Assessment of Student Learning Outcomes

1. **Name and Contact Information of Program Assessment Coordinator:**
   LaDona Knigge, Associate Professor of Geography & Planning
   GEOG, Mail ZIP 0425, Phone 530-898-5881, email: lknigge@csuchico.edu

2. **Student Learning Outcomes**
   http://www.csuchico.edu/geop/department/index.shtml

3. **Course Alignment Matrix:**
   http://www.csuchico.edu/geop/department/2014%20Matrix

4. **Learning Outcome(s) Assessed in AY 2015-2016:**
   *Which SLOs were assessed this past year?*

   Goal 1: Demonstrate technological capabilities related to geographic data interpretation and their spatial representation.

   1. Students can formulate geographic research questions.
   2. Students can collect, compile, and interpret geographic data.
   3. Students can present geographic data in a map.

5. **Assessment Methodology Used:**

   Embedded assessment of student work was used for the purposes of this assessment. The samples consisted of signature assignments for three geography courses, described below. There was no sample; the entire collection of student work for each course was evaluated.

   The assessment rubric, developed by the assessment coordinator from course alignment matrix, was used, to assess Goal 1 to measure the three learning outcomes (formulating geographic research questions, collecting, compiling and interpreting geographic data, and presenting geographic data in a map). Each indicator was given a score of (4) Exceptional (3) Very Good or Above Average (2) Adequate or Average (1) Unacceptable (0) Missing.

   GEOP assessment strategy has a requirement that 75% - 80% of students must score Exceptional, Very good or above average, or adequate or average. If more than 20-25% of students score Unacceptable, then GEOP will take appropriate action to rectify the low performance of students. This assessment evaluation was performed by assessment coordinator.

**Courses**

**GEOG 211 Introduction to GIS.** This is the first of three GIS courses that are offered in the department. As a 200 level course, the assessed objectives are introduced and practiced according to the GEOP Course Alignment Matrix. Twenty-three samples of student work for the GIS Project Design assignment were evaluated for this assessment.
**GEOG 390 Foundations of Geographical Analysis and Writing** is a 300-level writing proficiency course. Assessed objective 1 (Students can formulate geographic research questions) is practiced and mastered in this course according to the GEOP Course Alignment Matrix. Ten samples of student work for the StoryMap assignment were evaluated for this assessment. The assessed StoryMap signature assignment required students to create a map, so objectives 2 and 3 were also assessed for this assignment.

**GEOG 411 Geospatial Analysis and Modeling in GIS** is a 400 level course and the third and final GIS course offered in the department. As an upper-division course in the major, all three assessed objectives are practiced and mastered according to the GEOP Course Alignment Matrix. Five samples of the GIS Final projects completed by student teams were evaluated for this assessment.

### 6. Assessment Results:

*Please describe outcomes of assessment. How well did students perform on the assessment task(s)? Feel free to use the table below to report results, adapting the table as necessary, and/or provide narrative describing the assessment results.*

Goal 1: Demonstrate technological capabilities related to geographic data interpretation and their spatial representation. See table of summary of results below.

<table>
<thead>
<tr>
<th>Student Learning Outcome</th>
<th>Course</th>
<th>Sample and Sample Size</th>
<th>Measure</th>
<th>Percent of Students Achieving exceptional, very good or above average, average or adequate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Outcome 1</td>
<td>GEOG 211</td>
<td>22</td>
<td>Students can formulate geographic research questions</td>
<td>95.5%</td>
</tr>
<tr>
<td></td>
<td>GEOG 390</td>
<td>10</td>
<td></td>
<td>90%</td>
</tr>
<tr>
<td></td>
<td>GEOG 411</td>
<td>5</td>
<td></td>
<td>100%</td>
</tr>
<tr>
<td></td>
<td>All courses combined</td>
<td>37</td>
<td></td>
<td>94.6%</td>
</tr>
<tr>
<td>Outcome 2</td>
<td>GEOG 211</td>
<td>22</td>
<td>Students can collect, compile, and interpret geographic data</td>
<td>95.4%</td>
</tr>
<tr>
<td></td>
<td>GEOG 390</td>
<td>10</td>
<td></td>
<td>90%</td>
</tr>
<tr>
<td></td>
<td>GEOG 411</td>
<td>5</td>
<td></td>
<td>100%</td>
</tr>
<tr>
<td></td>
<td>All courses combined</td>
<td>37</td>
<td></td>
<td>94.6%</td>
</tr>
<tr>
<td>Outcome 3</td>
<td>GEOG 211</td>
<td>15*</td>
<td>Students can present geographic data in a map.</td>
<td>93.3%</td>
</tr>
<tr>
<td></td>
<td>GEOG 390</td>
<td>10</td>
<td></td>
<td>90%</td>
</tr>
<tr>
<td></td>
<td>GEOG 411</td>
<td>5</td>
<td></td>
<td>100%</td>
</tr>
<tr>
<td></td>
<td>All courses combined</td>
<td>30*</td>
<td></td>
<td>93.3%</td>
</tr>
</tbody>
</table>

*NOTE: Maps were not included in seven of the projects in GEOG 211 so Outcome #3 was not assessed for those samples.

According to the aggregated results of all three courses of embedded student work:

- 94.6% of embedded student work assessed demonstrated that the students had mastered Outcome 1 at a level of average or adequate or better.
- 94.6% of embedded student work assesses demonstrated that the students had mastered Outcome 2 as a level of average or adequate or better.
• 93.3% of the embedded student work assessed demonstrated that the students had mastered Outcome 3 at a level of average or adequate or better.

As indicated by the data results, overall total student scores were well over the requirement of the GEOP assessment strategy that requires that 75% - 80% of students must score Exceptional, Very good or above average, or adequate or average. See Appendix for complete results.

7. Analysis / Interpretation of Results

What did the results tell you about how well students were achieving your Student Learning Outcome expectations? How were the results shared with faculty, students, and/or other stakeholders?

First the data results for the assessment of Goal 1, Outcome 1, 2 and 3 indicates that students exceed the minimum requirement set by the GEOP faculty. The results of the assessment were shared with faculty and discussed at the monthly faculty meeting on October 14, 2016.

Second, by assessing three courses at 200, 300 and 400 level we find that students’ skills and mastery of the assessed goals were highest in the 400-level course. This is to be expected as the Course Matrix indicates that the learning outcomes will be introduced and practiced in the GEOG 211 and 390 courses. This increase in mastery as students culminate their geography degree requirements is desired and to be expected.

8. Planned Program Improvement Actions Resulting from Outcomes (if applicable)

How will the assessment data and their evaluation be used to improve the program? Possible actions might include revising pedagogy, courses, curricula, or other learning support mechanisms.

Assessment results indicate that the students were meeting the learning objectives of Goal 1. There are no improvement actions planned at this time.

However, Outcome 2 was assessed for the 2013-14 (data collection, compilation and interpretation) and that report noted the following:

“While no actions are indicated as necessary by this assessment, the department has recently redesigned the GIS curriculum. The sequent of classes of GEOG 319 and 419 have been discontinued. GEOG 219 remains a requirement for all geography majors. GEOG 319 and 419 have been replaced with GEOG 211, 311 and 411” (GEOP Annual Program Assessment Report 2013-14).

Results of this assessment indicate that the program redesign has not had a negative impact as the students continue to meet or exceed the minimum set by department.

9. Planned Revision of Measures or Metrics (if applicable)

A possible revision of a measure might be to recommend a change in the assignments that are evaluated for program assessment, or the number of assignments examined, and by whom. A metric revision might be for program faculty to decide to change the “bar” for acceptable performance.

In the future, an assessment team of three faculty members, with LaDona Knigge as the lead assessment coordinator, will be involved in assessment design, data collection, evaluation, and reporting. More involvement from a broader selection of faculty will improve the reliability and validity of the assessment process and may make assessment more meaningful to the department as a whole.

10. Planned Revisions to Program Objectives or Learning Outcomes (if applicable)

After examining the assessment data, it might be appropriate to revise one or more of the Program Objectives or Student Learning Outcomes.

The department might consider revision of course matrix for GEOG 211 to included Outcome 1 at the 'introduce or practice” level. Only learning Outcome 2 and 3 were included on the course alignment matrix.
Goal 5.2 now reads “2. Students can (deleted 'write and') speak clearly in the discipline of geography.” Assessment coordinator recommends that Goal 5.2 be amended to delete the phrase in parenthesis “(deleted ‘write and’)” and read as follows:

2. Students can speak clearly in the discipline of geography.

11. Changes to Assessment Schedule (if applicable)

Do the results create a need for change in your assessment schedule? If so, please describe.

While the results to not create a need for change in the assessment schedule, future assessment strategies will be amended so that one of the five goals will be assessed each year using the learning outcomes as the metrics or criteria for assessment. This would facilitate the assessment of all five department goals over a five-year period of time.

12. Information for Next Year

What learning outcome(s) are you examining next year and who will be the contact person?

The following goal will be assessed for the 2016-17 department assessment:

Goal 5: Demonstrate proficiency in written and spoken communication.

1. Students can write clearly in the discipline of geography and use and cite scholarly sources of information correctly.
2. Students can (deleted 'write and') speak clearly in the discipline of geography.

The assessment team will consist of LaDona Knigge, Jacque Chase and Don Hankins. The lead assessment coordinator and contact will be LaDona Knigge lknigge@csuchico.edu Office phone: 530 898-5881.

1. Appendices (please include any of the following that are applicable to your program)

A. Assessment Data Summaries (Details that elaborate on item 6, above.)

See attached

B. Measurement Standards (Rubrics, etc.)

See attached rubric for evaluating student work

C. Survey Instruments

None

Please submit your completed report electronically to rpatten@csuchico.edu by Friday, September 30, 2016.