

EARTH, WATER, AND CLIMATE SCIENCE B.S.

General Degree Requirements

To earn a baccalaureate degree, all students must complete successfully, in addition to any other requirements, the University of Montana General Education Requirements. Please refer to the General Education Requirements page (<https://catalog.umt.edu/academics/general-education-requirements/>) for more information.

Additional requirements for graduation can be found on the Degree/Certificate Requirements for Graduation page (<https://catalog.umt.edu/academics/graduation-requirements/>).

Unless otherwise noted in individual program requirements, a minimum grade point average of 2.00 in all work attempted at the University of Montana-Missoula is required for graduation. Please see the Academic Policies and Procedures page (<https://catalog.umt.edu/academics/policies-procedures/>) for information on how your GPA is calculated.

Courses taken to satisfy the requirements of a major, minor, or certificate program must be completed with a grade of C- or better unless a higher grade is noted in the program requirements.

BACHELOR OF SCIENCE - EARTH, WATER, AND CLIMATE SCIENCE

This major is designed for students who seek post-graduate employment as a professional geoscientist or preparation for graduate study in Geosciences.

Course Requirements

Code	Title	Hours
Lower-Division Core		
Complete one of the following courses:		4
ERTH 101N & ERTH 103N	Earth Systems Science and Earth Systems Science Lab	
GEO 107N	Natural Disasters	
Complete all of the following courses:		
ERTH 194	Getting to Know Earth, Water, and Climate Science	1
GEO 201	The Rocky Planet	4
GEO 202	The Water Planet	4
Upper-Division Core		
Complete all of the following courses:		
GEO 323	Computational Methods for Earth and Environmental Scientists	3
GEO 428	Field Methods: Earth, Water, and Climate Science	3
Upper-Division Electives		
Earth Science		
Complete two of the following courses:		6-8
GEO 302	Mineralogy and Optical Mineralogy	
GEO 305	Igneous & Metamorph Petrology	
GEO 309	Sedimentation/Stratigraphy	
GEO 321	Earth Resources and Sustainability	

GEO 439	Geophysics	
GEO 443	Principles of Sedimentary Petrology	
Water Science		
Complete two of the following courses. At least one must be a Geosciences (GEO) course.		6-8
ERTH 406	Global Water Crises	
GEO 420	Hydrogeology	
GEO 421	Hydrology	
GEO 460	Process Geomorphology	
NRSM 385	Watershed Hydrology	
Climate Science		
Complete 3 credits of the following courses:		3
ERTH 303N	Weather and Climate	
GEO 318	Earth's Changing Climate	
GEO 322	Energy and the Environment	
GEO 488	Snow, Ice and Climate Change	
NRSM 408	Natural Climate Solutions	
Upper-Division Experiential Learning		
Complete 3 credits of the following courses:		3
GEO 316	Getting Started in Research	
GEO 392	Independent Study	
GEO 409	Careers in Geosciences	
GEO 498	Internship	
GEO 499	Senior Thesis /Capstone	
Cognate Sciences		
Physics		
Complete one of the following sequences:		10
Algebra- and Trigonometry-based Physics:		
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	Fundamentals of Physics with Calculus I and Physics Laboratory I with Calculus	
PHSX 217N & PHSX 218N	Fundamentals of Physics with Calculus II and Physics Laboratory II with Calculus	
Chemistry		
Complete one of the following:		3-5
CHMY 121N	Introduction to General Chemistry	
CHMY 141N & CHMY 142N	College Chemistry I and College Chemistry I Lab	
Mathematics and Statistics		
Complete all of the following courses:		
M 171	Calculus I	4
M 172	Calculus II	4
	or STAT 216 Introduction to Statistics	
Computer Science		
Complete the following course:		
CSCI 150	Introduction to Computer Science	3
Total Hours		61-67