

## Contact

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## Admission Requirements

(In years as established by the college)

A high school diploma with the following specific courses:

- 4 English
- 2 Algebra I & II
- 1 Geometry
- 1/2 Trigonometry
- 2 Lab Science (*including chemistry or physics*)
- 2 History/Social Studies
- 2 Foreign Language (*same language or two years of American Sign Language-ASL*)
- Academic electives (*to equal at least 17 total credits*)

*To ensure current mathematical skills, students should take a mathematics course during their senior year of high school.*

## Major Requirements

### Bachelor of Arts

- 35 credits Physics
- 25 credits Sciences & Mathematics
- 60 credits Electives

### Bachelor of Science

- 52 credits Physics
- 28 credits Sciences & Mathematics
- 40 credits Electives

*120 Minimum total credits required for graduation*

## College of Liberal Arts & Sciences

### Program Description

The Bachelor of Arts (B.A.) degree in Physics is a relatively flexible program that requires a minimum of 35 semester credits in physics, 15 credits in mathematics, 4 credits in chemistry, and 6 additional credits of approved science, engineering or mathematics electives. Students may elect additional credits in Physics, but at least 72 credit hours of the total 120 credits must be taken in departments other than Physics.

The Bachelor of Science (B.S.) degree in Physics requires a minimum of 52 credits of physics, 18 credits of mathematics, 10 credit hours in science. The minimum number of credit hours required for the B.S. degree is 120.

A number of students have been able to participate in internships to enhance their learning experience. Some of those positions have been: Engineering Design Associate, Amoco Laser Corporation; Solid Waste Facilities Inspector, Department of Environmental Protection; Research Intern, Oak Ridge Associated Universities; Research Intern, Crocker Nuclear Lab; Intern, Applied Physics Laboratory.

### Career Opportunities

The Bachelor of Arts program can be adapted to a variety of student needs. It can provide the depth of a background in physics and mathematics required by students preparing for graduate school or a physics-based career in industry. It can be tailored to students planning careers in medicine, dentistry or in broad science areas such as astronomy, astrophysics, biophysics, environmental studies, geophysics and physical oceanography. In addition, it can be adjusted to serve the special needs of students who plan careers in management or law with a strong science background or to prospective secondary school science teachers.

The Bachelor of Science program is customarily the prerequisite for graduate education in physics, astronomy or related areas preparatory for careers in basic or applied research and development. Because of its strong emphasis on science and mathematics, it is particularly appropriate for those seeking careers in research at industrial, governmental or academic institutions.

Recent graduates of these programs have accepted positions such as: Engineer at the Portsmouth Naval Shipyard and Research Technician at S.D. Warren.

### General Education Requirements\*

- ENG 101 College Composition
- 18 credits Human Values & Social Context area (*a single course may satisfy more than 1 sub-category, but a total of 18 credits must be completed*)
  - Western Cultural Tradition
  - Social Context & Institutions
  - Cultural Diversity & International Perspectives
  - Population & the Environment
  - Artistic & Creative Expression
- 2 courses Designated Writing Intensive (*1 must be within the major*)
- 2 courses Biological or Physical Sciences (*must include at least 1 laboratory course*)
- 1 course Ethics (*emphasis on discussion of ethical issues in 1 course or series of courses*)
- 6 credits Mathematics (*including statistics & some computer science, only 3 credits in computer science can count toward this requirement*)
- 1 capstone An approved experience in which the student integrates the components of his or her undergraduate training to perform at a professional level. The capstone experience is usually completed during the senior year in consultation with the student's academic advisor.

*\*All UMaine students must complete these general education requirements, which are counted in the total credit hours required for graduation and may be contained in the Major Requirements previously listed.*

## **Specialized Information**

The Department of Physics and Astronomy offers a minor in physics or astronomy. The minor is open to all undergraduate, degree-seeking University of Maine students and requires the completion of an approved sequence of 21 credits in either Physics or Astronomy courses.

## **Graduate Study**

Recent graduates of these programs have gone on to pursue a graduate degree at such institutions as: Boston University, Brandeis University, Cornell University, the University of Arizona, the University of Maine, the University of Pittsburgh, Rensselaer Polytechnic Institute, Stanford University. The University of Maine offers a Master of Science in Physics degree, a Master of Science with a concentration in Engineering Physics degree, and a Doctor of Philosophy in Physics degree.

### **Academic Programs 2008-2009**

Please refer to the web site (<http://factsheets.umaine.edu/>) for the most updated version of the fact sheets.  
This fact sheet is intended for informational purposes only and is subject to change.