Descriptions — Military Science of Courses

302. Military Leadership III Winter. 3(2-3) M S 301 or approval of department. Application of the theories and models of the behavioral sciences to leadership as it functions in a military environment. Case studies from military history. Lab emphasizes practical leadership applications.

303. Small Unit Tactics (M S 325.) Spring. 3(2-3) M S 302 or approval of department. Offensive and defensive military tactics. Incorporates practical exercises which allow cadets to view the modern battlefield through the eyes of the infantry platoon leader. Lab emphasizes tactical employment of the infantry squad and platoon.

401. Training Management and Unit Administration (M S 435.) Fall. 3(2-2) M S 303 or approval of department. The Army training management system and the leader’s role as a trainer. Operations and administration in military units to provide effective personnel management and logistic support. Oral and written military communication. Lab includes practical experience in unit administration.


403. Military Law, Ethics, and Professionalism (M S 447.) Spring. 3(2-2) M S 402 or approval of department. Military legal system and the responsibilities of leaders in the application of military justice. Examination of fundamental values and principles of conduct in the profession of arms. Lab includes practical exercises in professional development.

499. Independent Study in Military Science Fall, Winter, Spring, Summer. 1 to 3 credits. May reenroll for a maximum of 6 credits. Approval of department and Juniors. Individual research and study in an area related to military science as approved and directed by the Department of Military Science.

118. Band

A. Marching Band Fall, Winter, Spring, Summer. 1 credit. May reenroll for credit. Membership determined by audition. The Marching Band participates at football games.

B. Spartan Brass Winter. 1 credit. May reenroll for credit. Membership determined by audition. The Spartan Brass participates at basketball games.

C. Concert Band Fall, Winter, Spring. 1 credit. May reenroll for credit. Membership determined by audition. Public appearances are scheduled on campus each term.

D. Symphonic Band Fall, Winter, Spring, Summer. 1 credit. May reenroll for credit. Membership determined by audition. A high level of achievement in performing ability is required. Concerts are scheduled both on and off campus.

E. Wind Ensemble Fall, Winter, Spring, Summer. 1 credit. May reenroll for a maximum of 12 credits. Membership determined by audition. The highest level of performance is required. Full range of wind literature is performed. Public concerts are presented both on and off campus.

F. Repertory Band Fall, Winter, Spring, Summer. 1 credit. May reenroll for a maximum of 12 credits. Membership determined by audition. Public appearances are scheduled on campus each term.

133A. Symphony Orchestra Fall, Winter, Spring. 1(0-5) May reenroll for a maximum of 12 credits. Admission by audition. Preparation and performance of symphonic and operatic repertoire under direction of faculty and guest conductors of international reputation.

133B. Chamber Orchestra Fall, Winter, Spring. 1(0-5) May reenroll for a maximum of 12 credits. Membership determined by audition. A specialized ensemble of advanced performers concentrating on the repertoire of the classic composers, and modern repertoire for chamber orchestra. Performances and performances with faculty and guest artists.

135. Music in Elementary Education Fall, Winter, Spring. 4(3-3) Elementary education majors. Study of music learning strategies in the elementary schools. Music concepts and literature are developed through listening, performing, creating and analytical skills. Methods and materials are emphasized.


142. Class Instruments and Voice Winter, Spring. 1(0-2) MUS 141. Continuation of MUS 141.

143. Class Instruments and Voice Spring. 1(0-2) MUS 142. Continuation of MUS 142.

147. Elementary Piano Fall, Winter, Spring. 2(2-2) MUS 145 or approval of department. Elementary Education and Physical Education and Recreation majors. Beginning class piano instruction. Development of ability to play the three principal chords in all keys and to harmonize simple melodies using these chords. Transposition of simple melodies. Ability to play melodies and rhythms suitable for use in lower intermediate grades or in recreation work.

150. Keyboard Instruments and Harp Fall, Winter, Spring, Summer. 1 to 4 credits. May reenroll for a maximum of 24 credits. Audition required.

151. Voice Fall, Winter, Spring, Summer. 1 to 4 credits. May reenroll for a maximum of 24 credits. Audition required.

152. Stringed Instruments Fall, Winter, Spring, Summer. 1 to 4 credits. May reenroll for a maximum of 24 credits. Audition required.

153. Woodwind Instruments Fall, Winter, Spring, Summer. 1 to 4 credits. May reenroll for a maximum of 24 credits. Audition required.

154. Brass Instruments Fall, Winter, Spring, Summer. 1 to 4 credits. May reenroll for a maximum of 24 credits. Audition required.

155. Percussion Fall, Winter, Spring, Summer. 1 to 4 credits. May reenroll for a maximum of 24 credits. Audition required.

150. Basic Harmony Fall. 3(1-1) Fundamentals of basic musicianship: notation, clefs, scales, intervals, triads, meter, rhythm, and tonality. The analysis and writing of diatonic harmony in the style of the Bach 4-part chorale.

151. Basic Harmony Winter. 3(1-1) MUS 150. Continuation of MUS 150.

152. Basic Harmony Spring. 3(0-1) MUS 151. Continuation of MUS 151.

153. Aural Harmony Fall, Winter, Spring, Summer. 1(0-2) MUS 180 concurrently. The aural counterpart of basic harmony. Drill in harmonic, melodic and rhythmic dictation. Sight singing and keyboard harmony.

154. Aural Harmony Fall, Winter, Spring, Summer. 1(0-2) MUS 183; MUS 181 concurrently.

155. Aural Harmony Fall, Winter, Spring, Summer. 1(0-2) MUS 184; MUS 182 concurrently.

College of Arts and Letters

MUS

112. Chamber Music Fall, Winter, Spring, Summer. 1(0-6) May reenroll for a maximum of 18 credits. Approval of department. Performance of works for small ensembles.
199. Collegiate Choir
Fall, Winter, Spring. 1(0-3) May reenroll for a maximum of 12 credits. Membership determined by audition.
Three hours of choral rehearsals each week. Representative literature for mixed choir with emphasis on Renaissance, Baroque, Classical, and contemporary composers. Attendance at all rehearsals and performances obligatory.

200. State Singers
Fall, Winter, Spring. 1(0-4) May reenroll for a maximum of 12 credits. Membership determined by audition; ability to sight read.
Four hours of rehearsals a week. Attendance at all rehearsals and public performances obligatory.

201. Chorus
Fall, Winter, Spring, Summer. 1(0-2-1/2) May reenroll for a maximum of 12 credits.
Two and one-half hours of rehearsals per week. Attendance at all rehearsals and public concerts obligatory.

202. Glee Club, Men and Women
Fall, Winter, Spring. 1(0-3) May reenroll for a maximum of 12 credits. Membership determined by audition.
Three hours of rehearsals a week. Attendance at all rehearsals and public concerts obligatory.

203. University Chorale
Fall, Winter, Spring. 1(0-4) Audition.
Choral ensemble designed primarily for graduate and upper class undergraduate students. Representative literature for chamber chorale with emphasis on Renaissance, Baroque, and contemporary composers. Limited to 25 students.

204. Jazz Laboratory Band
Fall, Winter, Spring, Summer. 1(0-4) May reenroll for a maximum of 12 credits. Membership determined by audition.
Practical experience in playing music in the jazz idiom. Techniques of rehearsing a stage band. Playing of student arrangements; performance of jazz composition and arrangements in concert.

205. Jazz Combo Performance
Fall, Winter, Spring. 1(0-3) May reenroll for a maximum of 12 credits. Audition.
Small group playing experience for advanced performers and improvisors, with additional emphasis on the writing of arrangements for the group.

206. Honors Work
Fall, Winter, Spring. 1 to 16 credits. May reenroll for a maximum of 16 credits. Approval of department.

207. Basic Keyboard Tuning: Theory and Practice I
Fall, Summer. 2(2-0). MUS 182, MUS 185 or approval of department.
Basic acoustics. Historical development of musical scales and tuning systems. Classical and modern methods of keyboard tuning.

208. Basic Keyboard Tuning: Theory and Practice II
Winter. 2(1-3) MUS 208.
Continuation of MUS 208.

209. Basic Keyboard Tuning: Theory and Practice III
Spring. 2(1-3) MUS 209.
Continuation of MUS 209.

210. Introduction to Music Literature I (A)
Fall, 4(4-0) Student may not receive credit in both HUM 281 and MUS 211.
Comparative study of selected musical works in historical context with emphasis on their relationships to society in general and the other arts in particular. From Antiquity through the Renaissance.

211. Introduction to Music Literature II (A)
Winter. Summer of odd-numbered years. 4(4-0) Student may not receive credit in both HUM 263 and MUS 213.
Comparative study of selected musical works in historical context with emphasis on their relationships to society in general and the other arts in particular. From 1600 to 1800.

212. History of Music
Fall. 3(3-0) MUS 183.
Music from ancient Greece through the Baroque and Classical periods, concluding with the Romantic period. Greek theory and ethos; age of polyphony; development of polyphony; instruments peculiar to period under question.

213. History of Music Literature III (A)
Spring. Summer of even-numbered years. 4(4-0) Student may not receive credit in both HUM 263 and MUS 213.
Comparative study of selected musical works in historical context with emphasis on their relationships to society in general and the other arts in particular. From Beethoven to the present.

214. History of Music Literature IV (A)
Spring. 3(3-0) MUS 224.
Baroque and classical periods. Special attention to fugue, opera, oratorio, sonata, and symphony. Analysis of characteristic works.

215. History of Music Literature V (A)
Spring. 3(3-0) MUS 225.
Romantic period, impressionism, and contemporary trends. Continuation of development of form, melody, rhythm, and tonality. Final examination is comprehensive, covering MUS 224, MUS 225, and MUS 226.

216. Jazz Improvisation
Fall, Winter, Spring. 2(2-0) May reenroll for a maximum of 12 credits. MUS 182 or approval of department, audition for Winter and Spring terms.
Studies of the fundamentals necessary for the improvisation of knowledgeable jazz solos, including the areas of theory, styles, and transcriptions, as well as individual performances in class.

217. Advanced Class Piano
Fall, Winter, Spring. 1(0-2) MUS 143 or approval of department. For School Music Choral majors only.
Continuation of Class Piano MUS 143. Special emphasis given to developing practical skills at the piano for use in the public school classroom.

218. Advanced Class Piano
Winter. 1(0-2) MUS 241 or approval of department.
Continuation of MUS 241.
Descriptions — Music of Courses

285. Advanced Aural Harmony
Fall, Winter, Spring, Summer. 1(0-2)
MUS 284; MUS 282 concurrently.

308. Advanced Keyboard Tuning: Theory and Practice I
Fall. 3(2-2) MUS 310 or approval of department.

309. Advanced Keyboard Tuning: Theory and Practice II
Winter. 3(2-2) MUS 308.
Continuation of MUS 308.

310. Advanced Keyboard Tuning: Theory and Practice III
Spring. 3(2-2) MUS 309.
Continuation of MUS 309.

320. Music Workshop
Summer. 1 to 6 credits. May reenroll for a maximum of 12 credits. Approval of department.

330. Jazz in America
Spring. 3(0-0) Juniors or approval of department.
Jazz fundamentals, history, styles, and social significance.

334. Composing and Arranging for Jazz Ensembles
Fall, Winter, Spring. Summer. 3(3-2) May reenroll for a maximum of 9 credits. MUS 182, approval of department.
Techniques of composition and arranging in jazz idiom for various instrumental and/or vocal ensembles. Analytical studies of scores, recorded examples and published stage band materials. Writing for films and commercials.

335. Ensemble and Conducting
Fall. Spring. 3(1-4) MUS 185 or approval of department.
Principles of conducting correlated with application in ensemble of vocal and instrumental class instruction. Survey of vocal and instrumental ensemble literature suitable for school use. Individual conducting stressed.

336. Ensemble and Conducting
Winter. 3(1-4) MUS 335.
Continuation of MUS 335.

340. Class Instruments
Fall, Winter, Spring. Summer. 1(0-2) May reenroll for credit. Majors.
Study for one term of instruments not included among basic instruments. Not more than two may be studied at same time. Class instruction in viola, string bass, flute, oboe, bassoon, French horn, trombone, and percussion.

345. Teaching Music in the Elementary School I
Fall, Winter, Spring. Summer. 3(3-0) Approval of department.
Procedures and program of music instruction in the elementary school. Special emphasis on instructional problems of early elementary children.

347. Methods and Literature
Fall. Summer of odd-numbered years. 2(1-2) Six terms of study on applied instrument or voice, or approval of department. Methods of teaching voice or instruments. Study of appropriate teaching literature.

348. Methods and Literature
Winter. 2(1-2) Six terms of study on applied instrument or voice, or approval of department. Methods of teaching voice or instruments. Study of appropriate teaching literature.

349. Methods and Literature
Spring. Summer of even-numbered years. 2(1-2) Six terms of study on applied instrument or voice, or approval of department. Methods of teaching voice or instruments. Study of appropriate teaching literature.

350. Keyboard Instruments and Harp
Fall, Winter, Spring, Summer. 1 to 4 credits. May reenroll for a maximum of 24 credits. Six terms of MUS 150 or approval of department.
Continuation of MUS 150.

351. Voice
Fall, Winter, Spring. Summer. 1 to 4 credits. May reenroll for a maximum of 24 credits. Six terms of MUS 151 or approval of department.
Continuation of MUS 151.

352. Stringed Instruments
Fall, Winter, Spring. Summer. 1 to 4 credits. May reenroll for a maximum of 24 credits. Six terms of MUS 152 or approval of department.
Continuation of MUS 152.

353. Woodwind Instruments
Fall, Winter, Spring. Summer. 1 to 4 credits. May reenroll for a maximum of 24 credits. Six terms of MUS 153 or approval of department.
Continuation of MUS 153.

354. Brass Instruments
Fall, Winter, Spring. Summer. 1 to 4 credits. May reenroll for a maximum of 24 credits. Six terms of MUS 154 or approval of department.
Continuation of MUS 154.

355. Percussion
Fall, Winter, Spring. Summer. 1 to 4 credits. May reenroll for a maximum of 24 credits. Six terms of MUS 155 or approval of department.
Continuation of MUS 155.

356. Piano Sight Reading and Accompanying
Fall, Winter, Spring. 2(0-4) May reenroll for a maximum of 12 credits. Piano major or approval of department. Sight reading. Transposing. Under supervision accompanying instrumental and vocal soloists.

357. Piano Accompanying
Fall, Winter, Spring. 1(0-5) May reenroll for a maximum of 12 credits. Piano major or approval of instructor. Instruction in the art of accompaniment. Accompaniment of instrumental and vocal soloists.

358. Studies in Style and Form
Fall, Summer. 3(2-1) MUS 282.
Analysis and creative writing of technical and structural practices in music of various periods, with special emphasis on the twentieth century.

359. Studies in Style and Form
Winter, Summer. 2(2-1) MUS 282.
Analysis and creative writing of technical and structural practices in music of various periods, with special emphasis on the twentieth century.

360. Orchestration
Fall, Summer. 2(0-2) MUS 282.
Modern orchestral resources and scoring for various instrumental groups.

361. Orchestration
Winter. 2(2-0) MUS 283.
Continuation of MUS 283.

362. Orchestration
Spring, Summer. 2(2-0) MUS 284.
Continuation of MUS 284.

365. Counterpoint
Fall. 2(0-2) MUS 288.
Creative and analytical work with two-part counterpoint in the style of J. S. Bach.

366. Counterpoint
Winter. 2(2-0) MUS 286.
Creative and analytical work with three-part counterpoint in the style of J. S. Bach.

367. Counterpoint
Spring. 2(2-0) MUS 287.
Creative and analytical work with three and four-part counterpoint in the style of J. S. Bach.

400. Clinical Training in Music Therapy
Fall, Winter, Spring. Summer. 1 to 16 credits. Music therapy majors. Six months internship in an accredited neuropsychiatric hospital.

400H. Honors Work
Fall, Winter, Spring. Summer. 1 to 16 credits. May reenroll for a maximum of 16 credits. Approval of department.

403. Music Literature for Children
Fall, Winter, Spring. Summer. 3(3-0) MUS 346, or F E 330 or F E 335.
Appropriate musical materials for both performance and listening instruction in elementary and secondary schools. Particular emphasis on the music of culturally different peoples.

408. Piano Technology I
Fall. 3(2-2) MUS 310 or approval of department.
Methods of and practice in restoring the original tone of old pianos. Repairing or replacing all worn parts. Advanced concert tuning and tone regulation.

409. Piano Technology II
Winter. 3(2-2) MUS 408.
Continuation of MUS 408.
410. Piano Technology III
Spring, 3(2-2) MUS 409.
Continuation of MUS 408.

411. Opera
Winter of odd-numbered years. 2(1-2)
Six terms of voice or approval of department.
History of opera from 1600 to the present.

412. Oratorio
Fall of even-numbered years. Summer.
2(1-2) Six terms of voice or approval of department.
History of oratorio from 1600 to the present.

415A. Renaissance Music
Fall. 2 credits. MUS 182 or approval of department.

415B. 19th Century Music
Fall. 2 credits. MUS 182 or approval of department.

415C. Keyboard Music. Seventeenth through Eighteenth Centuries
Fall of even-numbered years. 2 credits.
MUS 182 or approval of department.

415E. German Lieder
Fall of odd-numbered years. 2 credits.
MUS 182 or approval of department.

415F. Organs Literature to 1700
Fall of odd-numbered years. 2 credits.
MUS 182 or approval of department.

416A. Baroque Music
Winter. 2 credits. MUS 182 or approval of department.

416B. Twentieth Century Music, European
Winter. 2 credits. MUS 182 or approval of department.

416C. Piano Music. Nineteenth Century
Winter of odd-numbered years. 2 credits.
MUS 182 or approval of department.

416D. French-Italian Art Song
Winter of even-numbered years. 2 credits.
MUS 182 or approval of department.

416F. Organ Literature From 1700 to 1900
Winter of even-numbered years. 2 credits.
MUS 182 or approval of department.

417A. Classical Music
Spring. 2 credits. MUS 182 or approval of department.

417B. American Music
Spring. 2 credits. MUS 182 or approval of department.

417C. Piano Music. Twentieth Century
Spring of odd-numbered years. 2 credits.
MUS 182 or approval of department.

417E. English-American Art Song
Spring of even-numbered years. 2 credits.
MUS 182 or approval of department.

417F. Organ Literature From 1900 to Present
Spring of even-numbered years. 2 credits.
MUS 182 or approval of department.

421. Music and Worship
Fall. 3(0) MUS 226 or approval of department.
Relationship of music and liturgy to Christian worship. Traditional liturgies and forms of service of the Christian churches with emphasis on function and place of music in worship.

430. Marching Band Methods and Materials
Winter. 2(2-0) Music Education Juniors or approval of instructor.
Basic marching techniques, show development, charting techniques, use of accessory groups, and appropriate materials for high school marching band.

435. Advanced Conducting
Spring. Summer. 2(2-0) Approval of department.
Development of conducting skills through rehearsal and analysis of literature appropriate for secondary school performing ensembles.

438. Brass and Woodwind Techniques
Spring. Summer. 2(2-2) Senior music majors.
Materials and contemporary pedagogical practices of group wind instrumental instruction.

440. Fundamentals of Electronic Music
Fall. Summer. 2(2-2) MUS 280.
Instruction in the use of the Electronic Music Studio.

441. Fundamentals of Electronic Music
Winter. 2(1-2) MUS 440.
Supervised use of the Electronic Music Studio.

442. Composition in Electronic Music
Spring. Summer. 2(2-2) MUS 441.
Assigned use of the Electronic Music Studio.

445. Recreational Music
Spring. Summer of odd-numbered years. 2(2-0) Majors.
Organization and administration of a community music program for adults, community choirs, orchestras, and band. Nonsymphonic instruments and their use in recreation. Summer camp and playground music. Recreational music as it is organized and used by industries.

448. Studio Teaching and Observation
Fall. 2(1-2) MUS 347, MUS 348, MUS 349.
Supervised studio teaching in classes and private lessons plus one-hour seminar each week.

463. Studio Teaching and Observation
Winter. 2(1-2) MUS 462.
Continuation of MUS 462.

464. Studio Teaching and Observation
Spring. 2(1-2) MUS 463.
Continuation of MUS 463.

470. Influence of Music on Behavior
Fall. 3(0) Nine credits of psychology or approval of department.
Study of the psychological and physiological effects of music; relation of music to health. Experimental studies, related philosophical and psychological theory will be reviewed.

471. Music Theory Techniques
Winter. 3(3-0) MUS 470.
Survey of procedures in music therapy; investigation of the rise of music as a tool in treatment of mentally ill, mentally and physically handicapped; introduction to hospital organization.

472. Music Theory Techniques
Spring. 3(3-0) MUS 471.
Continuation of MUS 471.

490. Independent Study: Special Topics
Fall, Winter, Spring. Summer. 1 to 5 credits.
May reenroll for a maximum of 6 credits. MUS 280 or approval of department.
Offered on an experimental basis according to instructor availability and student interest.

495. Opera Workshop
Fall, Winter, Spring. 1 to 2 credits.
May reenroll for a maximum of 6 credits. Approval of department. Practical experience in performance and production of operas and opera scenes.

497. Music Therapy Techniques
Winter, Spring. 1 to 5 credits.
May reenroll for a maximum of 12 credits. Approval of department.
Critical study in depth of music literature and performance practices within historical perspective.
Descriptions — Music Courses

803. Seminar in Music Education
Spring of odd-numbered years, Summer of even-numbered years. 3(3-0) Approval of department.
Consideration of the historical and philosophical basis for music instruction in education.

804. Seminar in Music Learning
Fall, Summer. 3(3-0) Approval of department.
Detailed analysis of the conditions of music learning for teachers of music including consideration of perception, maturation and concept formation.

805. Seminar in Music Curriculum
Winter, Summer. 3(3-0) Approval of department.
Development of goals, objectives, learning sequence and evaluative techniques for music learning at all instructional levels.

806. Seminar in Music Education Methodology
Spring of odd-numbered years; Summer of even-numbered years. 3(3-0) Approval of department.
Critical analysis of various methodologies in music teaching. Emphasis on the impact of methods and their applications to improvement of musical growth in performance, cognitive, and affective domains.

511. Introduction to Research in Music Education and Music Therapy
Fall, Summer. 3(3-0) Approval of department.
Conducting and critically interpreting research in music education and music therapy. Library skills, experimental research, and statistical analysis are emphasized.

812. Research Problems in Music
Fall, Winter, Spring, Summer. 1 to 3 credits. May reenroll for a maximum of 15 credits.

813. Chamber Music
Fall, Winter, Summer. 1(1-0) May reenroll for a maximum of 6 credits. Approval of department.
Performance of works for small ensembles.

815. Seminar in Chamber Music: 18th Century
Fall, 2(2-0) Approval of department.
Intensive study of selected chamber music works of the 18th century.

816. Seminar in Chamber Music: 19th Century
Winter, 2(2-0) Approval of department.
Intensive study of selected chamber music works of the 19th century.

817. Seminar in Chamber Music: 20th Century
Spring, 3(3-0) Approval of department.
Intensive study of selected chamber music works of the 20th century.

820. Music Workshop
Summer. 1 to 9 credits. May reenroll for a maximum of 9 credits. Approval of department.

821. Advanced Methods and Materials in Elementary Music
Fall, Winter, Spring, Summer. 3(3-0) May reenroll for a maximum of 6 credits if different topics are taken. Graduate students in Music Education or approval of department.
Teaching methods and materials for special topics in elementary music, such as music literature, Orff, Kodaly, and integrated arts.

824. Research Methods and Materials
Fall, Winter, Summer. 3 or 4 credits.
A critical examination of encyclopedias, indices, and other aids to research, and of the organization, presentation and documentation of research results.

830. Sixteenth Century Counterpoint
Fall of even-numbered years, Summer. 3(3-0) MUS 482 or approval of department.
Study and writing of counterpoint based upon the works of Orlando Lasso and Palestrina.

831. Sixteenth Century Counterpoint
Winter of odd-numbered years, Summer. 3(3-0) MUS 890.

832. Sixteenth Century Counterpoint
Spring of odd-numbered years, Summer. 3(3-0) MUS 831.
Continuation of MUS 831 to include a study of madrigal counterpoint.

834. Seminar in Composition
Fall, Winter, Spring, Summer. 2(2-0) May reenroll for a maximum of 24 credits. Approval of department.
Study of contemporary music with emphasis on compositional procedures.

835. Composition
Fall, Winter, Spring, Summer. 1 to 2 credits. May reenroll for a maximum of 24 credits. Approval of department.
Advanced composition.

836. Seminar in Conducting
Fall, Winter, Spring, Summer. 1 to 3 credits. May reenroll for a maximum of 18 credits. Approval of department.
Advanced conducting techniques applicable to choral and instrumental music of all periods.

843. Pedagogy of Theory
Fall, Summer. 3(3-0) Approval of department.
Methods, content, and textbooks for teaching basic theory.

844. Pedagogy of Theory
Winter, Summer. 3(3-0) Approval of department.
Continuation of MUS 843 with emphasis upon new instructional media, and upon methods and materials in ear training and sight singing.

845. Pedagogy of Theory
Spring, Summer. 3(3-0) Approval of department.
Methods, content, and textbooks for teaching counterpoint, form, and orchestration.

846. Minor Instrument Study: String
Fall, Winter, Spring, Summer. 1(1-0) May reenroll for a maximum of 12 credits.
Secondary instrument for students enrolled in string specialist program.

847. Minor Instrument Study: Brass
Fall, Winter, Spring, Summer. 1(1-0) May reenroll for a maximum of 12 credits.
Secondary instrument for students enrolled in brass specialist program.

848. Minor Instrument Study: Woodwinds
Fall, Winter, Spring, Summer. 1(1-0) May reenroll for a maximum of 12 credits.
Secondary instrument for students enrolled in woodwind specialist program.

849. Minor Instrument Study: Piano
Fall, Winter, Spring, Summer. 1(1-0) May reenroll for a maximum of 12 credits. Approval of department.
Study of piano for students in majors other than applied music.

850. Applied Music
Fall, Winter, Spring, Summer. 1 to 3 credits. May reenroll for a maximum of 27 credits.

851. Minor Instrument Study: Voice
Fall, Winter, Spring, Summer. 1(1-0) May reenroll for a maximum of 12 credits. Approval of department.
Study of vocal techniques for students in majors other than applied music.

852. Choral Technique and Materials
Spring, Summer. 3(3-0) May reenroll for a maximum of 9 credits. Completion of undergraduate program in music education.
Advanced course for further development of choral proficiency. Demonstrations of choral techniques, conducting by students, examination and evaluation of new materials.

856. Problems in Analysis
Fall, Winter, Spring, Summer. 4(4-0) May reenroll for a maximum of 8 credits. Approval of department.
An application of analytical procedures to school music repertoire.

870. Composition with Computers
Winter. 2(2-0) MUS 834 or approval of school.
Techniques and principles of composition with computers. Use of computer equipment and software.

871. Computer Music Projects
Spring. 1 to 3 credits. May reenroll for a maximum of 12 credits. MUS 870, MUS 864, or approval of school.
Music theory and composition projects using computer equipment and software.

880. Materials of Music
Fall, Winter, Summer. 1 to 4 credits. MUS 262.
Correlation of the areas of music theory as a basis for the study of 19th and 20th century music.

881. Materials of Music
Winter, Spring. 1 to 4 credits. MUS 880.
Continuation of MUS 880.

899. Master's Thesis Research
Fall, Winter, Spring, Summer. Variable credits. Approval of department.

A-156
903. Proseminar in Music Education
Fall, Winter, Spring, Summer. 3(3-0)
May reenroll for a maximum of 9 credits. Approval of department.
Problems of music education with study of and readings from aesthetics, philosophy, measurement evaluation, and teacher training.

915. Medieval Music
Fall. 3(3-0) Approval of department.
Investigation of various developments in European music to middle of fifteenth century. Some attention given to Gregorian Chant as well as to various types of secular Monody, but greater stress is laid on the forms and styles of Polyphonic music.

916. Renaissance Music
Winter. 3(3-0) Approval of department.
Investigation of developments in European music from 1450 to 1600, tracing developments in both sacred and secular music.

917. Music of the 17th Century
Spring. 3(3-0) Approval of department.
Instrumental and vocal music of Early Baroque period.

918. Music of the 18th Century
Fall. 3(3-0) Approval of department.
Intensive study of selected topics in 18th century music.

919. Music of the 19th Century
Winter. 3(3-0) Approval of department.
Intensive study of selected topics in 19th century music.

920. Music of the 20th Century
Spring. 3(3-0) Approval of department.
Intensive study of selected topics in 20th century music.

924. Seminar in Musicology
Fall, Winter, Spring. 3 credits. May reenroll for a maximum of 15 credits. Approval of department.

943. Survey of the History of Theory
Winter. 2(2-0) Approval of department.
Significant theoretical treatises from the 6th century B.C. to the early 20th century.

945. Administration of Music Education Programs
Spring of even-numbered years. 3(3-0)
Approval of department.

955. Current Tendencies in Music Education
Winter of even-numbered years. 3(3-0)
Approval of department.
Current trends and practices in public school music education.

956. Advanced Research Techniques in Music
Winter. 3(3-0) Approval of department.
Selected research techniques in music education with emphasis on experimental design and computerized data analysis.

960. Analytical Studies
Fall. 3(3-0) Approval of department.
Analysis of melody, harmony, rhythm, color, texture, counterpoint, and form in part-music from the thirteenth century through the late sixteenth/early seventeenth century.

961. Analytical Studies
Winter. 3(3-0) Approval of department.
Analysis of melody, harmony, rhythm, color, texture, counterpoint, and form in music of the late seventeenth through the eighteenth century.

962. Analytical Studies
Spring. 3(3-0) Approval of department.
Analysis of melody, harmony, rhythm, color, texture, counterpoint, and form in music of the nineteenth century.

963. Schenker Analysis
Fall. 2(2-0) Approval of department.
Analytical techniques and concepts of Robert Schenker. Examination of his sketches and writings, reading about him, and analysis of music using his techniques.

964. Set-Theory Analysis of Atonal Music
Spring. 2(2-0) Approval of department.
Set-Theory principles and their application to the analysis of atonal music.

970. Contrapuntal Techniques
Fall of odd-numbered years. Summer. 3(3-0) MUS 482 or approval of department.
Advanced contrapuntal practice from the sixteenth century to the present.

971. Contrapuntal Techniques
Winter of even-numbered years, Summer. 3(3-0) MUS 970.
Continuation of MUS 970.

972. Contrapuntal Techniques
Spring of even-numbered years, Summer. 3(3-0) MUS 971.
Continuation of MUS 971.

999. Doctoral Dissertation Research
Fall, Winter, Spring. Variable credit. Approval of department.

NATURAL SCIENCE  N  S

College of Natural Science

115. The Nature and Continuity of Life (N)
Fall, Winter, Spring, Summer. 4(3-2)
A—The development and testing of scientific concepts as examples of our attempts to understand the world. Selected topics from the life sciences illustrate the nature of scientific investigation.
B—Theories of the origin, development and structure of life and the universe of which it is a part. Examination of contemporary problems associated with defining life and death.
C—Consideration of social and ethical issues relating to our increasing control of reproduction and heredity. Reproduction and here from a molecular, cellular and organismic perspective, including human structure and function.

D—The nature of living things, contrasting various scientific and non-scientific views. The implications of the modern scientific concepts of life for our beliefs and values.

122. Human Bioethical Evolution (N)
Fall, Winter, Spring. 4(3-2)
Current understanding of human beings and their beliefs as products of biological and cultural evolution. Implications for the future of humanity.

125. Time and Change in Nature (N)
Fall, Winter, Spring, Summer. 4(3-2)
A—Our attempts to explain the present in terms of past events are explored through selected topics from the life sciences and earth sciences. Stress is on the evolution of science and the nature of scientific evidence.
B—Heredity, evolution and diversity of life are examined from the viewpoint of the biological and cultural development of the human species. Evolutionary relationships between humans and their environment.
C—The origin and evolution of earth and living things are studied as whole and related problems. Emphasis on problem-solving in science and impact of evolutionary concepts on human societies.

127. The Biocology of Health
Fall, Winter, Spring. 4(3-2)
Human health examined from evolutionary and ecological viewpoints. Emphasis will be on the impact of a technological environment on our health.

129. Biotechnology and Human Values (N)
Winter, Spring. 4(4-0)
Consideration of social and ethical issues which arise from our increasing control of the human body through biotechnology.

135. Changing Concepts of the Universe (N)
Fall, Winter, Spring. Summer. 4(3-2)
Students may not receive credit in more than one of the following: AST 119, AST 217, AST 229, N S 135, N S 135.
A—The origin and development of scientific explanations of the physical world. The origins of modern science and scientific revolutions.
B—The role of science in the development of western ideas about reality. The origin and development of mechanistic concepts of the physical world and their part in intellectual dialogue.

142. Life, Its Environment (N)
Fall, Winter, Spring. 4(3-2)
Natural ecological systems and the impact of human biological and cultural development on them. Examination of specific ecological problems and the role of science in seeking solutions.

152. Science and Culture in the 20th Century (N)
Fall, Winter, Spring. 4(4-0)
Contemporary concepts concerning interpretation of modern scientific concepts such as evolution, uncertainty and relativity are discussed in terms of developing a personal philosophy.