

Outcomes Assessment for Geology 409/410

(Field Camp)

Course Outcomes	Objectives (SWBAT)
<p>1. Understand methods and techniques to produce a geological map of an area.</p>	<p>1.1 Demonstrate proper location of geologic features and current position on a topographic map. 1.2 Plan a field schedule to accomplish the goals of each mapping project. 1.3 Use important aspects of field work safety</p>
<p>2. Understand how to measure and depict geological structures in the field on maps and reports.</p>	<p>2.1 Correctly measure the attitudes of geological structures (bedding, cleavage, lineations, etc) using a Brunton compass. 2.2 Correctly plot contacts and structures on a geologic map 2.3 Produce a completed map with correct elements (such as a legend) 2.4 Use field relationships to correctly recognize large scale structures (such as faults or folds), and accurately depict these on maps.</p>
<p>3. Understand how to recognize and describe geological units in the field, determine the contact relationships between these units, and depict their locations on maps .</p>	<p>3.1 Correctly identify specific rock units based on information provided from literature and outcrop observation. 3.2 Recognize the stratigraphic order (or perturbations to the expected stratigraphic order) of rock units in the field 3.3 Use and/or develop consistent criteria for definition and recognition of contacts between geological units 3.4 Identify key minerals, mineral assemblages, or other compositional and/or textural features in a rock unit.</p>
<p>4. Understand the use of selected field techniques to solve geological problems (e.g. measuring stratigraphic sections, plotting stereonet, sampling for lab analysis, GPS)</p>	<p>4.1 Demonstrate proper data collection technique, representation of data in a figure (e.g. stereonet), and interpretation of data in the context of the geologic history of the field area</p>
<p>5. Understand how to prepare a report describing the geology and the geological history of an area or region based on field mapping results.</p>	<p>5.1 Produce reasonable cross sections illustrating the subsurface geology based on mapping evidence. 5.2 Write concise descriptions of geological units using proper terminology 5.3 Use field relationships to determine the relative timing of important geological events or processes. 5.4 Synthesize field and map data to describe the nature and timing of geological events important to the map area or region</p>