University of West Florida

Academic Learning Compact

PHYSICS

Mission Statement

The mission of the Physics Department is to provide high-quality instruction in Physics and to train competent Physicists who can contribute significantly to the Physics and Engineering environment in the country. To develop awareness of Physics as an ongoing activity through student involvement in research, thus providing students with a challenging, strongly personalized training program

Student Learning Outcomes

UWF Physics graduates should be able to do the following:

Content

- Recognize and apply basic principles in the main areas of physics, including Newtonian methods, quantum mechanics, and relativity
- Recognize and apply mathematical tools useful to the practice of physics, including calculus, differential equations, vector algebra and calculus, variables and functions, and partial differential equations
- Use the terminology of physics accurately
- Describe possible career options related to physics

Critical Thinking

- Extract information from physics text through analytic reading
- Calculate and interpret the results of various physics problems
- Solve real world engineering problems using physics principles
- Develop models of physical systems

Communication

- Use computer-based strategies to illustrate and solve physics problems
- Present findings of physics applications orally and in writing

Integrity/Values

- Demonstrate self-direction in learning
- Recognize ethical problems that may occur in the context of solving physics problems
- Adhere to the values of science: objectivity, precision, persistence

Project Management

- Collaborate effectively with team members
- Solve problems through skilled time management

Instrumentation

- Exhibit expertise in the use of modern experimental equipments such as high power pulsed lasers and thin film coating equipments
- Use computer controlled data acquisition devices to develop complex measuring systems.

Assessment of Student Learning Outcomes

In Physics, you will have multiple opportunities to demonstrate what you know and what you have learned to do. In addition to traditional testing, your major in Physics culminates with advanced research activities where you will be working as part of a team that includes faculty members from within and outside the Physics Department. We will also you ask you upon graduation to give us feedback about how effectively we helped you meet your career goals through an exit questionnaire.

Job Prospects for Physics Majors

Professional Physicist in research labs such as NASA or National research labs
Physics teacher in a university, college, or high school
Engineer in electrical-engineering firms
Computer Programmer in research labs & programming companies
Data Analyst in financial institutions

Find Out More about Physics:
http://uwf.edu/physics