**PHYSICAL SCIENCE (PHSC)**

**PHSC 101 PHYSICAL SCIENCE I (4)**
Fundamental principles of selected topics from physics and chemistry, emphasizing construction of concepts from experimental evidence. May not be used for the Natural Science major. Prerequisites: Education major or department consent. GenEd II.A. or Core: Biological & Physical Sciences. Lab/Class fee will be assessed.

**PHSC 103 PHYSICAL SCIENCE II (4)**
Fundamental concepts of atoms, molecules, energy, states of matter, and processes involved in phase transitions integrating chemistry, earth science, and physics through application to interdisciplinary environmentally oriented topics. One hour lecture, four hours lecture-lab. Prerequisite: PHSC 101 or permission of instructor.

**PHSC 195 COURSE RESEARCH IN 100-LEVEL COURSES (1)**
Individual projects in any branch of physical science. Students can choose either to work on projects or in areas suggested by physical science faculty. At the completion of a project, students must write a formal research paper on the work done. Repeatable for credit at different levels. Prerequisite: permission of the instructor who will direct the proposed work.

**PHSC 206 EARTH-SPACE SCIENCE FOR MIDDLE SCHOOL TEACHERS (3)**
Earth-Space Science for middle school education majors, emphasizing development of principles from experiments and discussion. Topics include plate tectonics, the rock cycle, celestial motion, and stellar evolution. Prerequisites: None. Lab/Class fee will be assessed.

**PHSC 295 COURSE RESEARCH IN 200 LEVEL COURSES (1)**
Individual projects in any branch of physical science. Students can choose either to work on projects or in areas suggested by physical science faculty. At the completion of a project, students must write a formal research paper on the work done. Repeatable for credit at different levels. Prerequisite: permission of the instructor who will direct the proposed work.

**PHSC 303 EARTH SPACE SCIENCE (3)**
Physical science principles applied in the study of earth and space. Emphasis on experimental and discovery approaches. Prerequisite: PHSC 101. Lab/Class fee will be assessed.

**PHSC 312 HISTORY OF SCIENCE (3)**
A general overview of the development of scientific knowledge from ancient to modern times. How our modern scientific worldview has been shaped by major periods of scientific development, particularly in the 16th and 17th centuries involving primarily astronomy and physics, and in the 19th and 20th, including geology, biology, and psychology. Attention will be given to the relations between science and culture, religion, technology, and public policy. Requires grade of C or better to fulfill Core or GenEd requirement. Prerequisites: ENGL 102 or ENGL 190; successful completion of University Core Categories 2, 3, 7, and 8 [or GenEd Categories I.B., I.C., and II.A]. Core: Advanced Writing Seminar or GenEd I.D.

**PHSC 360 INTERSHIP IN PHYSICAL SCIENCE (2-3)**
Practical experience in Physical Science in industry or public or private agencies through the University’s Internship/Cooperative Education Program. Special permit and fee required. May be repeated for a maximum of 6 units. Prerequisites: major in Natural Science, junior or senior standing; 2.70 GPA; consent of major adviser.

**PHSC 401 ADVANCED LABORATORY IN PHYSICAL SCIENCE (2)**
Exacting laboratory work of an advanced nature under the guidance of the Physical Sciences staff. Students will present and defend their work at a seminar. May be repeated for a maximum of 6 units. Prerequisite: consent of instructor.

**PHSC 470 SPECIAL TOPICS PHYSICAL SCIENCE (1-4)**
The study of special topics in the area of Physical Science. Special topics will be determined by their need for study and relevance to existing courses. May be repeated for a maximum of 4 units provided a different topic is covered.

**PHSC 490 INDEPENDENT STUDY IN PHYSICAL SCIENCE (1-4)**
Individual and supervised research in selected areas of the physical sciences. Topics may be either theoretically or experimentally oriented. May be repeated for a maximum of 6 units. Prerequisites: junior status and one course in PHSC.

**PHSC 491 DIRECTED READINGS (1-4)**
Independent reading in an area selected by the student in consultation with the instructor. May be repeated for a maximum of 6 units. Prerequisites: junior status and one course in PHSC.

**PHSC 494 TRAVEL STUDY (1-3)**
Investigation of field problems and phenomena. May be repeated for a maximum of 3 units.

**PHSC 495 COURSE RESEARCH IN 400-LEVEL COURSES (1)**
Individual projects in any branch of physical science. Students can choose either to work on projects or in areas suggested by physical science faculty. At the completion of a project, students must write a formal research paper on the work done. Repeatable for credit at different levels. Prerequisite: permission of the instructor who will direct the proposed work.