

- MUS 459 Internship in Music (6).** On-the-job training in a public or commercial institution. A minimum of eight weeks of training in an approved facility followed by a written report prepared under the supervision of the cooperating institution and the student's advisor. (F, S)
- MUS 463 Stagecraft for Singers (1).** Practicum in performance and production for rotating schedule of music theatre/opera. Stage movement, design/construction of set, costumes, lighting and sound. Requires an audition for major production. May be repeated for credit.
- MUS 464 Chamber Music Performance (1).** Options: Performance of piano ensemble literature; accompanying of degree recitals; performing in mixed ensembles. (May be repeated for credit.) (F, S)
- MUS 468 Workshop in Music (1-3).** As announced. (May be repeated for credit.)
- MUS 471 Piano Literature I (2).** Analysis of piano literature through Beethoven. Prerequisite: completion of Sophomore Assessment (MUS 212). (Alt F)
- MUS 472 Piano Literature II (2).** Analysis of piano literature after Beethoven. (Alt S)
- MUS 481 Vocal Pedagogy (3).** Problems encountered by teachers of studio voice; demands individual study and research which encompasses the physiological and psychological approaches to teaching singing. (Alt F)
- MUS 491 Directed Study (1-3).** Independent study. (May be repeated for a maximum of 4 credits.) Prerequisite: consent of instructor.
- MUS 493 Topics in Music (1-3).** As announced. May include topics related to theory, history or performance. (May be repeated for credit.)

Music Education (MUED)

- MUED 223 High Brass Teaching Techniques (1).** Skills and related information for teaching trumpet and French horn. (Alt F)
- MUED 300 Jazz Methods (1).** Jazz ensemble rehearsal techniques, and study of basic jazz arranging and improvisation. Study of basic jazz keyboard, bass and drums in jazz and commercial idioms. Primarily for future music educators. (Alt F)
- MUED 310 Woodwind Teaching Techniques I (1).** Fundamental skills and related information for teaching woodwind instruments. Student must attain a basic proficiency on two instruments selected from: bassoon, clarinet, flute, oboe and saxophone. (Alt F)
- MUED 311 Woodwind Teaching Techniques II (1).** Skills and related information for teaching woodwind instruments continued. Students must attain basic proficiency on three instruments other than those used for MUED 310 (Bassoon, clarinet, flute, oboe and saxophone). Prerequisite: MUED 310. (Alt S)
- MUED 312 Low Brass Teaching Techniques (1).** Fundamental skills and related information for teaching trombone, euphonium and tuba. (Alt S)
- MUED 313 String Teaching Techniques (1).** Fundamental skills for teaching string instruments. (S)
- MUED 314 Percussion Teaching Techniques (2).** Skills and related information for teaching percussion instruments. Students will meet three times a week for 2 credits. (Alt F)
- MUED 372 Techniques of Marching Band (2).** Charting, arranging, organization and rehearsal techniques of the marching band. (F)
- MUED 377 Music for Elementary Teachers (3).** Methods, materials and procedures employed in teaching music; organized for the benefit of the classroom teacher.

MUED 378 Teaching Elementary School Music (3). Methods, materials and procedures for teaching K-6 music with emphasis on areas covered by the music specialist, i.e., Orff, Kodaly, music reading, part singing. Includes ten hours of structured observation. Prerequisite: music major or minor or consent of instructor. (Alt S)

MUED 403 Wind Ensemble and Band Literature (2). Survey of elementary through advanced literature. (S)

MUED 476 Teaching Secondary School Music (3). Methods and materials for organizing and rehearsing secondary school vocal and instrumental music classes and ensembles. Includes 10 hours of structured observations of public school music classes. Prerequisites: MUS 253, 254, and 306. (Alt S)

Nursing (NURS)

Students must take Nursing 300-level courses prior to Nursing 400-level courses consistent with progressive development of core content.

NURS 305 BSN Basics (1). Knowledge and competencies basic to the nursing curriculum: Critical thinking; computerized databases; APA style; sequencing courses; adult learning behaviors. Course must be taken the student's first semester. (F, S)

NURS 312 Global Health Care (3). Examines a cross-section of national health care systems of various countries. Provide a foundation for understanding global health issues including ethics and economics in the contexts of their effects on different cultures. (F, S)

NURS 315 Foundations of Professional Nursing (4). History of nursing. Major concepts and trends. Emphasis placed on healthcare delivery, teaching modalities. Includes nursing ethics, economics, cultural competencies and legal aspects of client care. (F, S)

NURS 316 Nursing Ethics (3). Evolution of Nursing Ethics; theories of Rule Ethics, Virtue Ethics and Care Ethics; framework for ethical analysis and its application to nursing situations. (S)

NURS 317 Economics and Nursing (3). Current knowledge about nursing economics focused on factors influencing nursing care services including ethical and cultural dimensions. (F, S)

NURS 318 Women's Health Care (3). Issues affecting women's health and lives in today's society. Specific topics include historical influences, cultural and ethnic differences, ethical dilemmas, as well as physical and psychosocial issues. Course may be taken at any time during the student's matriculation. (Su)

NURS 319 Nursing Management of Pain (3). Concepts and processes basic to effective management of patients' pain. Includes clinical, ethical, legal and cultural considerations with applications to clients. Course may be taken at any time during the student's matriculation. (S)

NURS 320 Pathophysiology in Nursing (3). Complex mechanisms of human disease processes, with application to nursing care of clients in various settings. (F)

NURS 360 Health Assessment (4). Theory and skill development in physical and psychosocial assessment, history taking, data collection. Includes review of systems and physical examinations of clients in lab settings. (S)

NURS 412 Nursing Theories and Research (4). Select nursing theories and fundamentals of quantitative and qualitative nursing research with application to clients. Includes scientific inquiry, informatics in clinical decision making, cultural competencies and nursing ethics. (F)

NURS 415 Community Health Nursing (7). Integrated theory and practicum: Community-as-client; vulnerable aggregates; public health; epidemiology; community health assessment project; community service project. Prerequisite: NURS 412 (may be taken concurrently). (F)

NURS 425 Nursing Leadership (6). Integrated theory and practicum. Ethical and effective nurse leadership and management including issues and functions of planning, organizing, staffing, and controlling; role of nurse in health policy. Prerequisite: NURS 415. (S)

NURS 491 Directed Study (1–3). Independent study. (May be repeated for a maximum of 4 hours.) Prerequisite: consent of instructor. (F, S)

NURS 493 Topics in Nursing (1–3). As announced. (May be repeated for credit if topics are different.)

Philosophy (PHIL)

PHIL 201 Introduction to Philosophy (3). Elementary problems and history of philosophy and the major philosophical systems.

PHIL 202 Introduction to Logic (3). Nature and structure of logical thinking with concrete applications.

PHIL 211 Ethics (3). Morality and principles of individual and social behavior; contemporary ethical issues. (F)

PHIL 268 Workshop in Philosophy (1–3). As announced. (May be repeated for credit.)

PHIL 293 Topics in Philosophy (1–3). As announced. (May be repeated for credit.)

PHIL/REL 312 Philosophy of Religion (3).

PHIL 321 Greek Philosophy (3). Concepts of Greek philosophers and selected readings from their works. (F)

PHIL 322 Medieval Philosophy (3). European philosophers through the 13th century. (F)

PHIL 331 Modern Philosophy (3). Western philosophical thinkers from the 14th century to the present. (S)

PHIL 332 American Philosophy (3). American philosophical thinkers with selected readings from their works. (S)

PHIL 404 Contemporary Problems of Philosophy (3). The areas of philosophy which relate to science, politics and religion. (S)

PHIL 468 Workshop in Philosophy (1–3). As announced. (May be repeated for a maximum of 6 hours.)

PHIL 491 Directed Study (1–3). Independent study. (May be repeated for a maximum of 4 hours.)

PHIL 493 Topics in Philosophy (1–3). As announced. (May be repeated for a maximum of 6 hours.)

Physical Science (PHSC)

PHSC 293 Topics in Physical Science (1–3). As announced. (May be repeated with permission of advisor.)

PHSC 493 Topics in Physical Science (1–3). As announced. (May be repeated with permission of advisor.)

Physics (PHYS)

PHYS 113 Survey of Physics (3). Important concepts in physics and their application to the everyday world. A course designed for non-scientists with an emphasis on conceptual understanding. (F, S)

PHYS 113L Survey of Physics Laboratory (1). A two-hour optional laboratory designed to give a hands-on exploration of the basic concepts of physics introduced in the accompanying class. Concurrent enrollment: PHYS 113. (F, S)

PHYS 123 Physics of Music (3). Application of physical principles to understanding musical instruments as well as the human voice and auditory system. PHYS 123L optional. (Alt F)

PHYS 123L Physics of Music Laboratory (1). Experiments and activities to accompany PHYS 123. Concurrent enrollment: PHYS 123. (Alt F)

PHYS 141 Astronomy (3). An introduction to the sky and a survey of the objects in the violent universe from our own solar system to globular clusters, nebulae, galaxies and quasars. (S)

PHYS 141L Astronomy Laboratory (1). An optional laboratory investigation of physical principles relevant to understanding astronomical objects and the techniques of observational astronomy. Some lab sessions will meet at night. Concurrent enrollment: PHYS 141 or consent of instructor. (S)

PHYS 151 General Physics (3). The first semester of a two-semester non-calculus treatment of principles of mechanics, thermodynamics, electricity and magnetism, and optics. Primarily for pre-medical and pre-dental students and others requiring basic knowledge of physics. Prerequisite: knowledge of algebra including familiarity with trigonometry. Concurrent enrollment: PHYS 151L. (F)

PHYS 151L General Physics Laboratory (1). Laboratory investigations related to lecture material. Meets three hours per week. Concurrent enrollment: PHYS 151. (F)

PHYS 152 General Physics (3). Continuation of PHYS 151. Prerequisites: PHYS 151/151L. Concurrent enrollment: PHYS 152L. (S)

PHYS 152L General Physics Laboratory (1). Continuation of PHYS 151L. Meets three hours per week. Concurrent enrollment: PHYS 152. (S)

PHYS 201 Physics I (4). Calculus-based principles and technical applications in mechanics and heat. For the science and pre-engineering major. Concurrent enrollment: MATH 124; PHYS 201L. (F)

PHYS 201L Physics I Laboratory (1). Laboratory investigations related to lecture material. Meets three hours per week. Concurrent enrollment: PHYS 201. (F)

PHYS 202 Physics II (4). Calculus-based principles and technical applications in fluid mechanics, electricity, magnetism, wave motion and light. Prerequisites: PHYS 201/201L. Concurrent enrollment: PHYS 202L; MATH 132. (S)

PHYS 202L Physics II Laboratory (1). Continuation of PHYS 201L. Meets three hours per week. Concurrent enrollment: PHYS 202. (S)

PHYS 268 Workshop in Physics (1–3). As announced. (May be repeated for a maximum of 4 hours.)

PHYS 293 Topics in Physics (1–3). As announced. (May be repeated for credit.)

PHYS 301 Modern Physics (3). Empirical foundations of quantum mechanics including photoelectric effect, black body radiation, Bohr atom, wave-particle duality, Schrodinger's equation for simple models. Prerequisites: 1 year of introductory physics; 1 year of calculus. (Alt S)

PHYS 303 Mechanics I (3). Kinematics and dynamics of particles using Newtonian and Lagrangian methods. Driven harmonic motion, normal modes of vibration and wave motion, Keplerian orbits, Rutherford scattering and cross sections. Prerequisites: one year of college physics; at least two semesters of calculus. Recommended prerequisite: MATH 351. (Alt F)

PHYS 304 Mechanics II (3). This continuation of PHYS 303 covers relativity, non-linear dynamics, non-inertial frames and introduction of the more powerful abstract methods of Lagrange, Hamilton and Hamilton-Jacobi theory. Prerequisite: PHYS 303. (Alt S)