

COURSE DESCRIPTION

FOX LANE HIGH SCHOOL PHYSICAL GEOLOGY

Physical Geology at Fox Lane is a full year advanced course in physical geology taught at a first year undergraduate level. The class meets 5 days per week for 36 weeks, and includes two 80 minute labs each week. Extra time allows exploration of topics in greater depth than they might be covered in a single semester undergraduate course.

The class is currently using Tarbuck and Lutgen's text, "Physical Geology"¹ and Kenneth Hamblin's lab manual, "Exercises in Physical Geology." The lab manual is augmented by additional labs that are developed locally or adapted from the AGI lab manual. The topics covered² are those typical of an introductory geology course, including mineralogy, petrology, weathering and erosion systems, landform studies, historical geology, tectonics, and structural geology. The lab manual is augmented by additional labs that are developed locally or adapted from the AGI lab manual. Students use Brunton transits to determine dip and strike of bedding or foliation planes. They must learn to use the Jolly balance to determine specific gravities, and their final involves the design, proposal, performing, and reporting of a field research project of their own design. Past projects have included sediment distribution in local streams, analysis of stream drainage systems on both large and small scales, and the mapping of glacial striae in an effort to reconstruct the pattern of Pleistocene ice flow in our area. All students must participate on a two day field trip³ to the Catskill Mountains to study the structure and erosion of the sedimentary rocks of that area, and two additional, optional 3 day field trips to the Adirondack Mountains combine science and adventure in the spring and fall (or winter) of each year. Over the years, these field experiences have been the subject of presentations at local, national, and international science education conferences.

In 2004, the course - content, labs, and exams - passed SUNY Oneonta's review process and students now have the option of registering and earning 3 undergraduate credits and an official transcript in Geol 120 through SUNY Oneonta's ESOP Program⁴.

Over the years, as few as two or as many as seven students each year have gone on to earn undergraduate or advanced degrees in the earth sciences at Lehigh, several SUNY Universities and Colleges, Hobart-William Smith, Franklin and Marshall, St. Lawrence, University of New Hampshire, Union, USC Santa Cruz, Hartwick, Colgate, and others. Many former students can be contacted through the alumni link⁵ on Mr. Kluge's geoscience web page⁵. Additional course details can be found there as well.

¹http://wps.prenhall.com/esm_tarbuck_earth_8

²<http://stevekluge.com/geoscience/apg/geologyoutline.html>

³<http://stevekluge.com/geoscience/apg/labs/catskilltrip.html>

⁴<http://employees.oneonta.edu/ebertjr/ESOP.htm>

⁵<http://stevekluge.com/geoscience/apg/geoalumni.html>