

the **epic** ADVANTAGE

Student/Faculty Collaborative Research Experience

Icelandic Field Studies

Dates: June 1 - June 27, 2020

Credits: Choice of 0 or 3 to be applied in Fall 2020. 1-2 credit for Spring 2020 for student-faculty research course in addition to the 1 credit for EPIC Advantage Orientation Course.

Leaders: Charlie Peck and Emmett Smith

Application Deadline: November 19, 2019

Apply in Handshake



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 an introductory seminar and student/faculty research during the Spring semester, 1 week of on-campus preparation June 1-7, and 3 weeks of fieldwork in Iceland during the remainder of June. During the on-campus component students will live in college housing. In Iceland students will stay in communal hostels and guest lodges. 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 archaeology sites.
- Leadership development - 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 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 to cover the carbon footprint of the trip.
- Longitudinal studies - Participants build on long-term glacial, volcanic elevation, soil chemistry, vegetation cover, avian nest-site and archaeological datasets that contribute to quantitative analysis and understanding of ecological, tectonic and climate change in Iceland.

Career Focus

This program is open to students pursuing a variety of careers, and we encourage all majors and interests to apply.

Location and Living Arrangements

During the on-campus component students will live in college housing. In Iceland students will stay in communal hostels and guest lodges. Landing in Reykjavik, Iceland's capital, we will traverse 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, and working at Stod, an early settlement archeological site. 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, and celebrate the summer solstice. We conclude with an internal flight back to Reykjavik for a day of self-guided touring.

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. A 2 credit research course may be required in the spring.

Faculty Leaders

Charlie Peck is 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, 2016-2019 and to Nicaragua, England and Turkey.

Emmett Smith is Assistant Professor of Biology and has co-led Iceland Field Studies since 2017. In addition to their academic pursuits, Emmett is a faculty advisor to the college's Equestrian Barn and is a full member of the Equestrian co-op.

Preparation

Students will be required to take a 1 credit EPIC Advantage Orientation seminar during the Spring 2020 academic semester, as well as a 1-2 credit student-faculty research course. These courses will provide the necessary background and experience for students to maximize the experience. Class meeting dates/times will be determined in the future.

Prerequisites

Preference given to rising juniors and seniors. Rising sophomores and May graduates are eligible to apply. Some knowledge of or interest in programming languages, biology, biochemistry, archaeology, geology and environmental sustainability is desired.

Cost to Student

This experience is funded as an Epic Advantage opportunity. Funding includes, travel, room and board and additional expenses as required by the program. This funding does not include the cost of passports and immunizations or other personal expenses. The CDC recommends Hepatitis A and B, rabies, meningitis, polio, MMR, TDap, shingles, chickenpox, pneumonia, and influenza vaccinations.

Program plans subject to change

Program Policies: <https://earlham.edu/academics/off-campus-study/program-policies/>