

# MAJOR TO CAREER GUIDE

## B.S. Physics with an Applied Physics Concentration

College of Sciences

### Mission of the College of Sciences

The College of Sciences offers programs in life sciences, chemistry, geoscience, mathematical sciences, physics and astronomy, and water management. The college has created a well-rounded curriculum by combining practical and empirical knowledge with scientific fundamentals and principles, which provides a solid foundation for a successful career in the sciences and other professional programs. The student-faculty relationship, hands-on research, and community service help ensure that students who graduate are prepared for whatever path they choose.

[www.unlv.edu/sciences](http://www.unlv.edu/sciences)

### About the Applied Physics Career

Applied physics is a general term for physics which is intended for a particular technological or practical use. It is usually considered as a bridge or a connection between "pure" physics and engineering. "Applied" is distinguished from "pure" by a subtle combination of factors such as the motivation and attitude of researchers and the nature of the relationship to the technology or science that may be affected by the work. It usually differs from engineering in that an applied physicist may not be designing something in particular, but rather is using physics or conducting physics research with the aim of developing new technologies or solving an engineering problem.

### Value of an Applied Physics Major

Physics majors have a reputation for solid mathematical skills, strong problem solving ability, and good work ethic. It is these fundamental skills that allow them to work successfully in so many different areas. The starting salaries for physics bachelor's degrees are very competitive, and comparable to other fields of science and engineering, with private sector salaries. Unemployment rates among students with physics bachelor's degrees are very low. Some physics majors go on to medical school or law school and the following tables demonstrate that these students do exceptionally well on the MCAT and LSAT exams.

### UNLV Academic Advising for Science Majors:

Academic Advisors who are eager to meet with students about their academic goals and to assist in constructing a plan for graduation. Advisors can also help students understand how their experiences at UNLV can lead to a career in their desired field.

College of Sciences Advising Center  
Phone: 702-895-2077  
Campus Location: MPE-A 130  
<http://www.unlv.edu/sciences/advising>

### Applied Physics Career Options

- Nuclear Physics\*
- Geophysics\*
- Atomic, molecular, optics physics\*
- Astronomy\*
- Astrophysics\*
- Space Physics\*
- Physics Education (depending on grade level\*)
- Engineering Physics (requires masters in Engineering)\*
- Computer Science\*
- Government research

### UNLV Student Organizations: Physics

#### UNLV Society of Physics Students

<https://sites.google.com/site/unlvps/>

#### Sigma Pi Sigma (SPS)

<http://www.sigmapi.org/>

#### Websites for

#### Professional physics organizations:

#### American Physical Society

<http://aps.org/>

#### American Association of Physics Teachers

<http://aapt.org/>

#### American Astronomical Society

<http://aas.org/>

#### American Institute of Physics

<http://www.aip.org/>

### Graduate Program: Physics M.S. and PhD

Our department offers both the masters and doctoral degree in physics; both degrees require a research thesis. Before considering our physics department as a possible place to pursue an advanced degree, it is best to explore our faculty's research interests located on the Physics and Astronomy Home Page overlap with your interests.

<http://physics.unlv.edu/jobs.html>

# Helpful Career Information

## Employers rate candidate soft skills/qualities in order of importance

- 1 Ability to verbally communicate with persons inside and outside the organization
- 2 Ability to work in a team structure
- 3 Ability to make decisions and solve problems
- 4 Ability to plan, organize and prioritize work
- 5 Ability to obtain and process information
- 6 Ability to analyze quantitative data
- 7 Technical knowledge related to the job
- 8 Proficiency with computer software programs
- 9 Ability to create and/or edit written reports
- 10 Ability to sell or influence others

Source: Job Outlook 2013

Courtesy of the National Association of Colleges and Employers

Visit the Career Occupational Handbook to learn more about a specific occupation:

<http://www.bls.gov/ooh/>

The OCH covers hundreds of occupations and describes: What They Do, Work Environment, How to Become One, Pay, and more. Each profile also includes BLS employment projections for the 2010–20 decade.

### Career Exploration/Planning

**FOCUS 2:** UNLV's computerized assessment that profiles your interests, abilities, and values and helps you find a career that's right for you.

<http://hire.unlv.edu/careerAssessment.html>

**Myers-Briggs Type Indicator (MBTI):** Assessment designed to identify how you are energized, how you take in information, how you make decisions, and how you approach life.

<http://hire.unlv.edu/careerAssessmentMBTI.html>

**Strong Interest Inventory:** Generates an in-depth assessment of your interests among a broad range of occupations, work and leisure activities, and educational subjects.

<http://hire.unlv.edu/careerAssessmentStrong.html>

### UNLV Career Services

Career Services encourages ALL UNLV students to take advantage of their services, which include:

- Assistance with developing a career plan and choosing a major
- Career counseling and guidance on building a RESUME
- Preparing for an interview, assistance with job searching and networking.

Phone: 702-895-3495

Campus Location: SSC-A 2<sup>nd</sup> Floor

<http://hire.unlv.edu/>

### Internship Opportunities

UNLV's **Hire a Rebel** is a free, online recruiting system that helps students, alumni, and employers connect in a variety of ways.

Students can use **Hire a Rebel** to search for: job and internship listings, on-campus recruiting interviews, employer information sessions, resume book database, & dates for career fairs.

<http://hire.unlv.edu/careerLink.html>

## AVERAGE SALARIES BY DISCIPLINE 2010-2012

| Career                | Salary Range         | Average Salary |
|-----------------------|----------------------|----------------|
| Physicist             | \$49,979 - \$139,451 | \$91,000       |
| Theoretical Physicist | \$46,122 - \$123,963 | \$76,300       |
| Medical Physicist     | \$73,759 - \$189,274 | \$122,800      |

[www.payscale.com](http://www.payscale.com)

**UNLV** | ACADEMIC  
ADVISING  
*Collaborate to Graduate*