

# Physics and Astronomy Courses (PHYSICS, ASTRONOMY)

## Contact:

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## PHYSICS COURSES (PHYSICS)

### PHYSICS 503

#### Microprocessor Laboratory 2 u

Laboratory experience in microprocessor addressing, digital logic circuits, microcomputer input and output techniques, digital to analog and analog to digital interfacing and device control by microcomputers. This course will not satisfy the laboratory work requirements for the physics major; the credit will count toward the major.

Prereq: PHYSICS 175 (or PHYSICS 163) and COMPSCI 171; or concurrent registration in COMPSCI 302/502; or graduate standing with computer programming experience; or consent of instructor.

### PHYSICS 610

#### Modern Physics I 3 u

A study of twentieth century physics. Topics covered include relativity, elementary quantum physics, atomic structure, elementary nuclear physics and fundamental particles. Three one-hour lectures per week.

Prereq: PHYSICS 174, PHYSICS 175 or PHYSICS 162, PHYSICS 163 and MATH 254.

### PHYSICS 611

#### Modern Physics Laboratory I 1 u

A laboratory course in modern physics. The experiments performed in this course complement the lectures of Modern Physics I. It is recommended that this course be taken concurrently with Modern Physics I. One two-hour laboratory per week.

Prereq: PHYSICS 410/610 or concurrent registration or consent of instructor.

### PHYSICS 612

#### Modern Physics II 3 u

A continuation of Modern Physics I. Topics covered include statistical mechanics, atomic and molecular spectra, x-ray spectra, physics of the solid state and nuclear physics. Three one-hour lectures per week.

Prereq: PHYSICS 410/610.

**PHYSICS 690**  
**Workshop 1-8 u**

**PHYSICS 691**  
**Travel Study 1-3 u**

**PHYSICS 694**  
**Seminar 1 u**

**PHYSICS 696**  
**Special Studies 1-3 u**  
Prereq: Consent of the instructor.

**PHYSICS 790**  
**Workshop 1-6 u**

**PHYSICS 794**  
**Seminar 1-3 u**

**PHYSICS 796**  
**Special Studies 1-3 u**

**PHYSICS 798**  
**Individual Studies 1-3 u**

**PHYSICS 799**  
**Thesis Research 1-6 u**  
Students must complete a Thesis Proposal Form in the Graduate Studies Office before registering for this course.

#### **ASTRONOMY COURSES (ASTRONOMY)**

**ASTRONOMY 630**  
**Astronomy For Teachers 3 u**

An individualized course intended for teachers with limited astronomy background. Subject matter covered will depend on the needs and interests of the student. Each student does an experimental or observational project which is presented at the end of the course as a paper in a seminar.  
Prereq: Enrollment in this course is limited to those teaching at the K-12 grade levels or consent of the instructor.

**ASTRONOMY 690**  
**Workshop 1-5 u**

**ASTRONOMY 798**

**Individual Studies 1-3 u**