DUAL MAJOR IN ENGINEERING AND PHYSICS

Students in the College of Engineering (http://bulletin.miami.edu/undergraduate-academic-programs/engineering/) can pursue a dual major in Engineering and Physics, which consists of a regular major in Engineering, plus selected courses in physics. The physics courses required are the complete University Physics sequence for Engineers, plus 11 additional credits in physics at the 300 level or higher, including PHY 350, PHY 360, and one between PHY 321, PHY 340, and PHY 560.

Students pursuing this dual major will take courses designed to provide them with the skills required for effective communication, both written and oral, within their discipline in the College of Engineering.

Curriculum Requirements

Code	Title	Credit Hours
Any BS in Engineering Program		**128**
Refer to the specific Engineering program page for full requirements:		
https://bulletin.miami.edu/undergraduate-academic-programs/engineering (https://bulletin.miami.edu/undergraduate-academic-programs/engineering/)/		
Physics Courses Included in the Engineering Major		
Option 1:		
PHY 221	University Physics I	
PHY 222	University Physics II	
PHY 223	University Physics III	
PHY 224	University Physics II Lab	
PHY 225	University Physics III Lab	
Option 2:		
PHY 221	University Physics I	
PHY 230	Honors University Physics II-III	
PHY 224	University Physics II Lab	
PHY 225	University Physics III Lab	
Additional Physics Requirements		
PHY 350	Intermediate Electricity and Magnetism	3
PHY 360	Introduction to Modern Physics	3
PHY 340	Classical Mechanics I	3
or PHY 321	Thermodynamics and Kinetic Theory	
or PHY 560	Quantum Mechanics and Modern Physics I	
One physics course at the 300 level or higher		2-3
Total Credit Hours		**139-140**

Sample Plan of Study

This plan of study includes only the Physics portion of the Dual major. Please refer to the corresponding Engineering major (http://bulletin.miami.edu/undergraduate-academic-programs/engineering/) for the Engineering portion (including general education requirements).

Year One		
Fall		**Credit Hours**
PHY 221	University Physics I	3
	Credit Hours	**3**
Spring		
PHY 222	University Physics II	3
PHY 224	University Physics II Lab	1
	Credit Hours	**4**
Year Two		
Fall		
PHY 223	University Physics III	3

PHY 225	University Physics III Lab	1
	Credit Hours	**4**
Spring		
PHY 340 or 321	Classical Mechanics I or Thermodynamics and Kinetic Theory	3
	Credit Hours	**3**
Year Three		
Fall		
PHY 360	Introduction to Modern Physics	3
	Credit Hours	**3**
Spring		
Electives		2-3
	Credit Hours	**2-3**
Year Four		
Fall		
PHY 350	Intermediate Electricity and Magnetism	3
	Credit Hours	**3**
	Total Credit Hours	**22-23**