NORTHERN ARIZONA UNIVERSITY
College of Engineering & Natural Sciences

"The important thing is not to stop questioning."

– Albert Einstein

Have you ever thought about the very big things like the universe, or the very small, like the inside of an atom? If you ponder the big questions, and look for patterns in nature's behavior, then maybe you're an astronomer or physicist in the making.

Indulge your scientific curiosity and build a career path. The sciences of astronomy and physics use math and research methods to investigate the causes of natural phenomena (like the orbits of the moon and planets) and to advance technology (like creating new stronger materials). The university's Department of Physics and Astronomy emphasizes research in undergraduate education. You will be encouraged to think independently and to join in faculty research projects. You'll benefit from our proximity to world-class Lowell Observatory and the university's array of high-tech instruments.

If you want to search for stars outside the solar system or learn how a laser actually works, you'll receive the guidance you need at Northern Arizona University. Find your way to questions you haven't yet learned to ask.

Career Opportunities

Begin your career in . . .	Study to become a . . .
Aerospace	Planetary geologist
Computers	Space technician
Defense	Aerospace research scientist
Higher education	Telescope operator
Optics	Test engineer
Research	Process Engineer
Semiconductors	

"I came here for the small school feel. The Physics and Astronomy faculty are extremely nice—always there to answer questions or help you find research opportunities. I've had several opportunities to conduct research with the professors; even as a freshman I had a research job. The department is very close and cooperative, from professors to students. We all help each other out."

Marie-Therese Bruhns, Physics & Astronomy graduate

Degree Programs

- **Bachelor of Science in Physics**
- **Bachelor of Science in Astronomy**
- **Bachelor of Science in Physics and Astronomy**
- **Bachelor of Science in Physics and Mathematics**
- **Bachelor of Science in Engineering Physics**
- **Bachelor of Science in Education: Physics**
  Secondary Education
- **Bachelor of Science in Education: Physical Science**
  Secondary Education or Middle School Education
- **Minors**
  Astronomy, Physics, Physical Science, Physics Secondary Education and Physical Science Secondary Education

Physics & Astronomy PO Box 6010 Flagstaff, AZ 86011 astro.physics@nau.edu 928-523-2661

Explore Courses that Jump-start Your Career

Get small
Would you like to understand how a nucleus behaves? Our **Nuclear Physics and Nuclear Physics Lab** classes will open up the subatomic world. You'll study nuclear decay and stability, the structure of nuclei, gamma radiation, alpha and beta decay, fission, and radiation techniques.

Take the quantum leap
Physics asks the most fundamental scientific questions. What is matter? What is energy? How do they work? Start finding answers in **Modern Physics**. See, in-depth, the theoretical systems that revolutionized our world in the last century--special relativity, atomic and nuclear physics, and quantum mechanics.

Tune in to the music of the spheres...
How do you begin to explore Everything Out There? Our **Introduction to Astronomy** opens the door to the known universe--the sun, moon, and planets, the stars of our Milky Way, and the galaxies beyond. You'll be dazzled by eclipses, comets, and meteors, and investigate the movements of the solar system.

Are we alone in the cosmos?
Maybe. But with an estimated 70 sextillion stars in the observable universe—that's 230 billion times more than the 300 billion stars in our Milky Way galaxy—the field of astrobiology has plenty of room for growth! Start your search for cosmic neighbors with **Life in the Universe**.

Experience the World of Research

Follow your interests with internships that provide "education by experience." The department is home to cutting-edge research programs in surface physics and astrophysics. You will find many undergraduate opportunities for original research through the NASA Space Grant, the National Undergraduate Research Observatory, and our Research Experiences for Undergrads program. Working in close partnership with faculty, you'll have opportunities to publish in scientific journals.

Facilities for use in the surface physics and astrophysics research programs include these:

- Scanning tunneling microscope
- Atomic force microscope
- X-ray photoelectron spectrometer
- Research grade spectrometer
- Instrumentation for low-energy electron diffraction
- 31-inch telescope at nearby Lowell Observatory
- 24-inch telescope at the Atmospheric Research Observatory on the NAU Campus

Study Abroad

Study for a summer, semester, or academic year in universities around the globe. We work to provide international education opportunities to all academically qualified students. The university has cooperative agreements with institutions in Australia, Canada, France, Germany, Ghana, India, Malta, New Zealand, United Arab Emirates, and the United Kingdom. Start your travel planning with a visit to nau.edu/international.

Participate!

The Northern Arizona Astrobiology Club supports studies in the origin, character, and future of life in the universe. The club sponsors movies, field trips, and undergraduate research projects about the astronomical search for life-supporting worlds, the evolution of life on Earth, and philosophical speculations in science fiction.

Fascinated by physics? **The Society of Physics Students** (SPS) is a professional association for all interested students. The SPS club visits local schools, holds regional meeting with other universities, and goes on field trips, like one to San Francisco during spring break to visit the Stanford Linear Accelerator, and Lick Observatory.

Finish in Four

Stay on a four-year track to your degree and save money in the process. The university guarantees that you will have access to the courses you'll need to graduate on time. It's your responsibility to talk to an advisor early. Eligible degree programs: BS in Physics, Astronomy, Physics and Astronomy, Engineering Physics; BS Ed in Physics and Secondary Education, Physical Science and Secondary Education. Visit nau.edu/finishinfour.

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