Overview
Geology is often defined as the study of the physical aspects of the Earth, particularly its composition and structure. But it’s much more than that. Understanding the processes that have shaped our dynamic planet, both past and present, involves chemistry, physics, mathematics and biology, along with history, logic and art. Professional geologists also utilize creativity, ingenuity and 3-D visualization, as well as speaking and writing skills. A geology career can utilize all your talents and apply them to areas of great importance to society, such as mineral and hydrocarbon exploration, safeguarding water resources, mitigation of natural hazards, remediation of environmental problems, and providing insights into past climate change.

Professional options

CAREERS
At no point in the past 60 years has there been such a sustainable demand for geologists, and geoscience-related occupations are expected to grow much faster than the average growth of all U.S. occupations. This involves three distinct employer groups: the energy and natural resources sector (mostly petroleum and mining), the environment sector (mostly groundwater and hazards) and the government sector (research and regulatory agencies). The demand for new geologists exceeds the number of geology graduates available.

The demand for geologists is reflected in salary offers. The petroleum industry is leading the way, with annual salaries often exceeding $100,000. The mean annual wage for all geoscientists is approximately $82,500. Job opportunities, salaries and opportunities for advancement are significantly enhanced with a Master of Science degree. Completing a master’s degree immediately after a bachelor’s degree typically takes 24 months.

Points of pride
The Princeton Review picked K-State among the best colleges in the country, ranking the university highly for happy students, town-gown relations, residence halls and more.
Suggested coursework

120 hours

Freshman year
First semester
Hrs.  Course
3  GEOL 100  Earth in Action
1  GEOL 103  Geology Lab
3  ENG 100  Expository Writing I
4  CHM 210  Chemistry I
3  Humanities or social science elective (one course)
T1

Second semester
Hrs.  Course
3  GEOL 102  Earth Through Time
3  ENG 200  Expository Writing II
3  COMM 106  Public Speaking I
2  Humanities (Fine Arts, one course)
T5

Sophomore year
First semester
Hrs.  Course
3  GEOL 503  Petrology
4  MATH 220  Analytical Geometry and Calculus
6  Humanities or social science electives (two courses)
T3

Second semester
Hrs.  Course
3  GEOL 504  Introduction to Geochemistry
3  GEOL 640  Introduction to Geophysics
2  Humanities or social science electives (two courses)
T3

Junior year
First semester
Hrs.  Course
3  GEOL 560  Field Methods
3  GEOL 581  Principles of Paleontology
3  GEOL 530  Structural Geology
4  PHYS 113  General Physics I
or  Phys 213  Engineering Physics
3  Elective (one course) - could be international overlay
T5

Second semester
Hrs.  Course
3  GEOL 630  Sedimentology – Stratigraphy
3  Geology elective from Groups I - II - III
4  PHYS 114  General Physics II
or  PHYS 214  Engineering Physics II
6  Humanities or social science electives (two courses)
T6

Summer Semester
Hrs.  Course
3  GEOL 680  Field Camp

Senior year
First semester
Hrs.  Course
6  Geology elective from Groups I - II - III
9  Electives (three courses)
T5

Second semester
Hrs.  Course
3  Geology elective groups I - II - II
12  Electives (four courses)
T3

Select at least one each from Groups I, II and III below and one additional elective from Groups I, II, III or IV

Group I
3  GEOL 605  Introduction to Geochemistry
3  GEOL 640  Introduction to Geophysics

Group II (Energy and natural resources)
3  GEOL 702  Economic Geology
3  GEOL 730  Petroleum Geology
3  GEOL 742  Seismic Data Interpretation

Group III (Surficial processes and the environment)
3  GEOL 520  Geomorphology
3  GEOL 611  Hydrogeology
3  GEOL 650  Geomicrobiology

Group IV (Other electives)
Any remaining Geology course 500-level or above, including but not limited to:

Hrs.  Course
3  GEOL 510  Geology of Planets
3  GEOL 540  Geologic Record of Climate Change
3  GEOL 599  Senior Thesis
3  GEOL 711  Water Resources Geochemistry
3  GEOL 735  Fossil Fuel Sedimentology
3  GEOL 738  Formation Evaluation
3  GEOL 740  Regional Geology
3  GEOL 741  Seismic Data Processing
3  GEOL 747  Numerical Modelling
3  GEOL 760  Geochemical and Biogeochemical Modelling
3  GEOL 770  Subsurface Methods
3  GEOL 790  Problems in Geology

Geology minor
Hrs.  Course
3  GEOL 100  Earth in Action
1  GEOL 103  Geology Laboratory
3  GEOL 501  Mineralogy
At least three additional courses at 500 level or above (excluding GEOL 512)
T6

Exploration and environmental geophysics minor
Hrs.  Course
3  GEOL 100  Earth in Action
1  GEOL 103  Geology Laboratory
3  GEOL 640  Introduction to Geophysics
3  GEOL 642  Field Geophysics
3  GEOL 742  Seismic Data Interpretation
3  GEOL 520  Geomorphology
or  GEOL 630  Sedimentology – Stratigraphy
T6

Distribution requirements
The College of Arts and Sciences requires each student to take 11 credit hours (four courses) in the humanities and 12 credit hours (four courses) in the social sciences. See the undergraduate catalog at catalog.k-state.edu for details.

For more information about geology, contact:
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1428 Anderson Ave.
Manhattan, KS 66506-3201
785-532-6724
akb666@k-state.edu
k-state.edu/geology

For more information about Kansas State University, contact:
Office of Admissions
Kansas State University
119 Anderson Hall
919 Mid-Campus Drive North
Manhattan, KS 66506-0102
1-800-432-8270 (toll free) or 785-532-6250
k-state@k-state.edu
k-state.edu/admissions

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Post-Graduation Statistics
k-state.edu/postgrad-stats
ksdegreestats.org

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