

Student Learning Outcomes (SLOs) Report for Non-Accredited Programs

(updated 9/19/23)

Program Type: **Non-Accredited Program**

Program Name: B.S. in Geography

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Review Cycle: Odd Year

Review Round:

- **Round B** (Associate Dean + VPAA review)

All SLO reports are archived here: <https://www.eiu.edu/assess/majorassessment.php>

DUE: **October 15th** to your Associate Dean or designee

Each academic program is expected to prepare a Summary of the Assessment Data by Student Learning Outcome. This summary may take the form of a chart or other means of presentation that describes the annual data collected, when it is collected, in which course(s), through which assignment or activity, and by whom. This summary should clearly indicate what the program seeks to discover in its students' learning. The summary should correspond to the record-keeping documents maintained by the academic program.

Program Name: B.S. in Geography

PART 1. OVERVIEW OF STUDENT LEARNING OUTCOMES AND MEASURES

<p>Student Learning Outcome (SLO)</p> <p><i>Primary undergraduate learning goal (ULG): writing, speaking, quantitative reasoning, critical thinking, responsible citizenship (w,s,q,c,r).</i></p>	<p>What measures and instruments are you using? This could be an oral or written exam, a regularly assigned paper, a portfolio—administered early and later in coursework.</p>	<p>How are you using this info to improve student learning? What are you hoping to learn from your data? Include target score(s) and results, and specify whether these were met, not met, or partially met for each instrument.</p> <p>Key: ✓ <i>target met</i> ✓* <i>target partially met</i> ✗ <i>target not met</i> <i>Target scores are further discussed in Part 2.</i></p>
<p>Objective 1.1 Uses and creates maps to interpret physical and human characteristics such as scale, distance, climate, soils, resource distribution, and other spatial information in determining geographic patterns.</p> <p>(c) critical thinking</p>	<p><u>GEO 3820 Remote Sensing I</u> <i>Embedded Exam Question</i> A one-page essay question was embedded into the final exam requiring demonstration of knowledge of basic remote sensing concepts and image processing techniques.</p>	<p>Viertel S23 Students are expected to develop familiarity with the basic principles and applications of remote sensing. Students must demonstrate the ability to interpret aerial and satellite imagery, recognize geographic features, and analyze spatial processes on the landscape. Among 4 students, answers received an average rating of 4.5 out of 5. The average was considerably higher than the previous assessment average of approx. 4.0. (✓)</p>
	<p><u>GEO 3820 Remote Sensing I</u> <i>Research Paper</i> Students were required to present the results and analysis of an in-depth, student-</p>	<p>Viertel S23 Students are expected to develop familiarity with the basic principles and applications of remote sensing. Students must demonstrate the ability to interpret aerial and satellite imagery, recognize geographic</p>

	driven research project in the form of a written research paper.	features, and analyze spatial processes on the landscape. Four student's research papers received an average rating of 3.75 out of 5. This was significantly lower than the previous assessment average of 4.4. (✓*)
	<u>GEO 3870 Remote Sensing II</u> <i>Embedded Exam Question</i> Students were assessed by means of a one-page essay question on the final exam involving in-depth exploration of classification and multi-temporal spatial analysis procedures.	Viertel F22 Students are expected to demonstrate comprehension of advanced remote sensing techniques and applications and relate these to other coursework undertaken during their time at EIU. Four student's essay questions received an average rating of 4 out of 5. This was a slight improvement over the previous assessment average of approx. 3.9. (✓)
	<u>GEO 3870 Remote Sensing II</u> <i>Research Paper</i> Students presented the results and analysis of an in-depth, student-driven research project in an approximately ten page research paper. A capstone project requires the application of acquired skills to all portions of the remote sensing process including image acquisition, correction, geo-registration, classification, and analysis.	Viertel F22 In GEO 3870, students are expected to research advanced remote sensing methods and apply these techniques to a study area of their choice. The results of this work are presented in an approximately 10-page research paper, with expectations for proper citation and coherent communication. Among 4 students, research papers received an average rating of 4 out of 5. This was slightly down from the previous assessment average of 4.2. (✓)
	<u>GEO 3825 Lidar Mapping</u> <i>Embedded Exam Question</i> A one-page essay question was embedded into the final exam	Viertel F22 Among 6 students, question responses received an average rating of 4.33/5. No data is available from the previous assessment for comparison. (✓)
	<u>GEO 3825 Lidar Mapping</u> <i>Research Paper</i> Students were required to present the results and analysis of an in-depth, student-driven research project in the form of a written research paper.	Viertel F22 Among 6 students, research papers received an average rating of 4.16/5. No data is available from the previous assessment for comparison. (✓)

	<u>GEO 3825 Lidar Mapping</u> <i>Speech/Oral Presentation</i> Students were assessed by presenting the results of a research project in a brief 10 minute speech.	Viertel F22 Among 6 students, speeches received an average rating of 4.00/5. No data is available from the previous assessment for comparison. (✓)
Objective 1.2 analyzes geographic data and appropriately presents them in charts, graphs, tables, and other forms. (q) quantitative reasoning	<u>GEO 3550 Surface Water Processes and Resources</u> <i>Research Paper</i> Research paper involving synthesis of previously published material or own data collection analysis and interpretation.	Riley S22 Among 4 students (all majors) who submitted a final paper, average rating was 4.25 (between significant and superior). Specific rating for graphic presentation also averaged 4.25. No data is available from the previous assessment for comparison. (✓)
	<u>GEO 3885 Quantitative Methods in Geography</u> <i>Pre/Post-Test Questions</i> Students were given a pre/post-test consisting of 15 questions testing students understanding of and ability to measure distributions and analyze statistical and spatial statistical problems.	Kronenfeld F22 Among 4 students, average response rates increased from 25% to 50%. No data is available from the previous assessment for comparison. (✓*)
Objective 2.1 understands the dynamic and interactive nature of the physical and human processes of the earth, including how the human activity within a region modifies the physical properties of the region, and how physical attributes of the land and climate influence and constrain human activities. (R) (r) responsible citizenship	<u>GEO 1120G The Natural Environment</u> <i>Pre/Post-Test Questions</i> Students were given pre and post tests consisting of 16-20 questions that spanned the semester content, to assess students' understanding of Earth's physical geography – the atmosphere, hydrosphere, lithosphere, and biosphere – and how these integrated systems influence one another.	Laingen S22, S23: average correct response rate in S22 increased from 42% to 73%. Increases were seen in both low and high scores. Results in S23 were similar with average increase from 44% to 75%. No data is available from the previous assessment for comparison. (✓) Riley F22: average correct response rate increased from 26% to 51%. This is a slight decline from the previous assessment when the total score increased from 25% to 60%. Only 5 of 64 students enrolled at end of semester were geography majors. (✓*)
	<u>GEO 1400 Weather and Climate</u> <i>Pre/Post-Test Questions</i>	Kronenfeld S23

	<p>10 questions on fundamental concepts, spatial patterns and measurement techniques in meteorology and climatology were asked at the beginning and end of the semester.</p>	<p>Correct answer rate improved from a pretest average of 35% to a post-test average of 67%. Minimum and maximum correct response rates also increased in a similar fashion. The results are similar to the previous assessment where an increase from 34% to 67% was observed. (✓)</p>
	<p><u>GEO 3020 Natural Disasters</u> <i>Embedded Exam Question</i> An essay question embedded into the final exam required students to apply key concepts from the semester to a recent natural disaster.</p>	<p>Riley F22 Of the 10 students (1 major) who completed the final exam question in GEO 3020, answers were rated as superior, significant and satisfactory for 3,5, and 2 students respectively for an average rating of approx. 4.1. This is comparable to the previous assessment in which a different rating system was used, but the average score of 84% was also rated as significant in that assessment. (✓)</p>
	<p><u>GEO 3550 Surface Water Processes and Resources</u> <i>Embedded Exam Question</i> Students were assessed by using an embedded question on the final exam. This question requires students to consider the impact of anthropogenic activities – both intended from river management and inadvertent from land use practices – on fluvial systems.</p>	<p>Riley S22 Students are expected to comprehend the physical processes and resultant landforms associated with surface water activity and the human impacts on fluvial systems and management of water as perhaps the most critical natural resource. Of 4 students (all majors) that completed the final exam question, answers were rated superior and significant for 2 and 2 students respectively for an average rating of approx. 4.5 (between significant and superior). This is an improvement over the previous assessment in which a different rating system was used, but the average score of 81% was rated as significant. (✓)</p>
<p>Objective 2.2 effectively analyzes and interprets information regarding the distribution of physical landscapes on the earth and</p>	<p><u>GEO 3020 Natural Disasters</u> <i>Research Paper</i> Students were assessed by a research paper involving a specific aspect of natural disasters of their choosing. The purpose of</p>	<p>Riley F22 Students were expected to be greater familiarity with chosen topics than discussed in class. Among 9 students completing the paper (1 major), the overall average rating was 3.61 out of 5. This is a slight</p>

<p>their development from landscape processes</p> <p>(w) writing & critical reading</p>	<p>this project was to have students provide a synthesis of previously published material.</p>	<p>decline the previous assessment average rating of 3.8/5. Students performed best on citations and graphics and worst on language. (✓*)</p>
	<p><u>GEO 3420 Geomorphology</u> <i>Embedded Exam Question</i> Students were assessed by using an embedded question on the final exam. This question requires students to apply key processes discussed throughout the semester to describe the physical landscape of east central Illinois.</p>	<p>Riley S22 Students are expected to recognize the varied surface forms and patterns of our planet, the physical processes responsible for these forms, and the process-form interaction that controls evolution of landforms through time. Students are also encouraged to appreciate the dynamics between anthropogenic activities and earth surface processes and landforms. Of 9 students (6 majors) answers were rated superior, significant, satisfactory and “nominal grasp” for 3,4,1 and 1 student respectively, for an average of approx. 4.0. This is comparable to the previous assessment in which a different rating system was used, but the average score of 84% was also rated as significant in that assessment. (✓)</p>
	<p><u>GEO 3420 Geomorphology</u> <i>Research Paper</i> Students were assessed by a research paper involving a specific aspect of geomorphology of their choosing. The purpose of this project was to have students either provide a synthesis of previously published material or conduct their own data collection, analysis, and interpretation.</p>	<p>Riley S22 The goal is to have students familiarize themselves with topics in more detail than we might discuss in class. Of the 9 students who submitted a research paper, the average rating was 3.98 out of 5 (4=“significant”). This is a slight improvement over the previous assessment average rating of 3.8/5. Students were rated best on formatting (4.44) and worst on critical thinking (3.67). (✓*)</p>
<p>Objective 2.3 presents coherent arguments in well-organized, focused and cohesive evidence-based reports on the earth’s physical processes and landscapes</p> <p>(s) speaking and listening</p>	<p><u>GEO 3550 Surface Water Processes and Resources</u> <i>Speech/Oral Presentation</i> Students were assessed by a 8-10 minute research presentation of their research to the class on a project involving a specific</p>	<p>Riley S22 Among 4 students (all majors) who completed presentation, average overall rating was 4.25 out of 5 (between significant and superior). Students performed best on timing, graphics and information presented and worst on organization and presentation style. No data</p>

	aspect of surface water processes or resources of their choosing.	is available from the previous assessment for comparison. (✓)
	<u>GEO 3820 Remote Sensing I</u> <i>Speech/Oral Presentation</i> Students were assessed by presenting the results of a research project in a brief 10 minute speech.	Viertel S23 Students are expected to research and relate contemporary methods of applied remote sensing. Among 4 students, average rating was 4.13. This is down from an average of 4.6 for the previous assessment period. (✓)
	<u>GEO 3870 Remote Sensing II</u> <i>Speech/Oral Presentation</i> Students were assessed by presenting the results and analysis of an in-depth, student-driven research project to the class at the end of the semester.	Viertel F22 In GEO 3870, students are expected to research advanced remote sensing methods and apply these techniques to a study area of their choice. Among 4 students in F22, average rating was 3.75. This is down from an average of 4.0 in the previous assessment period. (✓*)
Objective 3.1 understands and interprets geographic patterns of population, culture, religion, and their interrelationships from a broad perspective, and demonstrates awareness of the vital role of economic resources and their spatial distribution in global conservation and stewardship of earth resources	<u>GEO 1100G Cultural Geography</u> <i>Pre/Post-Test Questions</i> Student understanding of key concepts in cultural geography was assessed by using a pre-test given on the first day of class and a post-test given on the last day of class. The test consisted of 15 questions. Assessed every semester.	Davis F21, S22, F22, S23 Responses over 4 semesters were consistent, increasing from a pretest average of 39-41% to a post test average of 69-73%. These were similar to the previous assessment, when averages increased from 39-42% to 67-70%. (✓)
(r) responsible citizenship	<u>GEO 1200G World Regional Geography</u> <i>Pre/Post-Test Questions</i> Student understanding of key concepts in world regional geography was assessed by using pre- and post-test questions.	Cornebise F22 Average responses increased from 45% on the pretest to 61% on the post test. Responses on the pretest were similar to previous year, post-test results were down slightly from 64%. (✓*)
	<u>GEO 3200 Human Impacts on the Environment</u>	Viertel F22

	<i>Embedded Exam Question</i> Questions were embedded into the exam.	Among 10 students, an average score of 4 out of 5 was received on embedded exam questions. No comparison data is available from the previous assessment. (✓)
Objective 3.2 effectively analyzes and interprets information regarding the distribution of human cultural and economic systems and the interdependences between <i>(w) writing & critical reading</i>	<u>GEO 3200 Human Impacts on the Environment</u> <i>Research Paper</i> Students were required to write a research report on a topic related to how humans are impacting the environment.	Viertel F22 Among 10 students' research papers, an average assessment of 4.2 out of 5 was assessed. No comparison data is available for the previous assessment. (✓)
	<u>GEO 3620 Geography of Tourism</u> <i>Embedded Exam Question</i> Essay questions were embedded into both exams 1 & 2 to determine if the students had an understanding of major concepts related to the geography of tourism.	Davis S22 Students averaged 4.53 and 4.4 out of 5 on embedded essay questions. No comparison data is available from the previous assessment. (✓)
	<u>GEO 3640 Geography of Sports</u> <i>Embedded Exam Question</i> Essay questions were embedded into both exams 1 & 3 to determine if the students had an understanding of major concepts presented in Geography of Sports class.	Davis S23 Students averaged 4.4 and 4.6 out of 5 on embedded essay questions. This was a significant improvement over the 7.9/10 average in the previous assessment period. (✓)
Objective 3.3 presents coherent arguments in well-organized, focused and cohesive evidence-based reports on human cultural and economic patterns, processes and their interdependence <i>(s) speaking and listening</i>	<u>GEO 3200 Human Impacts on the Environment</u> <i>Speech/Oral Presentation</i> Students were required to present the results of their research report to the class in a speech.	Viertel F22 Among 10 students presenting in F22 (all non-majors), speeches received an average rating of 3.33 out of 5. No comparison data is available for the previous assessment. (✓*)

PART 2. IMPROVEMENTS AND CHANGES BASED ON ASSESSMENT

A. Provide a short summary (1-2 paragraphs) or bulleted list of any **curricular actions** (revisions or additions) that were approved over the past two years as a result of reflecting on the student learning outcomes data. Are there any additional future changes, revisions, or interventions proposed or still pending?

No curricular actions were approved over the past two years as a result of student learning outcomes data. There are no future changes, revisions, or interventions proposed or pending curricular action. However, individual professors regularly make modifications to their curricular content on the basis of assessment outcomes, even if these do not require official curricular actions.

B. Provide a brief description or bulleted list of **any improvements (or declines)** observed/measured in student learning. Be sure to mention any intervention made that has not yet resulted in student improvement (if applicable).

Overall, observed student learning outcomes were steady in comparison to the previous assessment period. Minor improvements and declines were observed in a large number of courses, but in most cases the number of students assessed was too small to ascribe significant meaning to these movements. For example, among assessments that used a rating scale of 1 to 5, the largest drop in average ratings in comparison to the previous assessment was from 4.4 to 3.75, but as this was for a class of only four students the decline could easily be the result of random variation. Overall, assessment ratings for all courses were generally consistent with previous years and an equal number of courses saw increases and decreases in assessment ratings.

Regarding assessment targets, there were some inconsistencies/ambiguities between the way that targets were defined in the Student Learning Assessment Plan from December 2021 and the way that assessment data were actually collected. The target of 4.0 out of 5.0 for assessment of written reports and oral presentations was consistent with the 5 point scale used by all faculty members to report these assessment results. However:

- Stated targets regarding percentage of correct response rates for embedded exam questions were based on the assumption that these could be marked as simply correct or incorrect. However, all embedded questions were essay type questions and were rated on a 5 point scale. For the purpose of assessment, a target of 4.0 was assigned to these assessments, similar to the scale used for written reports and oral presentations.
- The stated target of 50% improvement on pre/post test questions was ambiguous, as for example an increase in correct response rates from 35% to 70% could be interpreted as either a 35% increase (by total number of questions) or a 100% increase (over the previous average). According to the former interpretation the target was not met in any course, whereas according to the latter interpretation it was met in every single course. For the purposes of this report, the assessment target was arbitrarily changed to an improvement of 30% by total number of questions. This change is admittedly arbitrary and has not been approved by Geography faculty members.
- The Student Learning Assessment Plan did not specify thresholds for partial meeting of targets. For the purposes of this report, average ratings between 3.0 and 4.0 on a 5 point scale, and pre/post-test improvement of 15-30% by total number of questions are considered to have partially met the target. These thresholds have not been approved by faculty members.

The above revisions will be revisited in discussion with all Geography faculty members before being formalized. As such, the results based on these assessment targets should be considered preliminary. However, according to these criteria:

- Targets were met in 22 assessments.
- Targets were partially met in 8 assessments.
- Targets were not met in 0 assessments.

While there may be some room for improvement in individual courses, no clear pattern of concern is identified. It can also be observed that courses where targets were only partially met all either had a small number of students or a large number of non majors. As such, greater consideration should be given to the overall trend across all courses rather than the results in any individual course.

C. HISTORY OF DATA REVIEW OVER THE PAST TWO YEARS

Please document annual faculty and committee engagement with the assessment process (such as the review of outcomes data, revisions/updates to assessment plan, and reaffirmation of SLOs).

Participation in assessment reporting has been high. It is notable that every full-time Unit A faculty member in the program reported assessment data from multiple courses and for multiple semesters. At this time no formal review of assessment data has been conducted by faculty members other than the assessment coordinator. This is not the fault of faculty members as the program recently underwent a revision to the SLO's, and the first set of data following that revision has just been compiled for this report. Assessment results detailed in this report will be shared with all Geography faculty members, and reviews and proposals for changes to the SLOs and/or curricular actions will be solicited during the Fall 2023 semester.

Date of annual (or periodic) review	Individuals or groups who reviewed the assessment plan	Results of the review (i.e., reference proposed changes from any revised SLOs or from point 2.A. curricular actions)

CLAS Dean's Comments

The BS in Geography assessment plan has well-defined student learning objectives mapped to instruments in specific courses including pre- and post-tests, embedded exam questions, research papers, and oral presentations. The program report indicates that student learning targets were met or partially met, while acknowledging some room for improvement in defining assessment thresholds. It is recommended that the Geography faculty review and reevaluate their results prior to the next report in order to identify possible ways to improve their assessment enterprise. The program faculty might consider adding other methods for assessing student success such as an exit or alumni survey. Overall, the report was well-done, and we look forward to seeing the progress at the 4-year mark (2025).

Dean or designee: Michael Cornebise 

Date: 11/17/2023

VPAA Office Review and Feedback (for "Round B" SLO report only)

B.S. Geography

The B.S. in Geography program is well on its way to developing a reliable system of assessment that calls upon the majority of faculty for their input and participation. As it stands, the program has collected a creative range of assignments (including embedded exam questions) and data points from different levels of geography coursework. The upside is that faculty approach these discrete collection points with a common purpose; the challenge remains for more faculty to discuss and converge upon a shared set of thresholds and measures for the data collection. Given the significant number of non-majors in geography courses, it seems perfectly reasonable for the program to focus more heavily on the larger picture of geography courses in total, rather than on any single major-heavy geography course.



VPAA or designee

Dr. Suzie Park, Asst VPAA Interim

Date

4/2/24