PHYS 4270K: Computational Physics II

3 Credit Hours

Prerequisite: PHYS 3500K

This course is a continuation of Computational Physics I. Advanced mathematical methods and numerical algorithms are applied to the solution of a variety of problems in physics. Emphasis is on the mathematical methods used to model physical systems. Students will learn a variety of numerical methods which they will implement using computer programs, and they will also learn how to use modern technical computing software to model physical systems with both numeric and symbolic calculations.

PHYS 4400: Directed Study

1-4 Credit Hours

Prerequisite: Approval of the instructor, major area committee and department chair.

Special topics of an advanced nature that are not in the regular course offerings.

PHYS 4410K: Advanced Physics Laboratory

2 Credit Hours

Prerequisite: PHYS 3410K and PHYS 3720L

An introduction to instrument control, data acquisition, and data analysis of the type used in the research labs. The student will then incorporate these techniques in the design of experiments important to classical and/or contemporary physics. This course will be writing intensive and will require extensive formal reports.

PHYS 4430: Capstone Physics Project

1 Credit Hours

Prerequisite: Senior standing.

Students will complete a research project in physics or a related field during the last year on campus. The content and subject of this project will be negotiated between the student and the faculty supervisor of the project.

PHYS 4490: Special Topics in Physics

1-4 Credit Hours

Special topics selected by the department of interest to the Physics faculty and students.