

What can I do with a physics major?

What Some Recent Graduates are Doing

You might be interested in knowing a bit about our graduates with bachelor's degrees in physics between 2003 and 2014:

There were 476 graduates including 102 women, 283 with Bachelor of Arts, 152 with Bachelor of Science, and 38 with Bachelor of Arts in Astronomy/Physics degrees.

There were 308 double majors including Mathematics-43, Mathematics-Grad Prep-30, Economics-24, Mechanical Engineering-20, Chemical Engineering-18, Computer Science-16, Electrical Engineering-14, Engineering Science-14, Chemistry-14, Chemistry-Chemical Physics-10, Philosophy-9, Aerospace Engineering-8, Astronomy-7, Chemistry-Biochemistry-7, Biology-6, History-6, Mathematics-Financial-6, Music-6, Cognitive Science-5, Computer Engineering-4, English-4, Foreign Affairs-4, Biomedical Engineering-3, Environmental Science-3, Psychology-3, Spanish-3, Studio Art-3, Systems Engineering-3, Civil Engineering-2, Commerce-2, French-2, Religious Studies-2, Applied Mathematics-2, Archaeology-1, Chemistry-Materials-1, Classics-1, Computer Engineering-1, Echols Scholar-1, Environmental Theory and Practice-1, INTER-Statistics-1, Japanese Language and Literature-1, Mathematics-Prob & Stats-1, Mathematics-Teacher Ed-1, Media Studies-1, and Slavic-1.

In response to a questionnaire we routinely distribute to all graduating majors just prior to graduation, we have summarized the data from those collected from 2008 through 2014:

Of 162 respondents, 70 had plans to attend graduate or professional schools:

32 in Physics (including applied physics, astronomy, astrophysics, biophysics, device physics, and medical physics); others in Computer Science-5, Materials Science-6, Aerospace Engineering-2, Electrical Engineering-2, Mathematics-2, Anthropology-1, Atmospheric Science-1, Biology-1, Chemistry-1, Chemical Engineering-1, Commerce-1, Financial Mathematics-1, History of Science-1, Management-1, Mathematics Education-1, Mechanical Engineering-1, Medical School-2, Medical Science-1, Nuclear Engineering-1, Philosophy-1, and Public Policy-1.

The institutions they attended include Boston University, Cal Tech, Cambridge, Carnegie Mellon, Chicago, Cornell, Duke, Florida State, Georgetown, Georgia Tech, Harvard, Indiana University Bloomington, MIT, North Carolina State, Northeastern University, Northwestern University, Ohio State, Penn State, POSTECH (Korea), Rice, Stanford, Stony Brook, U. Arizona, U. California Berkeley, U. California Davis, U. California San Diego, U. California Santa Barbara, U. Florida, U. Illinois Urbana-Champaign, U. Iowa, U. Maryland, U. Michigan, U. North Carolina Chapel Hill, U. Texas Austin, U. Virginia, U. Wisconsin Madison, United States Air Force Institute of Technology, Virginia Commonwealth, West Virginia School of Osteopathic Medicine, and Yale.

Others entered a wide variety of jobs and other activities:

Programming, systems development, engineering, mechanical engineering, network engineering, Software Engineer, Systems Engineer, Lead Data Scientist at a startup, technology and management consulting, risk management, government research and development, technical sales, Business Consultant, Economic Consultant, Financial Consultant, Software Consultant, Investment Banking Analyst, operations management, preparing to apply to graduate or medical school, preparing to take LSAT, Legal Analyst, U.S. Patent and Trademark Office, simulations, Military Scientist, Navy Explosive Ordnance Disposal Officer, Commissioned Infantry Officer, Commissioned Officer in USAF, military service, Natural Gas Trader, environmental policy/carbon trading, Melting Process Engineer, Research Assistant, Lab Assistant, software

development for air traffic management, Firefighter/Medic, Teach for America, teaching physics at a private or charter school, Assistant Language Teacher through JET Program, Summer Instructor (physics & calculus) at Upward Bound, playing music full-time with a signed band, starting a small business, seeking a second BS, health care consulting/marketing to hospitals, residential remodeling and construction, carpentry, coaching a youth swim team, public transit dispatch, traveling abroad, mission trip, and running marathons.

Others had not decided at graduation what they were going to do, and some didn't respond to our requests for information about their plans.

What You Might Do with a Physics Major

I think a good general answer is that for students who enjoy physics, a physics major is very stimulating and intellectually rewarding, and it is good preparation for a remarkable variety of careers. Indeed, the analytical and problem solving skills learned in studying physics can be even more important in the future than the specific scientific knowledge. This is a message we get from a large number of our physics majors. Even those whose jobs have little to do with physics feel that these skills learned in physics complemented their courses in the humanities and social sciences to such an extent that they still regard their physics major as their best choice.

Some similar facts about the skills physics graduates find most useful emerged from a survey by the American Institute of Physics. They queried some thousands of people with physics degrees (bachelor's, master's, and doctorate) working in industry, government, and secondary and higher education about the skills they used most frequently. At all degree levels and for all types of jobs, whether directly involving physics or not, almost 100% of respondents said that problem solving is their most frequently used skill (<https://www.aip.org/statistics/data-graphics/knowledge-and-skills-regularly-used-physics-bachelor%E2%80%99s-employed-private>). Computer skills were highly ranked by most of the respondents. Even more highly ranked were interpersonal skills and technical writing. These same skills have been identified as most important by many companies who hire physics graduates. Physics majors are very successful in getting into law school or medical school (<https://www.aip.org/statistics/reports/mcat-lsat-and-physics-bachelors>).

We are addressing the development of these skills explicitly in the physics major. Problem solving and computing are strong components of the program. The upper-level physics laboratories and independent study courses are structured to provide excellent opportunities for developing skills in both oral and written communication of technical material. Spontaneous teamwork on solving problems in the upper-level courses has long been a part of being a physics major. Working with a variety of partners in the lab courses and research groups also helps develop skills in interpersonal relationships. These experiences are being supplemented in some physics classes by group problem solving, which has been shown to be an effective way of learning new concepts and has the added effect of teaching and encouraging teamwork.

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