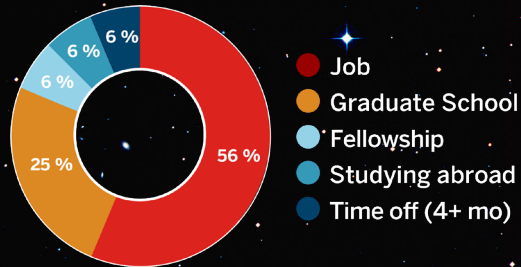
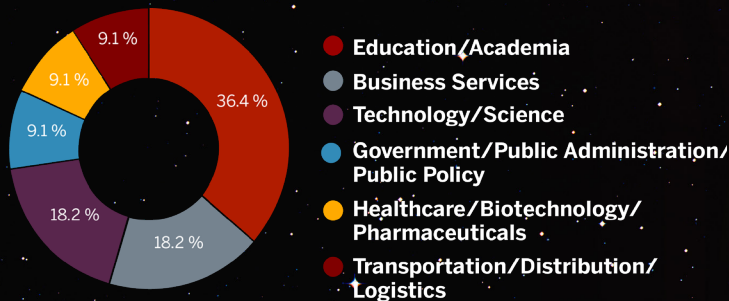


in 2022-23, 93 % of our graduates are employed or in graduate school within 6 months of graduation



our graduates have careers in:



IU Walter Center for Career Achievement

NASA: On April 8, 2024, a total solar eclipse will cross North America, passing over Mexico, the United States, and Canada.

CONTACT INFORMATION

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24



EARTH AND ATMOSPHERIC SCIENCES

Our Atmospheric Science program offers opportunities for field, satellite, and modeling research. Our faculty study weather and climate processes from cold fronts and tropical cyclones to global atmospheric cloud and circulation patterns. We collaborate in interdisciplinary research with other departmental faculty on paleoclimate and global climate change, building collective expertise in atmosphere-hydrosphere-solid earth interactions. We are among the most active users of IU's high-performance parallel computing facilities which include the new Big Red 200 supercomputer, one of the most powerful in the world.

atmospheric science

FACULTY: CHANH Q. KIEU, CODY KIRKPATRICK, BEN KRAVITZ, TRAVIS O'BRIEN, PAUL W. STATEN, MATTHEW CHURCHFIELD, PAUL GODDARD

geochemistry biogeochemistry

Biogeochemistry is inherently multidisciplinary, positioned at the intersection of biology, geology, and chemistry, and combines field investigations with laboratory analyses and experimentation to reveal how the complex interactions between chemical, geological and biological systems shape our planet and its neighbors. Our research is rooted in the exploration of molecular and isotopic characteristics of organic matter in diverse geological settings.

FACULTY: SIMON BRASSELL, ERIKA ELSWICK, JULIA KELSON, MARIA MASTALERZ, SHELBY RADER, PETER SAUER, JUERGEN SCHIEBER, ARNDT SCHIMMELMANN, CHEN ZHU

Economic Geology encompasses areas of Earth science that pertain to the extraction or production of geologic materials for profit. Our faculty are involved in field, analytical, and experimental studies of natural resources such as metals, non-metals, fuels, and water, including studies that relate to the genesis and localization of petroleum, coal, and natural gas.

economic geology

FACULTY: SIMON BRASSELL, CHUSI LI, MARIA MASTALERZ, SHELBY RADER, JUERGEN SCHIEBER, ARNDT SCHIMMELMANN

geobiology geoanthropology geoarchaeology

Our group investigates interactions between life and environments through Earth's long history. Bridged by principles of paleontology that link geologic, biologic, chemical, and anthropologic sciences,

geobiology analyzes fossils and biogeochemical traces to test hypotheses about the history of life and geoarchaeology and geoanthropology focus on the spatial, temporal, and environmental context of humans in the most recent phases of Earth history. The IU Paleontology Collection, a repository of more than 1.3 million fossils, offers special opportunities for research, teaching, and outreach.

FACULTY: SIMON BRASSELL, ERIKA ELSWICK, ED HERRMANN, CLAUDIA JOHNSON, JESS MILLER-CAMP, JACKSON NJAU, P. DAVID POLLY

geophysics geomorphology tectonics

Geophysics investigates the physical processes that shape the Earth's formation, evolution, and present-day dynamics. We combine state-of-the-art instrumentation and advanced computation observe and model complex systems in ways that were previously unimaginable. Our research includes global plate tectonics, earthquake-related deformation, earthquake forecasting and hazards, volcanology, structural geology, and tectonic geomorphology. We also combine quantitative geochronology, thermochronology, and petrology in interdisciplinary investigation of crustal deformation, sedimentary basin formation, magmatism, landscape evolution, and natural hazard mitigation.

FACULTY: JIANHUA (GINNY) GONG, MICHAEL HAMBURGER, KAJ JOHNSON, ELIZABETH KENDERES, DAVID LILIE, BRIAN YANITES

Our mineralogists and petrologists study rocks from terrestrial and planetary environments, with active projects on all 7 continents and on Mars. Our work, which utilizes natural samples and experimental methods, interfaces with the hydrology, biogeochemistry, sedimentary, and geophysics research in our department.

mineralogy petrology

FACULTY: ELIZABETH KENDERES, CHUSI LI, SHELBY RADER, JUERGEN SCHIEBER

Sedimentary geology investigates the processes that shape the Earth's surface and how they have controlled the Earth system throughout its history. We build on our long-standing strengths in physical sedimentology and basin analysis to define new frontiers in tectonics, paleoclimate and sedimentary processes. Our work with facies analysis and provenance analysis, stable isotope geochemistry, detrital zircon geochronology, flume experimentation, and modelling are expanding what can be learned from the sedimentary record. Training in sedimentary geology leads to employment in academia, government, energy, and environmental science.

FACULTY: SIMON BRASSELL, DOUG EDMONDS, ERIKA ELSWICK, CLAUDIA JOHNSON, JULIA KELSON, JACKSON NJAU, P. DAVID POLLY, PETER SAUER, JUERGEN SCHIEBER, ANDREA STEVENS-GODDARD

Earth's surface is a dynamic zone extending from the base of weathered bedrock to the top of trees where interactions between atmosphere, water, biota, and tectonics influence landscapes, resources, hazards, climate, biogeochemical cycles, and life. Our research includes dynamics of ground- and surface waters, geological carbon sequestration, evolution of landscapes, rivers, and deltas, interaction of climate and topography, dynamics of geochemical cycles, and contamination of soils and surface and ground waters.

surface processes + environmental geoscience

FACULTY: SIMON BRASSELL, MATTHEW CHURCHFIELD, DOUG EDMONDS, ERIKA ELSWICK, MICHAEL HAMBURGER, BEN KRAVITZ, DAVID LILIE, TRAVIS O'BRIEN, SHELBY RADER, PETER SAUER, JUERGEN SCHIEBER, ARNDT SCHIMMELMANN, ANDREA STEVENS-GODDARD, BRIAN YANITES, CHEN ZHU



The IU Judson Mead Geologic Field Station, located in the Tobacco Root Mountains of Montana, is one of the best places in the world to learn geology in the field. Over 3.5 Ga of geologic history is exposed near the field station. Our courses are designed to allow you to build and integrate a broad set of geoscience skills to solve 4-dimensional geologic problems. The field station environment allows you to immerse yourself in learning and meeting your future peers with minimal logistical distractions.

IU Geologic Field Station

EAS X429 Field Geology in the Rocky Mountains (6 credits) is our 6-week capstone course that prepares geoscience majors to be successful in a geoscience career or graduate program. X429 is an immersive, hands-on geology course that teaches the fundamental field skills and includes a deep dive into the geoscience subdiscipline of your choice. Field projects range from outcrop to regional scale.

EAS X498 Subdiscipline Concentration Courses (1 credit) is a 1-week, subdiscipline specific curriculum that is an integral part of X429 and is also open to students who don't take X429. Current subdisciplines include Igneous Intrusive and Extrusive Systems; Environmental Geology and Hydrology; Quantitative Structural Geology; Sequence Stratigraphy, Depositional Facies and Paleoclimate; and Digital Mapping Techniques.

EAS E432 Virtual On-Line Field Geology Fundamentals in the Rocky Mountains (4 credits) is designed to teach students field geology skills, thought processes and workflows without requiring them to actually go into the field. It is recommended for students who are unable to participate in a rigorous and time intensive field experience.

EXECUTIVE DIRECTOR OF THE FIELD STATION
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