401 Leadership: Training Management, Counseling, and Unit Management Fall. 3(3-2) P:NM: (MS 302) Army training philosophy. The lieutenant's role in training management, personnel administration, and logistics. Practical exercises in counseling and training presentations. Practical application of leadership development doctrine. Laboratory includes practical experience in unit administration and training management.

402 Military Law, Ethics and Professionalism Spring. 3(3-2) P:NM: (MS 401) Introduction of the military legal system and the Law of War. The basis of the military profession and the importance of ethical development to the profession of arms. Development of subordinates. Laboratory includes practical exercises in professional development and leadership opportunities.

490 Independent Study in Military Science Fall, Spring. 1 to 4 credits. A student may earn a maximum of 4 credits in all enrollments for this course. R: Open only to juniors or seniors. Approval of department. Individual research in areas related to military science.

MUSIC

School of Music
College of Arts and Letters

112 Chamber Music Fall. Spring. 1(0-2) A student may earn a maximum of 10 credits in all enrollments for this course. R: Audition required. Rehearsal and performance of broad range of chamber music literature.

113 Philharmonic Orchestra Fall. Spring. 1(0-3) A student may earn a maximum of 10 credits in all enrollments for this course. RB: High school and/or youth orchestra experience/or other college or university ensemble experience R: Audition required. Rehearsal and performance of symphonic and operatic repertoire.

114 Marching Band Fall. 1(0-9) A student may earn a maximum of 6 credits in all enrollments for this course. R: Audition required. Rehearsal and performance of broad range of marching band literature at football games.

115 Spartan Brass Spring. 1(0-2) A student may earn a maximum of 6 credits in all enrollments for this course. R: Audition required. Rehearsal and performance of broad range of brass literature at basketball and hockey games.

116 Campus Band Fall. Spring. 1(0-3) A student may earn a maximum of 10 credits in all enrollments for this course. Rehearsal and performance of broad range of band literature chosen from baroque period to the present.

117 Concert Band Fall. Spring. 1(0-3) A student may earn a maximum of 10 credits in all enrollments for this course. R: Audition required. Rehearsal and performance of broad range of wind literature from various historical periods and styles.

118 Wind Symphony Fall. Spring. 1(0-6) A student may earn a maximum of 10 credits in all enrollments for this course. R: Audition required. Rehearsal and performance of broad range of wind literature from various periods and styles.

119 Symphony Band Fall. Spring. 1(0-3) A student may earn a maximum of 10 credits in all enrollments for this course. R: Audition required. Rehearsal and performance of broad range of wind and percussion literature.

120 Symphony Orchestra Fall. Spring. 1(0-6) A student may earn a maximum of 10 credits in all enrollments for this course. R: Audition required. Rehearsal and performance of symphonic and operatic repertoire.

122 Campus Orchestra Fall. Spring. 1(0-2) A student may earn a maximum of 10 credits in all enrollments for this course. Rehearsal and performance of symphonic and concert literature written for large orchestra, conducted by staff under the supervision of faculty.

123 Collegiate Choir Fall. Spring. 1(0-3) A student may earn a maximum of 10 credits in all enrollments for this course. R: Audition required. Rehearsal and performance of representative literature for mixed choir with emphasis on renaissance, baroque, classical, romantic, and contemporary composers.

124 Choral Union Fall. Spring. 1(0-2) A student may earn a maximum of 10 credits in all enrollments for this course. R: Audition required. University and community chorus. One evening rehearsal per week, culminating in performance of a major work with orchestra.

125 Glee Club, Men and Women Fall. Spring. 1(0-3) A student may earn a maximum of 10 credits in all enrollments for this course. Rehearsal and performance of broad range of choral literature chosen from medieval period to the present.

126 State Singers Fall. Spring. 1(0-4) A student may earn a maximum of 10 credits in all enrollments for this course. R: Audition required. Mixed choir performing music from all periods.

127 University Chorale Fall. Spring. 1(0-4) A student may earn a maximum of 10 credits in all enrollments for this course. R: Audition required. Mixed chamber choir for experienced singers performing representative literature from all periods.

128 Percussion Ensemble Fall. Spring. 1(0-3) A student may earn a maximum of 10 credits in all enrollments for this course. R: Audition required. Rehearsal and performance of representative works for percussion and mallet ensembles.

130 Jazz Band Fall. Spring. 1(0-4) A student may earn a maximum of 10 credits in all enrollments for this course. R: Audition required. Rehearsal and performance in large jazz ensemble. Literature from classic bands of Ellington and Basie to contemporary composers.

131 Jazz Combo Fall. Spring. 1(1-2) A student may earn a maximum of 10 credits in all enrollments for this course. R: Audition required. Rehearsal and performance in small jazz ensembles. Literature from all historical periods of jazz.

141 Class Instruction in Piano I Fall. Spring. 1(1-1) R: Open only to students in the School of Music. Use of the piano as a teaching tool.

142 Class Instruction in Piano II Spring. 1(1-1) P:NM: (MUS 141) R: Open only to students in the School of Music. Use of the piano as a teaching tool.

143 Class Instruction in Voice I: Music Majors Fall. 1(1-1) R: Open only to students in the School of Music with an emphasis in voice. C: MUS 151 concurrently. English lyric diction. Rules or pronunciation. Performance of English language songs in class.

144 Class Instruction in Voice II: Music Majors Spring. 1(1-1) P:NM: (MUS 143) R: Open only to students in the School of Music with an emphasis in voice. C: MUS 151 concurrently. Italian lyric diction. Rules of pronunciation. Performance of Italian language songs in class.

145 Class Instruction in Voice I Fall. 1(1-1) R: Open only to students in the School of Music with an emphasis in voice. Rules of pronunciation. Vocal techniques.

146 Class Instruction in Voice II Spring. 1(1-1) P:NM: (MUS 145) R: Open only to students in the School of Music with an emphasis in voice. Vocal techniques and exploration of vocal literature.

147 Class Instruction in Elementary Piano I Fall. Spring. 2(2-1) R: Open only to students in the School of Music. Basic notation, performance, improvisation, and transposition. Repertoire includes folksongs, simple classics, and blues.

149 Keyboard Skills Fall. Spring. 1(0-2) A student may earn a maximum of 4 credits in all enrollments for this course. R: Open only to students in the School of Music. Sight-reading, transposing, figured bass, keyboard harmony, and accompanying instrumentalists and vocalists.

150A Piano Fall. Spring. 1 to 3 credits. A student may earn a maximum of 18 credits in all enrollments for this course. R: Open only to students in the School of Music. Audition required. Private instruction in piano.
Music–MUS

150C Harp
Fall, Spring. 1 to 4 credits. A student may earn a maximum of 16 credits in all enrollments for this course. R: Open only to students in the School of Music. Audition required.
Private instruction in harp.

150J Piano: Jazz
Fall, Spring. 1 to 2 credits. A student may earn a maximum of 8 credits in all enrollments for this course. R: Audition required.
Private instruction in piano.

151 Voice
Fall, Spring. 1 to 3 credits. A student may earn a maximum of 12 credits in all enrollments for this course. R: Open only to students in the School of Music and students in the Music teaching minor. Audition required.
Private instruction in voice.

152A Violin
Fall, Spring. 1 to 4 credits. A student may earn a maximum of 16 credits in all enrollments for this course. R: Audition required.
Private instruction in violin.

152B Viola
Fall, Spring. 1 to 4 credits. A student may earn a maximum of 16 credits in all enrollments for this course. R: Audition required.
Private instruction in viola.

152C Cello
Fall, Spring. 1 to 4 credits. A student may earn a maximum of 16 credits in all enrollments for this course. R: Audition required.
Private instruction in cello.

152D Double Bass
Fall, Spring. 1 to 4 credits. A student may earn a maximum of 16 credits in all enrollments for this course. R: Audition required.
Private instruction in double bass.

152J Stringed Instruments: Jazz
Fall, Spring. 1 to 2 credits. A student may earn a maximum of 8 credits in all enrollments for this course. R: Audition required.
Private instruction in a stringed instrument.

153A Flute
Fall, Spring. 1 to 4 credits. A student may earn a maximum of 16 credits in all enrollments for this course. R: Audition required.
Private instruction in flute.

153B Oboe
Fall, Spring. 1 to 4 credits. A student may earn a maximum of 16 credits in all enrollments for this course. R: Audition required.
Private instruction in oboe.

153C Clarinet
Fall, Spring. 1 to 4 credits. A student may earn a maximum of 16 credits in all enrollments for this course. R: Audition required.
Private instruction in clarinet.

153D Saxophone
Fall, Spring. 1 to 4 credits. A student may earn a maximum of 16 credits in all enrollments for this course. R: Audition required.
Private instruction in saxophone.

153E Bassoon
Fall, Spring. 1 to 4 credits. A student may earn a maximum of 16 credits in all enrollments for this course. R: Audition required.
Private instruction in bassoon.

153J Woodwind Instruments: Jazz
Fall, Spring. 1 to 2 credits. A student may earn a maximum of 8 credits in all enrollments for this course. R: Audition required.
Private instruction in a woodwind instrument.

154A Trumpet
Fall, Spring. 1 to 4 credits. A student may earn a maximum of 16 credits in all enrollments for this course. R: Audition required.
Private instruction in trumpet.

154B Horn
Fall, Spring. 1 to 4 credits. A student may earn a maximum of 16 credits in all enrollments for this course. R: Audition required.
Private instruction in horn.

154C Trombone
Fall, Spring. 1 to 4 credits. A student may earn a maximum of 16 credits in all enrollments for this course. R: Audition required.
Private instruction in trombone.

154D Euphonium
Fall, Spring. 1 to 4 credits. A student may earn a maximum of 16 credits in all enrollments for this course. R: Audition required.
Private instruction in euphonium.

154E Tuba
Fall, Spring. 1 to 4 credits. A student may earn a maximum of 16 credits in all enrollments for this course. R: Audition required.
Private instruction in tuba.

154J Brass Instruments: Jazz
Fall, Spring. 1 to 2 credits. A student may earn a maximum of 8 credits in all enrollments for this course. R: Audition required.
Private instruction in a brass instrument.

155 Percussion Instruments
Fall, Spring. 1 to 4 credits. A student may earn a maximum of 16 credits in all enrollments for this course. R: Audition required.
Private instruction in percussion instruments.

155J Percussion Instruments: Jazz
Fall, Spring. 1 to 2 credits. A student may earn a maximum of 8 credits in all enrollments for this course. R: Audition required.
Private instruction in percussion instruments.

160 Class Instruction in Guitar
Fall. 1(1-0) R: Open only to students in the Music Therapy major and to other students in the School of Music with a teacher certification option.
Chording, strumming and finger picking techniques. Accompanying and song leading with guitar. Reading of notation and tablature. Classical and popular styles.

161 Class Instruction in Stringed Instruments
Fall. 2(2-2) R: Open only to students in the School of Music with a teacher certification option.
Techniques for playing and teaching stringed instruments.

162 Class Instruction in Flute and Saxophone
Spring. 1(0-2) R: Open only to students in the School of Music with a teacher certification option.
Techniques for playing and teaching flute and saxophone.

163 Class Instruction in Clarinet
Fall. 1(0-2) R: Open only to students in the School of Music with a teacher certification option.
Techniques for playing and teaching clarinet.

164 Class Instruction in Double Reed Instruments
Spring. 1(0-2) R: Open only to students in the School of Music with a teacher certification option.
Techniques for playing and teaching oboe and bassoon.

165 Class Instruction in High Brass Instruments
Fall. 1(0-2) R: Open only to students in the School of Music with a teacher certification option.
Techniques for playing and teaching trumpet and horn.

166 Class Instruction in Low Brass Instruments
Spring. 1(0-2) R: Open only to students in the School of Music with a teacher certification option.
Techniques for playing and teaching trombone, euphonium, and tuba.

167 Class Instruction in Percussion Instruments
Fall. 2(1-2) R: Open only to students in the School of Music with a teacher certification option.
Techniques for playing and teaching percussion instruments.

171 Class Instruction in Stringed Instruments I
Fall. 1(1-1) R: Open only to Music majors.
Techniques for playing and teaching stringed instruments at the elementary level.

172 Class Instruction in Stringed Instruments II
Spring. 1(1-1) P.M.: (MUS 171) SA: MUS 161
Techniques for playing and teaching stringed instruments at the intermediate level and beyond.

173 Class Instruction in Percussion Instruments I
Fall. Spring. 1(1-1)
Techniques for playing and teaching percussion instruments at the elementary level.

174 Class Instruction in Percussion Instruments II
Spring. 1(1-1) P.M.: (MUS 173)
Techniques for playing and teaching percussion instruments at the intermediate level and beyond.
175 Understanding Music
Fall, Spring. 2(2-0)
An active and creative approach to understanding the elements of music in a wide variety of music styles. No prior musical skills required.

177 Introduction to Music Education
Fall, Spring. 2(2-1) PM: (MUS 181) SA: MUS 280
Historical foundations, current trends, and teaching responsibilities in music education at all curricular levels.

178 Music Theory For Non Music Majors I
Fall. 2(2-1) R: Not open to music majors. Not open to students with credit in MUS 180.
Basic components of both written and aural music. No previous musical knowledge assumed.

179 Music Theory For Non Music Majors II
Spring. 3(3-1) P.M. (MUS 178) R: Not open to music majors. Not open to students with credit in MUS 180 or MUS 181.
Common chords and chord progressions, harmonizing melodies, basic musical forms including some popular and jazz forms, introductory compositional techniques.

180 Fundamentals of Music
Fall. 2(2-1)
Conceptual and notational presentation of the basic components of musical structure. No previous familiarity with music is assumed.

181 Musicianship I
Spring. 3(3-1) P.N.M.: (MUS 180)
Hierarchical musical structure through species counterpoint and figured bass. Linear and vertical aspects of tonality.

182 Ear Training and Sight Singing I
Fall. 1(1-1)
Diction, melody singing using solfege (movable do) syllables, intervals to octave, error detection, quarter note values in rhythm, part singing.

183 Ear Training and Sight Singing II
Spring. 1(1-1) P.N.M. (MUS 182)
Diction, singing melodies in major and minor keys. Simple modulation, chromatic alteration, error detection, rhythms, triads and components, part singing.

200 Introduction to Music Theory
Fall. 1(1-1) R: Open only to graduate students in the School of Music. SA: MUS 800 Elements of music theory, with emphasis on voice-leading and harmonic analysis in diatonic and chromatic music.

201 Aural Skills
Spring. 1(1-1) R: Open only to graduate students in the School of Music. SA: MUS 801
Ear training in the areas of melody, harmony, and rhythm. Sight singing using the solfege system. Computer-aided drill programs.

211 History of Western Music to 1750
Fall. 3(3-0) P.M. (MUS 181) R: Not open to freshmen. Open only to students in the School of Music.
Music from ancient Greece through the Baroque. Literature and theory of plainsong, instrumental and vocal traditions, and vocal polyphony before 1750 in sociopolitical context.

212 History of Western Music Since 1750
Spring. 3(3-0) P.M. (MUS 181) P.N.M: (MUS 211) R: Not open to freshmen. Open only to students in the School of Music.
Literature of the cultivated tradition and its theory in sociopolitical context.

230 Beginning Jazz Improvisation I
Fall. 2(2-0) P.M. (MUS 181) R: Not open to freshmen.
Keys, modes, chord progressions as improvisational tools. Blues form in basic keys. Aural transcription of recorded solos.

231 Beginning Jazz Improvisation II
Spring. 2(2-0) P.M. (MUS 230) R: Not open to freshmen.
Performance of complete tunes using II-V-I progressions in all major and minor keys. Transcriptions of recorded jazz solos.

244 Advanced Class Instruction in Piano I
Fall. 1(1-1) P.M. (MUS 142) R: Not open to freshmen. Open only to students in the School of Music with an emphasis in voice. Use of the piano as a teaching tool in school music.

245 Advanced Class Instruction in Piano II
Spring. 1(1-1) P.M. (MUS 245) R: Not open to freshmen. Open only to students in the School of Music with an emphasis in voice. Use of the piano as a teaching tool in school music.

248 German Diction for Singers
Fall. 1(1-1) P.M. (MUS 151) R: Open only to students in the School of Music.
German lyric diction. Rules of pronunciation. Performance of German art songs in class.

249 French Diction for Singers
Spring. 1(1-1) P.M. (MUS 151) R: Open only to students in the School of Music.

260 Introduction to School Music
Fall. Spring. 2(2-0) P.M. (MUS 181) R: Not open to freshmen. Open only to students in the School of Music with a teacher certification option and to students with a major in Music Therapy or Composition and Music Theory and to students with a Music teaching minor.

265 History of Western Music
Spring, 3(3-0) P.M. (MUS 181) R: Not open to freshmen. Open only to students in the School of Music.
Historical foundations, current trends, and teaching responsibilities in school music at all curricular levels.

270 Music Therapy: Foundations and Principles
Fall. 3(3-0) R: Not open to freshmen.
History, philosophy and scope of the practice of music therapy. Use of music in treating people with special needs. Field trips required.

271 Music Therapy: Instrumental, Vocal and Movement Techniques
Spring. 3(3-0) P.M. (MUS 270) R: Not open to freshmen.
Creative and expressive techniques involving percussion instruments, autoharp, handchimes, song leading, creative movement, folk dance.

277 Principles of Music Education
Spring. 3(3-2) P.M. (MUS 177) SA: MUS 339
Techniques for developing instructional and management skills for teaching music. On- and off-campus clinical experiences required.

280 Musicianship II
Fall. 3(3-1) P.M. (MUS 181)
Techniques of diatonic modulation and soprano harmonization. Chromatic techniques.

281 Musicianship III
Spring. 3(3-1) P.M. (MUS 280)
Research base for formal categorization. Large-scale principles of musical organization. Chromatic substitution and chords derived from voice-leading.

282 Advanced Ear Training and Sight Singing I
Fall. 1(1-1) P.M. (MUS 183)
Diction including recognition of triads, functions, cadences, seventh-chord harmonies, chord components. Two-and four-part dictation and singing.

283 Advanced Ear Training and Sight Singing II
Spring. 1(1-1) P.M. (MUS 282)
Recognition of harmonic functions in major keys, minor keys, and modulations. Dictation in two-and four-part textures including augmented-sixth chords and nonharmonic tones.

290 Independent Study
Fall, Spring. 1 to 3 credits. A student may earn a maximum of 9 credits in all enrollments for this course. R: Approval of school. Special projects arranged by an individual student and a faculty member in areas supplementing regular course offerings.

335 Ensemble Conducting I
Fall. 2(2-2) P.M. (MUS 181) R: Open only to students in the School of Music with a teacher certification option and to students with a major in Music Therapy or Composition and Music Theory and to students with a Music teaching minor.
Introduction to conducting and rehearsal techniques.

336A Ensemble Conducting II: Instrumental
Spring. 2(2-2) P.M. (MUS 335) R: Open only to students in the School of Music with a teacher certification option and students with a major in Composition and Music Theory. SA: MUS 336
Advanced conducting and rehearsal techniques as applied to music literature from each of the stylistic periods.

336B Ensemble Conducting II: Choral
Spring. 2(2-2) P.M. (MUS 335) R: Open only to students in the School of Music with a teacher certification option and to students with a major in Composition and Music Therapy. SA: MUS 336
Advanced conducting and rehearsal techniques as applied to music literature from each of the stylistic periods.

337 Conducting for Music Performance Majors
Fall, Spring. 1(1-1) P.M. (MUS 281) R: Open only to Music Performance majors.
Beat patterns, clefs, and transpositions of string, wind, and percussion instruments. Score reading and analysis. Rehearsal techniques.

339 Teaching School Music
Spring. 3(3-2) P.M. (MUS 280) R: Open only to students in the School of Music with a teacher certification option and to students with a Music teaching minor.
Techniques for developing instructional and management skills for teaching school music. On- and off-campus clinical experiences required.
340 Methods and Literature for Voice
Fall. 3(3-0) P:NM: Four semesters of MUS 151. R: Open only to majors in the School of Music.
Methods of teaching voice. Literature for both private lessons and classrooms.

341 String Pedagogy
Spring. 2(2-1) R: Open only to majors in the School of Music.
Principles, techniques, and materials for teaching stringed instruments.

346 Keyboard Methods and Literature I
Fall. 2(2-0) P:NM: Four semesters of MUS 150A. R: Open only to majors in the School of Music.
Beginning and intermediate methods and literature for teaching piano. Observation and teaching of beginning piano students.

347 Keyboard Methods and Literature II
Spring. 2(2-0) P:NM: (MUS 346) R: Open only to majors in the School of Music.
Intermediate and advanced methods and literature for teaching piano. Observation and teaching of piano students.

349 Piano Accompanying
Fall. Spring. 1(0-2) A student may earn a maximum of 8 credits in all enrollments for this course. P:NM: (MUS 149) R: Not open to freshmen. Open only to students in the School of Music.
Accompaniment of instrumental and vocal soloists.

350A Piano
Fall. Spring. 2 to 3 credits. A student may earn a maximum of 18 credits in all enrollments for this course. P:NM: (MUS 150A) R: Open only to majors in the School of Music. Approval of school.
Private instruction in piano.

350B Pipe Organ
Fall. Spring. 1 to 3 credits. A student may earn a maximum of 18 credits in all enrollments for this course. R: Open only to majors in the School of Music. Approval of school.
Private instruction in pipe organ.

351 Voice
Fall. Spring. 1 to 3 credits. A student may earn a maximum of 18 credits in all enrollments for this course. P:NM: (MUS 151) R: Open only to majors in the School of Music and to students in the Music teaching minor. Approval of school.
Private instruction in voice.

352A Violin
Fall. Spring. 1 to 4 credits. A student may earn a maximum of 24 credits in all enrollments for this course. P:NM: (MUS 152A) R: Open only to majors in the School of Music. Approval of school.
Private instruction in violin.

352B Viola
Fall. Spring. 1 to 4 credits. A student may earn a maximum of 24 credits in all enrollments for this course. P:NM: (MUS 152B) R: Open only to majors in the School of Music. Approval of school.
Private instruction in viola.

352C Cello
Fall. Spring. 1 to 4 credits. A student may earn a maximum of 24 credits in all enrollments for this course. P:NM: (MUS 152C) R: Open only to majors in the School of Music. Approval of school.
Private instruction in cello.

352D Double Bass
Fall. Spring. 1 to 4 credits. A student may earn a maximum of 24 credits in all enrollments for this course. P:NM: (MUS 152D) R: Open only to majors in the School of Music. Approval of school.
Private instruction in double bass.

353A Flute
Fall. Spring. 1 to 4 credits. A student may earn a maximum of 24 credits in all enrollments for this course. P:NM: (MUS 153A) R: Open only to majors in the School of Music. Approval of school.
Private instruction in flute.

353B Oboe
Fall. Spring. 1 to 4 credits. A student may earn a maximum of 24 credits in all enrollments for this course. P:NM: (MUS 153B) R: Open only to majors in the School of Music. Approval of school.
Private instruction in oboe.

353C Clarinet
Fall. Spring. 1 to 4 credits. A student may earn a maximum of 24 credits in all enrollments for this course. P:NM: (MUS 153C) R: Open only to majors in the School of Music. Approval of school.
Private instruction in clarinet.

353D Saxophone
Fall. Spring. 1 to 4 credits. A student may earn a maximum of 24 credits in all enrollments for this course. P:NM: (MUS 153D) R: Open only to majors in the School of Music. Approval of school.
Private instruction in saxophone.

353E Bassoon
Fall. Spring. 1 to 4 credits. A student may earn a maximum of 24 credits in all enrollments for this course. P:NM: (MUS 153E) R: Open only to majors in the School of Music. Approval of school.
Private instruction in bassoon.

354A Trumpet
Fall. Spring. 1 to 4 credits. A student may earn a maximum of 24 credits in all enrollments for this course. P:NM: (MUS 154A) R: Open only to majors in the School of Music. Approval of school.
Private instruction in trumpet.

354B Horn
Fall. Spring. 1 to 4 credits. A student may earn a maximum of 24 credits in all enrollments for this course. P:NM: (MUS 154B) R: Open only to majors in the School of Music. Approval of school.
Private instruction in horn.

354C Trombone
Fall. Spring. 1 to 4 credits. A student may earn a maximum of 24 credits in all enrollments for this course. P:NM: (MUS 154C) R: Open only to majors in the School of Music. Approval of school.
Private instruction in trombone.

354D Euphonium
Fall. Spring. 1 to 4 credits. A student may earn a maximum of 24 credits in all enrollments for this course. P:NM: (MUS 154D) R: Open only to majors in the School of Music. Approval of school.
Private instruction in euphonium.

354E Tuba
Fall. Spring. 1 to 4 credits. A student may earn a maximum of 24 credits in all enrollments for this course. P:NM: (MUS 154E) R: Open only to majors in the School of Music. Approval of school.
Private instruction in tuba.

355 Percussion
Fall. Spring. 1 to 4 credits. A student may earn a maximum of 24 credits in all enrollments for this course. P:NM: (MUS 155) R: Open only to majors in the School of Music. Approval of school.
Private instruction in percussion.

370 Music Therapy: Behavior Measurement and Assessment
Fall. 3(3-1) P:NM: (MUS 270) R: Open only to Music Therapy majors.

371 Music Therapy: Treatment Planning and Case Management
Spring. 3(3-1) P:NM: (MUS 370) R: Open only to Music Therapy majors.

380 Musical Styles and Forms (W)
Fall. 3(3-1) P:NM: (MUS 281) and completion of Tier I writing requirement. R: Open only to majors in the School of Music.
Form in pre-20th century Western music. Stylistic analysis of representative medieval, renaissance, baroque, and 18th and 19th century compositions.

381 20th Century Music Theory
Spring. 3(3-1) P:NM: (MUS 380)
Western art music and jazz. Stylistic and formal analysis of representative compositions and jazz improvisations. Post-tonal theory. Jazz nomenclature and harmonic practice.

413 Keyboard Literature to Mid-19th Century
Fall of even years. 2(2-1) P:NM: (MUS 281) R: Open only to majors in the School of Music.
Keyboard styles and works of representative composers such as Bach, Couperin, Mozart, Haydn and Beethoven.
414 Keyboard Literature since the Mid-19th Century
Fall of odd years. 2(2-1) P:M: (MUS 413) R: Open only to majors in the School of Music.
Keyboard styles and works of representative composers such as Schumann, Chopin, Ives and Prokofiev.

415 Art Song Literature: German
Fall of odd years. 2(2-1) P:M: (MUS 181) R: Open only to majors in the School of Music. Not open to freshmen or sophomores. Standard art song repertoire with emphasis on German Lieder. Performance of art songs in class.

416 Art Song Literature: European and American
Spring of odd years. 2(2-1) P:M: (MUS 181) R: Open only to majors in the School of Music. Not open to freshmen or sophomores. Standard art song repertoire with emphasis on Italian, French, and twentieth century art songs. Performance of art songs in class.

420 Music of the 18th Century
Fall of even years. 2(2-0) P:M: (MUS 212) R: Not open to freshmen or sophomores. Open only to majors in the School of Music. Late baroque and early classical traditions: styles, genres, forms, theories, aesthetics, performance practices, instruments and masterworks in sociopolitical context. Aural and score analysis of representative works.

421 19th Century European-American Music Literature
Spring of odd years. 2(2-0) P:M: (MUS 212) R: Not open to freshmen or sophomores. Open only to majors in the School of Music. Late classical and romantic period traditions: styles, genres, forms, theories, aesthetics, performance practices, instruments and masterworks in sociopolitical context. Aural and score analysis of representative works.

422 20th Century European and American Music Literature
Spring of even years. 2(2-0) P:M: (MUS 212) R: Not open to freshmen or sophomores. Open only to majors in the School of Music. Twentieth-century styles, genres, forms, theories, aesthetics, performance practices, instruments and masterworks in sociopolitical context. Aural and score analysis of representative works.

423 History of Opera
Fall of odd years. 2(2-0) P:M: (MUS 212) R: Open only to majors in the School of Music. Musical, cultural, and social significance of opera since 1600.

425 Music of South Asia and Its Diaspora
Fall of odd years. 2(2-0) R: Not open to freshmen or sophomores. Music associated with the cultures of South Asian India and Pakistan, and South Asian musical practices in its Diaspora.

426 Music of West Africa
Spring of odd years. 2(2-0) R: Not open to freshmen or sophomores. Music associated with the cultures of West Africa.

427 Music of Asia, the Pacific, and the Near East
Fall. 2(2-0) P:NM: (MUS 212) R: Open only to majors in the School of Music. Not open to freshmen or sophomores. Music in the cultures of the Asian continent and Pacific islands. Techniques of ethnomusicology, listening and analysis.

429 Music of East and Southeast Asia
Fall of even years. 2(2-0) R: Not open to freshmen or sophomores. Music associated with the cultures of East and Southeast Asia.

430 Music of the Caribbean
Spring of even years. 2(2-0) R: Not open to freshmen or sophomores. Music with the cultures of the Caribbean.

435 Opera Theatre
Fall. Spring. 1 to 2 credits. A student may earn a maximum of 8 credits in all enrollments for this course. R: Audition required. Rehearsal and performance of complete operas and operatic excerpts.

440 Electronic and Computer Music Literature
Fall. 3(2-0) P:M: (MUS 281) R: Not open to freshmen or sophomores. Music literature composed with tape recorders, synthesizers and computers.

441 Introduction to Computer Music
Fall. 3(3-0) P:M: (MUS 281) R: Not open to freshmen or sophomores. Digital synthesizers, samplers, and Musical Instrument Digital Interface. Computer sequencing and timbre editing software. Compositional techniques of computer music.

442 Independent Projects in Computer Music
Fall, Spring. 1 to 3 credits. A student may earn a maximum of 6 credits in all enrollments for this course. R: Open only to seniors and graduate students in the School of Music. Assigned use of computer music studios.

445 Teaching Instrumental Music
Spring. 3(3-1) P:M: (MUS 177) R: Open only to majors in the School of Music. Develop skills necessary for teaching elementary and secondary band. Role of the instrumental music educator purpose of instrumental music in the schools. Clinical experiences in schools required.

448 Advanced Keyboard Methods and Literature I
Fall. 2(2-0) P:NM: (MUS 347) R: Open only to majors in the School of Music. Advanced piano literature for private lessons and classrooms.

449 Advanced Keyboard Methods and Literature II
Spring. 2(2-0) P:M: (MUS 448) R: Open only to majors in the School of Music. Advanced piano literature for private lessons and classrooms.

450 Teaching Stringed Instruments
Fall. 2(3-2) P:M: (MUS 177) R: Open only to seniors and graduate students in the School of Music. Develop skills and knowledge for teaching string and orchestra programs in schools. Pedagogy, music curriculum, materials and program administration. Clinical experiences in schools required.

453 Methods and Materials of Elementary Music
Fall. Spring. 2(2-0) R: Not open to freshmen or sophomores. Open only to students in the School of Music with a teacher certification option and to students with a Music teaching minor. How children learn music from early childhood to grade three.

455 Teaching Instrumental Music
Spring. 3(3-1) P:M: (MUS 177) R: Open only to seniors and graduate students in the School of Music with a teacher certification option and to seniors and graduate students with a Music teaching minor. Techniques for teaching general music to students in grades K-6. Topics include curriculum, pedagogy, materials, and program administration. Clinical experiences in schools required.

457 Teaching Instrumental Music in the Elementary School
Fall. 3(2-0) P:M: (MUS 339) R: Open only to seniors and graduate students in the School of Music and to seniors and graduate students with a Music teaching minor. Techniques for developing instrumental music programs in grades 4-6. Topics include curriculum, pedagogy, materials, and program administration. Clinical experiences in schools required.

458 Teaching Instrumental Music in the Secondary School
Spring. 3(2-0) P:M: (MUS 339) R: Open only to seniors and graduate students in the School of Music and to seniors and graduate students with a Music teaching minor. Techniques for developing instrumental music programs in grades 7-12. Topics include curriculum, pedagogy, materials, and program administration. Clinical experiences in schools required.

460 Computers in School Music
Fall. 2(2-1) R: Not open to freshmen or sophomores. Open only to students in the School of Music with a teacher certification option and to students with a Music teaching minor. Technics and principles of computer-assisted music instruction in school programs. Emphasis on appropriate software and hardware for teaching and management.

461 Marching Band Methods
Spring. 2(2-0) R: Not open to freshmen or sophomores. Open only to students in the School of Music with a teacher certification option and to students with a Music teaching minor. Administration of school marching bands. Technical and philosophical aspects.

462 Suzuki Methods and Materials
Spring. 2(1-2) R: Open only to majors in the School of Music. Beginning levels of Suzuki violin pedagogy.

465 Music in Early Childhood
Fall. Spring. 2(2-0) P:M: (MUS 260) R: Not open to freshmen or sophomores. Open only to students in the School of Music with a teacher certification option and to students with a Music teaching minor. Music learning activities and teaching strategies for children ages three to six.

467 Teaching General Music in the Elementary School
Fall. 3(2-0) P:M: (MUS 339) R: Open only to seniors and graduate students in the School of Music with a teacher certification option and to seniors and graduate students with a Music teaching minor. Techniques for teaching general music to students in grades K-6. Topics include curriculum, pedagogy, materials, and program administration. Clinical experience in schools required.
468 Teaching Choral Music  
Spring. 3(2-2) P:M: (MUS 177)  
Techniques for developing choral music programs. Curriculum, pedagogy, materials, and program administration. Clinical experiences in schools required.

469 Teaching Secondary Classroom Music  
Fall. 3(3-1) P:M: (MUS 177)  
Techniques for teaching general music and elective music classes in middle schools and high schools. Clinical experiences in schools required.

470 Music Therapy: Mental and Behavioral Disorders  
Fall. 3(3-1) P:M: (MUS 371 or concurrently and PSY 280 or concurrently) R: Open only to Music Therapy majors. Use of music therapy to treat clients with mental and behavioral disabilities. Clinical practicum required.

471 Music Therapy: Physical and Developmental Disabilities  
Spring. 3(3-1) P:M: (MUS 470 or concurrently and CEP 240 or concurrently) R: Open only to Music Therapy majors. Use of music therapy to treat clients with physical and developmental disabilities. Clinical practicum required.

474 Aesthetic Theory and Modernism  
Fall. 4(4-0) Interdepartmental with Philosophy; English; History of Art; Linguistics and Languages; Romance Languages. Administered by Department of Philosophy. R: Not open to freshmen or sophomores. Problems, assumptions, and arguments of modern aesthetic theory examined in the context of debates over modernity and modernist artistic practice.

476 Psychology of Music: Foundations  
Fall. 3(3-0) R: Not open to freshmen or sophomores. Psychoacoustics and neuropsychological processing of music. Affective response to music and musical preference. Function of music in society. Nature of musical talent.

477 Psychology of Music: Research Methodology and Application  
Spring. 2(2-0) P:M: (MUS 476)  
Research projects and proposal writing. Application of elementary statistical concepts in evaluating responses to music.

480 Counterpoint  
Fall, Spring. 2(2-0) P:M: (MUS 381) R: Open only to majors in the School of Music. Creative and analytical work with two- and three-part counterpoint in the style of J.S. Bach.

483 Composition  
Fall. 2 credits. A student may earn a maximum of 12 credits in all enrollments for this course. P:M: (MUS 281) R: Open only to majors in the School of Music. Private instruction in music composition.

484 Instrumentation and Basic Orchestration  
Fall. 2(2-1) P:M: (MUS 380) R: Open only to majors in the School of Music. Four families of orchestral instruments: strings, woodwinds, brass, and percussion. Acoustics, notation, range, articulation, dynamics, technique, and timbre for individual instruments and orchestral sections.

489 Piano Performance  
Fall, Spring. 1(1-0) A student may earn a maximum of 10 credits in all enrollments for this course. R: Open only to graduate students in School of Music. Critique and analysis of individual performances of piano literature in a group setting.

490 Independent Study  
Fall, Spring. 1 to 3 credits. A student may earn a maximum of 9 credits in all enrollments for this course. R: Approval of school. Special projects arranged by an individual student and a faculty member in areas supplementing regular course offerings.

491 Special Topics in Music  
Fall, Spring. 1 to 4 credits. A student may earn a maximum of 10 credits in all enrollments for this course. R: Approval of school. Special topics supplementing regular course offerings proposed by faculty for group study.

493 Music Therapy: Clinical Practicum  
Fall, Summer. 1 credit. Fall: Offered at various a. Spring: sites around the U.S. P:M: (MUS 471) R: Open only to Music Therapy majors. Six months of internship in an approved music therapy clinical program at an accredited treatment center.

495 Student Teaching in Music  
Fall, Spring. 9 credits. Interdepartmental with Teacher Education. R: Open only to seniors in the Bachelor of Music Education major. Supervised music teaching experience in schools. On-campus seminar required.

830 Research Methods and Materials in Music  
Fall. 1 to 3 credits. A student may earn a maximum of 3 credits in all enrollments for this course. R: Approval of school. Organization, presentation, and documentation of research. Encyclopedias, indices, databases, and other aids.

832 Seminar in Ethnomusicology  
Fall, Spring. 3(3-0) Fall: odd years. Historical development of ethnomusicology. Theories and techniques of the discipline.

833 Fieldwork in Ethnomusicology  
Fall, Spring. 2(2-0) Fall: even years. Fieldwork methods and experience. Theoretical issues, Research strategies and techniques.

835 Medieval Music  
Fall. 3(3-0) P:NM: (MSU 830) R: Open only to graduate students in School of Music. European music to 1400. Emphasis on polyphonic music, with some attention to Gregorian chant and secular monophony.

836 Renaissance Music  
Spring. 3(3-0) R: Open only to graduate students in School of Music. European music, sacred and secular, from 1400 to 1600.

837 17th-Century Music  
Fall. 3(3-0) P:NM: (MUS 830) R: Open only to graduate students in School of Music. Instrumental and vocal music in Europe from 1600 to 1700. Development of genres and of national styles.

843 Seminar in Piano Pedagogy  
Fall, Spring. 2(2-0) A student may earn a maximum of 8 credits in all enrollments for this course. P:M: (MUS 346 and MUS 347 and MUS 448) RB: Bachelor of Music in Piano Performance, Piano Pedagogy or Music Education R: Open only to graduate students in Music. Must satisfactorily pass an audition and interview as required by piano department. Advanced piano pedagogy methods and materials for teaching piano at all levels. Conceptualizing and implementing a practical teaching project. Topics will vary.

844 Secondary or Specialist Emphasis: Piano  
Fall, Spring. 1(1-0) A student may earn a maximum of 8 credits in all enrollments for this course. R: Open only to graduate students in School of Music. Approval of school. Audition required. Not open to students with an emphasis in piano. Instruction in piano for students whose principal instrument is not piano.

845 Secondary or Specialist Emphasis: Voice  
Fall, Spring. 1(1-0) A student may earn a maximum of 8 credits in all enrollments for this course. R: Open only to graduate students in School of Music. Not open to students with a emphasis in voice. Approval of school. Audition required. Instruction in vocal techniques for students whose principal emphasis is not voice.

846 Secondary or Specialist Emphasis: String  
Fall, Spring. 1(1-0) A student may earn a maximum of 8 credits in all enrollments for this course. R: Open only to graduate students in School of Music. Approval of school. Audition required. Instruction in violin, viola, cello, or double bass.

847 Secondary or Specialist Emphasis: Brass  
Fall, Spring. 1(1-0) A student may earn a maximum of 8 credits in all enrollments for this course. R: Open only to graduate students in School of Music. Approval of school. Audition required. Instruction in trumpet, trombone, euphonium, or tuba.

848 Secondary or Specialist Emphasis: Woodwind  
Fall, Spring. 1(1-0) A student may earn a maximum of 8 credits in all enrollments for this course. R: Open only to graduate students in School of Music. Approval of school. Audition required. Instruction in flute, clarinet, oboe, bassoon, or saxophone.

849 Piano Performance  
Fall, Spring. 1(1-0) A student may earn a maximum of 10 credits in all enrollments for this course. R: Open only to graduate students in School of Music. Approval of school. Critique and analysis of individual performances of piano literature in a group setting.
Private instruction in oboe.

Private instruction in flute.

Private instruction in double bass.

Private instruction in clarinet.

Private instruction in saxophone.

Private instruction in bassoon.

Private instruction in trombone.

Private instruction in euphonium.

Private instruction in tuba.

Private instruction in percussion.

Private instruction in piano.

Private instruction in voice.

Private instruction in violin.

Private instruction in percussion.

Private instruction in tuba.

Private instruction in euphonium.

Private instruction in horn.

Private instruction in bassoon.

Private instruction in saxophone.

Private instruction in bassoon.

Private instruction in voice.

Private instruction in oboe.

Private instruction in clarinet.

Private instruction in saxophone.

Private instruction in bassoon.

Private instruction in voice.

Private instruction in oboe.
864 Research in Music Education and Music Therapy
Fall. 3(3-0) R: Open only to graduate students in College of Arts and Letters and in College of Education.
Methods of research in music education and music therapy. Conceptualizing and implementing a study. Systematic information retrieval. Proposal writing.

865 Advanced Methods and Materials in Secondary Music Education
Fall, Spring. 1 to 3 credits. A student may earn a maximum of 6 credits in all enrollments for this course.
Current methods and materials for teaching music in secondary schools. Topics vary.

870 Contrapuntal Techniques I
Fall of odd years. 3(3-0) R: Open only to graduate students in School of Music.
Techniques of voice-leading through imitative counterpoint. Compositional exercises modeled after sacred vocal polyphony of the sixteenth century, principally Palestrina and Victoria.

871 Contrapuntal Techniques II
Spring of even years. 3(3-0) P:NM: (MUS 870) R: Open only to graduate students in School of Music.
Compositional exercises modeled after instrumental polyphony of the eighteenth century, principally J.S. Bach. Influence of fugal technique in the nineteenth and twentieth centuries.

872 Tonal Forms
Fall. 2(2-0) R: Open only to graduate students in School of Music.
Music from the period of common practice and its relationship to music composition. Interplay of melody, harmony, rhythm, and timbre in various structural units.

873 Early 20th Century Techniques
Spring. 2(2-0) R: Open only to graduate students in School of Music.
Melodic, harmonic, rhythmic, and textural devices employed in early twentieth century music.

874 Schenkerian Analysis
Fall. 2(2-0) R: Open only to graduate students in School of Music.
Thought, works, and influences of Heinrich Schenker. Techniques of linear analysis emphasizing the role of long-range voice-leading musical structure.

875 Analysis of Musical Scores
Summer. 3(3-0) R: Open only to graduate students in School of Music.
Analysis of choral, orchestral, and band music as a means of enhancing interpretation and performance.

876 History of Music Theory
Fall of odd years. 3(3-0) P:NM: (MUS 830) R: Open only to graduate students in School of Music.
Principal western theories of music from Pythagoras to the present. Ideas contributing to the development of modern musical thought and their place in western intellectual history.

877 Scoring for Orchestra and Band
Fall. 2(2-1) R: Open only to graduate students in the School of Music.
Theory and practice in scoring for orchestra and band.

878 Advanced Scoring for Orchestra and Band
Spring. 2(2-1) P:NM: (MUS 877) R: Open only to graduate students in the School of Music.
Orchestra scoring from Bach to Boulez and band scoring from Sousa to Maslanka. Advanced scoring projects.

879 Rhythm in Music
Fall. 3(3-0) R: Open only to graduate students in the School of Music.
Theory and analysis of large-scale rhythm and motion, including issues of temporal relationships, harmonic rhythm, phrase formation, and formal structure.

880 Composition
Fall, Spring. 2(2-0) R: Open only to graduate students in School of Music.
Advanced guided projects in creative writing of music.

881 Seminar in Composition
Fall, Spring. 2(2-0) R: Open only to graduate students in School of Music.
Study of contemporary music, with emphasis on compositional procedures.

882 Composition with Computers
Fall. 2(2-1) R: Open only to graduate students in School of Music.
Current applications of microcomputers in musical composition.

883 Advanced Computer Music Projects
Spring. 1 to 4 credits. A student may earn a maximum of 12 credits in all enrollments for this course. P:NM: (MUS 882 or MUS 441) R: Open only to graduate students in School of Music and in Computer Science.
Techniques and principles of composition and research with computers. Use of computer hardware and software.

890 Independent Study
Fall, Spring, Summer. 1 to 10 credits. A student may earn a maximum of 20 credits in all enrollments for this course. R: Approval of school.
Special projects, directed reading, and research arranged by an individual graduate student and a faculty member in areas supplementing regular course offerings.

891 Special Topics
Fall, Spring, Summer. 1 to 10 credits. A student may earn a maximum of 25 credits in all enrollments for this course. R: Approval of school.
Special topics supplementing regular course offerings proposed by faculty on a group study basis for graduate students.

892A Seminar in Music History
Fall, Spring. 1 to 6 credits. A student may earn a maximum of 12 credits in all enrollments for this course. R: Open only to graduate students in School of Music. Approval of school.
Various areas of music history, such as major composers, development of genres, criticism, or cultural context.

906 Recital Performance
Fall, Spring, Summer. 1 to 4 credits. A student may earn a maximum of 10 credits in all enrollments for this course. R: Open only to master's students in Music Performance. Approval of school.
Directed experience in recital performance in partial fulfillment of Plan B master's degree requirements.

907 Concert Conducting
Fall, Spring, Summer. 1 to 4 credits. A student may earn a maximum of 10 credits in all enrollments for this course. R: Open only to master's students in Music Performance. Approval of school.
Directed experience in concert conducting in partial fulfillment of Plan B master's degree requirements.

908 Master's Research
Fall, Spring, Summer. 1 to 10 credits. A student may earn a maximum of 20 credits in all enrollments for this course. R: Open only to master's students in School of Music. Approval of school.
Directed research in support of Plan B master's degree requirements.

909 Master's Thesis Research
Fall, Spring, Summer. 1 to 10 credits. A student may earn a maximum of 20 credits in all enrollments for this course. R: Open only to master's students in School of Music. Approval of school.
Directed research in partial fulfillment of Plan A master's degree requirements.

935 Seminar in 18th Century Music
Spring of odd years. 3(3-0) R: Open only to graduate students in School of Music.
Research on topics in eighteenth-century music.

936 Seminar in 19th-Century Music
Fall of even years. 3(3-0) R: Open only to doctoral students in School of Music.
Selected topics in 19th-century music.

937 Seminar in 20th-Century Music
Spring of even years. 3(3-0) R: Open only to doctoral students in School of Music.
Selected topics in 20th-century music.

950A Piano
Fall. 1 to 3 credits. A student may earn a maximum of 24 credits in all enrollments for this course. R: Open only to doctoral students in Music Performance with an emphasis in piano. Approval of school. Audition required.

951 Voice
Fall. 1 to 3 credits. A student may earn a maximum of 24 credits in all enrollments for this course. R: Open only to doctoral students in Music Performance with an emphasis in voice. Approval of school. Audition required.

952A Violin
Fall. 1 to 3 credits. A student may earn a maximum of 24 credits in all enrollments for this course. R: Open only to doctoral students in Music Performance with an emphasis in violin. Approval of school. Audition required.

Private instruction in piano.

Private instruction in voice.

Private instruction in violin.
Private instruction in trumpet.

Private instruction in bassoon.

Private instruction in clarinet.

Private instruction in double bass.

Private instruction in violin.

Private instruction in viola.

Private instruction in oboe.

Private instruction in double bass.

Private instruction in flute.

Private instruction in oboe.

Private instruction in clarinet.

Private instruction in saxophone.

Private instruction in euphonium.

Private instruction in tuba.

Private instruction in tympani.

Private instruction in percussion.

Private instruction in timpani.

Private instruction in percussion.

Private instruction in bassoon.

Private instruction in trumpet.

Private instruction in horn.

Private instruction in trombone.

Private instruction in euphonium.

Private instruction in tuba.

Private instruction in percussion.

Private instruction in oboe.

Private instruction in clarinet.

Private instruction in tuba.

Private instruction in percussion.

Private instruction in clarinet.

Private instruction in timpani.

Private instruction in tuba.

Private instruction in percussion.

Private instruction in euphonium.

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Private instruction in euphonium.
NATURAL SCIENCE  NSC

College of Natural Science

101  Preview of Science
Fall, 1(1-0) Interdepartmental with Agriculture and Natural Resources; Engineering; Social Science. R: Approval of college. Overview of natural sciences. Transitional problems. Communications and computer skills. Problem solving skills. Diversity and ethics problems in science. Science and society.

102  Preprofessional Freshman Seminar
Fall, Spring, 1(1-0) Overview of human health care professions with emphasis on academic and nonacademic undergraduate preparation, campus resources, communication and computer skills, and collaborative learning.

192  Environmental Issues Seminar
Fall, Spring, 1(1-0) A student may earn a maximum of 4 credits in all enrollments for this course. Interdepartmental with Agriculture and Natural Resources or College of Engineering or College of Natural Science or College of Communication Arts and Sciences or College of Social Science. Approval of college. Environmental issues and problems explored from a variety of perspectives, including legal, scientific, historical, political, socio-economic, and technical points of view.

201  Science Problem Solving Seminar I
Fall, 2(2-0) P:M: (MTH 116 or concurrently or MTH 132 or concurrently) R: Approval of college. Problem solving principles and strategies used in the disciplines of science and mathematics. Activities reflecting the types of problems encountered.

202  Science Problem Solving Seminar II
Spring, 2(2-0) P.M.: (NSC 201) R: Approval of college. Continuation of NSC 201.

448  Ecology, Law and Economics
Fall, Spring, 4(2-6) R: Open only to seniors in the Biological Science-Interdepartmental or Earth Science-Interdepartmental or General Science-Interdepartmental or Physical Science-Interdepartmental major or their associated LBS majors. Laboratory equipment, supplies, demonstrations, exercises, and safety. Care of live organisms. Disposal of biological and chemical wastes. Field trips required.

490  Special Problems
Fall, Spring, Summer, 1 to 4 credits. A student may earn a maximum of 6 credits in all enrollments for this course. R: Approval of department. Faculty directed individualized study of an interdisciplinary problem.

491  Selected Topics
Fall, Spring, Summer, 1 to 3 credits. A student may earn a maximum of 6 credits in all enrollments for this course. R: Approval of department. Selected interdisciplinary topics not normally covered in other courses.

495  Capstone in Human Biology (W)
Fall, Spring, 2(2-0) P.M: Completion of Tier I writing requirement. R: Open only to seniors in the Human Biology major. Integration of human biology disciplines with a focus on health and disease.