

# Physics

## Overview

The undergraduate program in physics is designed to provide a fundamental understanding of both experimental and theoretical physics. It provides a strong basis for either graduate study in physics or employment by industrial or governmental laboratories. By a suitable choice of electives, students will also be prepared for graduate study in the other sciences, mathematics, engineering, or medicine.

## Degree Requirements

### *Bachelor of Science with a Major in Physics*

#### 1. General Education Requirements (43-54 hours)

The following courses fulfill some of the general education requirements and some cognates and must be completed for a major in physics: PHYS 206, 207, 208, 211L, 212L; MATH 141, 142, 241, and 242; and two math courses 500 level and above, selected with advisor; CHEM 111 and 112; CSCE 145. A grade of C or higher is required in all physics courses.

For an outline of other general education requirements, see "College of Science and Mathematics."

#### 2. Major Requirements

##### **General Major (25-26 hours)**

Courses in physics, to include the following: PHYS 307, 308, 309, 501, 502, 503, 504, and 506 (22 hours)

One course in experimental physics (e.g., 509, 511, 514, 531, or 532) (3-4 hours)

Total (25-27 hours)

##### **Intensive Major (34-36 hours)**

Courses in Physics, to include the following: PHYS 307, 308, 309, 501, 502, 503, 504, 505, and 506 (25 hours)

Three physics electives numbered 500 or above, to include at least two courses in experimental physics (e.g., 509, 510, 511, 514, 531, or 532) (9-11 hours)

## **Requirements for the Major in Physics, Engineering Physics track.**

### **1. General Education Requirements (43-54 hours)**

The following courses fulfill some of the General Education Requirements and some Cognates and must be completed for a major in physics: PHYS 206, 207, 208, 211L, 212L; MATH 141, 142, 241, and 242; and two math courses 500 level and above, selected with advisor; CHEM 111 AND 112; CSCE 145. A grade of C or higher is required in all physics, mathematics, and engineering courses.

For an outline of other General Education Requirements, see College of Science and Mathematics.

### **2. Major Requirements**

#### **Computer Option (48-49 hours)**

PHYS 307, 308, 309, 311, 502, 503, 504, 506, and one course chosen from PHYS 501, 505, 511, 512, 514

CSCE 146, 212, either 211 and 313 or 245 and 311, and one course numbered 491 or higher.

ECON 421 (may be used for Group IV)

#### **Electrical Option (52-54 hours)**

PHYS 307, 308, 309, 311, 502, 503, 504, 506, and two courses chosen from PHYS 501, 505, 509, 511, 512, 514

ELCT 102, 201, 221, 222, 371, 301

CSCE 211

ECON 421 (may be used for Group IV)

#### **Mechanical Option (52-55 hours)**

PHYS 307, 308, 309, 311, 502, 503, 504, and three courses chosen from PHYS 501, 505, 506, 509, 511, 512, 514

EMCH 200, 260, 290, 360, 327, 507, 508

EMCH 327, 507, 508

ECON 421 (may be used for Group IV)