

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)