

Field Methods for Environmental Sciences

Idaho State University - Geology 4451/5551 - Summer 2017 - 3 credits



What: An intensive, two-week, field-based introduction to Environmental Science tools and techniques.

Who: Junior or senior level undergraduates or graduate students.
Disciplines: Earth and Enviro. Sciences, Geology, Ecology, Biology, Environmental or Civil Engineering

When: May 15–27, 2017, applications due **April 20, 2017**

Where: Idaho State University campus and Pocatello's Gibson Jack Creek

Cost: \$1444/\$1678 for undergrads/grads. No out-of-state fees. ~\$50 processing for internationals.

Instructors: Drs. Benjamin Crosby, Sarah Godsey, David Huber and Keith Reinhardt

Course Description:

Students will gain hands-on experience with the design, deployment and maintenance of environmental sensing/sampling networks as well as computer-based analyses of collected field data. Students collect data needed to evaluate watershed-scale hydrologic and carbon budgets. Rooted in conservation of mass/energy principles, students gain experience with specific techniques including:

- Basic programming and operation of data loggers and automated sensors (Campbell, YSI, etc.)
- Installation and operation of weather, sap and soil based sensors
- Installation and maintenance of gaging stations for stream flow and water quality
- Water and soil sampling. Processing and analytical protocols.
- Direct measurements of CO₂ and H₂O fluxes from soil, plant leaves, and plant communities
- Troubleshooting field equipment and basic repair strategies. LiDAR data interpretation.

Activities incrementally contribute data toward two written reports and presentations. Learning outcomes are designed to enable graduates to do baseline monitoring and assessments as a either a research assistant, environmental consultant or employee within a state or federal agency.

Information and application at: <http://geology.isu.edu/FieldMethods>

email: crosby@isu.edu **call:** 208-282-2949

