WVU Fire and Ice: Lessons Learned from (Re-) Establishing a Study Abroad Program to Invigorate a Geology Program

Holly D. Pettus, Graham D.M. Andrews

Volcanology and Petrology Lab, Department of Geology and Geography, WVU

Introduction
- College-level STEM classes often strive for a meaningful active learning component
- Effort is usually constrained by budget, time, and faculty-engagement levels
- West Virginia University’s (WVU) Geology Program developed an overseas active learning course to southern Iceland in May 2018.

Class Structure & Expectations
- Met once a week to cover topics we would see in the field
- Topics included: sub-glacial volcanism, subaqueous volcanism, glacial geomorphology, glaciology, etc.
- Students picked a topic related to what we would see in Iceland to write about for the field guide
- During the field trip, students would then present their topic in the field
- Students also picked a cultural topic for the field guide, e.g., Icelandic cuisine
- The weekly seminar helped students by introducing them to new topics they would see and actively study in the field
- Students were expected to complete weekly readings based on the lectures

In Iceland
- Daily routine
  - The weekly seminar helped students by introducing them to new topics they would see and actively study in the field
  - Students were expected to complete weekly readings based on the lectures

Geo-Tourism
- Highlights:
  - Jökulsárlón glacial lagoon
  - Guided hike on Skáftafelljökull
  - Basalt columns on Reynisfjara beach
  - Mid-Atlantic Rift at Thingvellir

Active Learning in the Field
- Volcanology, Stratigraphy, and structure of Miocene flood basalts
- Igneous petrology of the Austerhorn Pluton
- Brenna Cole talking about Eyjafjallajökull (‘I forgot my yogurt’)
- Dr. Steven Kite talking about Skáftafelljökull glacier

Pros and Cons

Pros
- Students felt more prepared for future field work
- Students were exposed to group living and cooking, Icelandic culture, and working in a geological setting very different from West Virginia
- Students were able to interact with faculty and alumni more than usual

Cons
- Expensive – even with subsidy it was $1,200 plus flights
- Little had time to fundraise or save up
- Departed immediately after exams and returned immediately before field camp (no time to recover)
- Had to be planned from scratch – no pre-existing structure to build on – very different from other WVU study abroad programs
- Needed tailored student registration & fee structure
- Liability issues over driving had to be discussed

Improvements/Changes
- Adding to regular class schedule so students have time to plan and save/fundraise
- Shortening the first field day – many people were jet-lagged and found it hard to focus at the end of the day

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Holly Pettus - @holly2014
Graham Andrews - @WVURockDoc
WVU Geology - @WVUGeology

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