



South Central College

GIS 2843 GIS Practicum

Course Outcome Summary

Course Information

Description This variable credit course expands upon the knowledge students' gained in previous geospatial technology courses and serves to hone their Geographic Information Systems skills. Students will have the opportunity to design, develop, and implement a GIS-based solution in response to a defined problem and present their results. (Prerequisite: GIS 2841 or consent of the instructor)

Types of Instruction

Instruction Type

Lab

Credits/Hours

1-4 / 32-128

Pre/Corequisites

GIS 2841 or consent of the instructor

Institutional Core Competencies

Civic Engagement and Social Responsibility - Students will be able to demonstrate the ability to engage in the social responsibilities expected of a community member.

Critical and Creative Thinking - Students will be able to demonstrate purposeful thinking with the goal of using a creative process for developing and building upon ideas and/or the goal of using a critical process for the analyzing and evaluating of ideas.

Course Competencies

1. Practice safety throughout the project

Learning Objectives

- Develop safe data collection practices
- Identify potential field hazards
- Identify safety equipment needed during data collection
- Review industry safety standards

2. Enhance problem solving skills

Learning Objectives

- Make observations effectively
- Gather information
- Make educated decisions
- Offer solutions to problems

3. Utilize technology

Learning Objectives

Apply technical aptitude to project activities
Utilize computer technology as it is related to achieving goals
Effectively manage information on computers
Solve problems using technology
Follow ethical technology practices

4. Acquire advance proficiency of understanding project development

Learning Objectives

Research project development requirements
Identify required project documents
Describe efficient project scheduling
Adhere to scheduling timelines

5. Properly utilize and manage equipment

Learning Objectives

Ensure equipment is properly working
Ensure equipment is properly maintained
Effectively use equipment to complete assigned work
Ensure proper use of equipment

6. Define GIS data integrity

Learning Objectives

Adhere to accuracy guidelines
Document changes to data
Provide acknowledgement to data owned by others
Review industry data practice guidelines

7. Identify data requirements

Learning Objectives

Research project requirements
Determine project requirements
Identify data needs

8. Develop a working knowledge of ArcGIS software

Learning Objectives

Identify the components of ArcGIS
Configure ArcGIS components
Maintain ArcGIS components

9. Demonstrate proficiency loading and configuring GIS software and hardware

Learning Objectives

Determine software requirements for software loads
Identify issues with various operating systems
Research online sources for loading issues
Configure computers for optimum performance

10. Demonstrate proficiency troubleshooting GIS software and hardware

Learning Objectives

Investigate various issues within a GIS
Locate reliable sources for acquiring information
Develop a log of issues resolved
Publish solutions to common issues

11. Follow industry data storage standards

Learning Objectives

- Develop a database storage system
- Assign and manage user rights
- Develop metadata for all data sets
- Document data collection and manipulation information

12. Describe delivery of end products

Learning Objectives

- Determine project deliverables
- Develop efficient work flow diagrams
- Communicate delivery schedule conflicts
- Perform to the highest quality of work standards

13. Develop ability to present research findings through poster presentation

Learning Objectives

- Identify the components of a well designed poster
- Utilize computer software to design graphs and tables to summarize research findings
- Develop a poster to assist in oral presentation of research findings
- Perform an oral poster presentation

SCC Accessibility Statement

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