

CWU Student Learning Outcome Assessment Plan
 Department: **Geological Sciences**
 Programs: **M.S. Geology Revised June, 2009**

Student Learning Outcomes (performance, knowledge, attitudes)	Related College Goals	Related University Goals	Method(s) of Assessment (What is the assessment?)*	Who Assessed (Students from what courses – population)**	When Assessed (term, dates) ***	Standard of Mastery/ Criterion of Achievement (How good does performance have to be?)
1) Critically interpret published scientific literature; differentiate data from interpretation	I and III	One, three, four, five	Instructor evaluation of literature-based and original research papers, directed reading assignments, oral presentations in class, laboratory, disciplinary and other meetings	Graduate students enrolled in GEOL 501, 502, 503 and other 500-level classes	Fall, winter, spring quarters	85% of students get rubric grade of 2 or better on such assignments
			Faculty mentor evaluation of thesis proposal, defense	Graduate students enrolled in GEOL 595 and 700	Fall, winter, spring quarters	95% of students enrolled receive passing grade
2) Design and implement an original research project that develops multiple hypotheses, predictions from hypotheses, data- gathering strategy, data analysis, evaluation of uncertainties, interpretation, and literature review	I and III	One, three, four, five	Instructor evaluation of research proposal, laboratory and field reports	Graduate students enrolled in GEOL 503	Winter quarter	85% of students get rubric grade of 2 or better on such assignments and 20-25% per year receive funding in internal or external competition
			Chair and committee member evaluation of thesis research	Graduate students enrolled in GEOL 595, 700	Fall, winter, spring quarters	20-25% per year receive funding in internal or external competition
3) Present and interpret results of original research, both orally and in writing, using standard geoscience reference tools, formats and conventions (including statistics, georeferencing, plotting, etc.)	I and III	One, three, four, five	Chair and committee member evaluation of written thesis, final thesis oral presentation (defense)	Graduate students enrolled in GEOL 595, 700	Fall, winter, spring quarters	85% of students get rubric grade of 2 or better on such assignments
			Acceptance of conference abstracts, peer reviewed journal articles or equivalent (e.g., book chapters)	Peer reviewers	Fall, winter, spring, summer quarters	25% of graduate students present at local, regional or national meeting, 25% successfully publish work in peer-reviewed journal (mostly post graduation)
4) Establish competency in solving quantitative problems, using correct units and significant figures, and representing geologic data on cross-sections and maps.						85% of students get rubric grade of 2 or better on such assignments

*Method(s) of assessment should include those that are both direct (tests, essays, presentations, projects) and indirect (surveys, interviews) in nature

Data needs to be collected and differentiated by location (Ellensburg campus vs. University Centers – see NWCCU standard 2.B.2) **MS program only offered at Ellensburg campus.

***Timing of assessment should be identified at different transition points of program (i.e., admission, mid-point, end-of-program, post-program)