# **Assessment: Course Four Column**



# Courses (CT) - GIS

# **GIS 109:Intro Geogrphc Info Syst**

Course Outcomes	Assessment Measures	Results	Actions
Compile and organize geospatial information - Compile and organize geospatial information Course Outcome Status: Active Next Assessment: 2023-2024	Assignment - Written - Geospatial data associates information about geographic locations. Data about location (geospatial data) has attributes and can be measured and collected. This data is often stored and organized in a Geographic Information System or GIS. Assessment Methodology: Labs 1-4 & Quizzes 1-4 Labs 1-4 examine how real-world features are represented and organized in a geographic information system. The labs are evaluated using a rubric that measures if the learner has included all required mapping layers, data, elements, and components in their submissions. Quizzes 1-4, assess if the student can navigate through the basic tools in ArcMap, connect folders using Catalog to move compiled spatial data and information, retrieve and preview spatial information, manipulate data layer properties and add point, line, and polygon data to a GIS, examine	Reporting Period: 2018-2019 Criterion Met: Yes Results: Labs 1-4 & Quizzes 1-4 30/34 students scored 80% or higher on Labs 1-4 and Quizzes 1-4. Analysis: Labs 1-4 & Quizzes 1-4 The criterion for achievement developed for the GIS 109 labs 1-4 and quizzes 1-4 states that 70% of the students will score 80% or greater on labs 1-4 and quizzes 1-4 to meet outcome number one, which requires the learner to compile and organize geospatial information. The criterion for course outcome one was met, as 88% of the learners in the GIS 109 class earned an 80% or greater on labs 1-4 and quizzes 1-4. (08/28/2019)	Action: Please see course overview report and notes for discussion, interpretation, and how the instructor/department will incorporate proficiency data results from course outcome number one, (which requires the learner to compile and organize geospatial information) in course design and planning moving forward. (08/28/2019) Follow-Up: Action Plan: Labs 1-4 & Quizzes 1-4 The criterion for course outcome one was met, as 88% of the learners in the GIS 109 class earned an 80% or greater on labs 1-4 and quizzes 1-4. Course level objectives such as, classify and categorize geospatial data and attributes, demonstrate how to organize, edit, save, and create spatial information are assessed via learning activities from our class text, Discovering GIS & ArcGIS. Second Edition 2016, authored by Shellito, Bradley A. I have read or reviewed every

Course Outcomes	Assessment Measures	Results	Actions
	data layer information such as coordinate systems, datums, and projections, define and change data layers from one projected coordinate system to another, and save and export work in PDF, jpg, map document, and Map Package <b>Criterion:</b> 70% of students will score above 80% on Course Outcome #1 (Compile and organize geospatial information) in lab and quiz assessments:1-4, throughout the semester.		published GIS textbook available for introductory college level GIS students and this text is by far the best. There are no current action items for course outcome one, other than adopting the most current edition when it becomes available. (08/28/2019)
Edit and share geospatial information - Edit and share geospatial information Course Outcome Status: Active Next Assessment: 2023-2024	Assignment - Project - Assessment Overview: Labs 5-8 & Quizzes 5-8 As more stake holders become reliant on geospatial data, the demand for high quality geospatial data will increase. High quality geospatial data has three elements. The first two elements are accuracy and precision. Spatial data can be accurate, but not precise. Spatial data can be precise, but not accurate. Spatial data can be accurate and precise. Low quality data is neither accurate nor precise. Updated and current attributes that represent the spatial phenomenon being measured or collected is the final element to high quality geospatial data. Assessment Methodology: Labs 5-8	Reporting Period: 2018-2019 Criterion Met: Yes Results: Labs 5-8 & Quizzes 5-8 25/34 students scored 80% or higher on Labs 5-8 and Quizzes 5-8. Analysis: Labs 5-8 & Quizzes 5-8 The criterion for achievement developed for the GIS 109 labs 5-8 and quizzes 5-8 states that 70% of the students will score 80% or greater on labs 5-8 and quizzes 5-8 to meet outcome number two, which requires the learner to edit and share geospatial information. The criterion for course outcome two was met, as 74% of the learners in the GIS 109 class earned an 80% or greater on labs 5-8 and quizzes 5-8. (08/28/2019)	Action: Labs 5-8 & Quizzes 5-8 Please see course overview report and notes for discussion, interpretation, and how the instructor/department will incorporate proficiency data results from the general education technological proficiency outcome number two, (which requires the learner to edit and share geospatial information) in course design and planning moving forward. (08/28/2019) Follow-Up: Action Plan: Labs 5-8 & Quizzes 5-8 The criterion for course outcome two was met, as 74% of the learners in the GIS 109 class earned an 80% or greater on labs

& Quizzes 5-8

Labs 5-8 require learners to access multiple datasets from the National Map, add data to ArcGIS from the National Map, examine geospatial data using the Identify and Find tools, download data layers from

08/28/2019

objectives such as, locate, collect,

geographic information, analyze

and create and deliver mapping

products using geographic

spatial data models and concepts,

information systems software are

and edit online land and

	Course	Outcomes
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#### Assessment Measures Results

ArcGIS Online, stream basemaps from ArcGIS Online, update and edit attribute data for a dataset to use with other data lavers. The labs are evaluated using a rubric that measures if the learner has included all required mapping layers, data, elements, and components in their submissions. Quizzes 5-8 assess if the student can navigate through the basic workflows in a geodatabase, digitizing vertices, as well as shapefile, coverage, and geodatabase color displays, digital raster graphics, volunteered geographic information, and the different datasets available from the U.S. Census Bureau, The National Map, and OpenStreetMap. Criterion: Labs 5-8 & Quizzes 5-8 70% of students will score above 80% on Course Outcome #2 (Edit and share geospatial information) in lab and quiz assessments: 5-8, throughout the semester.

### **Actions**

assessed via learning activities from our class text, Discovering GIS & ArcGIS. Second Edition 2016, authored by Shellito, Bradley A. I have read or reviewed every published GIS textbook available for introductory college level GIS students and this text is by far the best. There are no current action items for course outcome two, other than adopting the most current edition when it becomes available. (08/28/2019)

Follow-Up: Action Plan: VoiceThread 1-4 Discussion The criterion for course outcome three was not met, as 62% of the learners in the GIS 109 class earned an 80% or greater on VoiceThread 1-4 discussion. The course level objective to discuss how real-world features are represented in a geographic information system is not satisfied by the VoiceThread assessment. As discussed above, the VoiceThread lectures and discussions in this course add technical content, information, and structure to the concepts in GIS. Each lecture and discussion are intended to introduce material related to a method, idea, concept, or an example of how one thinks in a given field. Topics from the lectures are also intended to motivate students to explore further. When students engage actively with class material and with their peers, a

Course	Outcomes

## **Actions**

learning community is formed where thoughts and ideas are shared, and knowledge is gained. In addition to our current students' postings within the VoiceThread environment, I also keep posts from previous classes. Basically, we as a cohort, are crowdsourcing and enhancing a single subject matter. I encourage posters to incorporated some of the concepts, methods, ideas, examples, talking points, impacts, outlooks, repercussions, imagery, organizations, or history from the VoiceThread lecture into their lecture comments. Methods and strategies that should be employed to increase student success for VoiceThread 1-4 Discussion may include the following (1) Send class announcement reminding students to complete and submit VoiceThread 1-4 Discussion, 2) Consider making the VoiceThread 1-4 Discussion worth more points. Currently, the VoiceThread 1-4 Discussion carries 5% weight in the student's final grade. Increasing the assessment value to 10% may increase learner participation, 3) Scaffold the existing assessment with a new discussion requirement(s) (TBD), 4) Add targeted and detailed suggestions for the VoiceThread discussion topics versus higher level-generic topic suggestions. (08/28/2019)

Course Outcomes	Assessment Measures	Results	Actions
Identify various uses for geospatial information - Identify various uses for geospatial information Course Outcome Status: Active Next Assessment: 2023-2024	Discussion - Assessment Overview: VoiceThread 1-4 Discussion VoiceThread lectures and discussions in this course add technical content, information, and structure to the concepts in GIS. Each lecture and discussion are intended to introduce material related to a method, idea, concept, or an example of how one thinks in a given field. Topics from the lectures are also intended to motivate students to explore further. When students engage actively with class material and with their peers, a learning community is formed where thoughts and ideas are shared, and knowledge is gained. Assessment Methodology: VoiceThread 1-4 Discussion Student Voicethread comments are evaluated using a rubric that measures if the learner has incorporated elements, concepts, methods, ideas, examples, talking points, impacts, outlooks, repercussions, imagery, organizations, or history from the VoiceThread lecture into their lecture comments and also measures if all grammar, spelling, and punctuation is organized, correct, and used to create sense, clarity and stress in sentences. <b>Criterion:</b> 70% of students will score above 80% on Course Outcome #3 (Identify various uses for geospatial information) in VoiceThread assessments: 1-4, throughout the semester.	Reporting Period: 2018-2019 Criterion Met: No Results: VoiceThread 1-4 Discussion 21/34 students scored 80% or higher on VoiceThread 1-4 Discussion. Analysis: VoiceThread 1-4 Discussion The criterion for achievement developed for the GIS 109 VoiceThread 1-4 discussion states that 70% of the students will score 80% or greater on VoiceThread 1-4 discussion to meet course outcome number three, which requires the learner to identify various uses for geospatial information. The criterion for course outcome three was not met, as 62% of the learners in the GIS 109 class earned an 80% or greater on VoiceThread 1-4 discussion. (08/28/2019)	Action: VoiceThread 1-4 Discussion Please see course overview report and notes for discussion, interpretation, and how the instructor/department will incorporate proficiency data results from the general education technological proficiency outcome number three, (which requires the learner to identify various uses for geospatial information) in course design and planning moving forward. (08/28/2019) Follow-Up: Course Overview Report GIS 109 (Introduction to Geographic Information Systems) course outcomes are measurable and consistent with the course- level objectives. The module/unit- level learning objectives describe outcomes that are measurable and consistent with the course- level objectives. Learning objectives are stated clearly, are written from the learner's perspective, and are prominently located in each module/unit overview. The relationship between learning objectives and learning activities is clearly stated in each module/unit overview. The learning objectives are suited to the level of the course as 74% of all learners earned an 80% or greater overall. GIS 109 (Introduction to Geographic Information Systems) course assessments (Story Map

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Project I and II, Story Map Project

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Course Outcomes	Assessment Measures	Results	Actions
			III, Student Peer Evaluation, Labs
			1-4 and Quizzes 1-4, Labs 5-8 an
			Quizzes 5-8, and Voice I hread 1-
			Discussion) measure the
			learning objectives. The course
			grading policy is stated clearly a
			the beginning of the course in t
			course syllabus and specific and
			descriptive criteria are provided
			for the evaluation of learners'
			work, and their connection to the
			course grading policy is clearly
			explained. The GIS 109
			(Introduction to Geographic
			Information Systems)
			assessments used are sequence
			varied, and suited to the level o
			the course. The course provides
			learners with multiple
			opportunities to track their
			learning progress with a timely
			feedback policy, automated qui
			grading, online class meetings,
			and Instructor comments.
			Geographic Information System
			instructional materials contribu
			to the achievement of the state
			learning objectives. The
			relationship between the use o
			instructional materials in the
			course and completing learning
			activities is clearly explained in
			the module overview and on th
			assessment activity page. The
			course models the academic

assessment activity page. The course models the academic integrity expected of learners by providing both source references and permissions for use of instructional materials. The

## Actions

instructional materials are comprised of the most current versions, and represent up-todate theory and practice in the discipline and a variety of instructional materials (Textbook, VoiceThread, ArcGIS, Story Maps, Big Blue Button) are used in the course. Notes: How will the instructor/department incorporate proficiency data results from the general education technological proficiency outcomes and course outcomes in course design and planning moving forward. (08/28/2019)