MUS 112A, MUS 112B, MUS 112C, MUS 114, MUS 116, MUS 117, MUS 136, MUS 191 (E-Z)
      (3) Individual Study: MUS 190, MUS 194, MUS 195, MUS 195H
   b) Other upper-division courses (12–24 units)
      (1) Dance History (4–8 units): DNCE 130/ANTH 130, DNCE 141, DNCE 142, DNCE 171 (E-Z), DNCE 172 (E-Z), DNCE 173 (E-Z)
      (2) Anthropology or Sociology (4–8 units)
      (3) English or Media and Cultural Studies (4–8 units)
      (4) Other courses in the Social Sciences, Humanities, or Arts could count toward these units if the students petition and an advisor’s permission is granted.

Minor

The minor in Music is designed for students who wish to continue their musical studies while pursuing another major. Within the required 24 upper-division units, the minor provides basic skills in music theory and first-level studies in music history and literature while still offering modest flexibility to pursue individual interests.

1. Lower-division preparation: (16 units)
   a) MUS 001 or equivalent
   b) MUS 030A, MUS 030B, MUS 030C

2. Upper-division requirements (24 units)
   a) Eight (8) units from MUS 112A, MUS 112B, MUS 112C
   b) Four (4) units from MUS 122-129
   c) Eight (8) units selected from MUS 122-129, MUS 130A, MUS 130B, MUS 133-139, MUS 191 (E-Z)
   d) Four (4) additional units in ensemble performance

As a freshman or sophomore, the student should complete MUS 030A, MUS 030B, MUS 030C (Harmony). This is a prerequisite for all later studies in the minor. Harmony has a prerequisite of MUS 001 (Introduction to Basic Musical Concepts) or the equivalent.

Two required courses from MUS 112A, MUS 112B, MUS 112C should be completed following MUS 030A, MUS 030B, MUS 030C and not later than the junior year.

See Minors under the College of Humanities, Arts, and Social Sciences in the Colleges and Programs section of this catalog for additional information on minors.

Education Abroad Program

The EAP is an excellent opportunity to travel and learn more about another country and its culture while taking courses to earn units toward graduation. Students should plan study abroad well in advance to ensure that the courses taken fit with their overall program at UCR. Consult the departmental student affairs officer for assistance. For further details visit UCR’s International Education Center at internationalcenter.ucr.edu or call (951) 827-4113.

See Education Abroad Program under International Education Center in the Programs and Courses section of this catalog for additional information.

Graduate Program

The Department of Music offers the M.A. and Ph.D. degrees in Music with a specialization in three areas: composition, ethnomusicology, and musicology. Students are encouraged to view music in the broad context of culture: communication between the interdisciplinary areas is built into the program, and courses outside the department are either encouraged or required in order to develop an interdisciplinary outlook.

Admission

Students may apply for a terminal M.A. degree. Students intending to pursue a Ph.D. as their final degree objective should apply directly to the Ph.D. program. Students with a B.A. should follow the requirements for the M.A. for the first six quarters.

Students are admitted into the graduate program in the fall quarter only. Though applicants must provide GRE General Test scores, scores for the music subject area are not required. All prospective students must submit an example of their writing. Composers must also submit musical scores and recordings.

Musicology and composition students must have an M.A. or undergraduate degree in music, including piano proficiency and musicianship (ear training).

Ethnomusicology students must have a background in music or anthropology. Evidence of superior intellectual ability in another field combined with some demonstrable expertise in any musical tradition is also viewed favorably.

Entering graduate students in the composition and musicology programs must take an advisory examination. Admission to full graduate status is contingent upon the removal of any deficiencies in undergraduate preparation as shown by this advisory examination.

Master’s Degree

The M.A. Degree

The Department of Music offers the M.A. degree in Music under Plan I (Thesis).

Requirements.

In addition to the coursework indicated below, all students must meet the following requirements.

1. Comprehensive examination. All students must pass a written and oral comprehensive examination testing knowledge over a broad spectrum of their field of study. The ethnomusicology exam covers three broad areas: geocultural area studies, the history of ethnomusicology, and critical issues in ethnography. The composition and musicology exams cover three broad areas: music theory, music history and critical issues in theory and/or musicology. For composition students a fourth section addresses their own creative work.

The comprehensive examination can be passed at the M.A. or at the Ph.D. level. Passing the exam at the PhD level is a requirement for students intending to pursue a PhD. Failure to pass the comprehensive examinations after two opportunities constitutes grounds for dismissal from the program.

2. Foreign Language Requirement. Students must demonstrate a reading knowledge of a foreign language, of use in scholarship within their discipline or chosen to support their research and creative interests, with the approval of the department. The requirement can be satisfied either by examination or by enrolling in 4 quarters of a language course with a grade of “B” or better.

3. Additional track requirements. By winter quarter of their second year, composition students must have composed two complete and performable compositions under the supervision of a member of the composition faculty and had two public performances. Additionally, they must present a portfolio with one finished composition, one polished seminar paper and one documented performance.

Musicology and ethnomusicology students must present a portfolio containing their CV, and representative seminar and conference papers. The portfolio offers the student a chance to organize their work in a manner that shows both their past performance and their future potential.

The portfolios will be evaluated by the composition, ethnomusicology or musicology faculty, respectively, coordinated by the graduate advisor.

4. Course Work

Each area requires a minimum of 48 units of graduate (200 series) or upper-
1. Composition

a) Core requirements
   MUS 137 Seminar in free composition or
   MUS 258 Seminar in free composition
   (repeatable)
   MUS 200 Music bibliography
   MUS 201 Proseminar in the analysis of
   Western music
   MUS 206 Proseminar in musicology or
   MUS 207b Current Approaches in
   Ethnomusicology
   MUS 250 Seminar in music theory
b) Two of the following repeatable courses:
   MUS 132 Film Music Workshop
   MUS 139 Sequencer composition
   MUS 142 Notation for composers
   MUS 253 Seminar in advanced music
   theory
   MUS 256 Computer music composition
c) One of the following non-repeatable
   courses:
   MUS 251 Music in computer gaming
   MUS 254 Seminar in music and technology
   MUS 259 Music and semiotics:
   Approaches to Meaning and Form
   MUS 262 (E-Z) Seminar in Western music
   history
   MUS 263 (E-Z) Seminar in special topics
   in musicology
   MUS 270 Special topics in ethnomusicology

2. Ethnomusicology

a) Core courses
   MUS 200 Music bibliography
   MUS 207a The Development of
   Ethnomusicology
   MUS 207b Current Approaches in
   Ethnomusicology
   MUS 255 Field Methods in
   Ethnomusicology
b) At least two quarters of the following
   courses:
   MUS 270 Special topics in ethnomusicology
   MUS 271 Area studies research in music
   c) Two of the following courses:
      MUS 113 Brazilian music
      MUS 117 Music and ritual
      MUS 118 Music, politics and social
      movements
      MUS 119 Javanese music and culture
      MUS 120 Contemporary Native American
      music
      MUS 122 Music and performance in the
      Andes
      MUS 123 Southeast Asian performance
      MUS 124 Music of Asian America
      MUS 126 Gender, sexuality and music in
      cross cultural perspectives
      MUS 127 Music cultures of Southeast
      Asia
      MUS 128 Performing arts of Asia
      MUS 129 Music cultures of Africa
      MUS 140 American Musical Subcultures:
      A Genealogy of Rock
      MUS 146 Genealogy of Electronica
d) One course in musicology or composition/theory
   e) Two courses outside the department; may
      use directed studies (MUS 290) for one.
f) Four units in one of the following ensembles:
   MUS 168 Javanese Gamelan Ensemble
   MUS 169 Japanese Taiko Ensemble
   MUS 170 Filipino Rondalla Ensemble
   MUS 174 Latin American Music
   Ensemble
   MUS 175 Mexican Music Ensemble
   MUS 176 Bagpipe ensemble

3. Musicology

a) Core requirements
   MUS 200 Music bibliography
   MUS 201 Proseminar in the analysis of
   western music
   MUS 206 Proseminar in musicology
   MUS 207b Current Approaches in
   Ethnomusicology
b) Three courses in the 260s series:
   MUS 262 (E-Z) Seminar in western music
   history
   MUS 263 (E-Z) Seminar in special topics
   in musicology
c) Two courses outside the Music Department;
   may use directed studies (MUS 290)
d) Two of the following courses:
   MUS 118 Music, politics and social
   movements
   MUS 126 Gender, sexuality and music in
   cross cultural perspectives
   MUS 137 Seminar in free composition
   MUS 153 Music and homosexuality
   MUS 207a The Development of
   Ethnomusicology
   MUS 207b Current Approaches in
   Ethnomusicology
   MUS 250 Seminar in music theory
   MUS 255 Field methods in ethnomusicology
   MUS 259 Music and semiotics: Approaches
   to Meaning and Form
   MUS 270 Special topics in ethnomusicology

Thesis Students whose degree objective is a
terminal M.A. must write a thesis as part of the
requirements for graduation. The M.A. thesis
consists of an essay of substantial scope that
makes an original contribution to the field. For
composition students the thesis consists of two
parts: a musical composition of substantial
scope and a prose essay. Composition students
who are continuing toward the Ph.D. and do not seek an M.A.
degree are not required to complete a thesis.

Normative time to degree 6 quarters

Doctoral Program

The Department of Music offers the Ph.D.
degree in Music. Students are invited by the
faculty to continue toward candidacy for the
Ph.D. degree on the basis of performance in
courses and seminars, the quality of their port-
ofolio, passing the comprehensive examination
at the Ph.D. level, satisfactory completion of
the M.A. requirements, and the recommenda-
tion of the faculty in their track (composition,
Musicology, or Ethnomusicology), in consulta-
tion with the graduate advisor. Composition stu-
dents who are invited to continue do not have
to write an M.A. thesis as part of the require-
ments for the Ph.D. degree.

Students with an M.A. degree from other uni-
versities are eligible for admission. The process
of admission is the same as for students with a
B.A.

Requirements

1. Foreign language requirement

Students must demonstrate a reading knowl-
edge of a second foreign language, of use in
scholarship within their discipline or chosen to
support their research and creative interests.
Musicology and ethnomusicology students with
an M.A. from other universities who did not
have to meet a foreign language requirement
must demonstrate a reading knowledge of two
foreign languages during their residency at
UCR. Composition students are required to
demonstrate a reading knowledge of one for-

gn language.

2. Coursework

Students continuing toward the Ph.D must take
36 additional units earned in seminars and in MUS 291 and MUS 299 studies geared toward preparation for the qualifying examinations. Students with a M.A. must take a minimum of 48 units earned in seminars and directed studies (MUS 290) for the musicology and ethnomusicology tracks and a minimum of 36 units for the composition track. These must include the following required courses, although waiver may be granted for specific courses on an individual basis, depending on the student’s prior graduate training and pending faculty approval. Students are encouraged to take additional seminars and MUS 291 and MUS 299 courses geared toward preparation for the qualifying examinations.

Ethnomusicology students must meet the course requirements of the M.A. as stated above.

Composition students are required to take:

a) Core requirements

- MUS 200 Music bibliography
- MUS 201 Proseminar in the analysis of Western music
- MUS 206 Proseminar in musicology or MUS 207b Current Approaches in Ethnomusicology

b) One of the following repeatable courses:

- MUS 132 Film Music Workshop
- MUS 137 Seminar in free composition
- MUS 139 Sequencer composition
- MUS 142 Notation for composers
- MUS 250 Seminar in music theory
- MUS 253 Seminar in advanced music theory
- MUS 256 Computer music composition
- MUS 258 Seminar in free composition

Musicology students are required to take:

a) Core requirements

- MUS 200 Music bibliography
- MUS 201 Proseminar in the analysis of western music
- MUS 206 Proseminar in musicology
- MUS 207b Current Approaches in Ethnomusicology or MUS 255 Field methods in ethnomusicology

b) Three courses in the 260s series:

- MUS 262 (E-Z) Seminar in western music history
- MUS 263 (E-Z) Seminar in special topics in musicology

3. Qualifying examinations

Students must take the qualifying examinations, both written and oral, supervised by a faculty committee as stipulated in the regulations of the Graduate Division. The qualifying examinations concentrate on testing advanced skills and knowledge of specialized fields. Qualifying examinations are normally taken in the ninth quarter for students entering with a B.A., and in the sixth quarter, for students entering with an M.A.

4. Dissertation prospectus

Students must write a dissertation prospectus as part of the written qualifying examinations.

Advancement to candidacy for the Ph.D. degree

Students advance to candidacy for the Ph.D. degree once they have passed all coursework and the written and oral qualifying examinations.

Dissertation and final oral examination

A dissertation to be presented as prescribed by the Graduate Council is prepared under the direction of the candidate’s dissertation committee. After completion of the dissertation, the candidate may be examined in its defense by the dissertation committee.

Normative time to degree.

15 quarters for students entering with a B.A. degree; 12 quarters for students entering with an M.A. degree.

The descriptions of many courses listed below carry the phrase “or consent of instructor.” This is meant to encourage musically qualified students who are not majors to participate in the courses and activities of the department. Any nonmajor having interest in a specific course should confer with the instructor about the qualifications for enrollment.

Lower-Division Courses

MUS 001. Basic Musical Concepts (4) Lecture, 3 hours; discussion, 1 hour. Prerequisite(s): none. An introduction to the course should confer with the instructor about the qualifications for enrollment.

MUS 002. Introduction to Western Music (4) Lecture, 3 hours; discussion, 1 hour. Prerequisite(s): none. A survey of the major styles and genres of Western music. Emphasis on the development of analytical listening without the use of musical notation. Designed for the general student with an interest in music and cultural practice. No previous musical background required.

MUS 003. Introduction to Opera (4) Seminar, 3 hours; assigned listening, 3 hours. Explores operas of the eighteenth century and operatic conventions. Includes study of operas with reference to works by composers, singers, and stage direction. Prerequisite(s): none. A survey of works primarily for nonmajors. Examines the historical development of the art form through the present.

MUS 006. Introduction to World Music (4) Lecture, 3 hours; discussion, 1 hour. Prerequisite(s): none. A survey of music in many cultural contexts. Also covers a variety of scholarly topics in world music. Cross-listed with ANTH 006.

MUS 007. Music in Movies and TV (4) Lecture, 3 hours; discussion, 1 hour. Prerequisite(s): none. An exploration of popular film and TV soundtrack music, emphasizing drama and musical style. Course features include a study of musical scores and soundtracks. Cross-listed with ANTH 006.

MUS 008. Popular Music Cultures of the United States (4) Lecture, 3 hours; discussion, 1 hour. Prerequisite(s): none. Explores the role of popular music in American culture and the social history of these cultures to provide students with a sonic understanding of these extremely fragmented, ever changing music traditions.

MUS 009. Introduction to Digital Music (4) Lecture, 2 hours; workshop, 2 hours. Introduces students to the history, technology, and theory of digital music, including the use of computers and computer music. Cross-listed with MUS 200.

MUS 010. Advanced Fundamentals (4) Lecture, 3 hours; consultation, 1 hour. Prerequisite(s): MUS 001 or a passing score on an equivalent examination or consent of instructor. Cross-listed with ANTH 006.

MUS 014. Popular Musics of the World (4) Lecture, 3 hours; discussion, 1 hour. Prerequisite(s): none. Introduction to issues surrounding popular and urban musics of the world, focusing on three major geocultural areas: Africa, Asia, and the Americas. Cross-listed with ANTH 014.

MUS 015. Latin American Folk and Popular Styles (4) Lecture, 2 hours; discussion, 1 hour; assigned listening, 3 hours. Prerequisite(s): none. An introduction to the course should confer with the instructor about the qualifications for enrollment.

MUS 016. Latin American Classical Heritage (4) Lecture, 2 hours; discussion, 1 hour; assigned listening, 3 hours. Prerequisite(s): none. An introduction to the course should confer with the instructor about the qualifications for enrollment.

MUS 017. Music of Mexico (4) Lecture, 3 hours; extra reading, 2 hours; assigned listening, 1 hour. Prerequisite(s): musical training and knowledge of Spanish is useful but not required. Surveys the rich tradition and art music of Mexico from the early 1500s to the present. Cross-listed with MUS 200.

MUS 020. Music of Scotland (4) Seminar, 3 hours; term paper, 1 hour; assigned listening, 2 hours. Surveys the rich heritage of Scottish music from the Middle Ages to the modern day, including folk, popular, and classical traditions. Emphasis is on the music of the Scottish highlands and the bagpipe. Cross-listed with MUS 200.
MUS 030A. Harmony (4) Lecture, 3 hours; consultation, 1 hour. Prerequisite(s): MUS 010 or a passing score on an equivalent examination or consent of instructor; concurrent enrollment in MUS 031A or MUS 031B or MUS 031C or MUS 131A or MUS 131B or MUS 131C. The study of harmony through melodic and rhythmic practices.

MUS 030B. Harmony (4) Lecture, 3 hours; consultation, 1 hour. Prerequisite(s): MUS 030A or consent of instructor; concurrent enrollment in MUS 031A or MUS 031B or MUS 031C or MUS 131A or MUS 131B or MUS 131C. Diatonic and chromatic harmony of the common practice period.

MUS 030C. Harmony (4) Lecture, 3 hours; consultation, 1 hour. Prerequisite(s): MUS 030B or consent of instructor; concurrent enrollment in MUS 031A or MUS 031B or MUS 031C or MUS 131A or MUS 131B or MUS 131C. Diatonic and chromatic harmony of the common practice period.

MUS 031A. Musicianship I (2) Studio, 2 hours; discussion, 1 hour. Prerequisite(s): MUS 001 or MUS 010 or a passing score on an equivalent examination or consent of instructor. Covers melodic reading, rhythmic reading, and ear training. Includes basic keyboard harmony.

MUS 031B. Musicianship I (2) Studio, 2 hours; discussion, 1 hour. Prerequisite(s): MUS 031A or consent of instructor. Covers melodic reading, rhythmic reading, and ear training. Includes basic keyboard harmony.

MUS 031C. Musicianship I (2) Studio, 2 hours; discussion, 1 hour. Prerequisite(s): MUS 031B or consent of instructor. Covers melodic reading, rhythmic reading, and ear training. Includes basic keyboard harmony.

MUS 073A. Dance of Mexico (2) Studio, 3 hours; extra reading, 1 hour; screening, 1 hour; individual studio, 1 hour. Prerequisite(s): none. Traditional dances of Mexico at the beginning level. Outside-of-class assignments include attending dance concerts, viewing dance videos, and regular individual practice sessions. Recommended for nondancers and dancers. Normally graded Satisfactory (S) or No Credit (NC), but students may petition the instructor for a letter grade on the basis of assigned extra work or examination. Course is repeatable. Cross-listed with DNCE 073A and LNST 073A.

MUS 073B. Dance of Mexico (2) Studio, 3 hours; extra reading, 1 hour; screening, 1 hour; individual studio, 1 hour. Prerequisite(s): DNCE 073A/LNST 073A/MUS 073A is recommended. Traditional dances of Mexico at the intermediate level. Outside-of-class assignments include attending dance concerts, viewing dance videos, and regular individual practice sessions. Normally graded Satisfactory (S) or No Credit (NC), but students may petition the instructor for a letter grade on the basis of assigned extra work or examination. Course is repeatable. Cross-listed with DNCE 073B and LNST 073B.

MUS 080 (E-Z). Private Instruction: Voice, Keyboard, and Strings (1-2) Studio, 5-1 hour; individual practice, 5-10 hours. Prerequisite(s): MUS 001 or equivalent; consent of instructor. Students study voices or individual instrument. Prerequisite(s): MUS 081 or equivalent. Students take a half- or one-hour lesson and practice 5 to 10 hours each week (see the note regarding fees under the Major Requirements section). Offered as demand indicates. E. Voice; F. Classical Piano; G. Jazz Piano; I. Harpsichord; J. Cantilon; K. Jazz Guitar; L. Electronic Bass Guitar; M. Lute; N. Classical Guitar; O. Viola da gamba; P. Piano Proficiency; Q. Organ; R. Violin; S. Viola; T. Violoncello; U. Double Bass Viol. Normally graded Satisfactory (S) or No Credit (NC), but students may petition for a letter grade on the basis of performance before a jury or at a recital. Segments are repeatable.

MUS 081 (E-Z). Private Instruction: Brass, Woodwinds, Percussion, and Other Instruments (1-2) Studio, 5-1 hour; individual practice, 5-10 hours. Prerequisite(s): MUS 081 or equivalent. Students take a half- or one-hour lesson and practice 5 to 10 hours each week (see the note regarding fees under the Major Requirements section). Offered as demand indicates. E. Trumpet; F. Trombone; G. Tuba; I. French Horn; J. Flute; K. Oboe; L. Clarinet; M. Bassoon; N. Saxophone; O. Recorder; P. Percussion; Q. Rondalla instruments; R. Bagpipe; S. Scottish Snare Drum; T. Tuba. Normally graded Satisfactory (S) or No Credit (NC), but students may petition the instructor for a letter grade on the basis of performance before a jury or at a recital. Segments are repeatable.

Upper-Division Courses

MUS 112A. History of Western Music: Middle Ages to 1700 (4) Lecture, 3 hours; discussion, 1 hour. Prerequisite(s): MUS 030A, MUS 030B, MUS 030C, or consent of instructor. An intensive survey of music history and literature from the Middle Ages to 1700. Involves score reading, listening, and analysis of pieces with emphasis on historical characteristics.

MUS 112B. History of Western Music: 1700-1900 (4) Lecture, 3 hours; discussion, 1 hour. Prerequisite(s): MUS 030A, MUS 030B, MUS 030C, or consent of instructor. An intensive survey of music history and literature from the 1700 to 1900. Involves score reading, listening, and analysis of pieces with emphasis on historical characteristics.

MUS 112C. History of Western Music: Twentieth Century (4) Lecture, 3 hours; discussion, 1 hour. Prerequisite(s): MUS 030A, MUS 030B, MUS 030C, or consent of instructor. An intensive survey of music history and literature from 1900 to the present. Involves score reading, listening, and analysis of pieces with emphasis on historical characteristics.

MUS 113. Brazilian Music (4) Lecture, 3 hours; extra reading, 2 hours; assigned listening, 1 hour. Prerequisite(s): upper-division standing or consent of instructor. Introduces the music of Brazil, focusing on the history and the current variety of musical languages, styles, and forms of the present. Examines the crucial question of national identity in Brazilian culture and society through the study of its music.

MUS 114. Opera (4) Lecture, 3 hours; discussion, 1 hour. Prerequisite(s): upper-division standing or consent of instructor. Study of selected operas from the Western repertory for 1600 to the present.

MUS 115. Renaissance and Baroque Music of Latin Europe and Latin America (4) Lecture, 3 hours; individual study, 3 hours. Prerequisite(s): MUS 112A, MUS 112B, MUS 112C; or upper-division standing and consent of instructor. Study of the sacred and secular musics of Italy, France, the Iberian Peninsula, and Latin America, 1450-1750. Emphasis is on the reper-toires, styles, and genres that are relevant to understanding the musical past of the Americas, from (Alta) California to South America.

MUS 116. Music of J. S. Bach (4) Lecture, 3 hours; individual study, 3 hours. Prerequisite(s): upper-division standing or consent of instructor. Critical and analytical exploration of selected works by J. S. Bach. Usually devoted to specific genres within his output viewed in their musical and cultural context.

MUS 117. Music and Ritual (4) Lecture, 3 hours; written work, 1 hour; fieldwork, 20 hours per quarter. Prerequisite(s): upper-division standing or consent of instructor. Examines music cross-culturally in a ritual context. Incorporates readings from ethnomusicology, anthropology, folklore, and performance studies. Addresses how music operates within specific ritual events and how it relates to cosmology. Also examines the role of music in achieving altered states (dreams, meditation, trance, and possession), as well as helping to constitute gendered authority.

MUS 118. Music, Politics, and Social Movements (4) Lecture, 3 hours; extra reading, 2 hours; assigned listening, 1 hour. Prerequisite(s): upper-division standing or consent of instructor. Examines the role of music in social and political movements. Emphasis is on understanding the textual and musical features of politically engaged music within its historical, social, and cultural context.

MUS 119. Javanese Music and Culture (4) Lecture, 3 hours; term paper, 1 hour; online discussion and listening, 2 hours. Prerequisite(s): upper-division standing or consent of instructor. Examines Javanese traditional and contemporary music. Focuses on the music of the Javanese gamelan and its relation to larger cosmological themes. Other topics include rural versus court traditions, popular music, mass media, piracy, Hindu roots, modernity, and local practices versus global trends.

MUS 120. Contemporary Native American Music (4) Lecture, 3 hours; extra reading, 2 hours; listening to prepared audio examples of music, 1 hour. Prerequisite(s): upper-division standing or consent of instructor. Explores the music of Native American peoples today, the contexts and behaviors with which such music is associated, and the ways these elements are discussed within Native communities. Emphasis is on "Pan Indian" music, including music for pow wows and syncretic religious music, and Native popular music, including folk, country, rock, and hip-hop.

MUS 122. Music and Performance in the Andes (4) Lecture, 3 hours; extra reading, 2 hours; assigned listening, 1 hour. Prerequisite(s): upper-division standing or consent of instructor. Introduction to the roles and genres of expressive culture in Southeast Asia, including dance, music, theater, film, and digital culture. Performance is discussed both as a time-honored and as a contemporary medium for cultural production, from the courts to everyday experience. Material will be drawn from the Philippines, Malaysia, Indonesia, Thailand, Laos, Cambodia, Vietnam, Burma, Singapore, and the Southeast Asian diaspora. Cross-listed with ANTH 126, AST 123, and DNCE 123.

MUS 124. Music of Asian America (4) Lecture, 3 hours; music listening, 1 hour; individual study, 2 hours. Prerequisite(s): upper-division standing or consent of instructor. Introduction to the roles and genres of expressive culture in Southeast Asia, including dance, music, theater, film, and digital culture. Performance is discussed both as a time-honored and as a contemporary medium for cultural production, from the courts to everyday experience. Material will be drawn from the Philippines, Malaysia, Indonesia, Thailand, Laos, Cambodia, Vietnam, Burma, Singapore, and the Southeast Asian diaspora. Cross-listed with ANTH 126, AST 123, and DNCE 123.
MUS 125. Music of Central America, Mexico, and the Caribbean (4) Lecture, 3 hours; extra reading and listening to prepared tapes of music, 3 hours. Prerequisite(s): upper-division standing or consent of instructor. A survey of different musical traditions from Central America, Mexico, and the Caribbean, with an emphasis on popular music. Examines the impact of intercultural contact on the musical styles of these regions. A background in Western music is not required.

MUS 126. Gender, Sexuality, and Music in Cross-Cultural Perspectives (4) Lecture, 3 hours; extra reading, 3 hours. Prerequisite(s): upper-division standing or consent of instructor. An overview of gendered performance genres from a number of cultures. Seeks to familiarize the student with gender-specific music and notions of gender that are often constructed, maintained, transmitted, and transformed through music and performance. Designed for students interested in music, anthropology, and gender studies. Cross-listed with ANTH 177 and WMST 126.

MUS 127. Music Cultures of Southeast Asia (4) Lecture, 3 hours; extra reading, 3 hours. Prerequisite(s): upper-division standing or consent of instructor. A survey of music, dance, theatre, and ritual in the Philippines, Indonesia, Malaysia, Thailand, Myanmar (Burma), Laos, Cambodia, and Vietnam. Designed for the student interested in the performing arts and cultures of mainland and insular Southeast Asia. No Western music background is required. Cross-listed with ANTH 176, AST 127, DNCE 127, and ETST 172.

MUS 128. Performing Arts of Asia (4) Lecture, 3 hours; extra reading, 3 hours. Prerequisite(s): upper-division standing or consent of instructor. A survey of music, dance, theatre, and ritual in four major geopolitical regions of Asia: Central, East, South, and Southeast. No Western music training is required. Course is repeatable to a maximum of 8 units. Cross-listed with ANTH 128, AST 128, DNCE 128, and THEA 176.

MUS 129. Music Cultures of Africa (4) Lecture, 3 hours; extra reading, 3 hours. Prerequisite(s): upper-division standing or consent of instructor. An overview of African performance, addressing the large culture areas of the continent. Emphasizes African aesthetics. Special attention is paid to contemporary popular music, its roots in older genres, and its ongoing role in postcolonial politics. Cross-listed with ETST 118.

MUS 130A. Counterpoint (4) Lecture, 3 hours; consultation, 1 hour. Prerequisite(s): MUS 138; concurrent enrollment in MUS 031A or MUS 031B or MUS 031C or MUS 131A or MUS 131B or MUS 131C. Study of contrapuntal techniques. Analysis of models centering on the sixteenth century, with exercises to develop manipulative skills in modal counterpoint.

MUS 130B. Counterpoint (4) Lecture, 3 hours; consultation, 1 hour. Prerequisite(s): concurrent enrollment in MUS 031A or MUS 031B or MUS 031C or MUS 131A or MUS 131B or MUS 131C. Study of contrapuntal techniques. Analysis of models centering on the sixteenth century, with exercises to develop manipulative skills in tonal counterpoint.

MUS 131A. Musicianship II (1) Laboratory, 2 hours; individual study, 1 hour. Prerequisite(s): MUS 031C. Sight-singing and ear-training laboratory including keyboard harmony.

MUS 131B. Musicianship II (1) Laboratory, 2 hours; individual study, 1 hour. Prerequisite(s): MUS 131A. Sight-singing and ear-training laboratory including keyboard harmony.

MUS 131C. Musicianship II (1) Laboratory, 2 hours; individual study, 1 hour. Prerequisite(s): MUS 131B. Sight-singing and ear-training laboratory including keyboard harmony.

MUS 132. Film Music Workshop (4) Workshop, 3 hours; studio, 2 hours. Prerequisite(s): piano proficiency, upper-division standing, consent of instructor. Introduces students to issues associated with narrative underscoring: its conception, modeling, and implementation. Students study classic underscoring for dramatic effect, experiment with music use in film and live-scored situations, and produce a piece of recorded music for film.

MUS 133. Instrumentation (4) Lecture, 3 hours; consultation, 1 hour. Prerequisite(s): MUS 030A, MUS 030B, MUS 030C, or consent of instructor. Investigation of the technical and color possibilities of various instruments, with scoring projects.

MUS 134. Orchestration (4) Lecture, 3 hours; consultation, 1 hour. Prerequisite(s): MUS 133 or consent of instructor. Advanced scoring projects with emphasis on stylistic aspects and relationship of orchestral color to form.

MUS 136. Jazz Theory (4) Lecture, 3 hours; extra reading and listening to music tapes, 3 hours. Prerequisite(s): MUS 030A, MUS 031A or MUS 031B or MUS 031C, or consent of instructor. Examines concepts and practices in harmony, melody, rhythm, and form as they relate to jazz and other popular idioms. Provides basic ear training for the recognition of changes in traditional jazz tunes, primary blues forms, modulations, and classic jazz bridges.

MUS 137. Seminar in Free Composition (4) Seminar, 3 hours; individual study, 3 hours. Prerequisite(s): MUS 030A, MUS 030B, MUS 030C, or consent of instructor. Assists in the successful composition of pieces in a variety of genres and media. Includes compositional models and the creation of musical scores. Course is repeatable to a maximum of 12 units.

MUS 138. Formal Analysis in Western Music (4) Lecture, 3 hours; assigned special projects, 3 hours. Prerequisite(s): MUS 030A, MUS 030B, MUS 030C, or consent of instructor. Different approaches to analysis using works in contrasting styles. Study of the dynamic design produced by the musical elements functioning in context.

MUS 139. Sequence Composition (4) Lecture, 3 hours; individual study, 3 hours; extra reading, 3 hours. Prerequisite(s): MUS 030A or MUS 030B or MUS 030C (may be taken concurrently). Students learn music sequencing techniques in the context of the creation of an original piece of music. Topics covered include basic computer skills, benchmarking a digital orchestra, composing using a click track, and techniques of musical composition specific to the editorial potential inherent in music sequencing.

MUS 140. American Musical Subcultures: A Genealogy of Rock (4) Lecture, 3 hours; extra reading, 0-2 hours; listening, 2-3 hours. Prerequisite(s): upper-division standing or consent of instructor. A historical and cultural overview of the genre of American popular music known as “rock.” Covers themes ranging from musical form and structure, aesthetics, and audio technology to community and individuality, gender and racial identity, political resistance, and the music industry. Cross-listed with HISA 139.

MUS 142. Notation for Composers (4) Lecture, 1 hour; discussion, 1 hour; workshop, 2 hours. Prerequisite(s): upper-division standing or consent of instructor. Familiarizes the beginning composer with proper music notation, presentation, and score preparation. Surveys notation techniques used in the composition of a variety of music, from traditional arrangements through the most complex contemporary hybrid scores. Teaches established practice through the study of published scores and recordings.

MUS 145. Introduction to Digital Audio (4) Lecture, 3 hours; laboratory, 3 hours. Prerequisite(s): upper-division standing or consent of instructor. College math is recommended. An introduction to the theory and practice of manipulating digital sound. Provides students with an understanding of digital audio devices associated with media production and of audio processing in general. Topics covered include basic psychoacoustics, digital audio theory, and digital audio editing.

MUS 146. Genealogy of Electronic Music (4) Lecture, 3 hours; term paper, 1 hour; online discussion and listening, 2 hours. Prerequisite(s): upper-division standing or consent of instructor. Examines the history of electronic and electronic music. Focuses on particular issues, including youth culture, dance and ecstatic trance, subcultures and club cultures, hallucinogenic drugs, and psychedelic aesthetics, globalization, audio piracy, media and audio technologies, music and politics, and gender and sexuality.

MUS 150A. Instrumental Technique: Strings (2) Lecture, 2 hours. Prerequisite(s): upper-division standing or consent of instructor. Study of basic techniques of orchestral string instruments.

MUS 150B. Instrumental Technique: Woodwinds (2) Lecture, 2 hours. Prerequisite(s): upper-division standing or consent of instructor. Study of basic techniques of orchestral brass instruments.

MUS 150D. Instrumental Technique: Percussion (2) Lecture, 2 hours. Prerequisite(s): upper-division standing or consent of instructor. Study of basic techniques of orchestral percussion instruments.

MUS 151. Orchestral Conducting (4) Lecture, 3 hours; studio, 2-3 hours. Prerequisite(s): consent of instructor. Fundamentals of baton technique, score study, transposition, and stylistic analysis as they relate to problems of conducting.

MUS 152. Choral Conducting (4) Lecture, 3 hours; studio, 2-3 hours. Prerequisite(s): consent of instructor. Study of choral repertoire, rehearsal methods, voice production, and techniques of conducting.

MUS 153. Homosexuality and Music (4) Lecture, 3 hours; discussion, 1 hour. Prerequisite(s): upper-division standing or consent of instructor. Uses a topical rather than a chronological approach to investigate homosexuality on the part of composers, performers, critics, theorists, and historians and how this has shaped the history of music in the West. Cross-listed with LGBS 153.

MUS 154 (E-Z). Critical Approaches to the Western Canon (4) Lecture, 3 hours; individual study, 3 hours. Prerequisite(s): MUS 112A, MUS 112B, MUS 112C, or upper-division standing and consent of instructor. Critical study of selected repertoires within Western music, and the multiple and potentially problematic aspects of their construction as iconic and paradigmatic. E. Beethoven: The Music and the Myth.

MUS 155 (E-Z). Seminar in Dance and Music (4) Seminar, 3 hours; term paper, 3 hours. Prerequisite(s): upper-division standing or consent of instructor. Introduces relationships and representa-
Performance Courses

MUS 160. Orchestra (1-2) Studio, 2-6 hours. Prerequisite(s): consent of instructor. Study and performance of standard orchestral literature. Normally graded Satisfactory (S) or No Credit (NC), but students may petition the instructor for a letter grade on the basis of assigned extra work or examination. May be repeated for credit.

MUS 161. Collegium Musicum (1-2) Activity, 2-6 hours. Prerequisite(s): consent of instructor. Study and performance of Medieval, Renaissance, and Baroque music. Normally graded Satisfactory (S) or No Credit (NC), but students may petition the instructor for a letter grade on the basis of assigned extra work or examination. May be repeated for credit.

MUS 162. Choral Society (1-2) Studio, 2-6 hours. Prerequisite(s): consent of instructor. Study and performance of standard choral literature. Normally graded Satisfactory (S) or No Credit (NC), but students may petition the instructor for a letter grade on the basis of assigned extra work or examination. May be repeated for credit.

MUS 163. Chamber Singers (1-2) Studio, 2-6 hours. Prerequisite(s): consent of instructor. Study and performance of works selected from different genres and periods. Normally graded Satisfactory (S) or No Credit (NC), but students may petition the instructor for a letter grade on the basis of assigned extra work or examination. May be repeated for credit.

MUS 164. Jazz Ensemble (1-2) Studio, 2-6 hours. Prerequisite(s): consent of instructor. Study and performance of literature for large jazz ensemble and stage band, and preparation of improvised solos. Normally graded Satisfactory (S) or No Credit (NC), but students may petition the instructor for a letter grade on the basis of assigned extra work or examination. Course is repeatable.

MUS 165. Concert Band (1-2) Studio, 2-6 hours. Prerequisite(s): consent of instructor. Study and performance of literature for the concert band. Normally graded Satisfactory (S) or No Credit (NC), but students may petition the instructor for a letter grade on the basis of assigned extra work or examination. Course is repeatable.

MUS 166 (E-Z). Chamber Music (1-2) Studio, 3-6 hours. Prerequisite(s): admission by audition. Study and performance in varied small ensembles. E. Musical Instrument Digital Interface (MIDI) Ensemble; F. Improvisatory Ensemble; G. Chamber Music. Normally graded Satisfactory (S) or No Credit (NC), but students may petition the instructor for a letter grade on the basis of assigned extra work or examination. Segments are repeatable.

MUS 167. Recital (1-2) rehearsals, 6-12 hours. Prerequisite(s): approval of music faculty; limited to advanced performers only. Preparation and presentation of a formal recital. Graded Satisfactory (S) or No Credit (NC).

MUS 168. Javanese Gamelan Ensemble: Beginning (2) Studio, 6 hours. Prerequisite(s): upper-division standing and consent of instructor. Study and performance of the Central Javanese gamelan, consisting mainly of gongs and gong-chime instruments. Readings and discussions focus on Javanese culture. Normally graded Satisfactory (S) or No Credit (NC), but students may petition the instructor for a letter grade on the basis of assigned extra work or examination. Course is repeatable. Cross-listed with AST 168.

MUS 169. Taiko Ensemble (1) Studio, 2 hours. Prerequisite(s): upper-division standing or consent of instructor. Study and performance of Japanese drumming. Normally graded Satisfactory (S) or No Credit (NC), but students may petition the instructor for a letter grade on the basis of assigned extra work or examination. Course is repeatable. Cross-listed with AST 169.

MUS 170. Rondalla Ensemble (1-2) Studio, 2-4 hours. Prerequisite(s): upper-division standing or consent of instructor. Study and performance of the Filipino rondalla, an ensemble consisting of various sizes of lute-like and guitar-like instruments. Discussions focus on Filipino culture. Normally graded Satisfactory (S) or No Credit (NC), but students may petition the instructor for a letter grade on the basis of assigned extra work or examination. Course is repeatable. Cross-listed with AST 170.

MUS 171. Gospel Choir (1-2) Studio, 2-4 hours. Prerequisite(s): upper-division standing or consent of instructor. Offers students practical performance experience in an ensemble as well as a background in different genres of gospel music ranging from the early 1900s to the present day. Normally graded Satisfactory (S) or No Credit (NC), but students may petition the instructor for a letter grade on the basis of assigned extra work or examination. Course is repeatable.

MUS 172. Chamber Orchestra (1) Studio, 3 hours. Prerequisite(s): upper-division standing or consent of instructor. Participation in a performance ensemble comprised mainly of strings, with occasional winds and horns as needed. Includes string techniques instruction. Normally graded Satisfactory (S) or No Credit (NC), but students may petition the instructor for a letter grade on the basis of assigned extra work or examination. Course is repeatable to a maximum of 4 units.

MUS 173. Music Recording (1-2) Workshop, 2 hours; studio, 2-4 hours. Prerequisite(s): consent of instructor. Introduces students to the practical aspects of classical music recording in a digital audio workstation, including miking, session organization, and subsequent editing and mastering. Students may sign up as either a performer or an engineer, with the instructor's permission. Normally graded Satisfactory (S) or No Credit (NC), but students may petition the instructor for a letter grade on the basis of the nature of the project. Course is repeatable.

MUS 174. Latin American Music Ensemble (1-2) Studio, 2-6 hours. Prerequisite(s): upper-division standing or consent of instructor. Study and performance of select Latin American folk music traditions, with special emphasis on music of the Andean region. Normally graded Satisfactory (S) or No Credit (NC), but students may petition the instructor for a letter grade on the basis of assigned extra work. Course is repeatable.

MUS 175. Mexican Folkloric Ensemble (1-2) Studio, 2 hours; practicum, 1 hour; individual studio, 0 to 3 hours. Prerequisite(s): upper-division standing or consent of instructor. Study and performance of select Mexican folk-music traditions, with special emphasis on mariachi and son jarocho and including popular corridos and rancheras. Students who participate in a performance receive a letter grade; other students receive a Satisfactory (S) or No Credit (NC) grade. Course is repeatable.

MUS 176. Bagpipe Ensemble (1) Studio, 2 hours. Prerequisite(s): consent of instructor. Study and performance of Scottish bagpipe music. Students who participate in a performance receive a letter grade; other students receive a Satisfactory (S) or No Credit (NC) grade. Course is repeatable.

MUS 180 (E-Z). Private Instruction: Voice, Keyboard, and Strings (2) Studio, 1 hour; individual practice, 5-10 hours. Prerequisite(s): upper-division or graduate standing in Music. Offered as demand indicates. E. Voice; F. Classical Piano; G. Jazz Piano; I. Harpsichord; J. Carillon; K. Jazz Guitar; L. Electric Bass Guitar; M. Lute; N. Classical Guitar; O. Viola da gamba; P. Piano Proficiency; Q. Organ; R. Violin; S. Viola; T. Violoncello; U. Double Bass Viol. Undergraduate students receive letter grades only; graduate students receive Satisfactory (S) or No Credit (NC) grades only. Course is repeatable.

MUS 181 (E-Z). Private Instruction: Brass, Woodwinds, Percussion, and Other Instruments (2) Studio, 1 hour; individual practice, 5-10 hours. Prerequisite(s): upper-division or graduate standing in Music. Offered as demand indicates. E. Trumpet; F. Trombone; G. Tuba; I. French Horn; J. Flute; K. Oboe; L. Clarinet; M. Bassoon; N. Saxophone; O. Recorder; P. Percussion; Q. Rondalla instruments. Undergraduate students receive letter grades only; graduate students receive Satisfactory (S) or No Credit (NC) grades only. Segments are repeatable.

MUS 187. Improvisation Studies (4) Seminar, 3 hours; outside research, 3 hours. Prerequisite(s): upper-division standing or consent of instructor. Presents the emergent field of improvisation studies, moving beyond traditional genre boundaries to explore improvisation as a cultural phenomenon and social practice. Draws from jazz studies, ethnomusicology, music theory, musicology, American studies, and the histories of dance, theatre, and the visual arts. Cross-listed with DNCE 187.

MUS 190. Special Studies (1-5) To be taken with the consent of the chair of the department as a means of meeting special curricular problems. Course is repeatable to a maximum of 12 units.

MUS 191 (E-Z). Seminar in Music (4) Seminar, 3 hours; individual study, 3 hours. Prerequisite(s): MUS 112A, MUS 112B, MUS 112C; or consent of instructor. Topics dealing with aspects of individual composers and genres of study. F. Music of Beethoven; H. Construction of Early Instruments; I. Performance Practice; J. Music of Haydn; K. Interpretation of Symphonic Literature; M. Russian Romantic Music; N. Early American Music; O. Music of Mozart; R. Survey of Sonatas from the Seventeenth through the Twentieth Centuries; S. The Evolution and Practice of Jazz; U. Music Criticism; V. Studies in Twentieth-Century Music.

MUS 194. Independent Reading (1-2) Prerequisite(s): junior standing. Independent reading in materials not covered in course work. Normally begun in the junior year. May be repeated for credit. Total credit for course 194 may not exceed 4 units.

MUS 195. Senior Thesis (1-4) Required for students who are candidates for honors in music. Open to other music majors by invitation. Total credit may not exceed 6 units.

MUS 198-I. Individual Internship (1-12) variable hours. Prerequisite(s): upper-division standing; evidence of
prior arrangements with the professional(s) involved; approval by the department chair after consulting the music faculty. Work with an appropriate professional individual or organization to gain experience and skill in the student's chosen specialty. Graded Satisfactory (S) or No Credit (NC). May be repeated to a total of 16 units.

MUS 199H. Senior Honors Research (1-5)

Graduate Courses

MUS 200. Music Bibliography (4) Seminar, 3 hours; outside research, 1 hour. Fundamentals of music bibliography. Emphasis on reference materials and other standard bibliographical tools.

MUS 201. Proseminar in the Analysis of Western Music (4) Seminar, 3 hours; individual guided research, 3 hours. Prerequisite(s): graduate standing. Analysis of selected musical works from various periods exploring different music-theory models.

MUS 206. Proseminar in Musicology (4) Lecture, 3 hours; consultation, 1 hour. Prerequisite(s): MUS 200. Study of significant issues and recent developments in musicology and criticism. Study and practice of expository writing about music.

MUS 207. Proseminar in Ethnomusicology (4) Lecture, 3 hours; outside research, 3 hours. Prerequisite(s): graduate standing. Explores ethnomusicology as a discipline, focusing on the relationships between ethnomusicology and musicology, and on ethnomusicology as an interdisciplinary field drawing on performance studies, ethnopoetics, postmodernism, translational theories, and postcolonialism.

MUS 250 (E-Z). Seminar in Music Theory (4) Seminar, 3 hours; research, 3 hours. Prerequisite(s): MUS 200 and MUS 201 or consent of instructor. Historical study of the theory of western music. F. History of Theory; G. Neo-Classicism; H. Twentieth Century. I-Z: topics to be announced.

MUS 251. Music in Computer Gaming (4) Seminar, 3 hours; outside research, 3 hours. Prerequisite(s): graduate standing or consent of instructor. Introduces students to the history and theory of music use in computer games, including the development of classical commercial gaming and game design and the related use of dramatic music. Topics cover adventure game history, narrative underscoring, commercial computer game genres, and contemporary issues related to interactivity, performance, and reception.

MUS 253. Seminar in Advanced Music Theory (4) Seminar, 3 hours; written work, 3 hours. Prerequisite(s): graduate standing or consent of instructor. Presents a survey of serial techniques developed in the twentieth and twenty-first centuries for use both in the composition of new works and analysis of existing repertoire. May be taken Satisfactory (S) or No Credit (NC) with consent of instructor and graduate advisor.

MUS 254. Seminar in Music and Technology (4) Seminar, 3 hours; outside research, 3 hours. Prerequisite(s): graduate standing or consent of instructor. Explores the use of technology in real-time performance and in the making of electronic music, studio music, computer music, and performance art. Surveys musical technoculture and examines music technology from both creative and consumer points of view. Also investigates the students' interests in music technology.

MUS 255. Field Methods in Ethnomusicology (4) Seminar, 3 hours; outside research, 1 hour; field, 2 hours. Prerequisite(s): graduate standing. A theoretical and practical introduction to fieldwork in music and performance. Each student focuses on a different performance group and documents its activities. Covers interviewing, audiotaping, videotaping, transcribing music and dance, and describing performance events.

MUS 256. Computer Music Composition (4) Seminar, 3 hours; laboratory, 3 hours. Prerequisite(s): graduate standing or consent of instructor; MATH 004 or equivalent is recommended. Students learn classic computer music techniques for sound processing in the context of the development of an original piece. Topics include computer music history, digital audio theory and processing, and electronic and computer music composition, including synthesis techniques and real-time instrument design.

MUS 258. Seminar in Free Composition (4) Seminar, 3 hours; consultation, 1 hour. Prerequisite(s): graduate standing or consent of instructor. Individual projects and issues in musical composition. Course is repeatable to a maximum of 12 units.

MUS 259. Musical Semiotics: Approaches to Meaning and Form (4) Seminar, 3 hours; extra reading, 3 hours. Prerequisite(s): graduate standing or consent of instructor. Study of musical semiotics focusing on recent theories and related areas such as cybernetics, cognitive science, and theory of systems. Examines questions of meaning and form in the domains of aesthetics, musical theory, analysis, composition, performance, and new approaches of digital media and music.

MUS 261. Seminar in Performance Practice (4) Seminar, 3 hours; consultation, 1 hour. Prerequisite(s): MUS 200 and MUS 201, or consent of instructor. Investigations into the historically accurate performance styles of music based on information contemporary with the music. Topics and content will vary each quarter depending on student interest. May be repeated for up to 8 units.

MUS 262 (E-Z). Seminar in Western Music History (4) Seminar, 3 hours; individual study, 3 hours. Prerequisite(s): MUS 206. Graduate standing or consent of instructor. Selected issues in the history of music in the context of social, political, religious and intellectual culture of the West during different periods.

MUS 263 (E-Z). Seminar in Special Topics in Musicology (4) Seminar, 3 hours; individual guided research, 3 hours. Prerequisite(s): MUS 206, graduate standing or consent of instructor. Addresses such topics as Music and Culture, Music and Poetry, Nationalism, Gender and Sexuality in Music, Individual Genres and Composers. Course is repeatable.

MUS 270. Special Topics in Ethnomusicology (4) Seminar, 3 hours; outside research, 3 hours. Prerequisite(s): MUS 207, graduate standing; or consent of instructor. Focuses on current scholarship in ethnomusicology and related fields. Theme varies, but emphasis is usually on theory and methodology or the study of particular regions or performance traditions. For further information, see Department. Course is repeatable to a maximum of 8 units.

MUS 271. Area Studies Research in Music (4) Seminar, 3 hours; extra reading, 2 hours; listening, 1 hour. Prerequisite(s): graduate standing or consent of instructor. Focuses on historical and ethnographic literature of particular geographical areas. Discusses scholarly literature on music (and expressive culture generally, including dance, theater, and ritual) of a particular geocultural region. Course is repeatable as topics change to a maximum of 8 units.

MUS 290. Directed Studies (1-6) Graded Satisfactory (S) or No Credit (NC). Course is repeatable.

MUS 291. Individual Study in Coordinated Areas (1-6) Individual study. 6-25 hours. Prerequisite(s): graduate standing; consent of instructor and graduate advisor. A program of study designed to assist graduate candidates who are preparing for M.A. comprehensive or Ph.D. qualifying examinations. Graded Satisfactory (S) or No Credit (NC). Course is repeatable to a maximum of 12 units.

MUS 292. Concurrent Analytical Studies in Music (1-4) Prerequisite(s): graduate standing; approval of instructor and graduate advisor. Each 292 course will be taken concurrently with some 100-series course but on an individual basis. It will be devoted to research, criticism, and written work of a graduate order commensurate with the number of units elected. Graded Satisfactory (S) or No Credit (NC). May be repeated for credit.

MUS 297. Directed Research (1-6) Prerequisite(s): graduate status and consent of instructor and graduate advisor. Individual graduate student research under the sponsorship of specific faculty members, on topics and selected problems in theoretical and historical research in music not directly related to student’s thesis. Graded Satisfactory (S) or No Credit (NC).

MUS 299. Research for Thesis or Dissertation (1-12) Graded Satisfactory (S) or No Credit (NC). Course is repeatable.

Professional Courses

MUS 301. Directed Studies in the Teaching of Music (3) Seminar, 2 hours; consultation, 1 hour. Prerequisite(s): graduate standing. A program of weekly meetings and individual formative evaluation required of new Music teaching assistants. Covers instructional methods and classroom/section activities. Conducted by department faculty. Graded Satisfactory (S) or No Credit (NC).

MUS 302. Teaching Practicum (1-4) Clinic, 1 hour; practicum, 1 hour; lecture, 2 hours. Prerequisite(s): appointment as a teaching assistant in Music; graduate standing. Supervised teaching in undergraduate Music courses. Required of all Music teaching assistants. Graded Satisfactory (S) or No Credit (NC). Course is repeatable to a maximum of 4 units.

Natural and Agricultural Sciences

Subject abbreviation: NASC
College of Natural and Agricultural Sciences

Lower-Division Courses

NASC 091. Freshman Advising Seminar in the Natural and Agricultural Sciences (1) Seminar, 1 hour. Prerequisite(s): first-year freshman standing in the College of Natural and Agricultural Sciences (CNAS). Introduction to UCR for students in the sciences. Includes selection of majors, curriculum planning,