

## PHYSICS

<http://cos.gmu.edu/academics/undergraduate/majors/physics>

### Name and description of the field.

Physics is the study and application of the fundamental laws of nature on all size scales from the infinitesimally small to the entire universe and on all time scales from the beginning of time to the far distant future. Physics describes how the physical world works. Other sciences build on physics, which is the most fundamental of all sciences. Physicists investigate the fundamental laws of nature or make use of what we already know about the physical world to design, develop, and evaluate new products and technologies. A physics degree opens an astonishing variety of career possibilities.

### What special skills or abilities are needed to succeed in this major?

The potential to development advanced mathematical and logical skills is essential, and strong physical intuition and geometrical sense are very helpful.

### If both B.A. and B.S. degrees are offered, what are the differences in career/graduate school opportunities?

Only the BS degree is offered

### Is it possible to minor in Physics?

Yes.

### What are recent graduates doing?

A Physics degree opens an astonishing variety of career possibilities. Many recent graduates have gone on to earn advanced degrees in Physics or related fields. Graduates have found employment in a wide variety of fields. The Washington D.C. metropolitan area has a high concentration of high technology companies and federal government agencies that employ physicists. Fields open to Physics graduates include education, research, medicine, engineering, space and earth sciences, law, consulting, environmental science, publishing/journalism, communications, and manufacturing.

### Specific job titles include:

Physicist	Systems Engineer	Research Scientist
Oceanographer	Physical Science Technician	Software Engineer
Medical Imaging Engineer	Technical Writer	Environmental Physicist
Intergrated Circuit Designer	Physical Science Teacher	Web Developer

### Organizations that typically hire Physics graduates include:

Naval Research Laboratory	Performance Engineering Corp.
Nat'l Oceanic & Atmospheric Admin.	National Weather Service
Systems Research & Application Corp	Science Applications International Corp.
Nat'l Inst. for Standards & Technology	Logicon, Inc.
NASA	Metron. Inc.
Hunter Labs	

### Resources for further information:

A key element in effective decision making is having sufficient information about the major or career being explored. Sources of information include people in the field, professional associations relating to the field, faculty and your career services counselor. Below are additional resources to aid in exploration:

**Printed Resources:** (Career Services Library, 348 SUB1)

[http://careers.gmu.edu/careerlibrary/wheretostart/phys\\_astr.pdf](http://careers.gmu.edu/careerlibrary/wheretostart/phys_astr.pdf)

**Online Resources:** [http://careers.gmu.edu/onlineresources/phys\\_astr.htm](http://careers.gmu.edu/onlineresources/phys_astr.htm)

**Science Related Job/Internship Postings:** <http://cos.gmu.edu/students/careerservices> &

<http://www.aaas.org/careercenter/>

**Networking Resource:** <http://www.mentornet.net/>

## EXPLORING MAJORS

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### Professional Associations:

- **American Association for the Advancement of Science**- <http://www.aaas.org/>
- **American Astronomical Society** - <http://www.aas.org>
- **American Institute of Physics** - <http://www.aip.org/>
- **Mason Student Clubs/Orgs/Societies Science and Technology Umbrella** - [http://sa.gmu.edu/student\\_orgs/orgs.php#stu](http://sa.gmu.edu/student_orgs/orgs.php#stu)

### Contacts for further information?

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