Outcomes Assessment for Geology 310 (Geomorphology)

Course Outcomes	Objectives (SWBAT)
1. Understand the processes of landform formation in terms of interacting systems (lithosphere, hydrosphere, biosphere, cryosphere, atmosphere), specifically the relationships among uplift, weathering, erosion and deposition in fluvial, hillslope, glacial and coastal environments.	1.1 Estimate rates of uplift, erosion, or deposition for various environments. 1.2 Describe the main modes of weathering and soil formation. 1.3 Define a drainage basin on the basis of topography 1.4 Construct a concept sketch describing the main landforms and processes for the following settings: rivers (meandering and braided); hillslopes (landslides types); glaciers (alpine and continental); active tectonics; beaches; volcanoes.
2. Understand how to identify and describe landforms from direct observation in the field and from various kinds of representations.	2.1 Identify common landforms of Whatcom County in the field. 2.2 Identify common landforms from observation of topographic maps, aerial photographs, DEM, and other imagery. 2.3 Visualize 3-D geologic features given 2-D representations.
3. Understand how to conduct a geomorphic investigation and effectively report its results in oral and written form.	3.1 Develop(?) testable hypotheses 3.2 Make qualitative and quantitative observations of geomorphic features at various scales. 3.3 Separate observations from inferences in written and oral reports.
4. Understand the usefulness and limitations of models (physical, analytical, computational) for understanding geologic processes.	4.1 Create topographic maps and profiles using appropriate surveying techniques from simple to sophisticated. 4.2 Distinguish between accuracy and precision of geomorphic data.
5. Understand the relative impact of human actions on landscapes relative to 'natural' processes	5.1 Describe qualitatively and quantitatively human impacts on the natural land surface, including 10x enhancement of natural erosion rates.