EAS E 131 OCEANS & OUR GLOBAL ENVIRONMENT
3 credits | Lecture 100% online course taught by IU Bloomington. No on-campus meetings are required. 
Instructor: Simon Brassell 
COLL (CASE) N&M credit 
An introduction to oceanography integrating exploration of ocean basins and plate tectonics, seawater and seafloor sediments, ocean-atmospheric interactions and global climate, and coastal-marine ecology to build understanding of oceanographic processes complemented by on-line assignments that explore and interpret web-based data sets emphasizing ocean dynamics and the climatic and environmental importance of Earth's oceans.

EAS X429 FIELD GEOLOGY IN THE ROCKY MOUNTAINS
6 credits | June 29 - August 9, 2020 
Location: IU Geologic Field Station in Cardwell, Montana 
X429 is an immersive, hands-on, field geology course. It is designed to allow students to build and integrate diverse geoscience skills to solve 4-dimensional geologic problems. Projects range from outcrop scale to regional scale and cover most sub-disciplines of the geosciences.

EAS X428 FIELD GEOLOGY FUNDAMENTALS IN THE ROCKY MOUNTAINS
3 credits | June 29 - August 8, 2020 
Location: IU Geologic Field Station in Cardwell, Montana 
X428 is designed as a lower cost option for students who need a field geology course to complete their degree requirements, but are not planning to specialize in the geosciences for a career. It includes the same material as the first five weeks of X429, but it does not include the subdiscipline concentration.

EAS X498 SUBDISCIPLINE CONCENTRATIONS
1 credit | August 2 - August 8, 2020 
Location: IU Geologic Field Station in Cardwell, Montana 
X489 concentrations are an integral part of X429 and, starting in 2020, are also open to students who don't take X429. We currently offer five field-based subdiscipline concentration subjects. Each course is a 1-credit, 1-week course. All five courses are taught concurrently at IUGFS.

EAS X377 PALEOANTHROPOLOGY AND GEOLOGY IN TANZANIA
6 credits | May 13 - June 19, 2020. Deadline for applications is February 20, 2020 
Location: Olduvai Gorge, Tanzania 
This 6-week course fulfills the IU GenEd World Languages and Cultures International Experience requirement. Students will study the impressive fault escarpment that marks the western boundary of the East Africa Rift Zone as well as understand the implication of the continental rifting and associated volcanism to evolution of early humans in East Africa.

DEPARTMENT CONTACT INFORMATION
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https://earth.indiana.edu/
EAS E122 EARTH'S DYNAMIC ATMOSPHERE
3 credits | Time: 10:10-11:00A Monday & Wednesday
Location: BH 330 | Instructor: Paul Staten
COLL (CASE) N&M credit
Specialized and general students are introduced to atmospheric science through climate-change science, atmospheric physics, atmosphere-ocean interactions, forecasting, and severe weather. Tools and techniques for analyzing atmospheric environments and assessing human impact are covered. Students will gain understanding of basic atmospheric properties and processes through rigorous critical thinking and problem solving.

EAS E131 OCEANS & OUR GLOBAL ENVIRONMENT
3 credits | Lecture 100% online course taught by IU Bloomington. No on-campus meetings.
Instructor: Simon Brassell
COLL (CASE) N&M credit
An introduction to oceanography integrating exploration of ocean basins and plate tectonics, seawater and seafloor sediments, ocean-atmospheric interactions and global climate, and coastal/marine ecology to build understanding of oceanographic processes complemented by on-line assignments that explore and interpret web-based data sets emphasizing ocean dynamics and the climatic and environmental importance of Earth’s oceans.

EAS E144 EXTREME WEATHER AND ITS IMPACT
3 credits | Time: 9:30-10:45A Tuesday & Thursday
Location: BH 227 | Instructor: Paul Staten
Location: CLSD 12895 | Instructor: Cody Kirkpatrick
COLL (CASE) N&M credit
Introduces a range of natural disasters and extreme weather phenomena that span regions, seasons, and origins. Emphasizes the influences of the causes and effects of each phenomenon, as well as their physical and societal impacts.

EAS A437 ADVANCED SYNTHETIC METEOROLOGY & CLIMATOLOGY
3 credits | Time: 2:30-3:20P Monday, Wednesday, Friday
Location: LI 028 | Instructor: Cody Kirkpatrick
COLL (CASE) N&M credit
Introduces a range of natural disasters and extreme weather phenomena that span regions, seasons, and origins. Emphasizes the influences of the causes and effects of each phenomenon, as well as their physical and societal impacts.

EAS A476 CLIMATE CHANGE SCIENCE
3 credits | Time: 10:10-11:25A Monday, Wednesday
Location: BH 231 | Instructor: Brian Kravit
COLL (CASE) N&M Breadth of Inquiry
Introduction to the processes that shape our planet, the composition and structure of Earth, and the erosion and deposition of sediments at the surface. Study of processes ranging from forces driving plate motion, fluid flow in and on the earth, crustal deformation and mountain building, erosion of source terrain, the transport system, and the depositional record.

EAS E100 THE EVOLVING EARTH: TREKS IN PROVENCE
3 credits | Time: 7:30-8:45P Tuesday
Location: IGWS 2022 | Instructor: Michael Hamburger
COLL (CASE) N&M Breadth of inquiry credit
Above class meets second eight weeks only. Above class is open only to those students interested in participating in the 3-week (3CR), Treks in Provence class, during Summer. Consent of instructor is required in advance.

EAS E100 THE EVOLVING EARTH
3 credits | Time: 9:45 - 10:30A Tuesday, Thursday
Location: IGWS 2022 | Instructor: Bruce Douglas
COLL (CASE) N&M Breadth of inquiry credit
Processes that have produced the Earth and are continuing to change it. Topics include origin and evolution of life, dynamic forces within the Earth (earthquakes and volcanism), geological sources of energy, and the effect of humans on the geologic environment.

EAS E104 EVOLUTION OF THE EARTH
3 credits | Time: 9:05-11:00P Thursday
Location: SY 008B | Instructor: Jackson Njau
COLL (CASE) N&M Breadth of Inquiry credit
This is an introductory science course focused on Earth’s history interpreted over 5-billion years. It employs a deductive approach to build an understanding of the significance of rocks and fossils and reconstructing the origins of mountains, continents, ocean basins and life.

EAS E190 THE EVOLVING EARTH
3 credits | Time: 4:00 - 6:30P Tuesday
Location: IGWS 2022 | Instructor: Ed Ripley
Theory and use of optics in the identification and classification of rock-forming minerals in fragments and thin sections.

EAS A431 PRINCIPLES OF HYDROGEOLOGY
3 credits | Time: 1:00-2:15P Tuesday, Thursday
Location: BH 231 | Instructor: Chen Zhu
COLL (CASE) N&M Breadth of Inquiry
Groundwater; acid drainage, landfills, and agricultural pollution; Darcy’s Law, fluid potential, unsaturated flow; fluid and aquifer properties affecting groundwater flow; fluid mass-balance equation and its application; contaminant transport.

EAS E333 SEDIMENTATION AND TECTONICS
4 credits | Time: 3:35-5:30P Thursday
Location: IGWS 2022 | Instructor: Bruce Douglas
COLL (CASE) N&M credit
Geology and origin of folds, faults, joints, and cleavage. Modes and principles of rock deformation. Regional tectonics of selected fold-mountain systems.

EAS E406 INTRODUCTION TO GEOCHEMISTRY
3 credits | Time: 11:20A - 12:30P Tuesday & Thursday
Location: BH 227 | Instructor: Erika Elswick
Physical and chemical properties of water; chemical equilibria and stable isotopes in groundwaters; acid drainage, landfills, and agricultural pollution; Darcy’s Law, fluid potential, unsaturated flow; fluid and aquifer properties affecting groundwater flow; fluid mass-balance equation and its application; contaminant transport.

EAS E417 OPTICAL MINERALOGY
3 credits | Time: 4:00 - 6:30P Tuesday
Location: IGWS 2022 | Instructor: Ed Ripley
Theory and use of optics in the identification and classification of rock-forming minerals in fragments and thin sections.

EAS E403 INTRODUCTION TO NEAR-SUBSURFACE HYDROLOGY
3 credits | Time: ARR
Location: ARR | Instructor: Simon Brassell
Theory and use of optics in the identification and classification of rock-forming minerals in fragments and thin sections.

EAS E105 EARTH: OUR HABITABLE PLANET
3 credits | Time: 12:20-1:10P Monday, Wednesday, Friday
COLL (CASE) N&M Breadth of inquiry credit
Introduction to Planet Earth as a dynamic and complex global system.

EAS E116 OUR PLANET AND ITS FUTURE
3 credits | Time: ARR
Location: ARR | Instructor: Brian Yanites
COLL (CASE) N&M Breadth of inquiry credit
This course is part of the College ASPIRE semester: - Italy Program. Interested students can visit go.iu.edu/ASPIREsemester to apply; deadline is October 15. Questions may be directed to collOIA@iu.edu. This course will take place from February 17 - April 3.

EAS E341 NATURAL HISTORY OF CORAL REEFS
3 credits | Time: 4:00-5:15P Tuesday & Thursday
Location: SY 0008 | Instructor: Jackson Njau
COLL (CASE) N&M Breadth of Inquiry credit
The course will address the evolutionary history of reef ecosystems through geologic time inclusive of reef composition and global distribution, modern reef development, conservation and management practices, and the persistence of the reef ecosystem through climate change scenarios. We will cover biologic, ecologic, and geologic principles as they pertain to coral reef ecosystems.

EAS E341 NATURAL HISTORY OF CORAL REEFS
3 credits | Time: 4:00-5:15P Tuesday & Thursday
Location: IGWS 2022 | Instructor: Claudia Johnson
COLL (CASE) N&M Breadth of Inquiry credit
The course will address the evolutionary history of reef ecosystems through geologic time inclusive of reef composition and global distribution, modern reef development, conservation and management practices, and the persistence of the reef ecosystem through climate change scenarios. We will cover biologic, ecologic, and geologic principles as they pertain to coral reef ecosystems.

EAS E341 NATURAL HISTORY OF CORAL REEFS
3 credits | Time: 4:00-5:15P Tuesday & Thursday
Location: IGWS 2022 | Instructor: Claudia Johnson
COLL (CASE) N&M Breadth of Inquiry credit
The course will address the evolutionary history of reef ecosystems through geologic time inclusive of reef composition and global distribution, modern reef development, conservation and management practices, and the persistence of the reef ecosystem through climate change scenarios. We will cover biologic, ecologic, and geologic principles as they pertain to coral reef ecosystems.

EAS E341 NATURAL HISTORY OF CORAL REEFS
3 credits | Time: 4:00-5:15P Tuesday & Thursday
Location: IGWS 2022 | Instructor: Claudia Johnson
COLL (CASE) N&M Breadth of Inquiry credit
The course will address the evolutionary history of reef ecosystems through geologic time inclusive of reef composition and global distribution, modern reef development, conservation and management practices, and the persistence of the reef ecosystem through climate change scenarios. We will cover biologic, ecologic, and geologic principles as they pertain to coral reef ecosystems.

EAS E341 NATURAL HISTORY OF CORAL REEFS
3 credits | Time: 4:00-5:15P Tuesday & Thursday
Location: IGWS 2022 | Instructor: Claudia Johnson
COLL (CASE) N&M Breadth of Inquiry credit
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3 credits | Time: 4:00-5:15P Tuesday & Thursday
Location: IGWS 2022 | Instructor: Claudia Johnson
COLL (CASE) N&M Breadth of Inquiry credit
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