# Physics

## What Can I Do With This Degree?

General, Acoustical Physics, Astronomy, Astrophysics, Biophysics, Fluid and Plasma Physics, Geophysics, Health Physics, Medical Physics, Nuclear Physics, Optical Physics, Science Education, Solid State Physics, Technology,

<table>
<thead>
<tr>
<th>AREAS</th>
<th>EMPLOYERS</th>
<th>STRATEGIES</th>
<th>RESOURCES</th>
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<tr>
<td>PHYSICS - GENERAL</td>
<td></td>
<td></td>
<td>• American Institute of Physics</td>
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<td>• American Physical Society</td>
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<td>ACOUSTICAL PHYSICS</td>
<td>• Colleges &amp; Universities</td>
<td>• Take courses in psychology and physiology, speech and hearing, vibration,</td>
<td>• Acoustical Society of America</td>
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<td>Research &amp; Development</td>
<td>• Government laboratories &amp; non-profit research centers</td>
<td>radiation therapy and light and optics.</td>
<td>• American Institute of Physics</td>
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<td>Teaching</td>
<td>• Industry involved in electronics, building design, medical instrumentation, communications, engineering, noise pollution, and recording and film production.</td>
<td>• Earn a master's degree in physics (preferred by the industry)</td>
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<td>Consulting</td>
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<td>• Gain knowledge of political science, sociology, and law.</td>
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<td>Testing</td>
<td></td>
<td>• Maintain an interest in music, the arts and humanities.</td>
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<td>Administration</td>
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<td>ASTRONOMY</td>
<td>• Colleges &amp; Universities</td>
<td>• Get involved in a research project.</td>
<td>• American Astronomical Society</td>
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<td>Teaching</td>
<td>• Observatories</td>
<td>• Acquire excellent knowledge of oral and written English.</td>
<td>• American Institute of Physics</td>
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<td>Research</td>
<td>• Planetariums</td>
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<td>Writing</td>
<td>• Science Museums</td>
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<td></td>
<td>• Nonprofit foundations</td>
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<td></td>
<td>• Industry: aerospace, scientific supply, mass</td>
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<tr>
<td>Field</td>
<td>Opportunities</td>
<td>Experience</td>
<td>Organizations</td>
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<td><strong>ASTROPHYSICS</strong>&lt;br&gt;Teaching&lt;br&gt;Research &amp; Design&lt;br&gt;Consulting&lt;br&gt;Astronautics Administration</td>
<td>Government laboratories and research centers&lt;br&gt;Airports&lt;br&gt;Colleges &amp; Universities&lt;br&gt;Industry including space research&lt;br&gt;Observatories or planetariums&lt;br&gt;National Aeronautics &amp; Space Administration (NASA)&lt;br&gt;Military</td>
<td>Gain experience through work or volunteering in a planetarium, observatory or science museum.</td>
<td>American Institute of Aeronautics and Astronautics&lt;br&gt;American Institute of Physics</td>
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<td><strong>BIOPHYSICS</strong>&lt;br&gt;Teaching&lt;br&gt;Research &amp; Development&lt;br&gt;Consulting&lt;br&gt;Administration</td>
<td>Colleges &amp; Universities&lt;br&gt;Government laboratories and nonprofit research centers&lt;br&gt;Industry including biotechnology, environment, pharmaceuticals</td>
<td>Acquire information about state licensure required for technicians employed in hospitals or certain medical areas.&lt;br&gt;Gain experience as laboratory assistant, hospital orderly, or volunteer at a</td>
<td>Biophysical Society</td>
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<td>Field</td>
<td>Examples</td>
<td>Required Education</td>
<td>Professional Organizations</td>
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<td><strong>FLUID &amp; PLASMA PHYSICS</strong></td>
<td>- Hospitals&lt;br&gt;- Colleges &amp; Universities&lt;br&gt;- Government and nonprofit research centers&lt;br&gt;- Industry including automobile, jet engine and space vehicle design, and controlled fusion devices&lt;br&gt;- Government agencies</td>
<td>- Earn master's degree for positions in industry.</td>
<td>- Fluid Dynamics Links</td>
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<td>Teaching Consulting Administration</td>
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<td><strong>GEOPHYSICS</strong></td>
<td>- Colleges &amp; Universities&lt;br&gt;- Government and nonprofit research centers&lt;br&gt;- Federal government (e.g. U.S. Geological Survey, Army Map Service, Naval Oceanographic Office)&lt;br&gt;- Industry: petroleum, mining, exploration and consulting firms.</td>
<td>- Specialize in geophysics or minor in geology.&lt;br&gt;- Develop good background in mathematics and chemistry, engineering and physics.&lt;br&gt;- Maintain good physical condition.</td>
<td>- American Geophysical Union</td>
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<td>Teaching Consulting Administration</td>
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<td><strong>HEALTH PHYSICS</strong></td>
<td>- Colleges &amp; Universities&lt;br&gt;- Government laboratories and nonprofit research centers&lt;br&gt;- Government agencies, e.g. Departments of Defense, Energy, Public Health Service</td>
<td>- Earn Ph.D. and certification by the American Board of Health Physics (ABHP) for top college/university teaching and advanced research and administrative positions.</td>
<td>- Health Physics Society</td>
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<td>Basic and Applied Research Consulting Monitoring/Inspection Training Teaching Administration</td>
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<td>MEDICAL PHYSICS</td>
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<td>NUCLEAR PHYSICS</td>
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<td><strong>Basic and Applied Research</strong></td>
<td><strong>Colleges, universities and medical schools.</strong></td>
<td><strong>Colleges &amp; Universities</strong></td>
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<td><strong>Consulting and Advising</strong></td>
<td><strong>Hospitals</strong></td>
<td><strong>Military</strong></td>
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<td><strong>Teaching</strong></td>
<td><strong>Industry, e.g. medical instrumentation</strong></td>
<td><strong>Industry including:</strong></td>
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<td><strong>Administration</strong></td>
<td><strong>Government Agencies</strong></td>
<td><strong>nuclear weapons, nuclear accelerators and reactors,</strong></td>
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<td><strong>Government laboratories and nonprofit research centers</strong></td>
<td><strong>nuclear instrumentation</strong></td>
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<td><strong>and radioisotope products</strong></td>
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<td><strong>Government</strong></td>
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<td><strong>Gain experience working in a hospital or other medical setting.</strong></td>
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<td><strong>Earn a Ph.D. for college/university teaching and advanced research and management positions. A master's degree is preferred for positions in industry.</strong></td>
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<td><strong>Develop excellent regulations.</strong></td>
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<td><strong>APS Division of Nuclear Physics</strong></td>
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| OPTICAL PHYSICS | agencies including Departments of Defense and Energy  
- Government laboratories and research centers. | laboratory skills.  
- Acquire strong mathematics and chemistry background. |  
- Colleges & Universities  
- Government laboratories and nonprofit research centers  
- Industry including medical scanners, eyeglasses, binoculars and microscopes, lasers, holography, display technologies, x-ray, ultraviolet spectra, and fiber optics  
- Federal agencies including NASA, Departments of Energy and Defense |  
- Earn a master's degree for positions in industry.  
- Take undergraduate coursework in electricity, magnetism, quantum mechanics, and electrons.  
- Get involved in independent optics project during senior year. |  
- Optical Society of America |

| SCIENCE EDUCATION | Public school systems  
- Private schools  
- Schools for the blind and/or deaf  
- Industry  
- Publishing companies (books, magazines, and videos)  
- Libraries | Gain experience working with young people through volunteering, tutoring or working with after school programs, summer camps, etc.  
- Earn bachelor's degree (master's degree for teaching advanced science courses). |  
- American Association of Physics Teachers |
| SOLID STATE PHYSICS | • Government laboratories and nonprofit research centers
• Colleges and universities
• Electronics industry including communications, automobile, computer, and navigation and guidance systems
• Government agencies including NASA and the Department of Defense. | • Obtain experience working with electronics and computers.
• Request job listings from the American Institute of Physics. | American Institute of Physics |

| TECHNOLOGY | • Research and Development Firms
• Mining and petroleum companies
• Hospitals
• Engineering firms
• Professional and technical journals | • Gain experience through internships/co-ops.
• Complete certification/licensure through a professional organization.
• Gain knowledge about the field through | Institute of Electrical and Electronics Engineers
The American Society of Mechanical Engineers
American Institute of Aeronautics and Astronautics |
| Government laboratories | informational interviews with professionals. |
| Manufacturing and processing firms | • Develop work habits that are systematic, precise and patient. |
| Atomic and nuclear labs | • Develop a strong computer background. |
| Government agencies (Departments of Commerce and Defense) | • Gain experience using scientific instruments and equipment. |
| Television and radio stations | |
| Weather bureaus |

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