

What can I do with a major in **PHYSICS** from Valparaiso University?

Description of major:

Physics involves the study of matter and energy. It attempts to find out how and why physical matter and energy interact as well as to describe force, motion and gravity. The fundamental laws that guide the interaction of matter and energy encompass a realm from the submicroscopic particles of the atomic nucleus to the distant constituents of the universe. Students may choose to concentrate on Fundamental Physics, Astronomy & Space Science, High School Physics Teaching, and Applied Physics.

Relevant skills for a PHYSICS major:

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| <ul style="list-style-type: none"> ◆ Anticipate problems ◆ Clarify problems and situations ◆ Collect and organize data ◆ Conduct & clearly explain scientific research ◆ Critique ◆ Diagnose ◆ Do scientific or laboratory work ◆ Have strong mathematical skills | <ul style="list-style-type: none"> ◆ Make critical observations & appropriate decisions ◆ Operate, use & program computers ◆ Organize, analyze & interpret scientific data ◆ Perceive/define cause and effect relationships ◆ Perform ambiguous tasks ◆ Recognize elements, relationships, structures | <ul style="list-style-type: none"> ◆ Review large amounts of material and extract essence ◆ Solve problems ◆ Systematize material ◆ Trouble-shoot ◆ Work independently and others! |
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Sample work activities for Graduates in PHYSICS (some may require an advanced degree)

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| <ul style="list-style-type: none"> • Acoustical Engineer • Aerospace Engineer • Aeronautical Engineer • Airplane Pilot • Architect • Astronomer • Astrophysicist • Ballistics Expert • Biophysicist • Chemical Physicist • Civil Engineer • Computer Programmer • Computer Systems Engineer • Crime Laboratory Analyst • Editor/science publication | <ul style="list-style-type: none"> • Electrical Engineer • Environment Engineer • Environmental Analyst • Geophysicist • Hydrologist • Industrial Engineer • Laboratory Technician • Marine Scientist • Mechanical Engineer • Medical Physicist • Metallurgical Engineer • Meteorologist • Nuclear Engineer • Nuclear Medical Technologist • Oceanography | <ul style="list-style-type: none"> • Optometrist • Patent Lawyer • Photo Optics Technician • Physicist • Polymer Physicist • Professor/Instructor – College/University • Radiation Health Physicist • Seismologist • Stress Analyst • Teacher – High School • Technical illustrator • and others! |
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Potential hiring institutions for PHYSICS majors:

- ◆ Airports
- ◆ Colleges and Universities
- ◆ Commerce Department
- ◆ Computer companies
- ◆ Computer-user companies
- ◆ Energy Department
- ◆ Hospitals
- ◆ Manufacturing & Processing firms
- ◆ National Science Foundation
- ◆ Particle Accelerator Laboratories
- ◆ Professional/technical journals
- ◆ Publishing companies
- ◆ Research & Development laboratories
- ◆ High schools
- ◆ Software companies
- ◆ Technology firms
- ◆ Utility companies

Area of further education for PHYSICS majors:

- Acoustics
- Aerospace/Aeronautical Engineering
- Applied Physics
- Architecture
- Artificial Intelligence/Robotics
- Astronomy
- Astrophysics
- Aviation
- Biophysics
- Business Administration
- Computer Engineering
- Electrical Engineering
- Engineering
- Engineering Management
- Engineering Physics
- Financial Engineering
- Geophysical Fluid Dynamics
- Geophysics
- Health Physics/Radiological Health
- Law
- Math Education
- Mathematical Physics
- Mathematics
- Mechanical Engineering
- Medical Physics
- Medicine
- Music Acoustics
- Nuclear Engineering
- Optical Sciences
- Patent Law
- Physics
- Planetary & Space Sciences
- Plasma Physics
- Radiation Biology
- Software Engineering
- Teacher Education
- Theoretical Physics
- and others!

Sources of additional information for PHYSICS majors:

- VU Department of Physics: A very helpful website that includes career planning information and some employment opportunities posted by VU Alumni <http://www.physics.valpo.edu>
- VU Majors & Areas of Study: <http://www.valpo.edu/cas/departments/physics.html>
- Occupational Outlook Handbook: the US Bureau of Labor Statistics compiles information about various occupations, including the nature of the work, the job outlook, the earnings, and other relevant information. <http://www.bls.gov/oco/oco1002.htm>
- American Association for the Advancement of Science: the world's largest general science organization and publisher of the peer-reviewed journal Science. With more than 138,000 members and 275 affiliated societies, AAAS serves as an authoritative source for information on the latest developments in science and bridges gaps among scientists, policy-makers and the public to advance science and science education. Site includes a page on Science Careers. <http://www.aaas.org/>
- American Astronomical Society: Articles, news, career information and job listings in the Career Services section. <http://www.aas.org/>
- American Institute of Physics: Has a section on the website for Jobs & Industry which includes the Job Opportunities Database, Career Bulletin Board, Resume Posting & Search and Career Workshops, <http://www.aip.org/>
- American Physical Society: Extensive website that includes a Careers & Employment section. <http://www.aps.org>
- High Energy Physics Information Center: Includes Employment Opportunities and links to other employment sites. <http://www.hep.net/>
- National Science Foundation: an independent U.S. government agency responsible for promoting science and engineering through programs that invest over \$3.3 billion per year in almost 20,000 research and education projects in science and engineering. This site contains information specific to students and Job Opportunities. <http://www.nsf.gov/>
- Physical Science Resource Center: A project by the American Association of Physics Teachers that provides teacher resources for the entire spectrum of learners. <http://www.psrc-online.org/>

- [PhysicsJobs.com](http://www.physicsjobs.com): job opportunities in physics. <http://www.physicsjobs.com>
- [PhysicsWeb](http://physicsweb.org/): global news in physics. Don't skip their PhysicsJobs section. They host TIPTOP but do not cross-post job listings with them. <http://physicsweb.org/>
- [PhysLINK](http://www.physlink.com/): information on Physics, astronomy, and engineering. And a nice job board that includes industry, academic, graduate, and post graduate positions. <http://www.physlink.com/>
- [Science Magazine's Next Wave](http://nextwave.sciencemag.org/): the career development resource for scientists. <http://nextwave.sciencemag.org/>
- [SpaceJobs.Com](http://www.spacejobs.com): News, articles & Career Opportunities. <http://www.spacejobs.com>

VU Career Center Resource Library Materials:

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| <ul style="list-style-type: none"> • <i>Book Of U.S. Government Jobs: Where They Are, What's Available, And How To Get One</i> • <i>Career Opportunities In Law And The Legal Industry</i> • <i>Career Opportunities In Science</i> • <i>Essays That Worked For Law Schools: 35 Essays From Successful Applications To The Nation's Top Law Schools</i> • <i>Federal Personnel Guide 2003</i> • <i>Graduate Programs In Engineering And Computer Science</i> • <i>Graduate Programs In Physical Sciences</i> • <i>Guide To America's Federal Jobs : A Complete Directory Of Federal Career Opportunities</i> • <i>Is There An Engineer Inside You? : A Comprehensive Guide To Career Decisions In Engineering</i> • <i>Job Surfing: The Sciences--Research And Medicine: Using The Internet To Find A Job And Get Hired</i> • <i>Law Schools</i> • <i>LSAT 2005</i> | <ul style="list-style-type: none"> • <i>Opportunities In Aerospace Careers</i> • <i>Opportunities In Engineering Careers</i> • <i>Opportunities In Environmental Careers</i> • <i>Opportunities In Government Careers</i> • <i>Opportunities In Laser Technology Careers</i> • <i>Opportunities In Law Careers</i> • <i>Opportunities In Technical Sales Careers</i> • <i>Peterson's Game Plan For Getting Into Law School</i> • <i>Peterson's Graduate Programs In Engineering & Applied Sciences</i> • <i>Peterson's Graduate Programs In The Physical Sciences, Mathematics, Agricultural Sciences, The Environment & Natural Resources</i> • <i>Phd Factory: Training And Employment Of Science And Engineering Doctorates In The United States</i> • <i>Resumes For Government Careers</i> • <i>Resumes For High Tech-Careers</i> • <i>Resumes For Scientific And Technical Careers and others!</i> |
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For more information about majoring in PHYSICS, contact:

Bruce Hrivnak, Ph.D.
 Physics and Astronomy
 Neils Science Center 140
 464-5379
Bruce.Hrivnak@valpo.edu

For more questions about your career decisions, please make an appointment with a VU Career Counselor by calling 464-5005, stopping by the Career Center in Alumni Hall or e-mailing us at Career.Center@valpo.edu