

GEOSCIENCES B.S.

Bachelor of Science - Geosciences

General Education Requirements

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

Summary

Code	Title	Hours
Lower-Division Core		12
Degree Electives		18
Cognate Sciences		24
Physics		
Chemistry		
Mathematics		
Computer Science		
Cognate Elective		
Total Hours		54

Degree Specific Credits: 54

Required Cumulative GPA: 2.0

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

Lower-Division Core

Code	Title	Hours
Complete one of the following courses:		3
GEO 101N	Introduction to Physical Geology	
GEO 103N	Introduction to Environmental Geology	
GEO 105N	Oceanography	
GEO 107N	Natural Disasters	
Complete one of the following courses:		1
GEO 102N	Introduction to Physical Geology Lab	
GEO 104N	Introduction to Environmental Geology Laboratory	
Complete all of the following courses:		
GEO 201	Geologic Evolution of North America	4
GEO 202	The Water Planet	4
Total Hours		12

Minimum Required Grade: C-

Degree Electives

Note: At least three of these courses must be at the 400-level.

Code	Title	Hours
Complete 18 credits of the following courses:		18
GEO 302	Mineralogy and Optical Mineralogy	

GEO 305	Igneous & Metamorph Petrology
GEO 309	Sedimentation/Stratigraphy
GEO 315	Structural Geology
GEO 318	Earth's Changing Climate
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 488	Snow, Ice and Climate Change
GEO 491	Special Topics

Total Hours 18

Minimum Required Grade: C-

Cognate Sciences

Rule: In addition to completing course work in Geosciences, a minimum of 24 credits in cognate science classes must be completed. More advanced courses in Chemistry, Computer Science, Math, and Physics may be used to meet the 24 credit minimum total in cognate sciences. Course substitutions for the 24 credit minimum in cognate sciences must be approved by a departmental advisor.

Physics

Code	Title	Hours
Complete one of the following sequences:		10
Algebra- and Trigonometry-based Physics:		
PHSX 205N	College Physics I	
& PHSX 206N	and College Physics I Laboratory	
Calculus-based Physics:		
PHSX 215N	Fundamentals of Physics with Calculus I	
& PHSX 216N	and Physics Laboratory I with Calculus	

Minimum Required Grade: C-

Chemistry

Code	Title	Hours
Complete one of the following:		3-5
CHMY 121N	Introduction to General Chemistry	
CHMY 141N	College Chemistry I	
& CHMY 142N	and College Chemistry I Lab	
Total Hours		3-5

Minimum Required Grade: C-

Mathematics

Code	Title	Hours
M 171	Calculus I	4
Total Hours		4

Minimum Required Grade: C-

Computer Science

Code	Title	Hours
Complete the following course:		
CSCI 151	Interdisciplinary Computer Science I	3
Complete one of the following courses:		
GPHY 284	Intro to GIS and Cartography	3-4
or STAT 216	Introduction to Statistics	
Total Hours		6-7

Minimum Required Grade: C-

Cognate Elective

Code	Title	Hours
Complete two of the following courses:		
COMX 111A	Introduction to Public Speaking	6
COMX 242	Argumentation	
ENST 230H	Nature and Society	
ENST 320E	Earth Ethics	
ENST 367	Environmental Politics & Policies	
GPHY 335	Water and Sustainability	
NRSM 427	Water Policy	
NRSM 475	Environment & Development	
PHL 112E	Intro Ethics and Environment	
PHL 323	Ethics of Climate Change	
Total Hours		6

Minimum Required Grade: C-