

Annual Assessment for Department of Geography Undergraduate Program

This report documents the Department of Geography's efforts to assess student learning outcomes in its undergraduate program. The report's objective is to review the effectiveness of the program's curriculum in achieving the desired student proficiencies in relation to the program's student learning outcomes, exploring possibilities for addressing any apparent deficiencies, and improving overall student competencies and proficiencies.

Program's Mission: The Department of Geography's undergraduate program supports the university's mission statement by providing high quality undergraduate and graduate education for the state and the region; promoting student learning, retention, and academic success; fostering community outreach through service activities; promoting instruction through the use of innovative teaching methods that require students to become actively involved in the learning process and develop the critical thinking skills necessary for life-long learning; contributing to the body of knowledge through completion of scholarly and creative activities; engaging and mentoring students in scholarly, artistic, and creative endeavors; providing opportunities for students to use their knowledge, creativity, and critical thinking skills to make their communities better places in which to live; and prepare students to examine critically the many issues facing society and, through the process of civil discourse, prepare themselves to become socially responsible individuals who contribute to the betterment of society.

Program's Student Learning Outcomes: The undergraduate program has seven broad student learning outcomes (see accompanying chart). All seven student learning outcomes will be assessed and analyzed on an annual basis. Adjustments to improve student performance in relation to these student learning outcomes are made on a continual basis, rather than waiting for some pre-determined period of time to make any necessary changes.

Assessment Activities:

Assessment Tools: The Department of Geography is adopting a holistic approach to student learning outcome assessment that includes a broad and flexible range of direct measures including, but not limited to, test questions, writing assignments, discussions, oral presentations, debates, and capstone experiences which require students to design, conduct, analyze, report, and present the results of their original research projects. There is no standardized licensure exam for the discipline of Geography as a whole. The Department also utilizes an array of indirect measures including, but not limited to, discussions with graduating students, annual Fall Orientation Day focus groups, annual Assessment Day surveys and focus groups, and continuing discussions with known employers and alumni.

Benchmarks: Benchmark refers to the level of student performance on evaluative assessments embedded within the program's required curriculum. Assessments may vary by course and instructor but will utilize standardized assessment rubrics. The Geography Department uses the following performance levels: Advanced - students use critical thinking to appraise, analyze, and apply knowledge, techniques, and concepts; Mastery - students skillfully employ knowledge, techniques, and concepts; Proficient - students recognize and apply basic techniques and concepts; Novice - students recall concepts but fail to interpret,

apply or express knowledge and techniques; Limited - students may recognize a few concepts or techniques but struggle with application. The faculty would prefer that 100% of students achieve the advanced level of proficiency for all student learning outcomes.

Results/Analysis: Specific performance results are listed on the accompanying table. Overall student performance was at the advanced, mastery, or proficient levels. Students failing to achieve performance levels of proficient or higher exhibited poor attendance.

Analysis/Planned Action: Comparable data from previous years does not seem to exist so it is impossible to determine if the results pertaining to student learning outcomes from 2009-10 represent an increase, decrease, or continuance of student performance. A number of the program's required courses are also experiencing significant revisions as part of the university's new general education program. Since this may include new assessment measures and student assignments, it will be impossible to generate meaningful comparisons between results from 2009-10 and subsequent years.

Instructors will also continue to emphasize to students the importance of attending and actively participating in class as well as submitting the required assignments. Although detailed statistical evidence is not available, anecdotal evidence suggests a strong positive correlation between students who do not attend class or submit assignments and students who fail to achieve satisfactory proficiencies in relation to the program's student learning outcomes.

Overview of Changes Implemented: I am unaware of reports submitted for previous years, so there were no changes implemented that derived from them. Despite this, other changes are continually being made in terms of curriculum structure, course scheduling, and assessment methods. For example, the Capstone experience is now spread over two semesters. GEO426 was also expanded to 4 credits hours from 3 credit hours to improve instruction and student proficiencies related to the student learning outcomes. Like other changes within the undergraduate program, this change resulted from the instructor's evaluation of specific student performances, feedback from students, and consultation with other faculty. As such, the department has found it more efficient and accurate to evaluate and refine student learning outcomes and assessments through direct discussions with students, evaluations of various student performances, and consultations with faculty, alumni, and employers.

In order to improve analytical capabilities for future years, faculty will develop grading rubrics appropriate for assessing the student learning outcome. Some rough rubrics have already been drafted for assessing oral presentations and quantitative projects (see accompanying charts). Additional rubrics are being developed for map projects, lab exercises, writing assignments, capstone projects, concepts and methods projects, research design projects, and Capstone experiences. These rubrics will be tested and refined during the spring 2010 semester. Following this trial period, the rubrics will become standard assessment tools used by all geography instructors for all classes. In subsequent years, these rubrics will help provide a baseline of data to determine overall trends in student performance and overall program effectiveness.

Changes/Modifications Resulting from Assessment Day Activities: Student attendance and participation during Assessment Day activities continues at a low level. Response rates on program surveys distributed during the spring semester was low. These efforts provided some anecdotal evidence, but valid statistical calculations are not possible.

Assistance Needed with Assessment: None

Marshall University
Assessment of Undergraduate Student Learning Outcomes for the Geography Program
2009/2010

Student Learning Outcomes	Year	Assessment Tools	Benchmark ¹	Results	Analysis/ Planned Actions
Students recognize, analyze, and interpret the features and processes of human geography	2009 /10	GEO100 assignments as determined by instructor ²	Proficient or above	4 students performed at the advanced level; 1 student performed at the mastery level; 2 students performed at the proficient level	Continued monitoring and refinement to include more diverse assignments and fulfill new role as CT course
Students recognize, analyze, and interpret earth processes	2009 /10	GEO101 assignments as determined by instructor ³	Proficient or above	4 students performed at advanced level; 5 student performed at mastery level; 2 students performed at proficient level; 2 students performed at the novice level	Continued monitoring and refinement; students at novice
Students identify and critically evaluate world regional/global issues	2009 /10	GEO317 assignments as determined by instructor ⁴	Proficient or above	1 student performed at advanced level; 2 students performed at mastery level; 1 student performed at proficient level	Refinement of evaluative assessments
Students interpret and construct maps	2009 /10	GEO426 assignments as determined by instructor ⁵	Proficient or above	5 students performed at advanced level; 5 students performed at mastery level; 2 students performed at the novice level	Change course from 3 to 4 hours to reflect lab component of course

Student Learning Outcomes	Year	Assessment Tools	Benchmark ¹	Results	Analysis/ Planned Actions
Students calculate and apply quantitative solutions to geographical problems	2009 /10	GEO440 assignments as determined by instructor ⁶	Proficient or above	3 students performed at advanced level; 1 student performed at proficient level	Revise course based on new learning tools and more diverse exercises
Students design, conduct, and present geographical research	2009 /10	GEO420 Capstone assignments as determined by instructor ⁷	Proficient or above	1 student performed at the advanced level; 3 at the mastery level; 1 at the novice level	Split course into two semesters to give students additional time to research their topic and design the study
Students communicate effectively	2009 /10	GEO420 Capstone assignments as determined by instructor ⁸	Proficient or above	4 students performed at the advanced level; 1 student at the novice level	Continued monitoring

¹ Benchmark refers to the level of student performance on evaluative assessments for the corresponding course. Such assessments vary by course and instructor. The Geography Department uses the following performance levels: Advanced - students use critical thinking to appraise, analyze, and apply knowledge, techniques, and concepts; Mastery - students skillfully employ knowledge, techniques, and concepts; Proficient - students recognize and apply basic techniques and concepts; Novice - students recall concepts but fail to interpret, apply or express knowledge and techniques; Limited - students may recognize a few concepts or techniques but struggle with application.

² GEO 100 is taught in multiple sections by multiple instructors. Therefore, the specific assessment tools vary from section to section and from semester to semester. Assessment tools typically include, but are not limited to, a mixture of writing assignments, group projects, oral presentations, classroom critical thinking activities, essay exams and multiple choice exams designed to assess students' ability to recognize, analyze, and interpret the features and processes of human geography.

³ GEO 101 is taught in multiple sections by multiple instructors and consists of a laboratory component. Assessment tools comprise of a mixture of multiple choice and short-answer exams. Students are required to satisfactorily complete laboratory exercises that require the student to perform calculations, write short answer explanations to scientific problems, and utilize web-based tutorials in order to meet the desired learning outcomes.

⁴ Performance assessments in GEO317 typically include classroom debates, essay exams, classroom critical thinking exercises, classroom presentations, multiple choice exams and quizzes which demonstrate students' ability to identify and critically evaluate world regional/global issues.

⁵ Performance assessments in GEO426 include classroom exercises to learn and apply concepts and techniques and application of the concepts techniques in quizzes, exams, and final course projects; these assessments focus on interpreting and constructing maps.

⁶ Performance assessments in GEO440 include classroom exercises to learn and apply concepts and techniques and application of the concepts and techniques in quizzes, exams, and final course projects; these assessments focus on calculating and applying quantitative solutions to geographical problems.

⁷ Performance assessment in GEO420 is based on a student-centered research project, including design, implementation, and presentation of that research project and its results.

⁸ Performance assessment in GEO420 requires the written and oral presentation of student research projects.

Department of Geography Oral Presentation Assessment Rubric

	Advanced	Mastery	Proficient	Novice	Limited
Content	Student demonstrates critical thinking to appraise, analyze, and apply geographical knowledge, techniques, and concepts	Student skillfully employs geographical knowledge, techniques, and concepts	Student recognizes and applies basic geographical techniques and concepts correctly	Student recalls geographical concepts but fails to interpret, apply or express knowledge and techniques	Student recognizes a few geographical concepts or techniques but cannot apply them correctly
Organization	Coherent structure with an introduction, main body, and conclusion; the main points/concepts are clear and critically analyzed; keeps to allotted time with skillful time management	Coherent structure with an introduction, main body, and conclusion; the main points/concepts are clear and employed correctly; keeps to allotted time with efficient time management	Coherent structure with an introduction, main body, and conclusion; the main points/concepts are clear; keeps to allotted time	Coherent structure with an introduction, main body, and conclusion; the main points/concepts are not clear; does not keep to allotted time	No apparent structure; no apparent main points/concepts; no apparent time management effort
Verbal Skills	Student demonstrates specialized verbal skills, including complete sentences, proper grammar, professional vocabulary, etc	Student employs basic verbal skills, including complete sentences, proper grammar, appropriate vocabulary, etc	Student demonstrates basic verbal skills, including complete sentences, proper grammar, appropriate vocabulary, etc with minor errors	Student makes frequent errors regarding complete sentences, proper grammar, vocabulary, etc	Student cannot speak

Non-Verbal Skills	Student demonstrates a professional demeanor, including eye contact, posture, gestures, etc	Student demonstrates a casual demeanor, including eye contact, posture, gestures, etc	Student demonstrates a indifferent demeanor including eye contact, posture, gestures, etc	Student demonstrates an unprofessional demeanor including eye contact, posture, gestures, etc	Student demonstrates completely inappropriate eye contact, posture, gestures, etc
Visual Material	Student demonstrates professional use of maps or other graphics, including geospatial technologies, which are clearly integrated into the presentation	Student demonstrates basic use of maps or other graphics, including geospatial technologies, which are integrated into the presentation	Student employs maps or other graphics, including geo-spatial technologies, but they are not integrated into the presentation	Student employs maps or other graphics, including geo-spatial technologies, but they are not integrated into the presentation and contain errors	Student did not use visual materials
Audience	Student demonstrates ability to critically analyze and respond effectively to audience questions or comments	Student demonstrates ability to analyze and respond to audience questions or comments	Student demonstrates ability to respond to audience questions or comments with basic answers or responses	Student responds to audience questions or comments, but is unable provide basic answers or responses	Student did not respond to audience questions or comments

GEO440/540 Quantitative Methods Semester Project Grading Rubric¹

	Advanced	Mastery	Proficient	Novice	Limited
Introduction (10 points)	Valid research problem clearly stated, integrating at least three appropriate sources to pique interest; dependent and independent variables clearly defined; strong revisions as recommended	Research problem stated, integrating at least three appropriate sources; dependent and independent variables defined; revisions as recommended	Research problem stated but unclear with some sources not well integrated; variables named and distinguished; some revisions	Research problem unclear or invalid with weak reference to sources; variables present but not clearly distinguished	Little development
Flow chart (5 points)	Clearly delineates the flow of research; strong revisions as recommended	Delineates the flow of research; revisions as recommended	Present to accompany research flow but may lack development	Present, but unclear	Missing or very unclear
Data and description (20 points)	Excel table properly formatted; complete description of data and their quality, applying most required terms such as interval, primary, discrete; validity, accuracy, reliability clearly described; strong revisions as recommended	Excel table properly formatted; description of data and their quality, applying most required terms; revisions as recommended	Excel table present; weak description of data; some data terms used correctly	Excel table has problems; data descriptions unclear; few data terms used correctly	Missing or very unclear
Descriptive statistics (15 point)	Formulae presented and described accurately; statistics calculated correctly and presented properly; strong revisions as recommended	Formulae presented and described; most statistics calculated correctly and presented properly; strong revisions as recommended	Formulae presented, but descriptions are weak; basic statistical analysis with few mistakes, but some weaknesses in presentation	Formulae not presented; some statistics with errors and little accurate presentation	Missing or very unclear
Quantitative analysis (40 points)	Methods chosen after consulting with instructor; six steps of classical hypothesis testing applied and described; formulae presented and described accurately; statistics calculated correctly and presented properly; scholarly article logically integrated for each method	Methods chosen with instructor; classical hypothesis testing applied and described; most formulae presented and described accurately; most statistics calculated correctly and presented properly; scholarly article integrated	Methods may not all be appropriate; some classical hypothesis testing elements present; formulae presented, but descriptions are weak; basic statistical analysis with few mistakes; scholarly article mentioned but not well integrated	Methods may not all be appropriate; classical hypothesis testing not followed accurately; formulae descriptions very weak; several statistical mistakes; scholarly article not used correctly	Missing or very unclear
Conclusions (10 points)	Well-written, thoughtful summation of techniques, research question, analysis results, and weaknesses	Good summation of techniques, research question, analysis results, and weaknesses	Contains summary of some elements	Weak summary	Missing or very weak
College-level English including grammar, punctuation, spelling, sentence structure and logical flow of content	After 5 mistakes, I will quit grading and return your paper for no credit.				

¹ This rubric is also used for quantitative work submitted as part of a thesis, comprehensive exam, or other geography classes.