Date of Report: 8/13/2018
Name of Person Submitting Report: Donald E Colley III

A. Program Information:
Assessment Coordinator’s Name: Donald E Colley III
Assessment Coordinator’s Email Address: don.colley@okstate.edu
Number of students enrolled in the program 2017-2018: 6
Number of students graduated in 2016-2017: 2

B. Program Mission Statement
In the box below, provide the mission statement for the program.
The mission statement, educational objectives, and goals for program should guide the assessment process. The mission statement should align with department, college, and institutional mission statements.
The Department of Geography advances geography instruction, research and extension to promote and maintain a growing statewide workforce skilled in geographic research and applications. The Department of Geography will achieve national and international stature in scholarly and creative activities to enhance the visibility and desirability of the geography program at Oklahoma State University, and capitalize on new opportunities and respond to the changing needs of Oklahomans and society to provide Oklahoma schools, universities, industries and businesses, and those in the surrounding region, with the highest caliber professionals in the field of geography.
In serving BS in GISci students, the Department of Geography will provide a broad-based education and focused learning experience emphasizing geographic information systems, the Global Positioning System and remote sensing technologies that will enable students to pursue careers in private industry, government or non-profit organizations or pursue graduate studies. In addition, since 2005, the U.S. Department of Labor has undertaken the development of competencies related to the use of geospatial technologies. Therefore, course and program learning outcomes integrate these competencies.

C. University Assessment Funds
Were university assessment funds used by the department/program for assessment activities? ☐Yes ☒No
If university assessment funds were used by the department or program, describe how university assessment funds were used and the contribution the funds had on the assessment process. Funding requests for the next academic year have a separate process and should not be included here.
If yes, click here to enter information about how university assessment funds were used.

D. Student Learning Outcomes
On the pages that follow, list the Student Learning Outcomes associated with the program identified in this assessment form.
D1) Student Learning Outcome #1: Students will be able to think geographically. More specifically, program graduates will demonstrate an ability to identify, interpret, and reason analytically about spatial patterns and their possible causes and consequences.

Identify opportunities for students to learn this outcome during the 2017-2018 academic year:
For example, include a curriculum map that lists the courses or other learning experiences in which the student learning outcome is taught. Another example is a written narrative that describes how the learning outcome is integrated into the program.

Specific to learning (quantitative) analytical reasoning and pattern recognition skills, the department will assess this learning outcome with a rubric designed for a required course, GEOG 3333 (Spatial Analysis). With regards to interpretation of spatial patterns, GEOG 4323 (Computer Cartography) will be used to assess this learning outcome. Students will be assessed by the faculty member teaching this course with a rubric specific to the course, subject to revision. Rubrics for this assessment period are included in the summary results section.

How many students were included in the assessment of this outcome?
All GSIS majors enrolled in either GEOG 3333 or GEOG 4323 for the 2017-2018 assessment period were included in the assessment of this outcome. For 2017-2018, there were 2 GSIS majors enrolled in GEOG 3333.

How were students selected to participate in the assessment of this outcome?
GEOG 3333 and GEOG 4323 are required classes for all GSIS majors. Therefore, all GSIS majors enrolled in 3333 and 4323 in an academic year will be assessed.

Assessment Methods
Identify the method(s) used to assess this learning outcome. Check all that apply.

☐ Survey
☒ Rating of skills (e.g., rubrics)
☐ Analysis of written artifacts
☐ Comprehensive, certification, or professional exam(s)
☐ Oral presentation
☐ Course project
☐ Satisfaction Survey
☐ Benchmarking
☐ Measuring effectiveness relative to professional standards
☐ Review of thesis/dissertation/ creative component
☐ Capstone project
☐ Internship
☐ Interviews
☐ Performance or jury
☐ Visual collection (photos, videos, etc.)
☐ Review of student research
☐ Other (please specify):
Click here to specify.

Describe the how the assessment method was implemented, administered, and/or conducted.
GEOG 3333 is taught once per year (currently in the fall) and the instructor will assess all GSIS majors enrolled in the course. GEOG 4323 is taught once per year (currently in the spring) and the instructor will assess all GSIS majors enrolled in the course. No student action or active participation is necessary. There was 1 student enrolled in GEOG 3333 in Fall 2016. There was 2 students enrolled in GEOG 4323 in Spring 2017.

Evaluation rubrics are distributed to each instructor of a required (core) course near the end of each semester, with the students’ names and each course’s stated student learning outcomes listed. Instructors rate each student on a 0-4 scale for each outcome (0 for minimal to no mastery of the outcome, 4 for maximal mastery), as described in the department Undergraduate Assessment Plan and as assessed by the instructors of each core course. Average scores for each course and learning outcome are determined each year. Rubric items are assessed independently on the 0-4 scale separately from specific grades earned in the class. Instructors primarily
base their evaluations on individual assignments and term projects in the pertinent courses, identifying specific assignments or components that meet the major course learning goals, and they are encouraged to rate students on the individual learning outcomes prior to determining final course grades.

**Did your department/program faculty have a goal set for this learning outcome?**

- ☐ Yes
- ☒ No

*For example, “80% of students included in the assessment will receive a 4 on the rubric” or “80% of students included in the assessment will achieve a passing score on the certification exam.” If yes, please describe the goal below.

If yes, click here to describe the goal set for this learning outcome.

**Provide a summary of the results from the assessment of Learning Outcome 1.**

*Report student’s scores for this assessment, as well as students’ strengths and weaknesses relative to this learning outcome.*

GEOG 3333 and GEOG 4323 are core courses in the department that have been assessed for several years for the Geography BS/BA degrees. However, because the GSIS degree program began in Spring of 2016, these courses are being assessed for GSIS for only the second time. Table 1 below includes the rubric averages for the learning outcomes for GEOG 3333 and GEOG 4323. This table in the future will include averages for the past 5 years as the degree program continues.

GEOG 3333 Learning Outcomes

<table>
<thead>
<tr>
<th>Outcome</th>
<th>Average Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>2</td>
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<tr>
<td>3</td>
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<tr>
<td>5</td>
<td>3.5</td>
</tr>
<tr>
<td>6</td>
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</table>

GEOG 4323 Learning Outcomes

<table>
<thead>
<tr>
<th>Outcome</th>
<th>Average Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
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<tr>
<td>2</td>
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<td>5</td>
<td>3</td>
</tr>
<tr>
<td>6</td>
<td>3</td>
</tr>
</tbody>
</table>

**What do the results suggest about student achievement of this learning outcome?**

As this is a new degree program which started in Spring 2016, there is little to report here. Both courses, GEOG 3333 and GEOG 4323 are courses that require prerequisites and therefore are taken later in a student’s career. Due to small sample size, which will continue to be an issue, an individual student’s achievement will skew any average results, in the case of 3333, one student had high outcomes and one student had consistently average outcomes. In the case of 4323, the student was proficient on all measures.

GEOG 3333 (Spatial Analysis) is assessed to determine the level of student quantitative reasoning skills. The rubric takes into account student ability to understand statistical analysis, how such analysis relates to geographic data, and how these data can be applied to pattern analysis techniques.

For GEOG 4323 (Computer Cartography), two students were enrolled during the 2016-2017 assessment period. GEGO 4323 is used to assess the level students are able to interpret spatial data. To determine this a combination of labs, exams, homework grades, and a final project are used.

As this program continues to grow, it will be easier and more beneficial to collect rubric data on student outcomes assessment for these courses.

**Timeline for the Assessment**

*Indicate the timeline for the assessment of this learning outcome. While outcomes assessment must be conducted every year, not all student learning outcomes for a given program must be assessed every year. If the assessment of a particular learning outcome occurs on cycle or rotation, please describe and provide the rationale for the cycle/rotation below.*
☐ Each Semester ☒ Yearly ☐ Every other year
☐ Other (please specify): If the assessment of Learning Outcome 1 occurs on a cycle or rotation, click here to describe and provide the rationale.

D2) Student Learning Outcome #2: Demonstrate technical skills and an understanding of the basic concepts in: collection and analysis of spatial data, computer cartography geographic information systems (GIS), the Global Positioning System and remote sensing.

Identify opportunities for students to learn this outcome during the 2017-2018 academic year:

For example, include a curriculum map that lists the courses or other learning experiences in which the student learning outcome is taught. Another example is a written narrative that describes how the learning outcome is integrated into the program.

The department will assess this learning outcome with rubrics designed for required courses that touch on the skills outlined above. Students in GEOG 2344, 4203, 4343, and 4353 (GIS courses) and GEOG 4333 will be assessed by the faculty members teaching these courses with rubrics specific to the courses, subject to revision. The rubrics for these courses are included in the section entitled Summary of Results of Outcome.

How many students were included in the assessment of this outcome?

All GSIS majors enrolled in GEOG 2344, 4203, 4333, 4343, and 4353 for the 2016-2017 assessment period were included. For this timeframe there were 6 different individuals who are GSIS majors and were enrolled in at least one of these courses. Therefore, 6 students were included over the 5 courses assessed.

How were students selected to participate in the assessment of this outcome?

All GISC majors are required to take GEOG 2344, 4203, 4343, and 4353 (GIS courses) and GEOG 4333 (Remote Sensing) Therefore, all GSIS majors enrolled in these courses will be assessed.

Assessment Methods
Identify the method(s) used to assess this learning outcome. Check all that apply.

☐ Survey ☐ Satisfaction Survey ☐ Internship
☒ Rating of skills (e.g., rubrics) ☐ Benchmarking ☐ Interviews
☐ Analysis of written artifacts ☐ Measuring effectiveness relative to professional standards ☐ Performance or jury
☐ Comprehensive, certification, or professional exam(s) ☐ Review of thesis/dissertation/ creative component ☐ Visual collection (photos, videos, etc.)
☐ Oral presentation ☐ Capstone project ☒ Review of student research
☒ Course project ☐ Other (please specify):

Describe the how the assessment method was implemented, administered, and/or conducted.

Both GEOG 2344 and GEOG 4203 are taught twice per year, once in the fall and once in the spring. GEOG 4343 and 4353 are taught once per year (currently in the fall) and GEOG 4333 is taught once per year (currently in the Fall). The instructor will assess all GSIS majors enrolled in each section of these courses.

Evaluation rubrics are distributed to each instructor of a required (core) course near the end of each semester, with the students’ names and each course’s stated student learning outcomes listed. Instructors rate each student on a 0-4 scale for each outcome (0 for minimal to no mastery of the outcome, 4 for maximal mastery), as described in the department Undergraduate Assessment Plan and as assessed by the instructors of each core
course. Average scores for each course and learning outcome are determined each year. Rubric items are assessed independently on the 0-4 scale separately from specific grades earned in the class. Instructors primarily base their evaluations on individual assignments and term projects in the pertinent courses, identifying specific assignments or components that meet the major course learning goals, and they are encouraged to rate students on the individual learning outcomes prior to determining final course grades.

Did your department/program faculty have a goal set for this learning outcome? ☐ Yes ☑ No

For example, “80% of students included in the assessment will receive a 4 on the rubric” or “80% of students included in the assessment will achieve a passing score on the certification exam.” If yes, please describe the goal below.

Provide a summary of the results from the assessment of Learning Outcome 2.

Report student’s scores for this assessment, as well as students’ strengths and weaknesses relative to this learning outcome.

GEOG 4203, GEOG 4333, GEOG 4353 and GEOG 4343 are core courses in the department that have been assessed for several years for the Geography BS/BA degrees. GEOG 2344 is a new course in the geography department and is being utilized as the introductory course for all GSIS majors. This is the first year in which GEOG 2344 has been assessed. Table 1 below includes the rubric averages for the learning outcomes for GEOG 2344, GEOG 4203, GEOG 4333, GEOG 4343, and GEOG 4353. This table in the future will include averages for the past 5 years as the degree program continues. There were no GSIS students enrolled in GEOG 4333 this year, therefore the tables for this course state N/A.

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<table>
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<tr>
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<td>3.5</td>
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<table>
<thead>
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<th>GEOG 4353 Learning Outcomes</th>
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<tbody>
<tr>
<td>Average Score</td>
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<td>4</td>
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</tr>
</tbody>
</table>
What do the results suggest about student achievement of this learning outcome?
Due to the fact that the GSIS degree program is a new program that began in Spring 2016, there is little to report yet on this assessment outcome. There were 6 students from the degree program enrolled in these core courses during the 2017-2018 assessment period. In the future it will be beneficial to track how student outcome achievement has progressed over time.

GEOG 2344 (Digital Tools for Environmental Exploration) serves as the introductory course for GSIS majors and is taught in both the Fall and the Spring semesters. There are two different instructors teaching this course, therefore the rubrics include the averages of all students enrolled in this course throughout both semesters and between both individual instructors as an aggregate number rather than two separate calculations. The rubric scores for GEOG 2344 for the 2 students enrolled in this course during the 2017-2018 assessment period indicate high proficiency in each of the 5 learning outcomes. Students have demonstrated knowledge of geographic technologies and an understanding of what constitutes geographic research, a vital base for continuing on in the GSIS program. The rubric average of 3.4 indicates that students are adequately prepared to progress to advanced courses in the GSIS degree plan and is consistent year over end.

GEOG 4203 (Principles of GIS) is the first complete course on GIS for the GSIS degree seeking students and is the most important core course of their degree plan as is serves as the prerequisite for the advanced GIS courses (GEOG 4343 and GEOG 4353) as well as the prerequisite for core course GEOG 4323. GEOG 4203 is taught each semester. There are currently 3 sections of the course taught by 3 different professors. Two students were enrolled in GEOG 4203 over the 2017-2018 assessment period. The assessment numbers are an aggregate of these three course sections throughout the assessment period. Based on this year’s rubrics, students performed at an average to below average level with an overall rubric score of 2.25. These numbers are a bit concerning because this course is the basis for the entire GSIS degree. In the future, if these numbers do not improve, instructors should look to see what changes can be made to these courses to better prepare students for future GSIS degree success. However, I would caution against small sample size, compared to the BS/BA GEOG degree which includes most of the class composition, one of the two students met expectations while the other fell far short.

GEOG 4333 (Remote Sensing) is taught every Spring and uses a mix of labs, exams, homework, and quizzes to assess whether or not students are obtaining proficiency in using and interpreting digital imagery. No students were assessed during this time period.

Both GEOG 4343 (Natural Resource Applications of GIS) and GEOG 4353 (Socioeconomic Applications of GIS) had two GSIS students enrolled during the 2017-2018 assessment period. Students performances ranged from proficient to advanced.

Timeline for the Assessment
*Indicate the timeline for the assessment of this learning outcome. While outcomes assessment must be conducted every year, not all student learning outcomes for a given program must be assessed every year. If the assessment of a particular learning outcome occurs on cycle or rotation, please describe and provide the rationale for the cycle/rotation below.*
☐ Each Semester ☒ Yearly ☐ Every other year
☐ Other (please specify): If the assessment of Learning Outcome 2 occurs on a cycle or rotation, click here to describe and provide the rationale.

D3) Student Learning Outcome #3: Apply geospatial knowledge and skills to a range of problems faced by industry and the government.

Identify opportunities for students to learn this outcome during the 2017-2018 academic year:
For example, include a curriculum map that lists the courses or other learning experiences in which the student learning outcome is taught. Another example is a written narrative that describes how the learning outcome is integrated into the program.

Each GSIS undergraduate must complete GEOG 4943 (Geospatial Information Science Internship/Research Capstone). The purpose of this course is to give students hands on experience by either completing an internship in the field of Geospatial Information Science or by working closely with a faculty member on an independent research project related to Geospatial Information Science. The choice of completing an internship or a faculty led research project will be up to the student, however it will be recommended that students who plan to seek employment participate in an internship and students who plan to seek graduate study participate in research. At the end of the semester students will submit a portfolio which includes projects completed during their internship/research as well as a self-evaluation essay of the gained knowledges and experiences received in the internship/research experience. This outcome will be measured by evaluation of student portfolios using university guidelines for evaluation of effective writing and communication skills (Appendix I).

How many students were included in the assessment of this outcome?
There were zero students who completed this course during the 2017-2018 assessment period. Students are most likely to take the required internship course over the summer between their junior and senior years. The 2017-2018 assessment period ends on May 31st, therefore only students enrolled in this course for Summer 2017 are included in the 2017-2018 assessment of this outcome. Because this is a new degree program that started in Spring 2016, there were no students ready to complete an internship during Summer 2017. One student had the internship waived because of an agreement with the previous Undergraduate Advisor/Assessment Coordinator and another student completed their internship during the previous assessment period.

How were students selected to participate in the assessment of this outcome?
All GSIS majors are required to take GEOG 4943. Each semester, the students enrolled in this class will submit a final portfolio evaluation which will be evaluated by the faculty member responsible for overseeing GEOG 4943. Therefore, those students who have completed GEOG 4943 in the given assessment year will be assessed.

Assessment Methods
Identify the method(s) used to assess this learning outcome. Check all that apply.

☐ Survey ☐ Oral presentation ☐ Measuring effectiveness relative to professional standards
☐ Rating of skills (e.g., rubrics) ☒ Course project ☐ Review of thesis/dissertation/ creative component
☒ Analysis of written artifacts ☐ Satisfaction Survey ☐ Benchmarking
☐ Comprehensive, certification, or professional exam(s) ☐ Capstone project
Describe the how the assessment method was implemented, administered, and/or conducted.
Each semester as needed. The faculty member responsible for overseeing GEOG 4943 will evaluate portfolios on a semester basis, depending on when the student completes their internship or research project.

Did your department/program faculty have a goal set for this learning outcome? □ Yes ☒ No
For example, “80% of students included in the assessment will receive a 4 on the rubric” or “80% of students included in the assessment will achieve a passing score on the certification exam.” If yes, please describe the goal below.

Provide a summary of the results from the assessment of Learning Outcome 3.
Report student’s scores for this assessment, as well as students’ strengths and weaknesses relative to this learning outcome.
As stated above, there were no students who were able to be assessed for this outcome during the 2017-2018 assessment period.

What do the results suggest about student achievement of this learning outcome?
As stated above, there were no students who were able to be assessed for this outcome during the 2017-2018 assessment period.

Timeline for the Assessment
Indicate the timeline for the assessment of this learning outcome. While outcomes assessment must be conducted every year, not all student learning outcomes for a given program must be assessed every year. If the assessment of a particular learning outcome occurs on cycle or rotation, please describe and provide the rationale for the cycle/rotation below.

☒ Each Semester □ Yearly □ Every other year

☐ Other (please specify): If the assessment of Learning Outcome 3 occurs on a cycle or rotation, click here to describe and provide the rationale.
D4) **Student Learning Outcome #4:** Express positive feedback on their experience as a Geography undergraduate major and their preparedness for post-graduate employment.

**Identify opportunities for students to learn this outcome during the 2017-2018 academic year:**

*For example, include a curriculum map that lists the courses or other learning experiences in which the student learning outcome is taught. Another example is a written narrative that describes how the learning outcome is integrated into the program.*

**Method 4A:** An Exit Survey administered online to all graduating GSIS seniors will be used. This survey (attached in Appendix II) can be a very effective, if indirect, method of gauging student satisfaction and can identify structural, procedural, and facilities problems in the department (lab access, club participation, course offerings) that are difficult to learn about elsewhere.

**Method 4B:** Every other year, the Office of University Assessment and Testing conducts a telephone or e-mail survey of undergraduate alumni 1 and 5 years after graduation. This survey consists of both university-wide items and department-specific questions (attached in Appendix II).

**How many students were included in the assessment of this outcome?**

The exit survey has yet to be completed because of the transition between Undergraduate Assessment Coordinators, but will be pursued and explained in future reports.

**How were students selected to participate in the assessment of this outcome?**

For Method 4A, GSIS students will be emailed an exit survey during their last semester of the degree program and encouraged to fill out the survey. For Method 4B, results of alumni surveys will be obtained every other year from the Office of University Assessment and Testing.

**Assessment Methods**

*Identify the method(s) used to assess this learning outcome. Check all that apply.*

- ☒ Survey
- ☐ Rating of skills (e.g., rubrics)
- ☐ Analysis of written artifacts
- ☐ Comprehensive, certification, or professional exam(s)
- ☐ Oral presentation
- ☐ Course project
- ☒ Satisfaction Survey
- ☐ Benchmarking
- ☐ Measuring effectiveness relative to professional standards
- ☐ Review of thesis/dissertation/ creative component
- ☒ Capstone project
- ☐ Internship
- ☐ Interviews
- ☐ Performance or jury
- ☐ Visual collection (photos, videos, etc.)
- ☐ Review of student research
- ☐ Other (please specify):
  - Click here to specify.

**Describe the how the assessment method was implemented, administered, and/or conducted.**

**Timeline 4A:** Exit Surveys will be administered approximately one month before students graduate each term (Fall, Spring, and Summer) and results will be aggregated. There are items that can be rated on a 0-4 scale and averaged, as well as open-ended items that cover a variety of topics of interest to the faculty.

**Timeline 4B:** The Survey of Alumni from Undergraduate Programs is administered in the spring of each even-numbered year, and results will thus be incorporated into the annual assessment report every other year as available.
Did your department/program faculty have a goal set for this learning outcome?  
☐ Yes  ☒ No

For example, “80% of students included in the assessment will receive a 4 on the rubric” or “80% of students included in the assessment will achieve a passing score on the certification exam.” If yes, please describe the goal below.

If yes, click here to describe the goal set for this learning outcome.

Provide a summary of the results from the assessment of Learning Outcome 4.

Report student’s scores for this assessment, as well as students’ strengths and weaknesses relative to this learning outcome.

The department expects there to be no graduates during the upcoming Fall 2018-Spring 2019 academic year. Therefore, results for this outcome will be assessed next year.

What do the results suggest about student achievement of this learning outcome?

Because there was a transition between Undergraduate Advisor/Assessment Coordinators, the data was not properly collected due to the current coordinator being unaware of the exit survey.

Alumni are surveyed by the University Undergraduate Programs every even year. Because this report is assessing the Fall of 2016 and Spring of 2017, alumni surveys were not completed during this timeframe. Due to the fact that this is a brand new degree program that started in Spring 2016, there are no previous alumni reports that have been conducted. It is anticipated that the first report of alumni surveys will be completed in Spring 2020.

Timeline for the Assessment

Indicate the timeline for the assessment of this learning outcome. While outcomes assessment must be conducted every year, not all student learning outcomes for a given program must be assessed every year. If the assessment of a particular learning outcome occurs on cycle or rotation, please describe and provide the rationale for the cycle/rotation below.

☒ Each Semester  ☐ Yearly  ☒ Every other year

☐ Other (please specify):  If the assessment of Learning Outcome 4 occurs on a cycle or rotation, click here to describe and provide the rationale.
E. Summary of Assessment Results

Describe the overall results of the program assessment and program faculty members’ interpretation of the assessment results.

What did the assessment reveal? What do faculty interpret the results to mean? What do the results suggest about the curriculum, teaching practices, and/or student achievement of the program learning outcomes?

This is the second time that an assessment report of learning outcomes for the GSIS degree has been completed as this degree program began in Spring 2016. Overall the results of the assessment suggest that this program has remained consistent with a roughly similar number of students in the program. Currently there are 6 students enrolled in this degree program with the first student graduating December 2017 and the second May 2018. Students enrolled in this degree program are excelling in the introductory course, GEOG 2344, which means that they should be proficiently prepared for success in future core courses as they continue to progress in the GSIS program. One area where the department should consider improving on is the student learning outcomes for GEOG 4203. As this is a foundational course for the GSIS degree program, the department needs to make sure that students are obtaining necessary developmental skill sets in GIS so they will be successful in advanced courses. Student outcomes in advanced courses seem proficient to advanced but will continue to be limited by small sample size. The department may need to consider ways in which to better prepare students for advanced GIS use.

F. Dissemination of Results

Describe the individual(s) or committee (e.g., a curriculum committee) responsible for reviewing and interpreting assessment data.

The Undergraduate Coordinator serves a dual role as Undergraduate Outcomes Assessment Coordinator and disseminates and gathers the rubrics from the core courses and disseminates undergraduate exit surveys. He then collects, inputs, and preliminarily evaluates the data and computes summary statistics.

Describe the process for sharing and discussing assessment results with program faculty.

The Assessment Coordinator writes and circulates (via e-mail) a draft report for review and comment by all faculty in the department. This is done in August in advance of an all-day planning conference held by the department the week before the fall semester begins, and discussion about the results, what they mean, and what to do with them subsequently occurs and is incorporated into a final draft of this report. This final draft is sent around a second time for final review before submission.

G. Program Improvements Based on Assessment

Based on the findings of this assessment, what changes are being considered or planned for the program? Describe the actions that will be taken as a result of the discussion of the assessment evidence.

This degree program was created as a result of two factors: a growing demand among GIS industry professionals to have students gain a particular skillset that would prepare them for careers and a desire among OSU Geography student alumni pressing for greater exposure to GIS related technologies, programming and database management. This program was built to meet both demands of the industry as well as demands of students while continuing to push the department’s mission of geographic literacy and education. The geography department foresees this new BS degree as a supplement to the geography degree program currently in place. The department anticipates that the program will continue to build on our reputation among students as being a department with strong faculty, teaching, and mentoring abilities. It is likely that enrollment in core courses in geography will continue to grow as a result of the establishment of the new degree program. Future senior exit surveys and alumni surveys conducted as the program grows will be able to provide confirmation of these expectations.
Based on the student learning outcomes rubrics it appears that the department is doing a satisfactory job at preparing students for advanced courses and giving them the necessary skills for obtaining employment in a GIS related career. Future assessments will need to consider where graduates of the GSIS degree program are obtaining internships and jobs to be able to reach a formal conclusion on whether the degree program is successful in providing appropriate knowledge. Assessment of advanced GIS courses will also need to be conducted on future assessments to determine if introductory courses are adequately preparing students with key knowledge in which to succeed as a GSIS major.

Based on the findings of this assessment, what (if any) changes are planned for the assessment process? For example, are there additional assessment data that may need to be collected? Are changes to the program assessment plan warranted?
The assessment plan for the GSIS program was submitted to the University Assessment office in December 2016. The degree program is brand new, starting in Spring 2016. This assessment plan will continue to be used for the next several years without changes before it is decided if it is adequately providing an accurate view of student learning outcomes for the GSIS program.

Describe the process for implementing these changes/planned program improvements.
N/A (see above).

H. Assessment Tools

Please provide a copy of any assessment tools (questionnaire, scale, interview questions, etc.) here.

An individual rubric for each core course has been created by the department of geography that outlines the learning goals for each of the core courses. An exit survey created by the department of geography includes a variety of questions related to the overall experience in the department as an undergraduate student. Alumni surveys are also administered by the College of Arts and Sciences. Other information is taken from student records (degree sheets, transcripts, etc.).
Appendix I – Rubrics for Writing and Oral Presentations

Existing university general education rubrics for evaluating written and oral communication will be used to assess student performance in the capstone course.

These are provided on the following pages for reference.
Learning Outcome: Graduates will be able to communicate effectively in writing.

<table>
<thead>
<tr>
<th>Skill</th>
<th>1</th>
<th>2*</th>
<th>3</th>
<th>4**</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>A Content</td>
<td>Topic is poorly developed; support is only vague or general; ideas are trite; wording is unclear, simplistic; reflects lack of understanding of topic and audience; minimally accomplishes goals of the assignment.</td>
<td>Topic is evident; some supporting detail; wording is generally clear; reflects understanding of topic and audience; generally accomplishes goals of the assignment.</td>
<td>Topic is evident; some supporting detail; wording is generally clear; reflects understanding of topic and audience; generally accomplishes goals of the assignment.</td>
<td>Topic is clearly stated and well developed; details/wording is accurate, specific, appropriate for the topic &amp; audience; with no digressions; evidence of effective, clear thinking; completely accomplishes the goals of the assignment.</td>
<td></td>
</tr>
<tr>
<td>B Organization</td>
<td>Most paragraphs are rambling and unfocused; no clear beginning or ending paragraphs; inappropriate or missing sequence markers. Overall organization can be inferred and is appropriate for the assignment.</td>
<td>Most paragraphs are focused; discernible beginning and ending paragraphs; some appropriate sequence markers. Overall organization can be inferred and is appropriate for the assignment.</td>
<td>Paragraphs are clearly focused and organized around a central theme; clear beginnings and ending paragraphs; appropriate, coherent sequences and sequence markers. Overall organization is clearly marked and is appropriate for the assignment.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>C Style and mechanics</td>
<td>Inappropriate or incorrect word choice, repetitive words and sentence types; inappropriate or inconsistent point of view and tone. Frequent non-standard grammar, spelling, punctuation interferes with comprehension and writer's credibility.</td>
<td>Generally appropriate word choice, variety in vocabulary and sentence types; appropriate point of view and tone. Some non-standard grammar, spelling, and punctuation; errors do not generally interfere with comprehension or writer's credibility.</td>
<td>Word choice appropriate for the task; precise, vivid vocabulary, variety of sentence types; consistent and appropriate point of view and tone. Standard grammar, spelling, punctuation; no interference with comprehension or writer's credibility.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>D Documentation</td>
<td>In-text and ending documentation are generally inconsistent and incomplete; cited information is not incorporated into the document; content is not supported by sources.</td>
<td>In-text and ending documentation are generally clear, consistent, and complete; cited information is somewhat incorporated into the document; content is somewhat supported with sources.</td>
<td>In-text and ending documentation are clear, consistent, and complete; cited information is incorporated effectively into the document; content is well-supported with sources.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* Exhibits most characteristics of '1' and some of '3'
** Exhibits most characteristics of '3' and some of '5'

Revised 8/09/10
# OSU General Education Oral Communication Rubric

<table>
<thead>
<tr>
<th>SKILL</th>
<th>LEVEL OF ACHIEVEMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>A</strong> Content/language</td>
<td><img src="image1.png" alt="Exhibits most characteristics of 0 and some characteristics of 2" /></td>
</tr>
<tr>
<td><strong>B</strong> Organization</td>
<td><img src="image3.png" alt="Topic is unclear or poorly identified to the audience." /></td>
</tr>
<tr>
<td><strong>C</strong> Presentation skills</td>
<td><img src="image5.png" alt="Much of the presentation is hard to hear." /></td>
</tr>
<tr>
<td>SKILL</td>
<td>0</td>
</tr>
<tr>
<td>-------</td>
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<tr>
<td>D</td>
<td>Visual aids</td>
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<td></td>
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</tr>
<tr>
<td>E</td>
<td>Questions from the Audience</td>
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</tbody>
</table>

(Developed by the OSU General Education Assessment Committee. Revised 06-2009)
Appendix II – Departmental Surveys

2010 OSU Alumni Survey Undergraduate Programs

College: CAS Department: Geography

Number of Questions: 14 items Question Code: GEOG

Which of the following kinds of geographic technologies or techniques do you use in your current position?

1 = do not use them
2 = use them occasionally
3 = use them regularly

GEOG1. Geographic Information Systems (GIS) and Database Management

GEOG2. Global Positioning Systems (GPS)

GEOG3. Remote Sensing

GEOG4. Computer Mapping (separate from GIS)

GEOG5. Qualitative Methods of Analysis

GEOG6. Quantitative and/or Statistical Analysis

GEOG7. Conducting Surveys and/or Field Work
Given your current responsibilities, how important have you found the following skills that you gained while studying at OSU? Would you say they were:

1 = not important at all
2 = not very important
3 = somewhat important
4 = very important
5 = did not obtain this skill at OSU

GEOG8. Writing skills

GEOG9. Analysis and critical thinking skills

GEOG10. Communication and/or discussion skills

GEOG11. Computer skills

GEOG12. Given your current responsibilities, what additional skills/subjects would have been helpful to you in your undergraduate program? (open ended)

GEOG13. What would you say were the primary weaknesses of your OSU degree program? (open ended)

GEOG14. What would you say were the primary strengths of your OSU degree program? (open ended)
Email to students for completion of exit survey:

Hello GIS Graduates!

You are receiving this message because you either graduated in December 2017 or you will be graduating in a few weeks in May 2018. Congratulations on your achievements! Every year the Department of Geography conducts a survey of recent graduates to help us better serve future geographers in our department. The survey results are very helpful to us in determining how we can do better as a program at Oklahoma State. The results are also important because they are sent to the college and university to see how Geography compares to other departments across campus. I would ask that you please take a few minutes out of your day to fill out the survey. You can take the survey at the following link: (Not Applicable). If you would prefer to take the survey on paper, please let me know and I will be happy to provide a paper copy for you.

Your candid responses are greatly appreciated so that we can continue to do our best to provide an excellent education experience!

Thank you for your help. Please do not hesitate to contact me with any questions or concerns.

-Don Colley, Undergraduate Coordinator

**EXIT SURVEY**

**DEPARTMENT OF GEOGRAPHY**

**OKLAHOMA STATE UNIVERSITY**

A. Student Survey of Satisfaction

Please rate your satisfaction level for the following items with this scale:

<table>
<thead>
<tr>
<th>Very Satisfied: 4</th>
<th>Satisfied: 3</th>
<th>Neutral: 2</th>
<th>Dissatisfied: 1</th>
<th>Very Dissatisfied: 0</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Item</th>
<th>Aspect of your educational experience</th>
<th>Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Overall rating of your degree program</td>
<td>4 3 2 1 0</td>
</tr>
<tr>
<td>2</td>
<td>Effectiveness of preparation for employment or graduate school</td>
<td>4 3 2 1 0</td>
</tr>
<tr>
<td>3</td>
<td>Up-to-date proficiency in technical skills</td>
<td>4 3 2 1 0</td>
</tr>
<tr>
<td>4</td>
<td>Marketability of skills for the workplace</td>
<td>4 3 2 1 0</td>
</tr>
<tr>
<td>5</td>
<td>Quality of instruction</td>
<td>4 3 2 1 0</td>
</tr>
<tr>
<td>6</td>
<td>Quality of advising</td>
<td>4 3 2 1 0</td>
</tr>
<tr>
<td>7</td>
<td>Quality of departmental facilities (primarily labs)</td>
<td>4 3 2 1 0</td>
</tr>
<tr>
<td>8</td>
<td>Quality and relevance of texts and instructional materials (lab manuals)</td>
<td>4 3 2 1 0</td>
</tr>
</tbody>
</table>
B. Student Feedback and Suggestions

1. How did you decide to become a geography major at OSU?

2. What did you most like about geography at OSU? Least like?

3. What could be done to improve students' experiences in the Geography Department (departmental labs and otherwise)?

4. Are you completing the GIS Certificate with your degree? Yes / No  If yes, do you have any comments about the Certificate?

5. Have you been involved in an internship, research assistantship, or independent study with a faculty member? Yes / No

   If yes, how would you rate your experience on the 0-4 scale from Part A, and what impact has this experience had on your degree program and post-graduation plans?

6. Do you have any other suggestions or concerns that are not addressed on this survey?

7. What areas of the country are you willing to move to for employment?

C. Student Information and Contacts:

1. What are your immediate plans?
a. Company, agency, or school:
b. Job title and/or duties:
c. Location (city/state):
d. Geographic skills to be used:

2. Contact information (please provide permanent, long-term information if possible):

   a. Name:
   b. Street: ____________________________
   c. City/State/Zip: ____________________________
      Phone: ____________________________
   e. Off-campus e-mail: ____________________________

Thank you for your time and thoughtful responses. If you have any questions about this interview, please feel free to contact the department with your concerns.