Weber State University
Annual Assessment of Evidence of Learning

Department of Geography
AY 2014-2015

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Introductory Statement

(No changes from previous years)

Geography begins with a lack of uniformity on the earth's surface. People, their activities, and physical features are distributed unevenly across space, so one of our most important tasks is to explain why things are where they are. But that's not all. Geographers study the earth's physical processes, movement and change of both people and natural systems, and the interaction of people with their environment. Virtually anything can be examined from a geographical perspective because everything, including environmental problems, economic activity, and natural environments, happens in particular places for reasons that we may or may not yet understand.

Program Mission Statement

(No changes from previous years)

The mission of the geography department is to provide students with an overview of the discipline, specific skills that will help them in their careers, and knowledge that will help them organize and maintain an effective philosophy of life that reflects an understanding of their natural and cultural surroundings.

Student Learning Outcomes

Consistent with the above, the following are objectives/goals that the department strives to achieve:
1. To provide students with knowledge about the earth's natural environment and its relationship to society.
2. To provide students with knowledge about the world's peoples, nations, cultural environments, and spatial organization.
3. To provide students with a good grounding in the modern technical skills of the discipline, including computer cartography, spatial analysis, spatially-oriented quantitative methods and techniques, and geographic information systems.
4. To provide (some) students with training emphasizing the understanding of the planning profession and issues related to that field.
5. To instill within each student an appreciation for the great variety of cultural forms and ways of thinking throughout the world, and to help students formulate a world view that uses this appreciation to become responsible citizens in America.

Meeting these objectives will equip students to function within American society as informed and engaged citizens, as well as equipping them with specific job skills that help them gain employment and/or admission into graduate schools. These goals are also major goals of the university as a whole. These 5 geography learning objectives are linked to the curriculum discussed in the next section and are shown in a curriculum/objective grid below.

Curriculum Grid

GEOG Course #*	Objective 1	Objective 2	Objective 3	Objective 4	Objective 5
1000	E	I	I	NA	I
1001	E	I	I	NA	P
1002	I	I	E	NA	P
1300	I	E	I	NA	E
1400	E	I	I	NA	I
1520	I	I	I	NA	E
3050	M	P	P	NA	P
3060	M	P	P	P	E
3080	M	P	P	NA	P
3081	E	E	E	P	E/M
3090	M	P	P	NA	P
3210	P	M	P	NA	E
3300	E	M	P	NA	E
3360	E	M	P	NA	E
3450	P	P	E	NA	P
3460	P	P	E/M	NA	P
3500	E/M	E/M	P	NA	E/M
3540	E/M	E/M	P	NA	E/M
3590	E/M	E/M	P	NA	E/M
3640	E/M	E/M	P	NA	E/M
3740	E/M	E/M	P	NA	E/M
4050	P	P	M	NA	P
4410	M	E/M	E	M	E
4420	M	E/M	E	M	E
4800	E/M	E/M	E/M	NA	E/M
4890	E/P	E/P	M/P	M/P	E/P
4950	E/M	E/M	E/M	P	E/M
4990	M	M	M	NA	M

I = Introduced E = Emphasized M = Mastered NA = Not Applicable P = Peripherally Addressed

* See www.weber.edu/geography for course titles and descriptions. ALL Courses Are Undergoing Assessment.

Assessment Plan (5 year) for Core Required Courses & Gen . Ed. Courses

When core courses (including General Education courses with prefix) will be assessed:

Core required courses for majors (and Gen. Ed. Courses)	Completed 2012-13	2013-14	2014-15	2015-16	2016-17
GEOG 1000 PS Natural Environments of the Earth	X		X		X
GEOG 1300 SS/DV Places and Peoples of the World		X		X	
GEOG 1400 PS Science of Global Warming…			X		X
GEOG 1520 SS/DV Geography of US & Canada		X		X	
GEOG 3600 Quant. Methods	X		X		X
GEOG 4990 Research Seminar		X		X	

How core courses will be assessed:

Core Geography courses offered (including Gen. Ed. courses)	**Current number of sections offered/yr**	**Number of sections to be assessed**		**Assessment approaches to be used***	**Common assessment tool or will it vary from section to section?**
		Fall	**Spring**		
PS1000 Natural Environments	**8**	**4**	**4**	**Exam q.s, homework assignments**	**Will vary among sections**
SS1300 Places & Peoples	**4**	**2**	**2**	**Exam q.s, term papers**	**Will vary among sections**
PS1400 Science of Global Warming	**1**		**1**	**Exam q.s, homework assignments**	**Only one section offered**
SS1520 Geography of US & Canada	**2**	**1**	**1**	**Exam q.s, assignments, term papers**	**Will vary among sections**
GEOG 3600 Quantitative Methods	**1**		**1**	**Exam q.s, homework assignments**	**Only one section offered**
GEOG 4990 Research Seminar	**1**	**1**		**Assignments, senior thesis research papers**	**Only one section offered**

***Assessment approaches:**
Possible approaches include (but are not limited to)

- Exam questions that assess gen. ed. learning outcomes (either exclusively or in conjunction with assessing course content)
- Quizzes, Homework assignments, Student papers, Course journals

Plan Overview:
As part of outcomes assessments for General Education courses in geography (GEOG 1000, GEOG 1300, GEOG 1400, and GEOG 1520), full time faculty have collectively crafted a standardized set of topics and skills that we expect all instructors (full-time and adjunct) to deliver whenever those courses are offered. For example, in GEOG 1000, students should always be exposed to Plate Tectonics, Biogeographic Processes, Weather and Atmospheric Dynamics, Geomorphology, the Hydrologic Cycle, Human-Induced Climate Change, Soils, Concepts of Sustainability, the Scientific Method, etc. This will insure that any student who takes a general education class in our department, will have been exposed to what the geographic community widely considers the standards of the discipline. What we expect students to know will be consistent with the Gen. Ed. Course learning outcomes and objectives. Exam results, term papers, homework assignments, etc. will form the basis of our assessment, and will be tied to outcomes. Assessment methods will vary from course to course as noted in the Assessment Plan matrix above, but assessment of introductory level Gen. Ed. Courses will be based primarily on analysis of individual test item results. Beginning in fall semester, 2012, we developed a test bank of questions for the various gen. ed. learning outcomes that will be used for GEOG 1000. We chose a minimum of 70% on scores for test items as the bottom threshold for demonstrating mastery since the lowest grade accepted for the geography major is C-, or 70%. Exam copies with assessment results will be kept by the department chair with other evidence of learning "artifacts" as part of program review documentation.

The two required (core) upper division geography courses will be assessed as part of an ongoing process using similar methods (exams, papers, projects, and homework assignments) by individual faculty who typically teach these courses (see Assessment Plan matrix above). Upper-division geography elective courses will be assessed periodically.

Report of Assessment Results for 2014-15

Core Course: GEOG 1000 PS Natural Environments of the Earth

Gen Ed Learning Goal Students will demonstrate understanding of:	**Measurable Learning Outcome & Threshold** Students will demonstrate their understanding by:	**Method of Measurement** Direct and Indirect Measures	**Findings Linked to Learning Outcomes**	**Interpretation of Findings**	**Action Plan/Use of Results**
Nature of Science. Scientific knowledge is based on evidence that is	Students will be able to identify explanations that are scientific and differentiate from those that	A set of 5 multiple choice questions from Exam 1	94 % of students scored 70% or better on 5 questions (Average	Students successfully demonstrated understanding of the nature of science objective	No curricular or pedagogical changes needed at this time

Gen Ed Learning Goal Students will demonstrate understanding of:	**Measurable Learning Outcome & Threshold** Students will demonstrate their understanding by:	**Method of Measurement** Direct and Indirect Measures	**Findings Linked to Learning Outcomes**	**Interpretation of Findings**	**Action Plan/Use of Results**
repeatedly examined, and can change with new information.	are not scientific at a minimum 70% mastery level.		from 5 sections)		

GE Learning Goal	**Meas. Learn. Outcome & Threshold**	**Method of Measure**	**Findings**	**Interpretation**	**Action Plan**
Integration of Science All natural phenomena are interrelated and share basic organizational principles. Scientific explanations obtained from different disciplines should be cohesive & integrated.	Students will be able to identify how scientific explanations are cohesive & integrated at a minimum 70% mastery level.	A set of 3 multiple choice questions from Exams 1, 2 or 3	95 % of students scored 70% or better on 3 questions (Average from 5 sections)	Students successfully demonstrated understanding of the integration of science objective	No curricular or pedagogical changes needed at this time

GE Learning Goal	**Meas. Learn. Outcome & Threshold**	**Method of Measure**	**Findings**	**Interpretation**	**Action Plan**
Science and Society The study of science provides explanations that have significant impact on society, including technological advancements, improvement of human life, and better understanding of human and other influences on the earth's environment.	Students will be able to identify how scientific explanations have an impact on society at a minimum 70% mastery level.	A set of 5 multiple choice questions from Exam 2 or 3	90 % of students scored 70% or better on 5 questions (Average from 5 sections)	Students successfully demonstrated understanding of the science and society objective	No curricular or pedagogical changes needed at this time

GE Learning Goal	**Meas. Learn. Outcome & Threshold**	**Method of Measure**	**Findings**	**Interpretation**	**Action Plan**

Problem Solving & Data Analysis Science relies on empirical data, and such data must be analyzed, interpreted, and generalized in a rigorous manner.	Students will be able to analyze, and interpret data in order to identify generalizations at a minimum 70% mastery level.	A set of 3 multiple choice questions from Exams 2 or 3	87 % of students scored 70% or better on 3 questions (Average from 5 sections)	Students successfully demonstrated understanding of the problem solving & data analysis objective	No curricular or pedagogical changes needed at this time, however, students are encouraged to take a statistics course (required for geography majors)

General Education Course: GEOG 1400 PS The Science of Global Warming

Gen Ed Learning Goal Students will demonstrate understanding of:	**Measurable Learning Outcome & Threshold** Students will demonstrate their understanding by:	**Method of Measurement** Direct and Indirect Measures	**Findings Linked to Learning Outcomes**	**Interpretation of Findings**	**Action Plan/Use of Results**
Nature of Science. Scientific knowledge is based on evidence that is repeatedly examined, and can change with new information.	Students will be able to identify explanations that are scientific and differentiate from those that are not scientific at a minimum 70% mastery level.	A set of 3 multiple choice questions from Exam 1	81 % of students scored 70% or better on 5 questions (Average from 5 sections)	Students successfully demonstrated understanding of the nature of science objective	No curricular or pedagogical changes needed at this time

GE Learning Goal	**Meas. Learn. Outcome & Threshold**	**Method of Measure**	**Findings**	**Interpretation**	**Action Plan**
Integration of Science All natural phenomena are interrelated and share basic organizational principles. Scientific explanations obtained from different disciplines should be cohesive & integrated.	Students will be able to identify how scientific explanations are cohesive & integrated at a minimum 70% mastery level.	A set of 3 multiple choice questions from Exams 1, 2 or 3	78 % of students scored 70% or better on 3 questions (Average from 5 sections)	Students successfully demonstrated understanding of the integration of science objective	No curricular or pedagogical changes needed at this time

GE Learning Goal	Meas. Learn. Outcome & Threshold	Method of Measure	Findings	Interpretation	Action Plan
Science and Society The study of science provides explanations that have significant impact on society, including technological advancements, improvement of human life, and better understanding of human and other influences on the earth's environment.	Students will be able to identify how scientific explanations have an impact on society at a minimum 70% mastery level.	A set of 3 multiple choice questions from Exam 2 or 3	80 % of students scored 70% or better on 5 questions (Average from 5 sections)	Students successfully demonstrated understanding of the science and society objective	No curricular or pedagogical changes needed at this time

GE Learning Goal	Meas. Learn. Outcome & Threshold	Method of Measure	Findings	Interpretation	Action Plan
Problem Solving & Data Analysis Science relies on empirical data, and such data must be analyzed, interpreted, and generalized in a rigorous manner.	Students will be able to analyze, and interpret data in order to identify generalizations at a minimum 70% mastery level.	A set of 3 multiple choice questions from Exams 2 or 3	85 % of students scored 70% or better on 3 questions (Average from 5 sections)	Students successfully demonstrated understanding of the problem solving & data analysis objective	No curricular or pedagogical changes needed at this time, however, students are encouraged to take a statistics course (required for geography majors)

Core Course: GEOG 3600 (spring semester, 2015) Quantitative Methods in Geography

Learning Goal Students will demonstrate understanding of:	**Measurable Learning Outcome & Threshold** Students will demonstrate their understanding by:	**Method of Measurement** Direct and Indirect Measures	**Findings Linked to Learning Outcomes**	**Interpretation of Findings**	**Action Plan/Use of Results**
Basic descriptive statistics and application to solving a geographic research question.	Students will be able to identify appropriate descriptive statistical methods at a 70% mastery level.	Homework problems & multiple choice questions from Exam 1	89 % of students scored 80% or better on Assignment 1 and 5 exam questions (Ave. from 2 sections)	Students successfully applied descriptive statistics to solving a geographic question	No curricular or pedagogical changes needed at this time

Learning Goal Students will demonstrate understanding of:	**Measurable Learning Outcome & Threshold** Students will demonstrate their understanding by:	**Method of Measurement** Direct and Indirect Measures	**Findings Linked to Learning Outcomes**	**Interpretation of Findings**	**Action Plan/Use of Results**
Statistical methods of testing a hypothesis in geographic research.	Students will be able to use statistical methods to test a research hypothesis at a 70% mastery level.	Homework problems & multiple choice questions from Exam 2	83 % of students scored 80% or better on Assignment 2 and 5 exam questions (Ave. from 2 sections)	Students successfully demonstrated use of statistical methods of testing a hypothesis in geographic research.	No curricular or pedagogical changes needed at this time

Elective Course: GEOG 3060 (spring semester, 2013) World Environmental Issues

Learning Goal Students will demonstrate understanding of:	**Measurable Learning Outcome & Threshold** Students demonstrate understanding by:	**Method of Measurement** Direct and Indirect Measures	**Findings Linked to Learning Outcomes**	**Interpretation of Findings**	**Action Plan/Use of Results**
Leading environmental issues and critical thinking skills in identifying strategies for mitigation.	Students will be able to identify appropriate descriptive statistical methods at a 70% mastery level.	Homework assignments, multiple choice essay questions, and exam essay questions	86 % of students scored 80% or better on Assignment 1 and 2 exam questions	Students successfully identified leading environmental issues and applied strategies for mitigation.	No curricular or pedagogical changes needed at this time
Research methods used to evaluate environmental issues from a global geographic perspective.	Students will be able to use statistical methods to test a research hypothesis at a 70% mastery level.	Homework problems & multiple choice questions from Exam 2	88 % of students scored 80% or better on Assignment 2 and 2 exam questions.	Students successfully demonstrated Research methods used to evaluate environmental issues from a global geographic perspective.	No curricular or pedagogical changes needed at this time.

Elective Course: GEOG 3740 DV (fall semester, 2015) Geography of Africa

Learning Goal Students will demonstrate understanding of:	**Measurable Learning Outcome & Threshold** Students demonstrate understanding by:	**Method of Measurement** Direct and Indirect Measures	**Findings Linked to Learning Outcomes**	**Interpretation of Findings**	**Action Plan/Use of Results**
Contemporary and historical patterns and processes of physical & cultural geography of Africa.	Students will be able to identify appropriate descriptive statistical methods at a 70% mastery level.	Mapping assignments and multiple choice exam questions, and exam essay questions.	86 % of students scored 80% or better on Assignment 1 and 2 exam questions	Students successfully identified historical patterns and processes of physical & cultural geography of Africa.	No curricular or pedagogical changes needed at this time
Research methods used to evaluate contemporary issues in Africa from a global geographic perspective.	Students will be able to use statistical methods to test a research hypothesis at a 70% mastery level.	Research papers & 5 multiple choice questions from Exam 2	88 % of students scored 80% or better on research papers and 5 exam questions.	Students successfully demonstrated research methods used to evaluate contemporary issues in Africa.	No curricular or pedagogical changes needed at this time.

<u>Summary of Artifact Collection Procedure</u> (for core courses and general education courses in geography, others are exactly the same or very similar)

Artifact	**Learning Outcome Measured**	**When/How Collected?**	**Where Stored?**
GEOG 1000 Chi Tester results and hard copy exams	See table in Assessment Results	2-3 times/semester Results submitted by faculty	Chi Tester electronic files and hard copies of exams in dept. chair's office
GEOG 1400 Chi Tester results	See table in Assessment Results	2-3 times/semester Results submitted by faculty	Chi Tester electronic files (cane be "shared" w/ reviewers)
GEOG 3600 Hard copy exams and assignments	See table in Assessment Results	2-3 times/semester Results submitted by faculty	Hard copies of exams and assignments in dept. chair's office
GEOG upper division electives	See table in Assessment Results	End of semester Results submitted by faculty	Hard copies of exams and assignments in dept. chair's office

<u>Reflection on Assessment Results</u>

1) Reflecting on this year's assessment(s), how does the evidence of student learning impact your faculty's confidence in the program being reviewed; how does that analysis change when compared with previous assessment evidence?

   Program assessments and individual course assessments that have been completed in the last year give the faculty confidence that student learning objectives overall are being met. Some curriculum adjustments are being made and our senior research seminar is being refined so that we are consistently meeting objectives while the course is taught by different faculty from within the department. GEOG 3600, Quantitative Methods in Geography will be retitled "Research Methods in Geography." The course will be expanded to include both qualitative and quantitative research methods.

2) With whom did you share the results of the year's assessment efforts?

   Perhaps most importantly, the assessment results have been reviewed and will continue to be reviewed by full-time faculty members in the geography department. As more assessment data become available, results will be discussed in faculty meetings toward the end of each semester.
   Both the Dean of the Social and Behavioral Sciences College, Frank Harrold, and Gail Niklason, Director of WSU Institutional Effectiveness also received a copy of this assessment report.

3) Based on your program's assessment findings, what subsequent action will your program take?

   As noted in the assessment results for GEOG 1000, students are encouraged to take an introductory statistics course in preparation for GEOG 3600 that is required for geography majors. During advising meetings, geography majors are encouraged to take MATH 1040, Introduction to Statistics (meets university-wide Quantitative Literacy requirement).

   Overall, the assessment results give the faculty confidence that we are preparing our students for careers in geography and related fields. Furthermore, high impact, service learning course projects are assisting both students and community organizations with research that can be applied in a "real world" setting.

   The Department has begun a strategic planning process that articulates departmental goals, including ongoing student learning assessment. As part of the long-range planning process, we intend to track our graduates to better gage employment and career training opportunities, such as internships that the department facilitates.