

- 306: Introduction to Non-Western Music.** 0-2-2. Preq., MUHS 305 or permission of instructor. An introduction to the music and musical life of the world's peoples by sampling and by synthesis.
- 307: Introduction to Jazz History.** 0-2-2. Preq., MUHS 305 or permission of instructor. Cultivate in the music major an understanding of jazz music through a comprehensive study of major artists and styles from 1900 to the present.
- 410: Piano Literature.** 0-3-3. A survey of piano literature from the Classic Period to the present including literature composed for earlier keyboard instruments.
- 430: Vocal Literature.** 0-3-3. A survey of vocal literature covering a wide diversity of composers, styles, and historical periods through discussion and analysis of representative works including assignments in listening, performance, and reading.
- 431: Choral Literature.** 0-2-2. A survey of choral literature covering a diversity of composers, styles, and historical periods through discussion and analysis of representative works.
- 432: Survey of Opera.** 0-3-3. Preq., permission of instructor. Designed to cultivate in students an understanding and enjoyment of opera by surveying selected, significant operatic works through viewing and analysis.
- 433: Survey of American Music Theatre.** 0-3-3. Preq., MUGN 290 or SPTH 290. Designed to increase the understanding and appreciation of the American Music Theatre genre through the study of musical theatre works, composers, lyricists, directors, and performers.

MUSIC PEDAGOGY (MUPD)

- 300: Beginning Conducting.** 1-1-1. Elementary methods, principles and practice of conducting.
- 301: Choral Conducting.** 1-2-2. Preq., MUTH 201 and MUPD 300. Principles of interpretation and score reading with emphasis on choral conducting. Includes laboratory experience with the choral ensembles.
- 302: Instrumental Conducting.** 1-2-2. Preq., MUTH 201 and MUPD 300. Principles of interpretation and score reading with emphasis on instrumental conducting. Includes laboratory experience with the instrumental ensembles.
- 303: Instruments.** 1-1-1. Preq., MUTH 102. Group instruction in the functional knowledge of wind, string, fretted, and percussion instruments for vocal majors.
- 311: Piano for Vocal Education.** 2-0-2. Preq., students must have passed all parts of the piano proficiency exam and have the consent of the instructor. Experiences in improvising, transposing and performing vocal accompaniments at the piano. These skills are required for vocal music education majors.
- 331: Vocal Methods.** 1-1-1. Group instruction in the singing voice including methods and materials of instruction for the music educator. Includes laboratory experiences and observation at the elementary and secondary levels.
- 334: Elementary Teachers Appreciation/Methods.** 0-3-3. Provides an understanding and appreciation of the elements of music.
- 351: String Methods.** 2-0-1. Group instruction in strings including methods and materials of instruction for the music educator. Includes laboratory experiences and observation at the elementary and secondary levels.
- 352: Guitar Methods.** 2-0-1. Group instruction in fretted instruments including methods and materials of instruction for the music educator. Includes laboratory experiences and observation at the elementary and secondary levels.
- 361: Flute Methods.** 2-0-1. Group instruction in flute including methods and materials of instruction for the music educator. Includes laboratory experiences and observation at the elementary and secondary levels.
- 362: Single Reed Methods.** 2-0-1. Group instruction in single reed instruments including methods and materials of instruction for the music educator. Includes laboratory experiences and observations at the elementary and secondary levels.
- 363: Double Reed Methods.** 2-0-1. Group instruction in double reed instruments including methods and materials of instruction for the music educator. Includes laboratory experiences and observation at the elementary and secondary levels.
- 371: High Brass Methods.** 2-0-1. Group instruction in high brass instruments including methods and materials of instruction for the music educator. Includes laboratory experiences and observation at the elementary and secondary levels.
- 372: Low Brass Methods.** 2-0-1. Group instruction in low brass instruments including methods and materials of instruction for the music educator.

Includes laboratory experiences and observation at the elementary and secondary levels.

- 381: Percussion Methods I.** 2-0-1. Group instruction in percussion instruments including methods and materials of instruction for the music educator. Includes laboratory experiences and observation at the elementary and secondary levels.
- 382: Percussion Methods II.** 2-0-1. Preq., MUPD 381. Continuation of MUPD 381.
- 410: Piano Pedagogy I.** 1-1-2. Methods and materials used in teaching piano to beginners. Required by the State Department of Education for teachers wishing to be certified in piano.
- 411: Piano Pedagogy II.** 1-1-2. Preq., MUPD 410. Continuation of MUPD 410. Practice teaching of beginning students in integral to this course.
- 430: Vocal Pedagogy.** 1-1-2 (4). Methods and materials of teaching voice in private studio and/or in the school.
- 464: Elementary Music Methods.** 0-3-3. An overview of the methodologies of Orff, Kodaly, and Dalcroze. Learning to plan, execute and evaluate music programs in the elementary school. Includes observation at the elementary level.
- 465: Secondary Vocal Methods.** 0-3-3. Examines the materials and methods for the teacher and supervisor of vocal music, e.g., program building, contests, festivals, requisitions, grading, materials, scheduling, and rehearsing. Includes observation at the secondary level.
- 466: Secondary Instrumental Methods.** 0-3-3. Examines the materials and methods for the teacher and supervisor of instrumental music, e.g., program building, contests, festivals, requisitions, grading, materials, scheduling, and rehearsing. Includes observation at the secondary level.

MUSIC TECHNOLOGY (MUTC)

- 141: Music Technology.** 1-2 semester hours. Individualized instruction in the techniques of working with various sound sources and resources in the field of music technology.
- 301: Computer Science in Music.** 2-2-3. Study of general computer applications and music related applications including notation, graphics, sound generation, sequencing, audio manipulation, and other related uses.

MUSIC THEORY (MUTH)

- 100: Rudiments of Music Theory.** 0-2-2. Instruction in the fundamentals of music theory including reading, notation, and aural skills.
- 101: Music Theory I.** 2-2-2. Preq., diagnostic exam. Beginning study of fundamentals of music covering the areas of notation, ear-training, sight singing, and functional keyboard.
- 102: Music Theory II.** 2-2-2. Preq., MUTH 101. Continuation of MUTH 101, increasing emphasis on common-practice harmonic vocabulary.
- 103: Music Theory III.** 2-2-2. Preq., MUTH 102. Continuation of MUTH 102.
- 201: Music Theory IV.** 2-2-2. Preq., MUTH 103. Continuation of MUTH 103 with emphasis on the organization and interaction of melodic, harmonic and rhythmic concepts and music forms. Aural training and functional keyboard is intensified in proportion to the depth of course content.
- 202: Music Theory V.** 2-2-2. Preq., MUTH 201. Continuation of MUTH 201.
- 203: Music Theory VI.** 2-2-2. Preq., MUTH 202. Continuation of MUTH 202.
- 301: Music Composition.** 0-3-3. Preq., MUTH 203. A survey of the techniques of 20th century composition with projects consisting of the writing of short compositions illustrating these techniques.
- 302: Form and Analysis.** 0-3-3. Preq., MUTH 203. A study of specific examples of the major forms of composition to show the relative importance of detail to the overall comprehension of a composition.
- 330: Choral Arranging.** 0-2-2. Preq., MUTH 203. A study of writing for the individual voices and the combinations of voices in choral ensembles.
- 370: Instrumental Arranging.** 0-2-2. Preq., MUTH 203. A study of writing for the individual instruments of the band and orchestra, the combinations of instruments in the various sections, and the combination of all the sections.
- 401: Counterpoint.** 0-3-3. Preq., MUTH 203. A study of contrapuntal practice of the 18th and 19th centuries with emphasis on the understanding of counterpoint within a harmonic context.

NURSING (NURS)

- 109: Introduction to Nursing.** 0-2-2. An introduction to the health care system and professional nursing. Basic human needs, the elderly client, and concepts related to death and dying are introduced.

- 110: Introduction to Application of the Nursing Process.** 8-0-3. Coreq., NURS 109, and credit or registration in BISC225 and 226. Acquaints student with basic nursing principles and techniques of safe nursing care to meet basic human needs. Emphasis on interpersonal skills, communication, interviewing and observation.
- 112: Adult Health Maintenance I.** 8-3-5. Preq., NURS 109 and 110 and BISC 225 and 226 and credit or registration in BISC227. Study, identification and application of nursing knowledge and skills related to adult health needs. Emphasis on patient-centered care utilizing the nursing process.
- 113: Introduction to Associate Degree Nursing.** 0-0-10. Emphasizes the nursing process and basic human needs with introduction to associate degree nursing roles. Principles are applied with validation in the clinical setting.
- 114: Adult Health Maintenance II.** 8-3-5. Preq., NURS 112 and BISC 225, 226, and 227. Continuation of the study, identification and application of nursing knowledge and skills related to adult health needs. Emphasis on patient-centered care utilizing the nursing process.
- 116: Adult Neuro/Psycho-Social Health Maintenance.** 8-3-5. Preq., NURS 114 and PSYC 102. Utilizes nursing knowledge/skills in provision of health care. Emphasis on nursing care of clients experiencing threats to needs as a result of neuro-psycho-social dysfunction.
- 210: Maternal/Newborn Health Maintenance.** 8-3-5. Preq., NURS 116. Study/application of principles and concepts of family-centered maternal/newborn care. Emphasis on meeting specific needs of clients during the childbearing cycle and newborn period.
- 212: Child Health Maintenance.** 8-3-5. Preq., NURS 116 and PSYC 408. Study/application of nursing knowledge/skills related to children's and adolescent's health needs. Includes growth and development, family, and prevention of and intervention in illness.
- 214: Nursing Seminar.** 0-1-1. Preq., Credit in all previous nursing courses. Study of current nursing trends in light of evolving patterns and practices. Emphasis on professional opportunities and obligations and legal aspects of nursing practice.
- 216: Nursing Practicum.** 24-4-7. Coreq., NURS 214. Preq., Credit in all other nursing courses. Integration of knowledge and skills acquired in previous nursing courses in caring for clients with complex and/or multiple threats to basic needs.
- 280: Selected Topics.** 1-3 hour(s) credit (6). Preq., Approval by Nursing Division Director. Independent study course designed for students to become involved with creative learning opportunities related to nursing research, theory and practice.

PHILOSOPHY (PHIL)

- 201: Introduction to Philosophy.** 0-3-3. Preq., junior standing or permission of the instructor. Philosophical vocabulary; types and problems of philosophy; major philosophical positions.
- 305: Ethics.** 0-3-3. Preq., PHIL 201 or permission of the instructor. A study of the writings of the major moral philosophers, beginning with the Greeks and continuing to the present.

PHYSICS (PHYS)

- 102: Introductory Physics.** 2-1-1. An introductory survey of physics, use of library resources, and basic computation.
- 103: Introductory Physics.** 2-1-1. A continuation of PHYS 102.
- 104: Introductory Physics.** 2-1-1. A continuation of PHYS 103.
- 201: General Physics.** 0-3-3. Preq., MATH 241. Thorough treatment of fundamental principles and detailed analysis of important physical situations.
- 202: General Physics.** 0-3-3. Preq., PHYS 201 and MATH 242. A continuation of PHYS 201.
- 205: Descriptive Physics.** 0-3-3. For non-science majors interested only in the cultural aspects of the subject.
- 206: Descriptive Physics.** 0-3-3. A continuation of PHYS 205.
- 209: Elementary Physics.** 0-3-3. Preq., MATH 112. For pre-medical, pre-dental, pre-pharmacy, and science education students. A study of the fundamental principles of physics and their applications.
- 210: Elementary Physics.** 0-3-3. Preq., PHYS 209. A continuation of PHYS 209.
- 220: Astronomy - The Solar System.** 0-3-3. An introduction to Astronomy, covering the history of Astronomy and the Solar System.
- 221: Introduction to Astrophysics.** 0-3-3. Introduction to astronomy, with emphasis on physical principles. Application of mechanics to orbits of

- planets and multiple stars. Atomic theory applied to stellar spectra. Nuclear reactions in stars.
- 230: Astronomy - The Stars and Galaxies.** 0-3-3. An introduction to Astronomy, covering the stars, galaxies, and the universe.
- 261: General Physics Laboratory.** 4 1/2-0-1. Preq., MATH 112 or 241. Laboratory investigations of basic physical principles.
- 262: General Physics Laboratory.** 4 1/2-0-1. Preq., PHYS 261. A continuation of PHYS 261.
- 303: Geometrical Optics.** 0-3-3. Preq., PHYS 202. The study of thick lenses, lens system layouts, aberrations, photometric theory applied to optical systems, optical instruments and matrix optics.
- 304: Physical Optics.** 0-3-3. Preq., PHYS 202. A thorough position of the wave theory of light and an introduction to the quantum theory.
- 307: Thermodynamics.** 0-3-3. Preq., PHYS 202. Classical thermodynamics and introductory classical and quantum statistical mechanics.
- 320: Optics Laboratory I.** 4 1/2-0-1. Experiments in optics to demonstrate optical phenomena.
- 350: Introduction to Lasers.** 0-3-3. Preq., six hours of physics. Introduction to modern laser technology. A semi-quantitative approach presents all known types of lasers. Applications such as measurements, instrumentation, communications, biological, medical, and health hazards are concluding topics.
- 406: Electricity and Magnetism.** 0-3-3. Preq., MATH 245, PHYS 202. A study of the fundamental theories of electricity and magnetism. An application of basic principles is stressed.
- 407: Electricity and Magnetism.** 0-3-3. Preq., PHYS 406. A continuation of PHYS 406.
- 408: Electricity and Magnetism Laboratory.** 4 1/2-0-1. Experiments in circuitry and in classical electricity and magnetism.
- 409: Electricity and Magnetism Laboratory.** 4 1/2-0-1. Preq., PHYS 408. A continuation of PHYS 408.
- 415: Introduction to Lasers.** 0-3-3. Preq., PHYS 304, 417. Introduction to modern laser technology. Topics included are spectra of simple systems, lifetimes and energy levels, atomic, molecular and solid state lasers, and laser applications.
- 416: Modern Physics.** 0-3-3. Preq., PHYS 202. An advanced course in general physics stressing the modern developments of the subject.
- 417: Modern Physics.** 0-3-3. Preq., PHYS 416. A continuation of PHYS 416.
- 418: Modern Physics Laboratory.** 4 1/2-0-1. Laboratory exercises involving the electron and the nucleus.
- 419: Modern Physics Laboratory.** 4 1/2-0-1. Preq., PHYS 418. A continuation of PHYS 418.
- 420: Optics Laboratory II.** 4 1/2-0-1. Experiments in optics to demonstrate advanced optical phenomena.
- 422: Physical Mechanics.** 0-3-3. Preq., PHYS 202, MATH 245. Statics, particle dynamics, dynamics of a rigid body, kinetic theory, elasticity, wave motion, and behavior of fluids. Fundamental importance of mechanical principles in all fields of physics emphasized. (G)
- 423: Physical Mechanics.** 0-3-3. Preq., PHYS 422. A continuation of PHYS 422. (G)
- 424: Quantum Mechanics.** 0-3-3. Preq., PHYS 423 or equivalent, PHYS 416, and MATH 245. An extension of mechanics into the microscopic world. The statistical nature of physical law is developed to augment the classical Newtonian picture of the macroscopic world.
- 430: Introduction to Medical Physics.** 0-3-3. Preq., PHYS 209-210 or 201-202. A basic course in Physics of radiology, designed for students interested in therapeutical and diagnostic uses of ionizing radiation. (G)
- 435: Undergraduate Physics Research.** 1-3 hours credit (6). Preq., consent of instructor. Introduction to methods of research.
- 440: Fourier Optics.** 0-3-3. Preq., PHYS 406, 407, or ELEN 411. An introduction to the theory of Fourier Optics including optical data processing and holography. (G)
- 450: Modern Optics.** 0-3-3. Preq., PHYS 350. Selected topics in modern optics.
- 462: Modern Physics for Teachers.** 0-3-3. Preq., 8 hours of Physics or permission of instructor. A survey of modern physics as used by the high school teacher of physics. Emphasis is placed on experimental techniques.
- 463: Modern Physics for Teachers.** 0-3-3. Preq., 8 hours of Physics or permission of instructor. Hands-on experience for teachers developing a physics science program that emphasizes the observational side of Physics.