



COURSE OUTLINE

GIS406

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Prepared: Heath Bishop Approved: Corey Meunier

Course Code: Title	GIS406: RESEARCH PROJECT/PRESENTATION I
Program Number: Name	4018: GIS-APPLICATION SPEC
Department:	GEOGRAPHIC INFORMATION SYSTEMS
Semester/Term:	17F
Course Description:	This course will introduce the student to the practical use of field equipment in a GIS environment, to data manipulation and management, to presentation as a method of communication and to the design of industry-related GIS projects. Skills to be gained include the practical use of Global Positioning Systems, spreadsheet software, oral presentation techniques, and designing research projects.
Total Credits:	4
Hours/Week:	3
Total Hours:	45
This course is a pre-requisite for:	GIS411, GIS412, GIS440
Vocational Learning Outcomes (VLO's): Please refer to program web page for a complete listing of program outcomes where applicable.	#1. Understand the general concepts of spatial information and the current methodologies used to input, store, manipulate, and retrieve this type of data in a computer based environment; #2. Understand the typical data structures, algorithms, and computational problems that are encountered in various GIS technologies; #3. Be aware of the variety of sources of spatial data, such as surveying and remote sensing, that feed into a GIS, and the methods by which these data are realized in a GIS system; #4. Understand the ways in which GIS technologies can be applied within specific disciplines (see assumption above), and the advantages, changes in method, developmental problems, and restructuring that may result from the adoption of these technologies; #6. Be aware of the issues surrounding the communication of data extracted from a GIS to a variety of potential end users; #7. Be capable of generating a plan for the design, implementation, and operation of a proposed GIS systems for a typical industrial client or group, and executing this plan as a demonstration project.
Essential Employability Skills (EES):	#1. Communicate clearly, concisely and correctly in the written, spoken, and visual form that fulfills the purpose and meets the needs of the audience. #2. Respond to written, spoken, or visual messages in a manner that ensures effective



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communication.

#4. Apply a systematic approach to solve problems.

#5. Use a variety of thinking skills to anticipate and solve problems.

#6. Locate, select, organize, and document information using appropriate technology and information systems.

#7. Analyze, evaluate, and apply relevant information from a variety of sources.

#8. Show respect for the diverse opinions, values, belief systems, and contributions of others.

#9. Interact with others in groups or teams that contribute to effective working relationships and the achievement of goals.

#10. Manage the use of time and other resources to complete projects.

#11. Take responsibility for ones own actions, decisions, and consequences.

Course Evaluation:

Passing Grade: 50%, D

Other Course Evaluation & Assessment Requirements:

Grade

Definition Grade Point Equivalent

A+ 90 – 100% 4.00

A 80 – 89%

B 70 - 79% 3.00

C 60 - 69% 2.00

D 50 – 59% 1.00

F (Fail) 49% and below 0.00

CR (Credit) Credit for diploma requirements has been awarded.

S Satisfactory achievement in field /clinical placement or non-graded subject area.

U Unsatisfactory achievement in field/clinical placement or non-graded subject area.

X A temporary grade limited to situations with extenuating circumstances giving a student additional time to complete the requirements for a course.

NR Grade not reported to Registrar's office.

W Student has withdrawn from the course without academic penalty.

Evaluation Process and Grading System:

Evaluation Type	Evaluation Weight
Assignments	60%
Presentations	30%
Quizzes	10%

Course Outcomes and Learning Objectives:

Course Outcome 1.



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1.Explain and use Global Positioning Systems technology.

Learning Objectives 1.

- 1.1 Describe how Global Positioning Systems work.
- 1.2 Demonstrate how to capture GPS data in the field and integrate into a Geographic Information System.
- 1.3 Describe the concept of differentially corrected GPS data.

Course Outcome 2.

2. Develop high-quality computer-based presentations.

Learning Objectives 2.

- 2.1 Demonstrate appropriate presentation style.
- 2.2 Apply appropriate content coverage for a presentation.
- 2.3 Create an advanced computer-based presentation using PowerPoint.
- 2.4 Recognize proper graphic presentation practice.

Course Outcome 3.

3. Effectively use spreadsheet software.

Learning Objectives 3.

- 3.1 Perform data manipulation and organization using Microsoft Excel.
- 3.2 Utilize formulas\autofills and other various functionality within Excel.

Course Outcome 4.

4. Plan and design a GIS Project.

Learning Objectives 4.



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- 4.1 Describe the fundamentals of project management.
- 4.1 Place the GIS process within a project management framework.
- 4.2 Write a GIS project charter/plan, including details on the estimated costs, resources required, and time-frame.
- 4.3 Present project charter/plan for review and suggestions.

Course Outcome 5.

- 5. Effectively deliver files to clients through the use of ArcExplorer.

Learning Objectives 5.

- 5.1 Explain the purpose and appropriate use of ArcExplorer.
- 5.2 Identify and demonstrate how ArcExplorer can be used to share ArcGIS files with clients that do not have ArcGIS software.

Date:

Friday, September 15, 2017

Please refer to the course outline addendum on the Learning Management System for further information.