

NATURAL SCIENCES, MINOR

Program Overview

The College of Arts and Sciences offers a minor in natural sciences that is available to all undergraduate students at CWRU.

Undergraduate Policies

For undergraduate policies and procedures, please review the Undergraduate Academics section of the General Bulletin.

Program Requirements

A minor is achieved through completion of the requirements listed below in any four of the six participating departments.

Code	Title	Hours
Choose four of the following:		
Astronomy		6
Biology		8
Chemistry		8-10
Earth, Environmental, and Planetary Sciences		4-6
Mathematics, Applied Mathematics, and Statistics		8
Physics		8-11
Total Hours		26-37

Participating Departments

Astronomy

Code	Title	Hours
One of the following sequences:		
ASTR 221 & ASTR 222	Stars and Planets and Galaxies and Cosmology	6
ASTR 101	Introduction to the Sun and Its Planets (& any other 100-level ASTR course - 3 credits or more)	
Total Hours		6

Biology

Code	Title	Hours
Two of the following sequences:		
BIOL 214 & 214L	Genes, Evolution and Ecology and Genes, Evolution and Ecology Lab	8
BIOL 215 & 215L	Cells and Proteins and Cells and Proteins Laboratory	
BIOL 216 & 216L	Development and Physiology and Development and Physiology Lab	
Total Hours		8

Chemistry

Code	Title	Hours
One of the following sequences:		
CHEM 105 & CHEM 106 & CHEM 113	Principles of Chemistry I and Principles of Chemistry II and Principles of Chemistry Laboratory	8-10

CHEM 111 & CHEM 113 & ENGR 145	Principles of Chemistry for Engineers and Principles of Chemistry Laboratory and Chemistry of Materials
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Total Hours 8-10

Earth, Environmental, and Planetary Sciences

Code	Title	Hours
One of the following:		
EEPS 101	The Earth and Planets	1-3
EEPS 110	Physical Geology	
EEPS 115	Introduction to Oceanography	
EEPS 117	Weather and Climate	
EEPS 119	Geology Laboratory	
One additional EEPS course		3
Total Hours		4-6

Mathematics, Applied Mathematics, and Statistics

Code	Title	Hours
One of the following sequences:		
MATH 125 & MATH 126	Math and Calculus Applications for Life, Managerial, and Social Sci I and Math and Calculus Applications for Life, Managerial, and Social Sci II	8
MATH 121 & MATH 122	Calculus for Science and Engineering I and Calculus for Science and Engineering II	
Total Hours		8

Physics

Code	Title	Hours
One of the following sequences:		
PHYS 115 & PHYS 116	Introductory Physics I and Introductory Physics II	8-11
PHYS 121 & PHYS 122 & PHYS 221	General Physics I - Mechanics and General Physics II - Electricity and Magnetism and Introduction to Modern Physics	
Total Hours		8-11