Course Information

Description

This variable credit course is one of the capstones of the Geographic Information Systems certificate program, where upon the students are provided a real world working atmosphere with area partners, such as state, county, and local governments, and consulting agencies. Students in this course work on assignments as requested by the governing agency and will be directed by the course instructor. (Prerequisite: GIS 2841 or consent of the instructor)

Types of Instruction

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<th>Instruction Type</th>
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<td>Internship</td>
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Pre/Corequisites

GIS 2841 Intermediate GIS 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. Describe the role of GIS in a workplace
   Learning Objectives
   - Identify how GIS is used in various work departments
   - Determine scope of GIS project needs
   - Observe GIS workflow in an organization
   - Recognize the components of an organization with varying resources

2. 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 software loading issues
3. **Demonstrate proficiency troubleshooting GIS software and hardware**

   Learning Objectives
   - Identify potential problems within a GIS
   - Locate reliable sources for acquiring information
   - Develop a log of issues resolved
   - Publish solutions to common issues

4. **Demonstrate working knowledge of ArcGIS software**

   Learning Objectives
   - Identify the components of ArcGIS software
   - Configure ArcGIS components
   - Maintain ArcGIS components

5. **Create open database connections (ODBC) to local computers**

   Learning Objectives
   - Research available GIS data locations
   - Determine security or rights issues
   - Configure ArcGIS ODBC connectivity
   - Test and maintain viable data connections

6. **Demonstrate GIS project management**

   Learning Objectives
   - Identify project resources
   - Identify project costs
   - Identify project needs
   - Develop project workflow diagrams

7. **Load and configure ArcGIS Server**

   Learning Objectives
   - Determine system requirements for ArcGIS Server load
   - Review ESRI licensing agreements
   - Examine ArcGIS Server components
   - Configure ArcGIS Server for use within an organization

8. **Load and configure a License Manager**

   Learning Objectives
   - Determine requirements of Flex LM
   - Configure networking between the licensing server and workstations
   - Restart a licensing service
   - Remotely restart a service

9. **Determine roles of GIS Team members**

   Learning Objectives
   - Identify the roles of a GIS Supervisor
   - Identify roles of a GIS Specialist
   - Identify the roles of a GIS Technician
   - Identify the roles of GIS users

10. **Recognize data privacy laws**

    Learning Objectives
    - Research current federal and state data privacy laws
    - Determine which data is considered private
    - Protect private data

11. **Practice data integrity**

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

12. **Practice industry data storage standards**
   Learning Objectives
   Develop a database storage system
   Assign and manage user rights
   Develop metadata for data sets
   Document data collection and manipulation information

13. **Research data requirement needs**
   Learning Objectives
   Research project requirements
   Determine project requirements
   Identify data needs
   Verify data needs with end user

14. **Establish safe work habits**
   Learning Objectives
   Develop safe data collection practices
   Identify potential field hazards
   Identify safety equipment needed during data collection
   Review industry safety standards

15. **Identify end user requirements**
   Learning Objectives
   Develop data for use in GIS
   Develop data for use in CAD
   Provide efficient accessibility to data
   Research end user requirements

16. **Practice delivery of end data**
   Learning Objectives
   Determine project deliverables
   Develop efficient work flow diagrams
   Adhere to project time lines
   Perform to highest quality of work standards

**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)

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