



# Comprehensive Report

*2020 - 2021*

**Program (CAS) - GEOG - Geospatial Information Sciences  
(BS) - 510**

## General Information

### **Program Mission Statement**

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.

## Program Information

Program Information - 2020 - 2021

## Program Four Column Report

*Outcomes*

**Knowledge** - 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.

**Outcome Status:** Active

**Planned Assessment Year:**

2017 - 2018, 2019 - 2020, 2016 - 2017

**Start Date:**

**Archived Date:**

**Outcome Type:** Knowledge

**Reason for Archival:**

*Assessment Methods*

GEOG 3333 is taught once per year (currently in the fall) and the instructor will assess all GIS majors enrolled in the course. GEOG 4323 is taught once per year (currently in the spring) and the instructor will assess all GIS 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 3 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.

**\* Learning Outcome**

*Findings*

**Reporting Period:** 2020 - 2021

**Conclusion:** 3 - Meets Program

Expectations (Proficient) Both students who qualified for assessment were minimally proficient in the overall course for GEOG 3333, holding true across all 5 Outcomes. Despite having 5 GIS students compared to 3 GEOG BS students in GEOG 4323, the GIS students performed much worse than the GEOG majors. This is an unexpected and unacceptable outcome. Students in 4323 were minimally proficient ranking at 3.07 across all Outcomes. Most profoundly they struggled in Outcome 6 which is the ability to critique and analyze other cartographic work. There they ranked 2.6 with individual scores as low as 1. While much of this can be attributed to a couple students, the scores could be higher if other students had performed beyond 'proficient'. Based on this score alone, there is some evidence that these skills are more Developing than Proficient and is something we should look into further. To end on a bright spot, all but one student scored Advanced in Outcome 5 which is the ability to understand and input spatial data.(09/27/2021)

**Number of Students Assessed:**

7

**Number of Successful**

**Students:** 7

**How were students selected to participate in the assessment of this outcome?:** Enrolled in the courses and completed the coursework

**What do the findings suggest about student achievement of**

*Use of Findings (Actions)*

**Use of Findings (Actions):**

Under no circumstances should GEOG 4323 be removed from the GIS degree. In fact, there is evidence that students need more work with the connections between Mapping and Society.(09/27/2021)

## Program Four Column Report

<i>Outcomes</i>	<i>Assessment Methods</i>	<i>Findings</i>	<i>Use of Findings (Actions)</i>
<p><b>Technical Skills</b> - 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.</p> <p><b>Outcome Status:</b> Active</p> <p><b>Planned Assessment Year:</b> 2017 - 2018, 2019 - 2020, 2016 - 2017</p> <p><b>Start Date:</b></p> <p><b>Archived Date:</b></p> <p><b>Outcome Type:</b> Skills</p> <p><b>Reason for Archival:</b></p>	<p>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 spring). The instructor will assess all GIS majors enrolled in each section of these courses. Due to the fact that the GIS major started in Spring 2016 and that GEOG 4343 and GEOG 4353 are advanced courses, there were no GIS students enrolled in GEOG 4343 and GEOG 4353 during the 2016-2017 academic year. 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</p>	<p><b>this learning outcome?:</b> GIS students perhaps because of their focus on spatial analysis rather than cartographic representation struggled with higher order Learning Outcomes.</p> <p><b>Reporting Period:</b> 2020 - 2021</p> <p><b>Conclusion:</b> 4 - Exceeds Program Expectations (Advanced)</p> <p>In GEOG 4203, 2 students qualified and performed above Proficient including performing Advanced in Outcome 4 (Mastering GIS software). In GEOG 4333, GIS students shined compared to their GEOG BS counterparts. By comparison, they scored a full point higher at 3.58. 4 students qualified for assessment and performed above Proficient and nearly Advanced in all 3 Outcomes. Ranking this course individually, it would be Advanced. Once again, as expected, GIS students in GEOG 4343 performed much better at 3.67 than their GEOG BS counter parts by 2/3rds of a point. In this case, the 4 GIS students scored near Advanced in all major Outcomes. In GEOG 4353, 3 students qualified again with a 3.67. Students in general performed at an Advanced level. &lt;no data reported for GEOG 2344&gt;</p> <p>(09/27/2021)</p> <p><b>Number of Students Assessed:</b> 15</p> <p><b>Number of Successful Students:</b> 15</p> <p><b>How were students selected to participate in the assessment of this outcome?:</b> Enrolled in the course and completed the coursework</p> <p><b>What do the findings suggest about student achievement of this learning outcome?:</b> Our GIS students are really quite</p>	<p><b>Use of Findings (Actions):</b> No recommendations at this time. Goals to maintain enrollment and see these trends continue. (09/27/2021)</p>

## Program Four Column Report

<i>Outcomes</i>	<i>Assessment Methods</i>	<i>Findings</i>	<i>Use of Findings (Actions)</i>
<p>learning goals, and they are encouraged to rate students on the individual learning outcomes prior to determining final course grades.</p> <p><b>* Learning Outcome Goal/Benchmark:</b> <b>Timeline for Assessment:</b> Yearly <b>Other Assessment Type:</b></p>	<p>learning goals, and they are encouraged to rate students on the individual learning outcomes prior to determining final course grades.</p> <p><b>* Learning Outcome Goal/Benchmark:</b> <b>Timeline for Assessment:</b> Yearly <b>Other Assessment Type:</b></p>	<p>good at what they've chosen to do. They meet or exceed program expectations in every major Outcome.</p>	<p>Use of Findings (Actions):</p>
<p><b>Applied Skills</b> - Apply geospatial knowledge and skills to a range of problems faced by industry and the government.</p> <p><b>Outcome Status:</b> Active <b>Planned Assessment Year:</b> 2017 - 2018, 2019 - 2020, 2016 - 2017 <b>Start Date:</b> <b>Archived Date:</b> <b>Outcome Type:</b> Skills <b>Reason for Archival:</b></p>	<p>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.</p> <p><b>* Learning Outcome Goal/Benchmark:</b> <b>Timeline for Assessment:</b> Each Semester <b>Other Assessment Type:</b></p>	<p><b>Reporting Period:</b> 2020 - 2021 <b>Conclusion:</b> 1 - Does Not Meet Program Expectations (Unacceptable) 3 students enrolled or were expected to enroll in GEOG 4943 for the Summer or Fall 2021 while completing their work of the Spring and Summer of 2021. Students continue to remain confused as to their expectations in the course despite being provided a syllabus, timeline, and explanation of advisors. No students completed 4943 for the 21 semester.(09/27/2021) <b>Number of Students Assessed:</b> 3 <b>Number of Successful Students:</b> 0 <b>How were students selected to participate in the assessment of this outcome?:</b> Gave intentions of enrolling in the course and/or attaining an internship <b>What do the findings suggest about student achievement of this learning outcome?:</b> Students need better communication with their GIS advisor, their Academic Advisor and the Internship Coordinator</p>	<p><b>Use of Findings (Actions):</b> While it is understandable and commendable that efforts are made to provide students the opportunity to enroll in GEOG 4943 for the Fall 2021 session so that it counts towards enrollment and financial aid, this has led to extreme problems with students appropriately completing their internships. Recommendation: Students must enroll in GEOG 4943 in the Summer that they attempt their internship. This is a strong recommendation. (09/27/2021)</p>
<p><b>Survey</b> - Express positive feedback on their experience as a Geography undergraduate major and their preparedness for post-graduate employment.</p> <p><b>Outcome Status:</b> Active <b>Planned Assessment Year:</b></p>	<p>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</p>	<p><b>Reporting Period:</b> 2020 - 2021 <b>Conclusion:</b> 1 - Does Not Meet Program Expectations (Unacceptable) Exit surveys are under evaluation for this year. We are requesting official university</p>	<p><b>Use of Findings (Actions):</b> Retrieve exit surveys from University. Conduct our own. (09/27/2021)</p>

## Program Four Column Report

<i>Outcomes</i>	<i>Assessment Methods</i>	<i>Findings</i>	<i>Use of Findings (Actions)</i>
2017 - 2018, 2019 - 2020, 2016 - 2017 <b>Start Date:</b> <b>Archived Date:</b> <b>Outcome Type:</b> Knowledge <b>Reason for Archival:</b>	scale and averaged, as well as open-ended items that cover a variety of topics of interest to the faculty. 14 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. <b>* Learning Outcome Goal/Benchmark:</b> <b>Timeline for Assessment:</b> Every other year <b>Other Assessment Type:</b>	exit surveys, but plan to re-evaluate the whole system finally for 2021-2022. (09/27/2021) <b>Number of Students Assessed:</b> 0 <b>Number of Successful Students:</b> 0 <b>How were students selected to participate in the assessment of this outcome?:</b> N/A <b>What do the findings suggest about student achievement of this learning outcome?:</b> N/A	

## Annual Executive Summary

Annual Executive Summaries - 2020 - 2021

### Executive Summary

**Program Assessment Coordinator**  
Donald E Colley III

#### **Plan Review and Approval**

**Date Current Plan Was Reviewed and Approved**  
09/27/2021

**Date of Future Plan Review and Approval**  
09/01/2022

#### **Summary of Assessment Findings**

**Describe overall assessment findings and faculty members' interpretation of the assessment results**

GSIS major growth remains slow, but performance has drastically improved. High quality students performed above Proficient and nearly Advanced in all technical courses. Students need more clarity about GEOG 4943.

#### **Dissemination of Findings**

**Describe the individual(s) or committee responsible for reviewing and interpreting assessment data**

The Undergraduate Coordinator and Graduate Coordinator

**Describe the process for sharing and discussing assessment findings with program faculty**

Provided in oral and written format at the Fall Faculty Planning Meeting 2021

#### **Program Improvements Based on Assessment**

**Based on data collected this year, what changes are being considered or planned for the program?**

GEOG 4943 needs an overhaul from the way it was created by the original Instructor. Students also need to find suitable GIS internships. Must work with GIS Steering Committee and Academic Advisor to better facilitate internships.

**Based on this year's findings, what (if any) changes are planned for the assessment process?**

N/A

**Describe the process for implementing these changes/planned program improvements**

N/A

**Program Improvements Made in the Last Year**

Improved Faculty Understanding or Buy-In

**"Other" Improvements**

**Goals for the Coming Year**

Graduate 3 students, improve internship process

**Is this program report ready for review?**

Yes

**This program report could not be completed due to low student enrollment**

**List all individuals associated with this report preparation**

Don Colley

Jon Comer

**Related Documents**