

the **epic** ADVANTAGE

Student/Faculty Collaborative Research Experience

EPIC ADVANTAGE: Icelandic Field Studies

Dates: May 9-May 30, 2018 on Campus

May 31-June 21, 2018 Fieldwork in Iceland

Leaders: Gail Connerley , Charlie Peck, Emi Smith, Andy Clifford

Application Deadline: November 6, 2017

Description of Experience and Research:



Icelandic Field Studies (IFS) is a multidisciplinary, science-based, on and off-campus Collaborative Research Experience. It is intended for students who seek to immerse themselves in the planning and execution of a science expedition designed to explore the geography, geology, biology, environment, archaeology and culture of one of the most unique places on our planet.

The program comprises 3-4 introductory seminars/briefings during the Spring semester, 3 weeks of on-campus preparation in May, and 3 weeks of fieldwork in Iceland during May/June. During the on-campus component in May students will live in college housing. In Iceland students will stay in communal hostels, guest housing, and expedition tents. The program is based on the following themes:

- Multidisciplinary field science - Our research incorporates the fields of biology, geology, computer science, geography, archaeology, and environmental science. We perform experiments and measurements on glaciers, volcanoes (dormant), avian nesting sites, and early settlement digs.
- Leadership development - Planning and day-to-day running of the program will substantially be driven by students, working in conjunction with the faculty leaders. Following Outdoor Education principles, students will need to adopt an expedition mentality, taking individual ownership and initiative to achieve group objectives.
- Sense of place - Our west to east traverse of Iceland will offer the chance to study natural, cultural, and historical perspectives. We will interact and work with Icelanders and incorporate museum visits and reflection time to provide opportunity for a genuine connection with the country and its heritage.
- Environmental Sustainability - Iceland's energy economy is built almost exclusively on renewable resources, which provides an opportunity to learn about large scale geothermal and related energy systems. We promote a sustainability mindset, and address our expedition's impact through recycling, minimizing resource use, and planting trees on Earlham's campus to cover the carbon footprint of the trip.
- Longitudinal studies - Participants will build on long-term glacial, volcanic elevation, soil chemistry, vegetation cover, avian nest-site and archaeological datasets, that will contribute to quantitative analysis and understanding of ecological, tectonic and climate change in Iceland.

Location in Iceland:

Landing in Reykjavik, Iceland's capital, in the south west, we will spend ~10 days traversing the south of the country from west to east. Highlights of the journey include visiting Thingvellir National Park, touring Hellisheidi geothermal power plant, seeing the North Atlantic Rift, taking a ferry to the island of Heimaey to observe two dormant volcanoes, working on the Sólheimajökull glacier, visiting the black sand beach at Vik, learning the history of Klaustur and Laki's globe-changing 1783 eruption, soil sampling at Stod (an early settlement archeological site), and seeing an aquaculture operation in the eastern fjords. The remainder of our time will be spent at Skalanes, a nature preserve, research station, avian nesting ground, and archeology site located at the far end of a peninsula on the East coast. Here we will work on collaborative science projects, with opportunities for hiking and reflection on our expedition learnings. We conclude with an internal flight back to Reykjavik in time to witness the Summer Solstice from some nearby hot springs.



Expectations for Students:

Students are expected to be “Fully Present”, i.e. engage in all group activities (research projects, discussions, social events), commit to demonstrating initiative as ‘servant leaders’ and work and live together showing respect for peers, faculty members, the Icelandic people and environment.

Faculty:

Charlie Peck is a Professor of Computer Science who works with scientists from a variety of disciplines. He has co-led groups of students/faculty doing field science to Iceland in 2013, 2014, 2016, and 2017, and to Nicaragua, England and Turkey.

Gail Connerley is the Senior Director of Annual Giving in the Institutional Advancement Office, and a long-time associate of Earlham’s Outdoor Education program. She co-led Iceland Field Studies in 2016 and 2017 and is a former August Wilderness (Earlham’s 1st year pre-orientation program) faculty leader.

Emi Smith is an Assistant Professor of Biology and co-led Iceland Field Studies in 2017. In addition to her academic pursuits, Emi is a faculty advisor to the college’s Equestrian Barn and is a full member of the Equestrian co-op.

Andy Clifford is Director of Outdoor & Environmental Education. While this is his first trip to Iceland, he has plenty of experience leading students in remote wilderness settings, including: New Zealand, Canada, Alaska, Utah, Wyoming and California.

Dates of Experience: Spring Semester 2018: 3-4 pre-experience briefings/seminars

May 9 - May 30, 2018: On campus preparation for field work

May 31 - Jun 21, 2018: Fieldwork in Iceland

Application: Applications can be received from students starting on Oct. 15, 2017. Application window closes on Nov 6, 2017.

Link to Application: Apply in Handshake

Preparation: Students will be required to take a 1 credit EPIC Advantage Orientation seminar during the Spring 2018 academic semester. This seminar will provide the necessary background and travel logistics for students to maximize the experience. Class meeting dates/times will be determined in the future.

Student Eligibility: Rising sophomores, rising juniors, or rising seniors may apply. There are no prerequisites, though previous lab science experience would help prepare you for technical aspects of the curriculum. The program will appeal particularly to those with an interest in some or all of the following: computer science, geology, biology, archeology, climate change, environmental sustainability, leadership, and outdoor education.

Cost to Student: This experience is funded as an EPIC Advantage opportunity. Funding covers passport, visa, travel, room and board, and other expenses required by the program. Additional personal expenses will be covered by the student.

Program plans subject to change.