EARTH, WATER, AND CLIMATE SCIENCE B.S.

The B.S. in Earth, Water, and Climate Science is designed for students who seek post-graduate employment as a professional geoscientist or preparation for graduate study in Geosciences.

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

Course Requirements

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Code	Title	Hours	
Lower-Division C	ore		
Complete one of the following courses:			
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 C	ore		
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 El	ectives		
Earth Science			
Complete two of the following courses:			
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. ERTH 406 Global Water Crises GEO 420 Hydrogeology GEO 441 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 318 Earth's Changing Climate GEO 322 Energy and the Environment GEO 488 Snow, loe 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 College Physics I Laboratory PHSX 205N College Physics I Laboratory PHSX 205N College Physics I Laboratory Calculus-based Physics: PHSX 215N Fundamentals of Physics with Calculus I & PHSX 215N Fundamentals of Physics with Calculus I & PHSX 215N Fundamentals of Physics with Calculus I & PHSX 215N Fundamentals of Physics with Calculus I & PHSX 215N Fundamentals of Physics with Calculus I & PHSX 215N Fundamentals of Physics with Calculus I & PHSX 215N Fundamentals of Physics with Calculus I & PHSX 215N Fundamentals of Physics with Calculus I & PHSX 215N Fundamentals of Physics with Calculus I & PHSX 215N Fundamentals of Physics with Calculus I & PHSX 215N Fundamentals of Physics with Calculus I & PHSX 215N Fundamentals of Physics with Calculus I & PHSX 215N Fundamentals of Physics with Calculus I & PHSX 215N Fundamentals of Physics with Calculus I & PHSX 215N Fundamentals of Physics with Calculus I & PHSX 215N Fundamentals of Physics with Calculus I & PHSX 215N Fundamentals of Physics with Calculus I & PHSX 215N Fundamentals of Physics with Calculus I & PHSX 215N Fundamentals of Physics with Calculus I & PHSX 215N Fundamental					
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Mathematics and Statistics Complete all of the following courses: M 171		•			
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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					
M 172 Calculus II 4 or STAT 216 Introduction to Statistics Computer Science Complete the following course: CSCI 150 Introduction to Computer Science 3		-			
or STAT 216 Introduction to Statistics Computer Science Complete the following course: CSCI 150 Introduction to Computer Science 3					
Computer Science Complete the following course: CSCI 150 Introduction to Computer Science 3			4		
Complete the following course: CSCI 150 Introduction to Computer Science 3	or STAT 216	Introduction to Statistics			
CSCI 150 Introduction to Computer Science 3	·				
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Total Hours 61-67	CSCI 150	Introduction to Computer Science	3		
	Total Hours		61-67		

Four Year Plan

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Course	Title	Hours
Freshman		
Autumn		
ERTH 101N	Earth Systems Science	3
ERTH 103N	Earth Systems Science Lab	1
ERTH 194	Getting to Know Earth, Water, and Climate Science	1
M 171	Calculus I (or appropriate prereq)	4
CSCI 150	Introduction to Computer Science	3
General Education Requ	uirement / Elective	3
	Hours	15
Spring		
CHMY 121N	Introduction to General Chemistry	4
or CHMY 141N <i>and</i> CHMY 142N	or College Chemistry I <i>and</i> College Chemistry I Lab	
M 172	Calculus II	4
or STAT 216	or Introduction to Statistics	
General Education Requ	uirement / Elective	8
	Hours	16
Sophomore		
Autumn		
GEO 201	The Rocky Planet	4
PHSX 205N	College Physics I	4
or PHSX 215N	or Fundamentals of Physics with Calculus I	
PHSX 206N or PHSX 216N	College Physics I Laboratory (take with corresponding course)	1
0111107(2101)	or Physics Laboratory I with Calculus	
General Education Requ		6
	Hours	15
Spring		
GEO 202	The Water Planet	4
PHSX 207N	College Physics II	4
or PHSX 217N	or Fundamentals of Physics with Calculus II	7
PHSX 208N	College Physics II Laboratory	1
or PHSX 218N	or Physics Laboratory II with Calculus	
General Education Requ	uirement / Elective	6
	Hours	15
Junior		
Autumn		
GEO 323	Computational Methods for Earth and Environmental Scientists	3
Upper Division Elective	odenioto	6
General Education Requ	uiroment / Fleetive	6
General Education Requ	Hours	
O	Hours	15
Spring		
Upper Division Elective	· · · · · · · · · · · · · · · · · · ·	6
General Education Requ		9
	Hours	15
Senior		
Autumn		
GEO 428	Field Methods: Earth, Water, and Climate Science	3
Upper Division Elective		3
Upper Division Experien	ntial Learning	3
General Education Requ	uirement / Elective	6
0	Hours	15
Spring		
Upper Division Elective	· · · · · · · · · · · · · · · · · · ·	3
General Education Requ		12
	Hours	15
	Total Hours	121