

# the **epic** ADVANTAGE

## Student/Faculty Collaborative Research Experience

### EPIC ADVANTAGE: Icelandic Field Studies

**Dates: May – 1 week on campus is on campus**

**June - 3 weeks in Iceland**

**Credit: 3 credits (credit/no credit)**

**Leaders: Charlie Peck and Emi Smith**

**Application Deadline: October 15, 2018**



### 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 during the Spring semester, 1 week of on-campus preparation in May, and 3 weeks of fieldwork in Iceland during 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 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.

### Location in Iceland:

Landing in Reykjavik, Iceland's capital, in the south west, 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, 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.



### **Faculty:**

**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, 2017, and 2018 and to Nicaragua, England and Turkey.

**Emi Smith** is Assistant Professor of Biology and co-led Iceland Field Studies in 2017 and 2018. 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.

### **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.

### **Application Dates:**

Applications can be received from students starting on Sept. 15, 2018. Application window closes on Oct. 15, 2018.

### **Link to Application:**

Apply in Handshake.

### **Preparation:**

Students will be required to take a 1 credit EPIC Advantage Orientation seminar during the Spring 2019 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, juniors, or seniors are eligible to apply.

### **Cost to Student:**

This experience is funded as an EPIC ADVANTAGE opportunity. Funding includes travel, room and board, and other expenses required by the program. Passports and immunizations as well as other personal expenses will be covered by students. Students who are accepted and withdraw after January 15, 2019 must reimburse the college for all expenses committed on their behalf.

**Program plans subject to change.**

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