



GEOLOGY

Program

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STOCKTON | SCHOOL OF NATURAL
UNIVERSITY | SCIENCES & MATHEMATICS



Geology Program | GEOL

ABOUT THE PROGRAM

Stockton's **Geology** curriculum provides students with a solid foundation in the basic sub-disciplines of geology. Beyond the basic core, students may concentrate their studies in subjects as traditional as earthquakes, volcanoes, sediments and minerals or in applied topics such as environmental geology, coastal processes, ore deposits, hydrology and water resources. Flexibility within a traditional framework is a characteristic of the Geology degree. Geology majors become experienced with all aspects of the Earth from the surface environment to the interior parts of the deep Earth.

The Geology curriculum stresses field experience, laboratory and instrumentation use, independent study projects and internships. A key aspect of all geology classes is the engagement of students with the world around them through field work. There is no better laboratory for the geosciences than the outdoors! Field trips are incorporated in all Geology courses and involve travel throughout New Jersey, New York, Pennsylvania, Connecticut and elsewhere. These encourage students to develop initiative and professionalism while they provide practical experience and enhance the students' understanding of local geology, the region and the world.

Opportunities for research also occur within the department through collaboration with the faculty members, and students are strongly encouraged to participate in research as an independent study. Current and previous research projects are taking place in Newfoundland (Canada), Connecticut, Massachusetts, Rhode Island, Maine, Utah, the Adirondacks (NY), Colorado, Ontario and Saskatchewan (Canada), Montana, Mount St. Helens (WA), the Florida Keys, and at various locations in New Jersey. These projects exemplify a variety of different topics within geology including: ore deposits, paleomagnetism, igneous and metamorphic petrology, sedimentology, stratigraphy, volcanology, structural geology, and geochemistry. Research projects engage students in the most relevant techniques, instrumentation, and ideas to enhance their educational experience.

Stockton offers both a **Bachelor of Science (B.S.)** and a **Bachelor of Arts (B.A.)** degree in Geology to prepare students for scientific, technical and educational careers. The Bachelor of Science and Bachelor of Arts degrees require a common core of 30 credits in introductory and upper level courses.

The B.S. degree requires 80 credits in program and cognate courses and 48 in General Studies. B.S. candidates are required to take an additional 30 or 32 credits of cognate science and 18 to 20 credits of program or cognate electives. The Bachelor of Arts (B.A.) in Geology is particularly appropriate for students who wish to focus on earth science education. The B.A. requires 64 program/cognate credits and 64 in General Studies. B.A. candidates need an additional 20 credits of cognate science and 14 credits of program or cognate electives. The Geology degree is administered in the Environmental Studies and Geology program. All students are required to maintain at least a 2.0 average in GEOL courses.

The Core Geology courses required for both B.S. and B.A. degrees are:

Physical Geology, Historical Geology, Mineralogy, Petrology, Field Geology, Structural Geology, Sedimentology and Stratigraphy, and an Independent Study project/Internship.

Cognate cores required for both B.S. and B.A. degrees are:

Chemistry I (with lab), and Chemistry II or IV (with lab).

Additional B.S. Requirements (cognates):

Physics I or Physical for Life Sciences I w/ labs, Physics II or Physics for Life Sciences II w /labs, Calculus I and II.

Additional B.A. Requirements (cognates):

Precalculus and Calculus I, or Calculus I and II, or Calculus I and a statistics course.

Geology elective courses (some are cross-listed or taught within other programs)
Groundwater Hydrology, Watershed Hydrology, Geophysics, Hydrothermal Fluids and Ore Deposits, Geomorphology, Tectonics, Soil Science, Coastal Processes, Paleobiology, Invertebrate Paleontology

Additional classes will be taken to achieve the grand total of 128 credit hours. For the B.S., this is completed with 18-20 credit hours being used for intermediate and upper level program/cognate electives and 48 credit hours from General Studies and at some distance classes. For the B.A., this is completed with 14-15 credit hours being used for intermediate and upper level program/cognate electives and 64 credit hours from General Studies and at some distance classes.

FOR ADDITIONAL INFORMATION

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FOR INFORMATION ABOUT THE PROGRAM:

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Stockton is an AA/EQ institution.