

Microbiology and Molecular Genetics—MMG

463 Medical Microbiology
Fall. 3(3-0) P:M: (MMG 205 or MMG 301)
RB: (MT 432 or MMG 451) R: Open only to juniors or seniors in the Department of Microbiology and Molecular Genetics or Clinical Laboratory Sciences or Medical Technology major or LBS Environmental Biology/Microbiology or Medical Technology or Microbiology coordinate major. SA: MPH 463

Properties of pathogenic bacteria and viruses and their mechanisms of pathogenicity.

464 Diagnostic Microbiology Laboratory
Fall. 2(0-4) P:M: (MMG 463 or concurrently)
R: Open only to juniors or seniors in the Department of Microbiology and Molecular Genetics or Clinical Laboratory Sciences or Medical Technology major or LBS Environmental Biology/Microbiology or Medical Technology or Clinical Laboratory Science or Microbiology coordinate major. SA: MPH 464, MIC 464

Diagnostic procedures for the identification of pathogenic microbes.

490 Special Problems in Microbiology
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. SA: MPH 490

Library research or tutorial instruction in advanced laboratory techniques.

491 Current Topics in Microbiology
Spring. 3(4-0) R: Open only to seniors in the Department of Microbiology and Molecular Genetics or LBS Environmental Biology/Microbiology or Microbiology coordinate major. SA: MPH 491

Capstone experience for microbiology majors. Presentation and discussion of journal articles. Writing of position papers. Topics such as microbial physiology, ecology, genetics, molecular biology, virology, immunology, or pathogenesis.

492 Undergraduate Research Seminar
Spring. 1(1-0) P:M: (MMG 499 or MMG 499H) R: Open only to seniors in the Department of Microbiology and Molecular Genetics or LBS Environmental Biology/Microbiology or Microbiology coordinate major. SA: MPH 492

Presentation and group discussion of undergraduate research results.

499 Undergraduate Research
Fall, Spring, Summer. 1 to 3 credits. A student may earn a maximum of 6 credits in all enrollments for this course. R: Open only to students in the Department of Microbiology and Molecular Genetics or LBS Environmental Biology/Microbiology or Microbiology coordinate major. SA: MPH 499

Participation in a laboratory research project.

499H Honors Research
Fall, Spring, Summer. 1 to 3 credits. A student may earn a maximum of 6 credits in all enrollments for this course. R: Open only to Honors College students in the Microbiology or Environmental Biology/Microbiology major or LBS Microbiology coordinate major or LBS Environmental Biology/Microbiology coordinate major. SA: MPH 499H

Research project with thesis and oral report. A portion of Microbiology capstone experience.

MILITARY SCIENCE MS

Department of Military Science Office of the Provost

101A Leadership: The Military Profession
Fall. 1(1-1) SA: MS 101 Not open to students with credit in MS 101B.

Introduction to military leadership and fundamental concepts of leadership. Application of leadership doctrine. The role of the U.S. Army, Army Reserves, and National Guard. Leadership laboratory introduces basic military skills.

101B Leadership: The Military Profession
Spring. 1(1-2) SA: MS 101 Not open to students with credit in MS 101A.

Introduction to military leadership and fundamental concepts of leadership. Application of leadership doctrine. The role of the U.S. Army, Army Reserves, and National Guard. Leadership laboratory introduces basic military skills.

102A Leadership: Wilderness Survival
Fall. 1(1-1) SA: MS 102 Not open to students with credit in MS 102B.

Introduction to wilderness survival including the psychology of survival, survival planning, and survival kits; shelters; water procurement; fire craft; field expedient weapons, tools, and equipment; desert, tropical, and cold weather survival; basic survival medicine; and food procurement.

102B Leadership: Wilderness Survival
Spring. 1(1-2) SA: MS 102 Not open to students with credit in MS 102A.

Introduction to wilderness survival including the psychology of survival, survival planning, and survival kits; shelters; water procurement; fire craft; field expedient weapons, tools, and equipment; desert, tropical, and cold weather survival; basic survival medicine; and food procurement.

201A Leadership: The Military Leader
Fall. 1(1-1) SA: MS 201 Not open to students with credit in MS 201B.

Introduction to effective leadership. Communications. Value of the United States Army. Responsibilities of military officers and professionalism. Laboratory includes tactics, marksmanship training, and military skills.

201B Leadership: The Military Leader
Spring. 1(1-2) SA: MS 201 Not open to students with credit in MS 201A.

Introduction to effective leadership. Communications. Value of the United States Army. Responsibilities of military officers and professionalism. Laboratory includes tactics, marksmanship training, and military skills.

202A Introduction to Land Navigation and Tactics
Fall. 1(1-1) SA: MS 202 Not open to students with credit in MS 202B.

Introduction to land navigation using military maps and lensatic compass. Planning routes using azimuth and distance. Determining location by terrain association and other methods. Introduction to infantry defensive and reconnaissance operations.

202B Introduction to Land Navigation and Tactics
Spring. 1(1-2) Not open to students with credit in MS 202A.

Introduction to land navigation using military maps and lensatic compass. Planning routes using azimuth and distance. Determining location by terrain association and other methods. Introduction to infantry defensive and reconnaissance operations.

301 Leading Small Organizations
Fall. 3(3-2) RB: (MS 101A or MS 101B) and (MS 102A or concurrently or MS 102B or concurrently) and (MS 201A or concurrently or MS 201B or concurrently) and (MS 202A or concurrently or MS 202B or concurrently) Completion of basic camp or boot camp. Must meet U.S. Army contracting requirements.

Skills required for military officers: communication, team building, delegating tasks, supervision, ethics, and physical fitness. Leading small units. Participation in physical fitness is required.

302 Leadership: Small Unit Tactics
Spring. 3(3-2) RB: (MS 301)

Basic military tactics and the military communication/orders process focusing on small units. Application of lessons learned from leadership case studies to practical exercises of leadership. Delegation of tasks and supervision of subordinates in a stressful environment.

401 Leadership: Training Management, Counseling, and Unit Management
Fall. 3(3-2) RB: (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) RB: (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 MUS

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: Open only to students in the School of Music. Audition required.

Rehearsal and performance of a broad range of chamber music literature.

- 113 Philharmonic Orchestra**
Fall, Spring. 1(0-5) 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(0-4) A student may earn a maximum of 10 credits in all enrollments for this course. R: Audition required.
Rehearsal and performance of a 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 conductors 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.
Rehearsal and performance of representative literature for mixed choir with emphasis on vocal jazz and contemporary styles of choral music. No vocal jazz experience necessary.
- 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.
- 129 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) RB: (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:M: (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: Not open 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:M: (MUS 145) R: Not open 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: Not open to students in the School of Music.
Basic notation, transposition, 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.
- 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.
- 151J Voice: 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 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.

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- 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 8 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 8 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.
- 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.
- 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) P:M: (MUS 181) SA: MUS 260
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) R: Open only to students in the School of Music.
Conceptual and notational presentation of the basic components of musical structure.
- 181 Musicianship I**
Spring. 3(3-1) RB: (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)
Dictation, 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) RB: (MUS 182)
Dictation, singing melodies in major and minor keys. Simple modulation, chromatic alteration, error detection, rhythms, triads and components, part singing.
- 185 Freshman Jazz Studies: Listening and Assimilation**
Fall. 2(2-0)
Introduction to jazz. Listening and appreciating jazz. Jazz styles and history.
- 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 solfège 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) RB: (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.
- 241 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.
- 242 Advanced Class Instruction in Piano II**
Spring. 1(1-1) P:M: (MUS 241) 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.
French lyric diction. Rules of pronunciation. Performance of French art songs in class.
- 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(2-2) 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)
Dictation 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.
- 301 Advanced Jazz Musicianship I**
Fall. 2(2-0) P:M: (MUS 231) R: or audition.
Secondary dominants, borrowed chords and tritone substitutions. Transcriptions of recorded jazz solos.
- 302 Advanced Jazz Musicianship II**
Spring. 2(2-0) P:M: (MUS 301)
Pentatonic scale relationships within II-V-I progressions, Aleatoric approaches to improvisation, non-traditional chord progressions, transcription of recorded jazz solos.
- 303 Advanced Jazz Musicianship III**
Fall. 2(2-0) P:M: (MUS 302)
Continuation of Advanced Jazz Musicianship II.
- 304 Advanced Jazz Musicianship IV**
Spring. 2(2-0) P:M: (MUS 303) R: Open only to juniors or seniors in Music.
Continuation of Advanced Jazz Musicianship III.
- 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 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 Theory. 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.
- 340 Methods and Literature for Voice**
Fall. 3(3-0) RB: 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) RB: 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:M: (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.
- 348 Piano Accompanying**
Fall, Spring. 1(0-3) A student may earn a maximum of 8 credits in all enrollments for this course. RB: (MUS 149) R: Not open to freshmen. Open only to students in the School of Music.
Accompaniment of instrumental and vocal soloists.
- 349 Piano Performance**
Fall, Spring. 1(0-2) A student may earn a maximum of 10 credits in all enrollments for this course. R: Open only to students in the School of Music.
Critique and analysis of individual performances in a group setting.
- 350A Piano**
Fall, Spring. 2 to 3 credits. A student may earn a maximum of 18 credits in all enrollments for this course. P:M: (MUS 150A) R: Open only to majors in the School of Music. Approval of school.
Private instruction in piano.
- 350C Harp**
Fall, Spring. 1 to 3 credits. A student may earn a maximum of 18 credits in all enrollments for this course. P:M: (MUS 150C) R: Open only to majors in the School of Music. Approval of school.
Private instruction in harp.

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- 351 Voice**
Fall, Spring. 1 to 3 credits. A student may earn a maximum of 18 credits in all enrollments for this course. P:M: (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:M: (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:M: (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:M: (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:M: (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:M: (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:M: (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:M: (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:M: (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:M: (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:M: (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:M: (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:M: (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:M: (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:M: (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:M: (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) RB: (MUS 270) R: Open only to Music Therapy majors.
Observation and assessment of behavior. Principles of behavioral change. Design of treatment. Ethics and standards of clinical practice. Field trips required.
- 371 Music Therapy: Treatment Planning and Case Management**
Spring. 3(3-1) P:M: (MUS 370) R: Open only to Music Therapy majors.
Supervised clinical practice in music therapy. Goals and objectives of treatment. Design and evaluation of treatment programs. Field trips required.
- 380 Musical Styles and Forms**
Spring. 3(3-0) P:M: (MUS 381) 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 (W)**
Fall. 3(3-1) P:M: (MUS 281) and completion of Tier I writing requirement.
Western art music and jazz. Stylistic and formal analysis of representative compositions and jazz improvisations. Post-tonal theory. Jazz nomenclature and harmonic practice.
- 400 Jazz Arranging and Composition I**
Fall. 2(2-0) P:M: (MUS 281)
Jazz instrumental writing focusing on voicing concepts for standard jazz chord progressions, melody, counter-melody, and standard forms. Beginning orchestration techniques emphasizing form.
- 401 Jazz Arranging and Composition II**
Spring. 2(2-0) P:M: (MUS 400)
Jazz instrumental writing focusing on orchestration and arranging concepts for large jazz ensembles. Voicing of chords within and across sections. Orchestration techniques which emphasize form.
- 410 Jazz History**
Fall. 2(2-0) P:M: (MUS 212)
Survey of jazz from its beginnings in African American aural traditions to the present.
- 413 Keyboard Literature to Mid-19th Century**
Fall of even years. 2(2-1) P:M: (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**
Spring 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 even 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 practice, 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.
- 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.
- 438 Jazz Pedagogy I**
Fall. 2(2-0) P:M: (MUS 281) R: Open only to juniors or seniors in Music.
Teaching theory and methodologies for jazz education in secondary schools.
- 439 Jazz Pedagogy II**
Spring. 2(2-0) P:M: (MUS 438)
Teaching theory and methodologies for jazz education in secondary schools.
- 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. P:M: (MUS 441)
Independent composition or research in computer music. Assigned use of computer music studios.
- 448 Advanced Keyboard Methods and Literature I**
Fall. 2(2-0) RB: (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) RB: (MUS 448) R: Open only to majors in the School of Music.
Advanced piano literature for private lessons and classrooms.
- 455 Teaching Instrumental Music**
Spring. 3(3-1) P:M: (MUS 177)
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.
- 456 Teaching Stringed Instruments**
Fall. 3(2-2) P:M: (MUS 177)
Develop skills and knowledge for teaching string and orchestra programs in schools. Pedagogy, musicianship, curriculum, materials and program administration. Clinical experiences in schools required.
- 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.
- 463 Methods and Materials of Elementary Music I**
Fall, Spring. 2(2-0) R: Not open to freshmen or sophomores. Not open to students in the School of Music.
How children learn music from early childhood to grade three.
- 465 Music in Early Childhood**
Fall, Spring. 2(2-0) P:M: (MUS 177) 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(2-2) P:M: (MUS 277) R: Open only to seniors or graduate students in the School of Music with a teacher certification option and to seniors or 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 neurophysiological 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, Spring. 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.
- 490 Independent Study**
Fall, Spring. 1 to 3 credits. A student may earn a maximum of 15 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 15 credits in all enrollments for this course. R: Approval of school.
Special topics supplementing regular course offerings proposed by faculty for group study.

Music—MUS

- 493 Music Therapy: Clinical Practicum**
Fall, Spring, 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.

NATURAL SCIENCE

College of Natural Science

- 101 Preview of Science**
Fall. 1 credit. 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.

- 150 Preview of Biomedical Research**
Spring. 1(1-0) Interdepartmental with Medical Technology. Administered by Medical Technology Program.

Exploration of biomedical research careers. Biomedical research in the United States: funding, safety, regulatory agencies, ethics, experimental design, trouble-shooting, and data interpretation.

- 192 Environmental Issues Seminar**
Fall, Spring. 1 credit. A student may earn a maximum of 4 credits in all enrollments for this course. Interdepartmental with Agriculture and Natural Resources; Engineering; Social Science; Communication Arts and Sciences. R: Open only to students in the College of 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 1825 or concurrently or 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.

- 203 Drew Laboratory Directed Studies**
Fall, Spring, Summer. 1 to 2 credits. A student may earn a maximum of 6 credits in all enrollments for this course. P:M: (NSC 202) R: Open only to Drew Laboratory students.

Using topics related to a faculty member's ongoing research, students explore the relationship between science and technology and social issues.

- 301 Science for Elementary Schools**
Fall, Spring. 3(3-0) RB: Completion of an ISB and ISBL or ISP and ISPL course. Completion of the majority of complementary studies coursework in science and math. R: Open only to students in the Elementary Teacher Education Program.

Topics in earth science, life science, and physical science explored through discussion, demonstrations, readings, presentations, and field trips.

- 390 Special Problems**
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.

Faculty directed individualized study of an interdisciplinary problem.

- 401 Science Laboratories for Secondary Schools (W)**
Fall. 4(2-6) R: Open only to seniors in the BA degree in Chemistry, or the BS degree in 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.

- 448 Ecology, Law and Economics**
Spring. 3(3-0) P:M: (EC 201)

Review and integrate principles of ecology, fundamentals of law, and principles of economics into a conceptual model that describes interrelations among the natural system, the economy, and the state. Analyze and assess the legal-economic natural resource and environmental policies in the context of the integrated model. Relate the ecology-law-economics model to emerging paradigms of sustainable development, ecological economics, industrial ecology, and the Natural Step.

- 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 or Lyman Briggs Human Biology major.

Integration of human biology disciplines with a focus on health and disease.

- 496 Directed Study in Human Biology**
Fall, Spring, Summer. 1 to 3 credits. P:M: Completion of Tier I writing requirement.
Directed studies in human biology.

- 497 Internship in Human Biology**
Fall, Spring, Summer. 1 to 3 credits. A student may earn a maximum of 6 credits in all enrollments for this course. P:M: Completion of Tier I writing requirement.
Practical experience applying human biology training outside the classroom setting.

- 498 Research in Human Biology**
Fall, Spring, Summer. 1 to 3 credits. A student may earn a maximum of 6 credits in all enrollments for this course. P:M: Completion of Tier I writing requirement.
Research in faculty laboratories

- 499 Research**
Fall, Spring, Summer. 1 to 4 credits. A student may earn a maximum of 6 credits in all enrollments for this course. R: Open only to juniors or seniors in the College of Natural Science with a teacher certification option.
Research in faculty laboratories. Oral and written presentations.

NURSING

NUR

College of Nursing

- 202 Introduction to Nursing Practice I**
Fall. 2(1-3) R: Open only to students in the College of Nursing except students in PreNursing and Registered Nurses.

Theoretical concepts of nursing necessary for professional practice. Assessment, interpersonal communication, documentation and decision-making.

- 204 Introduction to Nursing Practice II**
Spring. 4(2-6) P:M: (NUR 202 and PHM 350 or concurrently) C: PHM 350 concurrently.
Nursing practice concepts in simulated and clinical practice settings. Development of nursing practice psychomotor skills.

- 215 Core Competencies in Nursing I**
Fall, Spring. 1(1-0) R: Open only to students in the College of Nursing.
Assessment core nursing competencies applying natural, social and nursing science.

- 303 Concepts of Nursing Care of the Adult**
Fall, Spring. 4(4-0) P:M: (NUR 204 and NUR 341) C: NUR 304 concurrently.
Family centered nursing care for adults at various levels of health and illness. Prototype health states with emphasis on associated nursing diagnosis and professional standards of care.

- 304 Practicum in Nursing Care of the Adult**
Fall, Spring. 4(0-12) P:M: (NUR 204 and NUR 341) C: NUR 303 concurrently.
Nursing care of the adult client with an emphasis on health promotion, disease prevention, care in acute and chronic illness, and rehabilitation.

- 305 Concepts of Nursing Care of the Childbearing Family**
Fall, Spring. 2(2-0) P:M: (NUR 204 and NUR 341) C: NUR 306 concurrently.
Concepts of holistic nursing care with culturally diverse childbearing families during the prenatal, intrapartum, and postpartum periods. Concepts of health promotion and risk factors in client care situations.