

# GEOSCIENCES B.S.

## Bachelor of Science - Geosciences

### College of Humanities & Sciences

Degree Specific Credits: 62

Required Cumulative GPA: 2.0

### Catalog Year: 2018-2019

**Note:** This option is designed for students who seek post-graduate employment as a professional geoscientist or preparation for graduate study in geosciences.

## General Education Requirements

Information regarding these requirements can be found in the General Education Section (<http://catalog.umd.edu/academics/general-education-requirements>) of the catalog.

## Summary

Code	Title	Hours
	Lower-Division Core	8
	Degree Electives	24
	Cognate Sciences	30
	Physics	
	Chemistry	
	Math	
	Computer Science	
	<b>Total Hours</b>	<b>62</b>

## Lower-Division Core

**Rule:** Complete all of the courses in one of two options. Completion of either option fulfills the Lower Division Core requirements.

### Option 1

Code	Title	Hours
<b>Complete all of the following courses:</b>		
GEO 101N	Introduction to Physical Geology	3
GEO 102N	Introduction to Physical Geology Lab	1
GEO 211	Earth's History and Evolution	4
	<b>Total Hours</b>	<b>8</b>

Minimum Required Grade: C-

### Option 2

Code	Title	Hours
<b>Complete all of the following courses:</b>		
GEO 103N	Introduction to Environmental Geology	3
GEO 104N	Introduction to Environmental Geology Laboratory	1
GEO 211	Earth's History and Evolution	4
	<b>Total Hours</b>	<b>8</b>

Minimum Required Grade: C-

## Degree Electives

Code	Title	Hours
<b>Complete 24 credits of the following courses:</b>		
GEO 225	Earth Materials	
GEO 291	Special Topics	
GEO 305	Igneous & Metamorph Petrology	
GEO 309	Sedimentation/Stratigraphy	
GEO 311	Paleobiology	
GEO 315	Structural Geology	
GEO 318	Climate System Dynamics	
GEO 320	Global Water	
GEO 327	Geochemistry	
GEO 391	Special Topics	
GEO 420	Hydrogeology	
GEO 421	Hydrology	
GEO 433	Global Tectonics	
GEO 439	Geophysics	
GEO 443	Principles of Sedimentary Petrology	
GEO 460	Process Geomorphology	
GEO 482	Global Change	
GEO 488	Snow, Ice and Climate	
GEO 491	Special Topics	
	<b>Total Hours</b>	<b>24</b>

Minimum Required Grade: C-

## Cognate Sciences

**Rule:** In addition to completing course work in Geosciences, a minimum of 30 credits in cognate science classes must be completed. More advanced courses in Chemistry, Computer Science, Math, and Physics may be used to meet the 30 credit minimum total in cognate sciences. BIOB 101N or above is also appropriate. Course substitutions for the 30 credit minimum in cognate sciences must be approved by a departmental advisor.

### Physics

Code	Title	Hours
<b>Complete one of the following sequences:</b>		
<b>Algebra- and Trigonometry-based Physics:</b>		
PHSX 205N & PHSX 206N	College Physics I and College Physics I Laboratory	
PHSX 207N & PHSX 208N	College Physics II and College Physics II Laboratory	

### Calculus-based Physics:

PHSX 215N & PHSX 216N	Fund of Physics w/Calc I and Physics Laboratory I w/Calc	
PHSX 217N & PHSX 218N	Fund of Physics w/Calc II and Physics Laboratory II w/Calc	

Minimum Required Grade: C-

**Chemistry**

Code	Title	Hours
<b>Complete one of the following sequences:</b>		8-10
<b>Option 1:</b>		
CHMY 121N	Introduction to General Chemistry	
CHMY 123	Introduction to Organic and Biochemistry	
CHMY 124	Introduction to Organic and Biochemistry Lab	
<b>Option 2:</b>		
CHMY 141N & CHMY 142N	College Chemistry I and College Chemistry I Lab	
CHMY 143N & CHMY 144N	College Chemistry II and College Chemistry II Lab	
Total Hours		8-10

Minimum Required Grade: C-

**Mathematics**

Code	Title	Hours
<b>Complete one of the following Mathematics options:</b>		7-8
<b>Mathematics Option 1</b>		
M 162	Applied Calculus	
M 263	Applied Differential Equations (Applied Differential Equations)	
<b>Mathematics Option 2</b>		
M 171	Calculus I	
M 172	Calculus II	
Total Hours		7-8

Minimum Required Grade: C-

**Computer Science**

**Note:** These courses are recommended to complete the Computer Science requirement. Credit may be received for only 2 of these 3 courses as needed to meet the 30 credit minimum cognate science requirement.

Code	Title	Hours
<b>Complete one or two of the following courses:</b>		3-7
CSCI 172	Intro to Computer Modeling	
GPHY 284	Intro to GIS and Cartography	
STAT 216	Introduction to Statistics	
Total Hours		3-7

Minimum Required Grade: C-