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 | Credits/Hours
--- | ---
Lab | 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**

South Central College strives to make all learning experiences as accessible as possible. If you have a disability and need accommodations for access to this class, contact the Academic Support Center to request and discuss accommodations. North Mankato: Room B-132, (507) 389-7222; Faribault: Room A-116, (507) 332-7222.

Additional information and forms can be found at: [www.southcentral.edu/disability](http://www.southcentral.edu/disability)

This material can be made available in alternative formats by contacting the Academic Support Center at 507-389-7222.