ES4801 Geology Field Camp in Scotland

Why Scotland?
Scotland is the birthplace of geology and renowned for its geological diversity. From 3-billion-year-old continental crust, to 300-million-year-old sedimentary rocks of ancient orogenic belts, to 50-million-year-old igneous rocks recording the opening of the north Atlantic Ocean, these will be part of your hands-on experience. You will gain understanding of processes of metamorphism (Barrovian-Buchan Zones), magma mixing and fractional crystallisation (Caledonian granites), map complex fault regions (Moine Thrust Fault system) and document sedimentary environments of deposition (Carboniferous of Fife).

Why St Andrews?
The School of Earth and Environmental Sciences is consistently ranked in the top 5 in Britain and the University places in the top 100 worldwide. The School is dedicated to teaching fundamental skills that prepare you in observing, reconstructing and interpreting the geological rock record and the processes that shaped the evolution of our planet. Our educational ethos is to build self confidence and deliver the foundational skills for you to be competent in field geology for research and employment.
Essential Information

The Course

- 24 SCQF credits awarded at level 10
- 6 USA semester credits awarded
- 5 weeks of hands-on experience
- small class sizes (20-30)

Cost £5,000 and includes:

- tuition
- accommodation
- mapping materials
- in-country transport
- breakfast-lunch-dinner (cook your own)
- admittance into historic sites of interest

Pre-requisites

- GPA of 3.0
- 100 Scottish or 24 USA credits in geoscience
Week 1: sedimentology and stratigraphy
- palaeoenvironmental reconstructions
- logging (measuring) sedimentary sections
- sedimentary facies and facies associations

Week 2: metamorphism
- Buchan Zone
- Barrovian Zone
- metamorphic facies

Week 3: mapping a fold and thrust belt
- Moine thrust fault
- imbricrates and mylonites
- Archaean-Proterozoic Earth history

Week 4: igneous rocks and processes
- magma mixing
- igneous textures and mineralogy
- intrusive versus extrusive igneous processes
Week 5 – bringing it all together

Independent mapping and Field Conference Project

- partnered for safety but done individually
- map area could include metamorphic, igneous and sedimentary terranes
- reconstruct the 3-D geological framework and interpret a geological history
- present your findings to the entire group as part of a field conference ‘workshop’
...all of this done with fun and some culture thrown in for good measure!
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