PHYSICS AND ASTRONOMY

Phillips 230
715-836-3148
Department Website (https://www.uwec.edu/academics/college-arts-sciences/departments-programs/physics-astronomy/)

Physics, the science of matter and energy, is the study of the deepest mysteries of our universe, ranging from subatomic particles to cosmology. Exploring ideas of space, time, matter, energy, and radiation, it serves as the basis for the physical sciences. Modern society is influenced by physics in countless ways, including recent developments in such fields as laser optics, miniaturized electronics, nuclear energy, and medical instrumentation.

Beyond the earth, astronomy applies the ideas of physics to the study of planets, stars, galaxies and all celestial phenomena within reach of our telescopes. Since the two areas share a vast array of common ideas and knowledge, new discoveries in physics often aid progress in astronomy and vice versa.

Special learning opportunities associated with the department include the Materials Science + Engineering Center (https://www.uwec.edu/academics/college-arts-sciences/departments-programs/materials-science-engineering/materials-science-engineering-center/), the L.E. Phillips Planetarium, and Hobbs Observatory at the Beaver Creek Reserve (www.beavercreekreserve.org (http://www.beavercreekreserve.org)).

Departmental Honors in Physics

Departmental Honors is a way for a student to experience the thrill of innovative research and discovery in an area of interest within Physics and Astronomy. One of the most significant benefits of Departmental Honors is that it fosters one-on-one interaction between students and professors, which substantially enhances a student's educational experience and serves as a springboard for excellence in graduate studies or professional employment after graduation.

Eligibility: Complete PHYS 332 and maintain both a resident GPA and a major GPA of at least 3.50.

Procedure: A written application for Departmental Honors in Physics and Astronomy must be approved by the student's academic advisor, the student's project advisor, and the chair of the Physics and Astronomy Department.

Requirements:

1. Complete the required courses for one of the three emphases for the Liberal Arts major in Physics.
2. Complete two courses selected from among

PHYS 367	Astrophysics	3
PHYS 375	Electromagnetic Fields	4
PHYS 430	Advanced Laboratory Techniques	2
PHYS 445	Thermal Physics	4
PHYS 465	Quantum Mechanics	3

3. Complete a significant scholarly activity and disseminate the results of the activity by completing a written research paper and presenting at an appropriate on-campus or off-campus venue (Physics Thursday, CERCA, Provost's Honors Symposium, etc.) or making a presentation at a professional meeting or publishing an article in a professional journal. The quality of the activity and dissemination will be evaluated by a three-member faculty panel. Upon approval by the panel, the student will receive the designation of Departmental Honors in Physics and Astronomy on his/her official transcript and a special notation in the graduation ceremony program.

Faculty

J. Erik Hendrickson, Chair

Douglas Dunham
Lyle Ford
Nathan Miller
Elizabeth Radue
James Rybicki
Dylan Weaver
William Wolf

Majors

- Major: Physics, Liberal Arts - B.A./B.S. (http://catalog.uwec.edu/undergraduate/arts-sciences/physics-astronomy/physics-major-liberal-arts-ba-bs/)
- Major: Physics, Applied Physics Emphasis, Liberal Arts - B.A./B.S. (http://catalog.uwec.edu/undergraduate/arts-sciences/physics-astronomy/physics-major-applied-physics-ba-bs/)
- Major: Physics, Astrophysics Emphasis, Liberal Arts- B.A./B.S. (http://catalog.uwec.edu/undergraduate/arts-sciences/physics-astronomy/physics-astrophysics-major-liberal-arts-ba-bs/)
- Major: Physics, Dual Degree Engineering Emphasis, Liberal Arts - B.A./B.S. (http://catalog.uwec.edu/undergraduate/arts-sciences/physics-astronomy/physics-major-dual-degree-ba-bs/)
- Comprehensive Major: Science Teaching, Physics Emphasis - B.S. (College of Education and Human Sciences Secondary Education Program) (http://catalog.uwec.edu/undergraduate/arts-sciences/interdisciplinary/science-teaching-comprehensive-major-physics-t-bs/)

Minors

- Minor: Physics, Liberal Arts (http://catalog.uwec.edu/undergraduate/arts-sciences/physics-astronomy/physics-minor/)

Certificates

- Certificate: LabVIEW (http://catalog.uwec.edu/undergraduate/arts-sciences/physics-astronomy/labview-certifcate/)