Astronomy and Astrophysics

Top Choice Program
According to the American Institute of Physics, our astronomy and astrophysics program is one of the largest in the U.S., in terms of B.S. degrees awarded annually.

Look Further
Florida Tech’s Olin Physical Sciences Center houses the high-tech Ortega 0.8-m telescope, one of the largest research-grade telescopes in the Southeast.

Hands-On Science
Astronomy and astrophysics at Florida Tech isn’t just something you study—it’s something you go into the lab or onto the roof (where the telescopes are) and do!

Space sciences at Florida Tech have been setting the standard since 1958, successfully preparing students for high-tech careers at top space agencies and research firms. The astronomy and astrophysics option, focused on the study of celestial bodies beyond the Earth’s solar system, is designed to meet the needs of students intending to pursue graduate education and a career in the astronomical sciences.

Awesome Facilities
Home to all physics and space sciences programs, the Olin Physical Sciences Center includes two large multi-use lecture/demonstration classrooms and the Olin Observatory, which houses our 0.8-m Ortega Telescope. Department faculty operate the world’s largest X-ray array for measuring lightning. Faculty also co-operate (with UCLA) a chain of 10 geomagnetic field observatories from Central Florida to Maine, and maintain a NASA-qualified clean room. The focus of physics research is our high-bay Physics Experiment Hall where very large research projects are conducted.

Stellar Research
The Astronomy and Astrophysics Research Group at Florida Tech is concerned primarily with observational and theoretical studies of white dwarf stars, M dwarf stars and cataclysmic variable systems. Students often use telescopes in making time-series observations of pulsating stars or binary stars—a field called asteroseismology. These observations, often in collaboration with international teams, probe the interiors of stars much like studies of seismic signals allow us to probe the interior structure of the Earth.

CLUBS AND ORGS
Astronomy and astrophysics students can explore interests and hone their professional skills as members of ...
• Students for the Enhancement and Development of Space
• Society of Physics Students
• Sigma Pi Sigma (honor society)
• Student Astronomical Society

EXTRAGALACTIC ASTROPHYSICS
What is the structure of the universe and how did it evolve? What lurks at the heart of galaxies? How do galaxies evolve? And how do black holes evolve and affect the galaxies they reside in? We attempt to answer these questions in the extragalactic research group.
Astronomy and Astrophysics

Astronomy and astrophysics is the study of the universe as a whole, and of its components. Students build knowledge of stars, stellar systems, planetary sciences and cosmology.

Program Size and Culture
Small freshman classes produce plenty of opportunities for you to find like-minded friends not only within the physics department, but across campus. As you progress through your four years at Florida Tech, you’ll often find you have your friends in many of your classes, creating even more opportunity to build strong relationships during your time here.

Faculty Focus
Professors specialize in everything from human space exploration to stellar evolution and are devoted to providing students with personal attention in the classroom as well as exposure to countless professional-level research opportunities.

Real Experience
Astronomy and astrophysics students have the opportunity to participate in cooperative programs and internships with various agencies and companies such as NASA, DRS Optronics, Lockheed-Martin, Harris and Northrop Grumman. Recently, Florida Tech students have:
- Helped to develop and test new night-vision optics used by the U.S. Army in Iraq
- Worked with the Relativistic Heavy Ion Collider at Brookhaven National Laboratory
- Spent the summer at Fermi National Accelerator Laboratory, working on the CMS (Compact Muon Solenoid) Experiment
- Interned at the Museum of Natural History in New York City, studying galaxy clusters

Careers
All physics and space sciences students are well prepared for entry-level employment in high-tech corporations that have research and development divisions, particularly those with ties to the aerospace industry. Graduates are and have been employed at companies such as Harris, Lockheed-Martin, Boeing, DRS Optronics, Kennedy Space Center, NASA Goddard and the Space Telescopic Science Institute.

Graduate School
Upon graduating from the program, roughly 1/3 of our alumni seek graduate degrees at universities including Florida Tech and:
- California Institute of Technology
- Dartmouth University
- Johns Hopkins
- Georgia Institute of Technology
- SUNY Stony Brook
- University of Arizona
- Vanderbilt University
- Yale

SARA
Florida Tech is the lead institution for the Southeastern Association for Research in Astronomy (SARA), which operates automated one-meter-class telescopes at Kitt Peak National Observatory near Tucson, Ariz., and at Cerro Tololo Interamerican Observatory in Chile. Both are accessed and controlled remotely over the Internet. SARA also sponsors an NSF-funded summer Research Experiences for Undergraduates (REU) program that provides 10–12 students from around the U.S. the opportunity to work with scientists at SARA institutions.

Astronomy Internships
Astronomy and astrophysics students have taken part in prestigious summer programs at Kennedy Space Center and hands-on experiences at Kitt Peak National Observatory.

Cosmic Research
Often, students get to analyze data from space-based observatories such as the Hubble Space Telescope, the Chandra X-Ray Observatory and the Kepler Observatory.

Rockstar Faculty
Physics and space sciences faculty include a TED Global Fellow and an NSF CAREER Award-winner. All are accomplished teachers and researchers.

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