

APPLIED PHYSICS MINOR

The Applied Physics Minor is designed for students who seek to go beyond the fundamentals of traditional physics and explore its applications across multiple fields. This program integrates theoretical knowledge with practical skills, emphasizing real-world problems in areas such as mechanics, optics, electronics, and energy systems. Add this minor to your major to tailor your education and career goals in technology industries. Through hands-on projects and interdisciplinary collaborations, students gain a deep understanding of how physics principles drive innovation across disciplines and industries.

Code	Title	Credits	Completed
Minor Requirements (20 credits)			
<i>Physics Core</i>			
Select one of the following:		4	
INPHYS-241	University Physics I		
INPHYS-141	College Physics I		
Select one of the following:		4	
PHYS-242	University Physics II		
PHYS-142	College Physics II		
INOPTC-101	Introduction to Optics	4	
<i>Applied Electives</i>			
Select two of the following:		8	
4 Credits in INASTR or ASTR			
4 Credits in INOPTC or OPTC ¹			
INPHYS-131	Engineering Fundamentals		
PHYS-260	Electronics		
PHYS-339	Classical Mechanics		
IIPHYS-305	Physics of Music		
CHEM-340	Physical Chemistry		
MATH-312	Differential Equations		
INMET-225	Meteorology		
SPDI-110	Elect & Electronic Fund		
SPDI-302	Properties of Materials		
ARCH-375	Statics/ Structural Analysis		
Total Credits		20	

¹ INOPTC-101 may not count toward this requirement.

- Have the ability to characterize systems, including the ability to systematically acquire, analyze, and interpret data.
- Have the ability to recognize, formulate, and model processes with the primary intent of recommending and implementing process improvement.
- Be able to effectively serve on interdisciplinary teams and, in many cases, be capable of leading / facilitating these teams.
- Understand that physics is a profession imposing significant social and ethical responsibilities with global implications that must be effectively addressed.
- Have the ability to evaluate, select and use the modern computer and information technology tools and techniques required for professional practice in the physics.
- Understand the major concepts and assumptions of physics as it relates the physical and life sciences to technology and society.
- Understand the principles of physics, procedures of inquiry, and scientific dispositions, and learning experiences that make these aspects of the subject matter meaningful.
- Understand the importance of developing critical thinking, problem solving and performance skills as related to the profession.
- Understand the role of communication and the use of knowledge of effective verbal and nonverbal techniques to foster active inquiry, collaboration, and supportive interaction in the field.
- Understand the meaning of life-long learning, and foster relationships with colleagues and agencies in the larger community to develop professionally.

Upon completion of the Applied Physics Minor, students will:

- Have an understanding of the applications and principles of physics to the analysis of systems.