

GEOSCIENCES B.S. - EARTH SCIENCE EDUCATION

Individuals interested in teaching in K-12 schools must complete a degree in the content area they want to teach plus the teacher preparation program through the Department of Teaching and Learning. Individuals must complete the teaching track within that degree program, which may contain different course requirements than the non-teaching track since the sequence of courses is designed to meet state standards. Upon completion of the degree program with the teaching track and the secondary licensure program, one will be eligible for a standard Montana teaching license in this content area.

- Secondary Education Licensure Program (<https://www.umt.edu/education/departments/teaching-and-learning/tep/default.php>)
- Licensure Degree Requirements (<https://catalog.umt.edu/colleges-schools-programs/education/teaching-learning/lic-secondary-licensure/>)

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 - Geosciences; Earth Science Education Concentration

- Students must be formally admitted to the Teacher Education Program and complete all of the professional education licensure requirements.
- A major GPA of 2.75 is required to be eligible for student teaching.
- This major does not qualify as a single field endorsement. Individuals must complete the teaching track of a second major or minor in another content area.

Course Requirements

Code	Title	Hours
Lower-Division Core		
Complete all of the following courses:		
GEO 101N	Introduction to Physical Geology	3
GEO 102N	Introduction to Physical Geology Lab	1
GEO 105N	Oceanography	3

GEO 201	The Rocky Planet	4
Upper-Division Geoscience Core Courses		
Complete all of the following courses:		
GEO 302	Mineralogy and Optical Mineralogy	4
GEO 318	Earth's Changing Climate	3
Upper-Division Geoscience Elective		
Complete one additional Geoscience (GEO) course at the 300- or 400-level. GEO 320 is recommended to complete the upper division writing requirement in Geosciences but students may also select from the university-approved list of upper division writing courses to fulfill this requirement.		3
Physics		
Complete one of the following Physics 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 all of the following courses:		
CHMY 121N	Introduction to General Chemistry	4
CHMY 485	Laboratory Safety	1
Mathematics		
Complete all of the following courses:		
M 162 or M 171	Applied Calculus Calculus I	4
STAT 216	Introduction to Statistics	4
Astronomy		
Complete the following course:		
ASTR 131N	Planetary Astronomy	3
Teaching Methods Course		
Complete the following course:		
EDU 497	Teaching and Assessing (Methods: 5-12 Science)	4
Total Hours		51

Secondary Teaching Licensure

For endorsement to teach this subject, a student also must gain admission to the Teacher Education Program and meet all the requirements for secondary teaching licensure (<https://catalog.umt.edu/colleges-schools-programs/education/teaching-learning/lic-secondary-licensure/>). For more information, see the Teaching and Learning Department webpage (<https://www.umt.edu/education/departments/currinst/default.php>).