Physics Career Outlook 2009-2010

Physics Programs Available at Bemidji State University:
Major: Physics (B.A.); Physics (B.S.); Option A: Engineering Physics, Option B: Physics; Science (Physics), Teacher Licensure (B.S.)
Minor: Physics
Department Website: http://www.bemidjistate.edu/academics/departments/physics

Major Highlights:
Physics is a fundamental science from which nearly all of modern engineering and technology has emerged, and its perspectives on theory and experimentation continue to influence profoundly the evolution of all sciences. It addresses all domains, from the submicroscopic worlds of atoms and quarks to the vast realms of space, from the esoteric to the mundane. It requires imagination, and persistence from those who would participate. The Department of Physics offers a flexible assortment of course work, laboratories, and guided research. Its laboratories are complemented by a variety of general and specialized apparatus; computers are employed in most aspects of experimentation and analysis, at all levels. The B.A. in physics is intended to supplement a liberal arts curriculum and is suitable preparation for continued study in a variety of professional programs. Both B.S. physics degree options (physics and engineering physics) offer routes to professional careers in industry and/or graduate study in physics, engineering, or related specialties.
Note: The two B.S. Physics options are very similar in their first two years, and they closely resemble the pre-engineering curriculum. Students are advised to keep all these options open until they have refined their interests and explored available career opportunities.

Employment Areas:
The "Occupational Outlook Handbook" reports that physicists and astronomers held about 17,100 jobs in 2008. Physicists accounted for about 15,600 of these, while astronomers accounted for only about 1,500 jobs. In addition, there were about 15,500 physicists employed in faculty positions. About 39 percent of physicists and astronomers worked for the scientific research and development services industry, which includes employees of the 36 Federally Funded Research and Development Centers. These centers, sometimes referred to as national laboratories, perform a significant amount of basic research in the physical sciences. They are funded by government agencies such as the Department of Energy and the Department of Defense, but are administered by universities or private corporations. The Federal Government directly employed another 22 percent, mostly in the U.S. Department of Defense, but also in the National Aeronautics and Space Administration (NASA) and in the U.S. Departments of Commerce, Health and Human Services, and Energy. Other physicists and astronomers worked in non-faculty research positions at educational institutions and hospitals.

Projected Demand for Physics Majors in Minnesota:
The iSeek.org website reports that the outlook for physicists is average with an average income of about $50.26 per hour. These positions require education beyond the B.S. degree.

Projected Demand for Physics Majors Nationwide:
The DISCOVER guidance system reports that the nationwide demand for physicists is expected to grow slowly with a 0.8% expected growth rate per year. The average starting salary offered was $53,500 annually in 2009. According to the National Association of Colleges and Educators, the average annual salary offered to graduates at the doctoral level was $60,000 in 2009.

Placement Information for Physics Graduates:
There are many career opportunities for Bemidji State University physics graduates. Of the Bemidji State University 2008-2009 Bachelor of Arts physics graduates, 100% reported obtaining related employment within one year of graduation. This does not include students who were not seeking employment, furthering their education, unavailable, or had unknown status. There was only one B.S. Physics graduate in 2008-2009, and that student went on to continue their education.
A Partial List of Employers Who Have Hired BSU Physics Graduates:

- Argonne National Laboratory: Research Assistant, Argonne, IL
- Barr Engineering: Stack Sampling Technician, Edina, MN
- Digi-Key Corporation, Inc.: Software Engineer, Thief River Falls, MN
- NASA: Engineer, Moffet Field, CA
- United Defense: Associate Controls Engineer, Fridley, MN
- United Defense LP: Controls Engineer, Minneapolis, MN

Colleges and Universities Where BSU Physics Graduates Have Gone to Continue Their Education:

- Bemidji State University, Bemidji, MN
- Rice University, Houston, TX

**Note 1:** Some of the above job/career titles require advanced degrees or specialized training.

**Note 2:** Degrees alone do not get students jobs. Internships, summer jobs, volunteer work, part-time jobs, work-study positions, and active participation in student organizations on campus are all ways to become more competitive in a tight job market.

**Note 3:** Personal Competencies: it is also recommended that individuals be competent in a variety of communication methods, and computer skills are a must.

**Bibliography:**
- Bemidji State University Undergraduate Catalog 2006-2008. Bemidji State University, Bemidji, MN (2009)
- DISCOVER. The American Testing Program, Educational Technology Center, Hunt Valley, MD (2009)

For more information, please contact the Career Services Office in 102 Sanford Hall or call us at 218-755-2038 or toll free at 800-657-3726.