

2012-2013 Annual Assessment Report
Department of Geography
College of Natural Sciences and Mathematics
California State University Sacramento

This report differs somewhat in format from previous assessment reports for the Department of Geography. Our assessment plan and report used essentially the same format for the years 2006-07 through 2010-11. In 2011-12 (actually in January 2012), the department prepared the required “Learning Outcomes Data for the Senate Committee on Instructional Program Priorities,” according to a template supplied by SCIPP. That document is referred to by the Office of Academic Program Review (OAPA) as the “2011-2012 Annual Assessment Report, Department of Geography.” This year, 2012-13, we are using the template supplied by OAPA. Because that template does not ask for a summary of our Assessment Plan, we have included it as an Appendix 1. It includes our learning goals, learning outcomes, methods of assessment, and assessment cycle. Appendix 2 is the rubric we use to assess the senior research projects required of all geography majors.

1. As a result of last year’s assessment effort, have you implemented **any changes for your assessment, including learning outcomes, assessment plan, assessment tools (methods, rubrics, curriculum map, or key assignment, etc.), and/or the university baccalaureate learning goals?**

a. If so, what are those changes? How did you implement those changes?

We did not change our learning outcomes (LOs), which were recognized in the feedback document as already being “aligned closely with the University Baccalaureate Learning Goals.” We also did not change our overall assessment plan. We have modified some of our methods. For the first time we have paired up the “baseline knowledge quiz” scores of individual students taking the quiz as first-semester juniors with their scores when they took it as last-semester seniors. We have also done some exploration of data from the baseline quiz by concentration, as we try to formulate an efficient way to do assessment by concentration per the feedback we received from OAPA. One faculty member also experimented with rubrics for evaluating individual assignments in the senior research seminar (GEOG 190), which may contribute to improved outcomes on the senior project. Based on the OAPA workshops, we decided to present and discuss results only on two LOs this year, when in the past we have generally done so for four or five.

b. How do you know if these changes have achieved the desired results?

c. If no, why not?

It seems evident that comparing earlier and later scores for individual students has greater validity than comparing them for cohorts in which the earlier and later scores were coming from somewhat different sets of students. As for whether using the baseline quiz to assess by concentration is useful, that discussion will begin at this year’s Geography retreat in August. More widespread experimentation with assignment rubrics in 190 would be needed to judge their impacts on the senior projects.

2. As a result of last year’s assessment effort, have you implemented **any other changes at the department, the college, or the university, including advising, co-curriculum, budgeting, and planning?**

a. If so, what are those changes? How did you implement those changes?

- b. How do you know if these changes have achieved the desired results?
- c. If no, why not?

We implemented once-per-year (prior to enrollment in Spring classes) mandatory major advising; this was done in response to the Graduation Initiative rather than to assessment, but ultimately there may be an enhancement of LO #8 (see Appendix 1), which we did not assess this year, from this. Prof. Krabacher strengthened the assignment in GEOG 102 (Ideas and Skills in Geography, a junior-level course) that helps students develop literature review skills; this is related to LO #6 (see Appendix 1), which we did not assess this year. In any case, it would have been too soon to see these impacts on the students who were evaluated as seniors this year.

3. What **PROGRAM** (not course) learning outcomes have you assessed this academic year?

- Learning Outcomes #1 and #5 (see Appendix 1 for details).

4. What methods/measures have you used to collect the data?

- Learning Outcome #1 – baseline knowledge quiz (See Appendix 1 for details).
- Learning Outcome #5 – senior research project (see Appendix 1 for details).

5. What are the criteria and/or standards of performance for the program learning outcomes?

- The department has not heretofore set standards of performance for the program learning outcomes and will have to discuss these at its retreat this August. The examples provided below are illustrative only.
 - One possibility is to adopt one standard for all those taking the baseline knowledge quiz as seniors; for example, the standard might be to get 80% of our seniors to achieve an overall score of at least 70% on the quiz.
 - We could also adopt different standards for students in the different concentrations taking the baseline quiz as seniors; for example:
 - 80% of those concentrating in physical geography achieving a score of at least 80% on the physical geography part of the quiz;
 - 80% of those concentrating in human geography achieving a score of at least 80% on the human geography part of the quiz;
 - 80% of those concentrating in GIS & analysis achieving a score of at least 80% on the techniques/mapping part of the quiz; and
 - 80% of those concentrating in Metropolitan Area Planning (MAP) achieving a score of at least 75% on the human geography part of the quiz and 75% on the techniques/mapping part of the quiz. (MAP concentration students take a mix of human geography and techniques courses.)
- It might also be desirable to indicate standards for *improvement* in scores between when a student takes the quiz in GEOG 102 as a junior and when he/she takes it as a senior in GEOG 190.
- While no standards of performance on the senior project rubric have been formally adopted, it has been assumed that a score of 3 on any rubric element was subpar, while a 4 or 5 was

desirable (3, 4, or 5 comprising the range used). This scale and possible standards of performance will be further discussed prior to their next use, which will be Spring 2014.

6. What data have you collected? What are the results and findings, including the percentage of students who meet each standard?

a. In what areas are students doing well and achieving the expectations?

b. In what areas do students need improvement?

Learning Outcome #1 – assessed via the Baseline Knowledge Quiz

Immediately below we report the general results on the baseline knowledge quiz for this year. This is the first year in which the results were from testing the exact same set of students in our junior gateway course, GEOG 102, Ideas and Skills in Geography, and in our senior capstone course, GEOG 190, Senior Research Seminar in Geography. Also, there were no changes in questions between the two times the quiz was taken. **These conditions did not hold true in earlier years**, so caution should be exercised in comparing this year’s results with previous ones, also included below. The baseline quiz assesses LO#1, “identify and describe basic concepts and patterns in physical and human geography.”

QUIZ RESULTS for 2012-2013

Course	Physical Geog.	Human Geog.	Mapping	Total
GEOG 102 Fall 11*	58.9	50.5	76.0	60.0
GEOG 190 Spr 13	78.1	53.3	83.0	70.3

Numbers = overall percentage of questions answered correctly

n = 18 (this was the total number of students for whom we had paired scores); the total number of students in GEOG 190 in Spr 2013 was 29.

*All 18 students took GEOG 190 in Spr 2013; most of those took 102 in Fall 2011, but some took it in Fall 2012.

[There are no QUIZ RESULTS for 2011-12, DUE TO SCIPP.]

QUIZ RESULTS for 2010-2011

Course	Physical Geog.	Human Geog	Mapping	Total
GEOG 102 Fall 09	54.6	50.4	44.5	49.8
GEOG 190 Spr 11	68.4	59.4	64.0	63.9

Numbers = overall percentage of questions answered correctly

n = 41 for 102 (F 2009); n = 25 for 190 (S 2011)

QUIZ RESULTS for 2009-2010

Course	Physical Geog.	Human Geog	Mapping	Total
GEOG 102	54.6	50.4	44.5	49.8
GEOG 190	58.1	53.3	67.8	59.7

Numbers = overall percentage of questions answered correctly

n = 41 for 102 (F 2009); n = 29 for 190 (F2009 &S2010)

QUIZ RESULTS for 2008-2009

Course	Physical Geog.	Human Geog	Mapping	Total
GEOG 102	55.6	52.3	47.6	51.8
GEOG 190	66.2	58.3	66.5	63.6

Numbers = overall percentage of questions answered correctly

n = 35 for 102 (F 2008); n = 19 for 190 (S 2009)

QUIZ RESULTS for 2007-2008

Course	Physical Geog.	Human Geog	Mapping	Total
GEOG 102	64.0	54.2	37.6	53.1
GEOG 190	57.1	59.0	52.7	56.7

Numbers = overall percentage of questions answered correctly

We also, for the first time, report here, how well students in the Physical Geography Concentration did on the physical geography questions, how well students in the Human Geography Concentration did on the human geography questions, how well students in the GIS & Analysis concentration did on the techniques/mapping questions, and how well students in the Metropolitan Area Planning concentration did on both the human and techniques/mapping questions.

QUIZ RESULTS for 2012-2013 – by Concentration

Course	Phys. on Phys.	Human on Human	GIS&A on Mapping	MAP on Human	MAP on Mapping
GEOG 102 Fall 11	58.4	70.0	78.6	60.0	83.3
GEOG 190 Spr 13	82.5	50.0	84.0	66.7	91.1

Numbers = overall percentage of questions answered correctly

n = 9 for Physical Concentration, n = 2 for Human Concentration, n = 5 for GIS&A Concentration, n = 3 for Metropolitan Area Planning (MAP) Concentration. The sum is 19 rather than 18, because one student completed two different concentrations.

It appears from this year's results, buttressed by those from prior years, that students are doing well (specific numerical expectations yet to be determined) in the physical geography and mapping areas of the quiz. All students, including the two human geography students, had trouble with the human geography portion of the quiz. In part, this reflects a structural reality of our program. Our human geography (and regional geography courses, which are also required for that concentration) are more diverse and less frequently taught than are physical and techniques courses, so students are less likely to develop a shared core of basic knowledge in that area than in the other two areas. Also, there was one 5-part question on the human geography part of the quiz, which was worth 25% of it, on contemporary philosophies in human geography, that no student did well on, and that was likely not adequately covered in classes. There are several other quiz questions in the human geography section that also need to be reconsidered, although we may leave them in place for another round or two of testing in order to have strictly comparable data for another year.

Learning Outcome #5 – assessed via the Senior Project

Learning Outcome #5, "show written competency in the description and analysis of geographic subject matter," is assessed via the rubric that is used to evaluate senior research projects, which are produced in our capstone Writing-Intensive course, GEOG 190, Senior Research Seminar in Geography. The item in the project rubric that is relevant here is "Overall Written Expression," the scale for which is:

- 5 – Few if any mechanical writing or formatting errors; writing is clear and well-organized; logic of arguments presented is unassailable
- 4 – Minor mechanical writing or formatting errors; writing is competent but has some problems with clarity and organization; local has some minor weaknesses

- 3 – Serious mechanical writing or formatting errors; writing is unclear and poorly organized; local has serious flaws.

These 3-5 possible points are part of a 35-point rubric (Appendix 2) whose other elements address other learning outcomes that are not part of this year's report. The average score on this rubric element across all senior projects in all three sections of GEOG 190 this year (Spring 2013) was 4.48/5.00. This is nearly equal to a grade of A-. There was some difference among the three instructors; the average scores for the three sections of GEOG 190 were 4.17, 4.50, and 4.82. In terms of the share of students receiving a 3, rather than a 4 or 5, on this rubric element, 3 out of 29, or 10.3% did so. Although specific standards of performance have not been set (X % of students achieving X score on the rubric), it is safe to say that this level of performance is acceptable. Also, no student on the senior seminar reflective evaluation chose "writing the paper" as a part of the senior project that he/she would have liked more experience with prior to doing it in GEOG 190. Many students pointed to papers written and evaluated in prior geography courses as good preparation for GEOG 190. Geography majors themselves appear to feel they are demonstrating competency in written expression.

7. As a result of this year's assessment effort, do you anticipate or propose any changes for your program (e.g., structures, content, or learning outcomes)?

- a. If so, what changes do you anticipate? How do you plan to implement those changes?
- b. How do you know if these changes will achieve the desired results?

We don't anticipate major changes. In general, we are happy with our senior capstone project as our major assessment tool. We will discuss whether using the baseline knowledge quiz is the best way to respond to the demand that we differentiate our assessment by program and will consider other alternatives. We will also review the questions, and related pedagogy, on the human geography portion of the quiz. Implementation will involve the faculty who teach 102 and 190, the human geography faculty, and potentially others. We don't know if these changes will achieve the desired results, but we are sure we will be using further rounds of assessment to find out.

8. Which learning outcomes do you plan to assess next year? How?

This will be discussed at our August Retreat and also may be influenced by what we learn in our Program Review, which is going to be completed (belatedly) by the end of the year. We will discuss the idea, presented in this year's OAPA workshops, that the assessment process could be tied to a 6-year (Program Review) cycle. However, we feel that the idea of only cycling back to a given LO once every 5 or 6 years means that it takes too long to evaluate the impacts of any changes made.

Final note: at the first Assessment Workshop (2/13/13) we were informed that we are not yet expected to have an assessment plan in place for minors, so even though that was one of the three main points made in the critique of Geography's existing plan, we did not address it this year. We also did not address the request that we devise a better way to survey "external constituents," as that will pertain largely to Learning Outcome 8, which we did not assess this year. We will take up these topics in future annual reports.

APPENDIX 1 – ASSESSMENT PLAN

Our Assessment Process

The primary mission of Geography Program, as identified in the self-study for its 2005 program review, is to provide students in the geography major (B.A.) with a solid undergraduate liberal arts education focused on geography. A secondary goal is to prepare majors with the knowledge and skills needed to pursue a graduate degree in geography or to obtain employment in a geography-related field. The Geography Department has been formally assessing its performance in these areas via its own internal assessment process since 2000-2001. The process has undergone continuous modification since then, most notably as part of a 2002-2003 university-wide assessment initiative undertaken by Academic Affairs under the direction of Linda Buckley, and in response to recommendations from the Department's 2005 program review. The current assessment process described below builds on these earlier efforts.

Goals and Learning Outcomes

The Geography Department has identified the following goals and learning objectives for students in the undergraduate Geography program. The numbers in brackets after each goal indicate related campus Baccalaureate Learning Goals.

Goals: Students completing the B.A. degree in Geography will:

1. Have an understanding of the nature of Geography as an academic discipline, including familiarity with its history and principal subfields [1,2];
2. Demonstrate (a) a knowledge of the basic concepts of physical and human geography [1, 2] and (b) competency in selected geographic techniques [1,3];
3. Display competency in the graphic expression of geographic/spatial data (maps, photographs, graphs, data bases) [1,3];
4. Display competency in written expression with respect to clarity, logical expression, and effective argument [1, 2, 3];
5. Understand and apply the basic research skills, including the ability to (a) critically evaluate the research of others [1, 2, 3, 4] and (b) effectively design and carry out a research project on one's own [5];

6. Acquire knowledge and skills sufficient to allow one to pursue advanced study in geography or find employment in a geography-related field [1, 2, 3, 4, 5].

(CSUS Baccalaureate Learning Goals: [1] Competence in the Disciplines; [2] Knowledge of Human Cultures and the Physical and Natural Worlds; [3] Intellectual and Practical Skills; [4] Personal and Social Responsibility; [5] Integrative Learning.)

Learning Outcomes: Various learning outcomes are identified to help the student achieve the above goals. The outcomes reflect the different levels of learning set forth in Bloom’s taxonomy, including basic knowledge and comprehension, application, analysis and evaluation, and synthesis. Key outcomes, along with the means for their assessment, are found in the accompanying table. Although the learning outcomes are addressed in required courses throughout the major, there are nonetheless key courses that play a central role in helping students achieve these outcomes. These are also identified in the table below.

Learning Outcome	Relevant Course(s)	Means of Assessment
<p>One</p> <p>Identify and describe basic concepts and patterns in physical and human geography.</p>	<p>GEOG 1, GEOG 2, GEOG 11, GEOG 118 and upper-division breadth requirements</p>	<p>Baseline knowledge quiz</p>
<p>Two</p> <p>Display knowledge of the history of Geography as an academic discipline and a familiarity with its contemporary models, approaches, and theories.</p>	<p>GEOG 102, GEOG 190</p>	<p>Baseline knowledge quiz</p>
<p>Three</p> <p>Demonstrate competency in one or more of the basic geographic tools/techniques for data collection, display, and analysis.</p>	<p>GEOG 3 and the upper-division techniques courses, including the field courses</p>	<p>GEOG 190 senior project; senior seminar reflective evaluation</p>
<p>Four</p> <p>Demonstrate graphic literacy in the use and analysis of maps, graphs, and spatial data sets.</p>	<p>GEOG 3, GEOG 105, GEOG 107, GEOG 109, GEOG 110, GEOG 163</p>	<p>Baseline knowledge quiz; GEOG 190 senior project; senior seminar reflective evaluation</p>

Five		
Show written competency in the description and analysis of geographic subject matter.	GEOG 102, GEOG 190	GEOG 190 senior project; senior seminar reflective evaluation
Six		
Analyze and evaluate scholarly writing within the discipline.	GEOG 102, GEOG 190	GEOG 102, GEOG 190 senior project; senior seminar reflective evaluation
Seven		
Synthesize geographic models, data, and methodologies in research design.	GEOG 190	GEOG 190 senior project; senior seminar reflective evaluation
Eight		
Acquire the overall competencies necessary to success in graduate school and post-graduation careers.	The major as a whole	Graduating senior interview; NSM senior survey; periodic alumni survey

Methods of Assessment

The Geography Department's assessment process is designed (1) to evaluate the degree to which students in the Geography B.A. program achieve the goals and outcomes above and (2) to identify potential areas for improvement. While course-level assessment of student performance takes place within the courses themselves, assessment of student performance at the programmatic level employs an additional set of assessment measures. Central to the Department's assessment process are two courses: GEOG 102 (Ideas & Skills in Geography), a gateway course taken by all students during their first fall semester in the major, and GEOG 190 (Senior Research Seminar in Geography) a capstone course, which requires the student to synthesize much of what he or she has learned as a major through design of an individualized research project. The latter course is taken during the student's final semester before graduation. Based on recommendations from the Department's last program review, these two classes have become central to the Geography assessment process.

In all, the Department employs the following six assessment measures:

1. Baseline Quiz: This instrument assesses student knowledge of basic geographic concepts and facts. It consists of 54 objective questions and is brief, taking only about 20 minutes to administer. It is now given electronically to students in both the gateway course (GEOG 102) and the senior seminar (GEOG 190). Its purpose is twofold: to identify the student's level of basic geographic knowledge at both the time of entering

the program and at the end of his or her time in the major (thus measuring “value added”), and to identify those areas in which student knowledge is deemed deficient and corrective measures may be called for. There are 19 questions in physical geography, 20 in human geography, and 15 in graphic literacy (maps and graphs).
Faculty responsible: Prof. Krabacher

2. Senior Research Project: The central focus of the capstone course, GEOG 190 (Senior Research Seminar in Geography), is design and execution of a research project. In doing so students have to complete the various phases of the research process (articulating the research question/hypothesis, literature review, selection of methodologies, data collection and analysis, graphical presentation, discussion of findings), and report their findings in a paper and a poster. The exercise is one of synthesis, requiring the student to draw upon the broad range of skills and knowledge acquired in the major. A standardized grading rubric based on a model proposed by the Center for Teaching and Learning was employed in the evaluation for the first time in Spring 2008. *Faculty responsible:* Profs. Datel, Krabacher, and Wanket
3. Senior Seminar Reflective Evaluation: Students in the GEOG 190 senior seminar are asked to complete a questionnaire as part of the end-of-semester course evaluation. While most questions relate to the student’s GEOG 190 experience, some are broader in scope, addressing such topics as: subject matter in which students felt it would have been desirable to have had greater experience prior to taking the seminar, prior courses that were most useful to them in completing the seminar research project, etc. These responses are useful in identifying student perceptions of curriculum strengths and weaknesses. *Faculty responsible:* Profs. Datel, Krabacher, and Wanket
4. Graduating Senior Exit Interview: At the end of each semester, the department chair invites graduating seniors to participate in an unstructured conversation about their experiences in the major. This ordinarily takes place in a relaxed setting, usually over pizza and beverages in the University Union. The purpose is to assess the level of student satisfaction with the major and identify what students perceive as strengths, weaknesses, and desirable changes. *Faculty responsible:* Department Chair
5. NSM Graduating Senior Survey: The NSM Dean has instituted a college-wide survey of all graduating seniors. The questionnaire requests information on undergraduate internships and work experiences as well as each student’s current employment situation and plans for the future, whether academic or otherwise.
6. Periodic Alumni Survey: The Office of Institutional Research conducts a survey of each program’s alumni on a regular basis. These surveys assess alumni perceptions of (1) the

usefulness of the major in realizing post-graduation academic and/or career goals and (2) the strengths and weaknesses of the Geography curriculum, given the perspective lent by time. Because these OIR surveys occur only every six years, the department has experimented with conducting its own e-mail based surveys of recent graduates.

Faculty responsible: Department Chair

Assessment Cycle

The Geography program's annual assessment activities occur over a 12-month cycle, beginning in the fall semester of a given academic year and culminating at the annual Geography Department faculty retreat in August just prior the opening of the fall semester of the following academic year. Thus:

- **Fall Semester** – Baseline quiz administered in gateway course (GEOG 102); graduating seniors interviewed; NSM survey administered.
- **Spring Semester** – Baseline quiz administered in capstone course (GEOG 190); senior projects graded using standard rubric (GEOG 190); reflective evaluations completed (GEOG 190) ; graduating seniors interviewed; NSM survey administered; informal e-mail surveys sent to recent alumni if need is felt.
- **Summer** – Department chair processes data and uses it to inform the annual assessment report, usually due to the dean on July 1.
- **August** – Geography faculty retreat: discussion/analysis of assessment data and possible program changes identified in response; possible modifications to assessment process proposed.

**APPENDIX 2: Rubric for Evaluating Projects in Senior Research Seminar in Geography
(GEOG 190)**

Elements of the Paper	Scoring Scale (5-4-3)
Statement of Research Questions or Hypotheses	<p>5 Clearly stated and clearly geographical; suitable for senior project (given constraints)</p> <p>4 Present, but somewhat unclear; geographical aspects not explicit; possibly unsuitable</p> <p>3 Not present or quite unclear; not geographical; clearly not suitable</p>
Literature Review	<p>5 Relevant, thorough, well-organized</p> <p>4 Generally relevant; some extraneous material and/or key sources missed; organization needs tightening</p> <p>3 Merely lists studies; little or no logic to selection of sources; poorly organized</p>
Methodology Choice and Description	<p>5 Highly appropriate methods selected; detailed description of methods; logically connected to research questions</p> <p>4 Weak methods or insufficient description of methods</p> <p>3 Inappropriate methods selected</p>
Presentation of Results (Data and Analysis)	<p>5 Data are complete, properly reported, and correctly analyzed</p> <p>4 Data are appropriate but some mistakes in reporting and/or analysis are evident; may be less than complete</p> <p>3 Data are seriously incomplete or improperly reported; major gaps and/or mistakes appear in the analysis</p>
Graphics	<p>5 Maps, charts, graphs, photos, and other images have a high degree of relevance, completeness, and quality</p> <p>4 Graphics are generally relevant, fairly complete, and of acceptable quality</p> <p>3 Graphics are inappropriate, missing, and/or of poor quality</p>

Discussion of Findings	<p>5 Discussion is insightful, thorough, well-organized, and clearly ties the work into a larger geographical research tradition</p> <p>4 Discussion is mechanical; some gaps in analysis; organization may be weak; ties to a larger geographical research tradition somewhat unclear</p> <p>3 Discussion fails to interpret data (merely repeats results) and fails to place work in a larger geographical research tradition</p>
Overall Written Expression	<p>5 Few if any mechanical writing or formatting errors; writing is clear and well-organized; logic of arguments presented is unassailable</p> <p>4 Minor mechanical writing or formatting errors; writing is competent but has some problems with clarity and organization; logic has some minor weaknesses</p> <p>3 Serious mechanical writing or formatting errors; writing is unclear and poorly organized; logic has serious flaws</p>

Total points possible = 35.