Geology

Department Information

- **Department Location:**
  238 Sugihara Hall
- **Department Phone:**
  701-231-8837
- **Department Web Site:**
  www.ndsu.edu/geosci/ (http://www.ndsu.edu/geosci/)
- **Credential Offered:**
  B.S.; B.A.
- **Sample Program Guide:**
  catalog.ndsu.edu/programs-study/undergraduate/geology/#planofstudytext (http://catalog.ndsu.edu/programs-study/undergraduate/geology/#planofstudytext)

Major Requirements

Major: Geology

Degree Type: B.A. or B.S.
Minimum Degree Credits to Graduate: 122

University Degree Requirements

1. Satisfactory completion of all requirements of the curriculum in which one is enrolled.
2. Earn a minimum total of 120 credits in approved coursework. Some academic programs exceed this minimum.
3. Satisfactory completion of the general education requirements as specified by the university.
4. A minimum institutional GPA of 2.00 based on work taken at NDSU.
5. At least 36 credits presented for graduation must be in courses numbered 300 or higher.
6. Transfer Students: Must earn a minimum of 60 credits from a baccalaureate-degree granting or professional institution.
   a. Of these 60, at least 36 must be NDSU resident credits as defined in #7.
   b. Within the 36 resident credits, a minimum of 15 must be in courses numbered 300 or higher and 15 credits in the major field of study.
7. At least 36 credits must be NDSU resident credits. Resident credits include credits registered and paid for at NDSU.

For complete information, please refer to the Degree and Graduation Requirements (http://catalog.ndsu.edu/past-bulletin-archive/2022-23/academic-policies/undergraduate-policies/degree-and-graduation/) section of this Bulletin.

University General Education Requirements

Code	Title	Credits
Communication (C)		**12**
ENGL 110	College Composition I	
ENGL 120	College Composition II	
COMM 110	Fundamentals of Public Speaking	
Upper Division Writing †		
Quantitative Reasoning (R) †		**3**
Science and Technology (S) †		**10**
Humanities and Fine Arts (A) †		**6**
Social and Behavioral Sciences (B) †		**6**
Wellness (W) †		**2**
Cultural Diversity (D) *†		
Global Perspectives (G) *†		
Total Credits		**39**

* May be satisfied by completing courses in another General Education category.

† General education courses may be used to satisfy requirements for both general education and the major, minor, and program emphases, where applicable. Students should carefully review major requirements to determine if specific courses can also satisfy these general education categories.

- A list of university approved general education courses and administrative policies are available here (http://catalog.ndsu.edu/past-bulletin-archive/2022-23/academic-policies/undergraduate-policies/general-education/#genedcoursestext).

College Requirements

Code	Title	Credits
Bachelor of Arts (BA) Degree – An additional 12 credits Humanities and Social Sciences and proficiency at the second year level in a modern foreign language. *		**12**
Bachelor of Science (BS) Degree – An additional 6 credits in Humanities or Social Sciences *		**6**

* Humanities and Social Sciences may be fulfilled by any course having the following prefix: ADHM, ANTH, ARCH, ART, CJ, CLAS, COMM, ECON, ENGL, FREN, GEOG, GERM, HDFS, HIST, LA, LANG, MUSC, PHIL, POLS, PSYC, RELS, SOC, SPAN, THEA, WGS, or any course from the approved list of general education courses in humanities and social sciences (general education categories A and B). These credits must come from outside the department of the student's major.

Major Requirements

Code	Title	Credits
Geology Core Requirements		
Students must have at least a 2.0 cumulative GPA in the geology core requirements.		
GEOG 455	Introduction to Geographic Information Systems	4
GEOL 105 & 105L	Physical Geology and Physical Geology Lab (May satisfy general education category S)	4
GEOL 106 & 106L	The Earth Through Time and The Earth Through Time Lab	4
GEOL 150	Concepts, Skills, and Ethics in Geoscience	2
GEOL 350 & GEOL 303	Invertebrate Paleontology and Paleontology Field Course	4
GEOL 410	Sedimentology/Stratigraphy	4
GEOL 412	Geomorphology	3
GEOL 420 & GEOL 421	Mineralogy and Mineralogy Laboratory	4
GEOL 422	Petrology	3
GEOL 423	Petrography	1
GEOL 450	Field Geology	3
GEOL 457	Structural Geology	4
GEOL 491	Seminar (Junior Year)	1
GEOL 491	Seminar (Senior Year)	1
SOIL 444	Soil Genesis and Survey	3
Select one course from the following:		2
GEOL 301	Lake Superior Field Course	
GEOL 302	Black Hills Field Course	
GEOL 496	Field Experience	
Related Required Courses		
ENGL 324	Writing in the Sciences	3
MATH 165	Calculus I (May satisfy general education category S)	4
MATH 166	Calculus II	4
Select one of the following chemistry sequences :		8
Sequence A:		
CHEM 121 & 121L	General Chemistry I and General Chemistry I Laboratory	

CHEM 122 & 122L	General Chemistry II and General Chemistry II Laboratory	
Sequence B:		
CHEM 150 & CHEM 160	Principles of Chemistry I and Principles of Chemistry Laboratory I	
CHEM 151 & CHEM 161	Principles of Chemistry II and Principles of Chemistry Laboratory II	
Select one of the following physics sequences:		8-10
Sequence A:		
PHYS 211 & 211L	College Physics I and College Physics I Laboratory	
PHYS 212 & 212L	College Physics II and College Physics II Laboratory	
Sequence B:		
PHYS 251 & 251L	University Physics I and University Physics I Laboratory	
PHYS 252 & 252L	University Physics II and University Physics II Laboratory	
Total Credits		**74-76**

Program notes

- Except for courses offered only as pass/fail grading, no course may be taken Pass/Fail.
- Majors planning on graduate studies should be aware that a summer field camp course may be required for graduate admission. This course is recommended to be taken during the summer following the junior or senior year. Information on field camp courses and a small departmental scholarship to support these studies may be obtained from an adviser.

Minor Requirements

Minor: Geology

Required Credits: 18

Code	Title	Credits
Required Courses		
All minor courses must be selected in consultation with a Department of Geosciences adviser.		18
Total Credits		**18**

Minor Requirements and Notes

- A minimum of 8 credits must be taken at NDSU.
- Select geography and soil science courses may be substituted for geology courses. A substitution form must be submitted to the Office of Registration and Records for approved substitutions.
- The student and adviser will complete a substitution form with the courses to be used for the geology minor. This form will also require the signature of the department chairperson before being submitted to the Office of Registration and Records for verification of minor program completion.
- Note: This minor will not be available for view in the Student Advisement/Requirement Report in Campus Connection until the substitution form has been received and processed.