

**Descriptions – Microbiology and Public Health
of
Courses**

899. Research
Fall, Winter, Spring, Summer. Variable credit. Approval of department.

900. Topics in Microbiology
Fall, Winter, Spring, Summer. 2(2-0)
May reenroll if different topic is taken. Approval of department.

Topics will be selected from taxonomic subsciences such as bacteriology, virology, protozoology, mycology, algology, and helminthology; and from transecting disciplines such as microbial genetics, immunology, physiology, and ecology.

901. Experimental Microbiology
Fall, Winter, Spring, Summer. 3(0-9)
May reenroll for a maximum of 9 credits. Approval of department.

Experiments, demonstrations, and discussions of current research programs in various areas of microbiology.

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

MILITARY SCIENCE M S

All University

041. General Military Science

Application of leadership techniques, the decision making process and staff planning. Military customs and traditions. Students will concurrently enroll in a selected non-Military Science course to fulfill military professional requirements.

A. Military Traditions-M S I
Winter. 0(0-1) Approval of department.

B. Evolution of Military Leadership—M S II

Fall. 0(0-1) Approval of department or M S II standing. HST 235 concurrently.

C. Military Career Preparation—M S II

Spring. 0(0-1) Approval of department or M S II standing.

D. Advanced Camp Preparation—M S III

Winter. 0(0-1) Approval of department or M S III standing.

E. Military Staff Organization-M S IV

Fall. 0(0-1) Approval of department or M S IV standing.

121. Preview of Military Science
Fall, Winter, Spring, Summer. 1(1-0)
Approval of department.

Role of the ROTC officer in the Army. Assists the student in planning a curriculum to satisfy requirements for a commission.

122. Marksmanship and Hunter Safety
Fall, Spring. 1(0-2) M S 121 or approval of department.

Small arms marksmanship and safety. Practical exercises on local firing ranges. Individual basic military marksmanship and the skills necessary to participate in a competitive or recreational shooting program.

223. Terrain Analysis and Land Navigation
Winter, Spring. 3(3-0) M S 121 and approval of department.

Military maps, map construction, specifications and uses. Includes both a study of aerial photographs and an introduction to remote energy sensors employed by defense agencies as they relate to tactical operations.

324. Military Teaching
Fall, Winter. 4(4-2) Basic course, approval of department.

Methods of teaching manipulative skills to groups with varying educational backgrounds. Emphasis on determination of entry behavior, progress analysis, testing and test construction. Introduction to current teaching aids. Practical experience in simulated field situations is stressed during laboratory.

325. Military Management
Spring. 4(3-2) M S 324 or approval of department.

Task analysis approach to missions. The subject of tactics is used as a teaching vehicle for the managerial approach to the preparation and execution phases of military operations. Emphasis is placed on physical and moral leadership during the laboratory sections.

426. Military Law
Winter. 4(4-0) Approval of department.

Jurisdiction and responsibility of the Army commander and junior leader in the application of military justice. Implications of Army operations as related to the rules of land warfare.

427. Seminar
Spring. 1(1-0) Approval of department.

Precommissioning orientation stressing current military policies, procedures, customs and trends.

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.

MUSIC MUS

College of Arts and Letters

100. Theory Review
Fall, Summer. 2(2-1) For majors who need theory review.
Basic course in fundamentals and ear training.

112. Chamber Music
Fall, Winter, Spring, Summer. 1(1-0)
May reenroll for a maximum of 18 credits. Approval of department.
Performance of works for small ensembles.

118. Band
A. Marching Band
Fall. 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. 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. 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.

133. Orchestra
Fall, Winter, Spring. 1(0-5) May reenroll for a maximum of 12 credits. Membership determined by audition.
Standard overtures and symphonies studied and publicly performed. Attendance at all rehearsals and public concerts obligatory.

135. Music in Elementary Education
Fall, Winter, Spring, Summer. 4(3-3)
Elementary education majors.
Basis, scope and sequence of music instruction in the elementary schools with an introduction to basic knowledge and skills used in elementary school music.

141. Class Instruments and Voice
Fall. 1(0-2) Knowledge of notation. Music majors, or approval of department.
Class instruction in piano, voice, violin, cello, clarinet, and comet.

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

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

145. Music Foundations I
Fall, Winter, Spring. 3(3-0) MUS 135 and approval of department.
Development of understanding and knowledge of music fundamentals, ear training, music reading, rhythm, and other basic music perceptions. Designed specifically for elementary classroom teachers who elect a strong concentration in music.

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.

- 148. Elementary Piano**
Winter, Spring. 2(2-2) MUS 147.
Elementary Education majors.
Continuation of MUS 147.
- 150. Keyboard Instruments and Harp**
Fall, Winter, Spring, Summer. 1 to 4 credits. May reenroll for a maximum of 24 credits. Audition required.
Instruction in piano, organ and harp.
- 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.
- 180. Basic Harmony**
Fall. 3(3-1)
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.
- 181. Basic Harmony**
Winter. 3(3-1) MUS 180.
Continuation of MUS 180.
- 182. Basic Harmony**
Spring. 3(3-1) MUS 181.
Continuation of MUS 181.
- 183. 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.
- 184. Aural Harmony**
Fall, Winter, Spring, Summer. 1(0-2) MUS 183; MUS 181 concurrently.
- 185. Aural Harmony**
Fall, Winter, Spring, Summer. 1(0-2) MUS 184; MUS 182 concurrently.
- 190. 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 performance obligatory.
- 191. Chorus**
Fall, Winter, Spring, Summer. 1(0-2½) 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.
- 192. 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.
- 193. 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.
- 195. 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.
- 200H. Honors Work**
Fall, Winter, Spring, Summer. 1 to 16 credits. May reenroll for a maximum of 16 credits. Approval of department.
- IDC. Introduction to Latin America I**
For course description, see *Interdisciplinary Courses*.
- 224. History of Music**
Fall. 3(3-0) MUS 183.
Music from ancient Greece through Romanesque and Gothic periods, concluding with the Renaissance. Greek theory and "ethos"; age of plainsong; development of polyphony; instruments peculiar to period under question.
- 225. History of Music**
Winter. 3(3-0) MUS 224.
Baroque and classical periods. Special attention to fugue, opera, oratorio, sonata, and symphony. Analysis of characteristic works.
- 226. History of Music**
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.
- 241. Advanced Class Piano**
Fall. 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.
- 242. Advanced Class Piano**
Winter. 1(0-2) MUS 241 or approval of department.
Continuation of MUS 241.
- 243. Advanced Class Piano**
Spring. 1(0-2) MUS 242 or approval of department.
Continuation of MUS 242.
- 245. Music in Special Education**
Fall, Winter, Spring, Summer. 3(3-0) MUS 135. Special education majors.
Methods of teaching music in special education programs.
- 271. Fundamentals of Music**
Fall, Winter, Spring. 3(3-1) Nonmajors.
Fundamentals of music to develop understanding and knowledge of scales and modes, key signatures, chord structures, chord progressions and non-harmonic tones.
- 272. Introduction to Music Literature I**
Fall, Winter, Spring, Summer. 3(3-0) Non-majors.
An introduction to music in the Western tradition. The elements of musical expression and the techniques of musical analysis in connection with representative musical masterpieces of the Middle Ages, the Renaissance, the Baroque, the period of Classicism and Romanticism, and the twentieth century.
- 273. Introduction to Music Literature II**
Fall, Winter, Spring, Summer. 3(3-0) MUS 272; non-majors.
Continuation of MUS 272. Music of the eighteenth century. Among composers to be studied are: Vivaldi, D. Scarlatti, F. Couperin, Bach, Handel, Haydn and Mozart. Demonstrates the major types and media of composition from the late Baroque to early romanticism and clarifies the stylistic trends of the time.
- 274. Music Literature in Live Performance**
Fall, Winter, Spring. 2(2-0) May reenroll for a maximum of 6 credits.
Live performances and discussions of music masterpieces by music department faculty. Instruction will include guidance in study of music styles, form, orchestral instruments.
- 280. Advanced Harmony**
Fall. 3(3-1) MUS 182.
Continuation of MUS 182, with added vocabulary and technique through nineteenth century harmony. Creative writing in small forms.
- 281. Advanced Harmony**
Winter. 3(3-1) MUS 280.
Continuation of MUS 280.
- 282. Advanced Harmony**
Spring. 3(3-1) MUS 281.
Continuation of MUS 281.
- 283. Advanced Aural Harmony**
Fall, Winter, Spring, Summer. 1(0-2) MUS 185; MUS 280 concurrently.
Aural counterpart of advanced harmony. Drill in harmonic, melodic, and rhythmic dictation. Sight singing and keyboard harmony.
- 284. Advanced Aural Harmony**
Fall, Winter, Spring, Summer. 1(0-2) MUS 283; MUS 281 concurrently.
- 285. Advanced Aural Harmony**
Fall, Winter, Spring, Summer. 1(0-2) MUS 284; MUS 282 concurrently.
- 295. Opera Workshop**
Fall, Winter, Spring. 1 to 2 credits. May reenroll for a maximum of 6 credits. Approval of department.
Repertoire coaching, diction, interpretation. Study and performance of entire operas and excerpts from the standard and contemporary repertoire; production of musicals (with Speech and Theatre Department); TV opera productions on Station WKAR.

**Descriptions – Music
of
Courses**

- 314. Church Service Playing**
Fall, Winter, Spring, Summer. 2(2-0)
May reenroll for a maximum of 6 credits. Three terms of pipe organ.
Instruction in adapting piano and orchestral accompaniment to organ; choosing organ and choir repertoire appropriate to church season; hymn playing, modulation, and ways to help unify service.
- 320. Music Workshop**
Summer. 1 to 6 credits. May reenroll for a maximum of 12 credits. Approval of department.
- 323. Carillon**
Fall, Winter, Spring, Summer. 2 credits. May reenroll for credit. MUS 182; 6 terms of piano and approval of department.
Carillon playing technique, style and interpretation, arranging, adapting composition and improvisation. Survey of ensemble combinations with other instruments. Mechanical aspects of the instrument and bell acoustics. Carillon art and tradition, bell founders, literature and composers.
- 334. Composing and Arranging for Jazz Ensembles**
Fall, Winter, Spring, Summer. 3(2-2)
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.
- 346. Teaching Music in the Elementary School II**
Winter, Spring. 3(3-0) MUS 345 and approval of department.
Continuation of MUS 345 with emphasis on upper elementary music. Approaches to music reading, harmonization and analytical listening.
- 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 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. Sight Reading at the Piano**
Fall, Winter, Spring, Summer. 1 to 2 credits. May reenroll for a maximum of 6 credits. Three terms of piano.
Establish principles of good sight reading, accompanying and free keyboard harmonization.
- 380. Studies in Style and Form**
Fall, 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.
- 381. 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.
- 382. Studies in Style and Form**
Spring, 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.
- 383. Orchestration**
Fall, Summer. 2(2-0) MUS 282.
Modern orchestral resources and scoring for various instrumental groups.
- 384. Orchestration**
Winter, Summer. 2(2-0) MUS 383.
Continuation of MUS 383.
- 385. Orchestration**
Spring, Summer. 2(2-0) MUS 384.
Continuation of MUS 384.
- 386. Counterpoint**
Fall, Summer. 2(2-0) MUS 282.
Technique of writing tonal counterpoint in two, three, and four parts.
- 387. Counterpoint**
Winter, Summer. 2(2-0) MUS 386.
Continuation of MUS 386.
- 388. Counterpoint**
Spring, Summer. 2(2-0) MUS 387.
Continuation of MUS 387.
- 400. Clinical Training in Music Therapy**
Fall, Winter, Spring, Summer. 1 to 18 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 ED 327R or ED 327P.
Appropriate musical materials for both performance and listening instruction in elementary and secondary schools. Particular emphasis on the music of culturally different peoples.
- 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. Organ 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.
- 416E. 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. Twentieth Century Music, American**
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.
- 418H. Honors Course in Music Literature**
Fall. 2(2-0) MUS 226 and approval of department.
A tutorial class. Primary emphasis on instrumental and vocal music 1750-1900, but work may be directed towards the student's special field of interest.
- 419H. Honors Course in Music Literature**
Winter. 2(2-0) MUS 226 and approval of department.
Continuation of 418H.
- 420H. Honors Course in Music Literature**
Spring. 2(2-0) MUS 226 and approval of department.
Continuation of 419H.
- 421. Music and Worship**
Fall. 3(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.
- 422. Hymnology**
Winter. 3(3-0) MUS 226 or approval of department.
Greek and Latin hymns, canticles, and transition from psalmody into hymnody. Hymns and tunes studied with emphasis on their natural place in church year. Special attention to anthem settings of hymns and adaptation of traditional melodies, especially Gregorian.
- 423. Choral Repertoire for the Church**
Spring, Summer. 3(3-0) Approval of department.
Choral literature for church choirs; emphasis on motets, anthems, responses, and materials for both youth and adult choirs.
- 424. Preparatory Musicology**
Fall. 3(3-0) MUS 226, MUS 282.
A seminar dealing with research in various fields of musicology, including ethno-musicology.
- 425. Preparatory Musicology**
Winter, Summer. 3(3-0) MUS 424.
Selected topics in music history from the ancient Greeks to 1600.
- 429. Band Materials**
Spring, Summer. 1(0-2) May reenroll for credit. Juniors.
Analysis and performance of literature suitable for school bands.
- 435. Advanced Conducting**
Spring, Summer. 2(2-0) Approval of department.
Continuation of MUS 434.
- 438. Brass and Woodwind Techniques majors.**
Spring, Summer. 2(1-2) Senior music majors.
Materials and contemporary pedagogical practices of group wind instrumental instruction.
- 440. Fundamentals of Electronic Music**
Fall, Summer. 2(2-0) MUS 382 or approval of department.
Instruction in the use of the Moog designed synthesizer, mixer and recorders.
- 441. Fundamentals of Electronic Music**
Winter, Summer. 2(2-0) MUS 440 or approval of department.
Supervised use of the Moog synthesizer.
- 442. Creative Composition in Electronic Music**
Fall, Winter, Spring, Summer. Variable credit. May reenroll for a maximum of 8 credits. MUS 441 or approval of department.
Assigned use of the Electronic Music Studio.
- 450. Recreational Music**
Spring, Summer of odd-numbered years. 2(2-0) Majors.
Organization and administration of a community music program for adults; community chorus, orchestra, and band. Nonsymphonic instruments and their use in recreation. Summer camp and playground music. Recreational music as it is organized and used by industries.
- 462. 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.
- 465. Practicum: Sacred Music**
Fall, Winter, Spring. 3(0-6) May reenroll for a maximum of 6 credits. MUS 314, MUS 336, MUS 348.
Supervised experience in all phases of sacred music by assisting at adult and junior choir rehearsals and church services, service planning, preparation and performance.
- 470. Influence of Music on Behavior**
Fall. 3(3-0) Nine credits of psychology or approval of department.
Study of the physiological and psychological effects of music; relation of music to health. Experimental studies, related philosophical and psychological theory will be reviewed.
- 471. Music Therapy 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 Therapy Techniques**
Spring. 3(3-0) MUS 471.
Continuation of MUS 471.
- 480. Advanced Studies in Style and Form**
Fall. 2(2-1) MUS 380, MUS 381, MUS 382.
Continuation of MUS 382.
- 481. Advanced Studies in Style and Form**
Winter. 2(2-1) MUS 480.
Continuation of MUS 480.
- 482. Advanced Studies in Style and Form**
Spring. 2(2-1) MUS 481.
Continuation of MUS 481.
- 483. Composition**
Fall, Winter, Spring, Summer. 2(2-0) May reenroll for a maximum of 6 credits. MUS 282 or approval of department.
Guided projects in creative writing.
- 486. Psychology of Music**
Fall, Summer. 3(3-0) Approval of department. Interdepartmental with and administered by the Department of Psychology.
Musical behavior with emphasis on psychological aspects of perception, learning, affective response, and ability. Emphasis on social and cultural influences in forming musical tastes, including mass media music.
- 487. Psychology of Music**
Winter, Summer. 3(2-2) PSY 486. Interdepartmental with and administered by the Department of Psychology.
Basic research concepts and experimental methods in psychology of music research. Practical training in conducting experimental research of musical behavior.

**Descriptions - Music
of
Courses**

- 490. Independent Study: Special Problems in Music Research**
Fall, Winter, Spring, Summer. 1 to 4 credits. May reenroll for credit. Seniors and approval of department.
Individual problems in music research.
- 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 opera and opera scenes.
- 802. Seminar in History of Music**
Summer. 4(5-0)
Critical study in depth of music literature and performance practices within historical perspective.
- 803. Seminar in Music Education**
Fall, Summer. 3(3-0) Approval of department.
Consideration of the historical and philosophical basis for music instruction in education.
- 804. Seminar in Music Learning**
Winter, 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**
Spring, Summer. 3(3-0) Approval of department.
Development of goals, objectives, learning sequence and evaluative techniques for music learning at all instructional levels.
- 812. Research Problems in Music**
Fall, Winter, Spring, Summer. Variable credit.
- 813. Chamber Music**
Fall, Winter, Spring, 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, Summer. 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, Summer. 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, Summer. 2(2-0) Approval of department.
Intensive study of selected chamber music works of the 20th century.
- 820. Music Workshop**
Summer. 1 to 6 credits. May reenroll for a maximum of 6 credits. Approval of department.
- 824. Research Methods and Materials**
Fall, Winter, Summer. 3(3-0)
A critical examination of encyclopedias, indices, and other aids to research.
- 825. Acoustics for Musicians**
Spring, Summer of even-numbered years. 3(3-0)
Classical theory of sound, stressing its application to musical instruments and the human voice.
- 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 830.
Continuation of MUS 830.
- 834. Seminar in Composition**
Fall, Winter, Spring, Summer. 3(3-0)
May reenroll for credit. MUS 482.
- 843. Pedagogy of Theory**
(841.) Fall, Summer. 3(3-0) Approval of department.
Current literature in the field of music theory and approaches to theory-pedagogy.
- 844. Pedagogy of Theory**
(842.) 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**
(840.) Spring, Summer. 3(3-0) Approval of department.
Music theory treatises and pedagogical practices of historical importance.
- 850. Applied Music**
Fall, Winter, Spring, Summer. 3 credits for Applied Music majors; 2 credits for others. May reenroll for credit.
- 852. Choral Technique and Materials**
Spring, Summer. 3(3-0) 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.
- 860. 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.
- 880. Materials of Music**
Fall, Winter, Spring, Summer. 1 to 4 credits. MUS 282.
Correlation of the areas of music theory as a basis for the study of 19th and 20th century music.
- 881. Materials of Music**
Fall, Winter, Spring, Summer. 1 to 4 credits. MUS 880.
Continuation of MUS 880.
- 882. Materials of Music**
Fall, Winter, Spring, Summer. 1 to 4 credits. MUS 881.
Continuation of MUS 881.
- 899. Research**
Fall, Winter, Spring, Summer. Variable credit. Approval of department.
- 903. Proseminar in Music Education**
Fall, Winter, Spring, Summer. 3(3-0)
May reenroll for a maximum of 9 credits. Approval of department.
Consideration of problems of music teaching and learning with readings from aesthetics, psychology, human growth, and education.
- 915. Medieval Music**
Fall. 3(3-0)
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)
Investigation of developments in European music from 1450 to 1600, tracing developments in both sacred and secular music.
- 917. Music of the Seventeenth Century**
Spring. 3(3-0)
Instrumental and vocal music of Early Baroque period.
- 924. Seminar in Musicology**
Fall, Winter, Spring. 3 credits. May reenroll for credit. Approval of department.
- 954. Music Supervision**
Summer of even-numbered years. 3(3-0) Completion of undergraduate program in Music Education.
- 955. Current Tendencies in Music Education**
Winter of even-numbered years. Summer of odd-numbered years. 3(3-0) Completion of undergraduate program in Music Education.
- 956. Advanced Research Techniques in Music**
Spring, Summer. 3(3-0) Approval of department.
Application of behavioral research to music including development and validation of original data gathering devices.
- 960. Analytical Studies in Music Literature**
Fall, Summer. 3(3-0) MUS 382 and two years of music literature or approval of department.
Melodic, formal, contrapuntal and harmonic analysis of music from plainsong to contemporary music.
- 961. Analytical Studies in Music Literature**
Winter, Summer. 3(3-0) MUS 960.
Continuation of MUS 960.
- 962. Analytical Studies in Music Literature**
Spring, Summer. 3(3-0) MUS 961.
Continuation of MUS 961.
- 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. Research
Fall, Winter, Spring, Summer. Variable credit. Approval of department.

NATURAL RESOURCES N R

College of Agriculture and Natural Resources

202. Soils and Man's Environment
Winter. 3(3-0) Interdepartmental with the departments of Crop and Soil Sciences, Resource Development, and Fisheries and Wildlife and administered by the Department of Crop and Soil Sciences.

Use of soil and water resources in a technological society as it relates to environmental quality. Nature of pollution problems and their possible solutions. Food production and world population.

220. Plants and Their Environment
Winter. 3(3-0) Interdepartmental with and administered by the Department of Forestry.

Fundamental ecological relationships between various climatic, edaphic and biotic environmental factors of the ecosystem and plant response, including structure, function and evaluation of species.

275. Exploring International Agriculture
Spring. 3(3-0) Interdepartmental with and administered by Agriculture.

Exploration of overseas assignments with international agencies; potential world food actualities and potentialities; special problems of the tropics compared with those in temperate regions.

350. Leadership Development for Agriculture and Natural Resources

Winter, Spring. 3(3-0) May reenroll for a maximum of 6 credits. Approval of department. Interdepartmental with and administered by Agriculture.

Leadership development. Preparation for community leadership. Firsthand look at social, economic, and political problems. Series of seminars, interviews, field trips. Emphasis on awareness, action, and involvement. Field trips required.

399. Agriculture Internship
Fall, Winter, Spring, Summer. Zero to 10 credits. (10 credits. See page A-2 item 3.) Juniors and approval of department. Interdepartmental with and administered by Agriculture.

Professionalized experiences in a student's major. Supervision and evaluation conducted by faculty and cooperating agencies.

425. Agriculture and Natural Resources Seminar
Spring. 2(2-0) Interdepartmental with and administered by Agriculture.

Current agricultural, natural resources, and environmental problems and solutions as presented by discussion leaders from various disciplines, arranged by undergraduate students.

444. Pest Management I: Systems Management for Plant Protection
(437.) Fall. 4(3-2) FSM 200 or EC 201.

Interdepartmental with Agriculture and the College of Natural Science and administered by the College of Natural Science.

Designed to integrate knowledge and improve ability in arriving at pest management decisions of varying complexity involving the fields of agronomy, wildlife, horticulture, entomology, and plant pathology.

445. Pest Management II: Pesticide Chemistry and Application Systems for Plant Protection

(435.) Winter. 5(3-4) CEM 132. Interdepartmental with Agriculture and the College of Natural Science and administered by the College of Natural Science.

A broad overview of pesticide chemistry, efficient usage, environmental fate, legislation and application techniques.

446. Pest Management III: Biological Systems for Plant Protection

(436.) Spring. 3(3-0) ENT 430, BOT 405, HRT 402 or CSS 402. Interdepartmental with Agriculture and the College of Natural Science and administered by the College of Natural Science.

Management of plant pests utilizing host resistance, cultural practices, legislation, and biological systems.

450. Natural Resource Administration

Fall, Spring. 4(4-0) Seniors. Interdepartmental with the departments of Fisheries and Wildlife, Forestry, Park and Recreation Resources and Resource Development. Administered by the Department of Forestry.

Concepts and methods of administering wildland properties. The legal, economic and social environment. Benefit-cost analysis of management changes. Unit organization, personnel management and accounting. Presents a systems view of administration.

455. Natural Resource Economics

Winter. 4(4-0) FOR 450 or approval of department. Interdepartmental with the departments of Fisheries and Wildlife, Forestry, Park and Recreation Resources and Resource Development. Administered by the Department of Forestry.

Basic economic and political principles and techniques that govern the production and consumption of forest land products, including basic forest valuation procedures.

475. International Studies in Agriculture and Natural Resources

Spring, Summer. 3 to 9 credits. Approval of the college. Interdepartmental with and administered by Agriculture.

Study-travel experience emphasizing contemporary problems affecting agriculture in the world, national, and local communities. Field trips, case studies, interviews with leading experts, government officials, community leaders. Supervised individual study.

491. Natural Resources and Modern Society

Spring. 3(3-0) Juniors. Interdepartmental with the departments of Forestry and Resource Development and administered by the Department of Forestry.

A survey of the social and economic significance of natural resources in modern industrial and urban society. Current problems of natural resources management and use are examined in terms of the society in which they exist.

NATURAL SCIENCE N S

University College

Students who have not taken any of the required natural science courses, may take any three course from the following list.

N S 115, 122, 125, 135, 142, 152, 162, 171H, 172H, 173H

OR
If you are enrolled in ATL 101, you may take N S 181, 182, 183.

Students who have already taken one or two natural science courses should refer to the chart below to complete the University requirements of 12 credits in Natural Science.

You may take		if you have not had credit in	
N S	115	111, 116, 121, 131, 140, 151, 161, 181, 192, 322	
	122	193	
	125	112, 117, 132, 141, 182, 193, 323	
	135	113, 120, 133, 150, 160, 183, 191, 321	
	142	118, 193	
	152	193	
	162	193	
	171H	192	
	172H	193	
	173H	191	
	181	115, (111, 116, 121, 131, 140, 151, 161, 192)	
	182	125 (112, 117, 132, 141, 193)	
	183	135 (113, 120, 133, 150, 160, 191)	

115. The Nature and Continuity of Life
Fall, Winter, Spring, Summer. 4(3-2)

A—The development and testing of scientific concepts as examples of man's attempt to understand the world in which he lives. 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 heredity from molecular, cellular and organismic perspectives, including human structure and function.

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

122. Biosocial Evolution of Man
(193B.) Fall, Winter, Spring. 4(3-2)

Man's current understanding of himself and his beliefs as products of biological and cultural evolution. Implications for man's future.