WHAT CAN I DO WITH A MAJOR IN … PHYSICS

OCCUPATIONAL OVERVIEW:

The UNM Department of Physics and Astronomy (2013) offers three degree programs to meet a range of student career goals. The Bachelor of Science in Physics is designed for students who are interested in a research career path in physics, as well as for those students who are pursuing a Bachelor of Science in Astrophysics. For example, an Optics Concentration is an option for a BS degree in Physics, which greatly reflects the research strengths of the department, as well as an important industry in the state of New Mexico. “There are also career opportunities at all degree levels! Local employers include the research laboratories at Sandia, Los Alamos, and Kirtland Air Force Base, and numerous high-tech companies. The Department of Physics and Astronomy being of moderate size, our faculty and staff share a commitment to giving you the personalized attention, the knowledge, and the skills you need for your future.”

WHAT PHYSICIST AND ASTRONOMERS DO

According to the Labor of Bureau Statistics, “Physics research has led to advances in many fields, such as the development of magnetic resonance imaging technology used in medicine. Physicists and astronomers study the fundamental nature of the universe, ranging from the vastness of space to the smallest of subatomic particles. They develop new technologies, methods, and theories based on the results of their research to deepen our understanding of how things work and contribute to innovative, real-world applications.”

EMPLOYMENT REQUIREMENT:

A bachelor’s degree is the minimum formal education required. However, many employers also require graduate school. According to the Labor of Bureau Statistics, “physicists and astronomers need a Ph.D. for most research jobs. Many physics and astronomy Ph.D. holders begin their careers in a temporary postdoctoral research position, which typically lasts 2 to 3 years.” Consult O’Net for more information on the specific KSAs (Knowledge, Skill, Ability) that are required for this career.

INDUSTRIES & TARGET EMPLOYERS:

A variety of employers specifically recruit UNM students and alumni. Consult UNM’s Lobo Career Connection for a complete list of employers and current job postings. Speak with a Career Development Facilitator at the UNM Office of Career Services for help with identifying employers or additional resources for your occupation of choice.

Astrophysics

Airports, colleges and universities, commercial industry, government laboratories, military, National Aeronautics and Space Administration (NASA), observatories, planetariums, research centers, space industry, research, consulting, writing, public relations, education

Technical

Atomic and nuclear labs, engineering firms, government agencies e.g., Department of Commerce, Department of Defense, government laboratories, hospitals, manufacturing and processing firms, mining and petroleum companies, professional and technical journals, research and development firms, television and radio stations, weather bureaus

Optical

Colleges and universities, federal agencies: NASA, the Department of Energy, the Department of Defense, government laboratories, industry e.g., medical scanners, eyeglasses, binoculars, microscopes, lasers, holography, display technologies, x-ray, ultraviolet spectra, fiber optics, nonprofit research centers

SUGGESTED STRATEGIES:

- Obtain experience through part-time or voluntary position in a planetarium, observatory or science museum.
- Gain professional experience in your area of interest through involvement in international internships, student employment, Co-ops, and/or volunteer opportunities.
- Research firms with international interests.
• Shadow professionals in your field of interest to gain a better understanding of their occupation and to build relationships with professional mentors.
• Build your network and get involved on campus through student organizations and campus events. Find more organizations and events at the Student Activities Center website.
• Attend career-related campus events such as career fairs, company information sessions, and career workshops.
• Students who are interested in graduate school should maintain a high undergraduate GPA and develop relationships with faculty and community leaders.
• Speak with mentors and faculty about career opportunities.
• Job leads can be found on your department’s website, list-serv, newsletters, and social media sites.
• Consider working in multiple departments throughout campus to gain experience in areas you are interested in through work study or student employment.
• Focus on developing “transferable skills” such as computer competency, written/verbal communication, and project management.
• Research government internship program and think about interning with a government agency to get a foot in the door, as well as building your resume.
• Get on government agencies’ job registers.
• Make sure to research organizational values in order to match with your own value set. Knowledge about organizations is critical, because it shows to employers that you’ve done your research and are committed to work for them.

STATE & NATIONAL WAGES:
Adapted from CAREER ONE STOP 2012

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INFORMATIONAL/ORGANIZATIONAL WEBSITES:
American Institute of Physics
http://www.aip.org/
American Physical Society
http://www.aps.org/
http://onetonline.org
http://www.bls.gov/

REFERENCE