COURSE OUTLINE: GIS406 - RESRCH/PRESENT I

Prepared: Heath Bishop
Approved: Corey Meunier, Chair, Technology and Skilled Trades

Course Code: Title	GIS406: RESEARCH PROJECT/PRESENTATION I
Program Number: Name	4018: GIS-APPLICATION SPEC
Department:	GEOGRAPHIC INFORMATION SYSTEMS
Semesters/Terms:	19F
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
Prerequisites:	There are no pre-requisites for this course.
Corequisites:	There are no co-requisites for this course.
This course is a pre-requisite for:	GIS411, GIS440
Vocational Learning Outcomes (VLO's) addressed in this course: **Please refer to program web page for a complete listing of program outcomes where applicable.**	**4018 - GIS-APPLICATION SPEC** VLO 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; VLO 2 Understand the typical data structures, algorithms, and computational problems that are encountered in various GIS technologies; VLO 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; VLO 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; VLO 6 Be aware of the issues surrounding the communication of data extracted from a GIS to a variety of potential end users; VLO 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) addressed in this course:	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. EES 2 Respond to written, spoken, or visual messages in a manner that ensures effective communication.

	EES 4 Apply a systematic approach to solve problems. EES 5 Use a variety of thinking skills to anticipate and solve problems. EES 6 Locate, select, organize, and document information using appropriate technology and information systems. EES 7 Analyze, evaluate, and apply relevant information from a variety of sources. EES 8 Show respect for the diverse opinions, values, belief systems, and contributions of others. EES 9 Interact with others in groups or teams that contribute to effective working relationships and the achievement of goals. EES 10 Manage the use of time and other resources to complete projects. EES 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% 4.00 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.

Course Outcomes and Learning Objectives:

Course Outcome 1	**Learning Objectives for Course Outcome 1**
1.Explain and demonstrate the use of Global Positioning Systems technology.	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 concepts of DGPS and RTK data collection.
Course Outcome 2	**Learning Objectives for Course Outcome 2**
2. Develop high-quality computer-based presentations.	2.1 Demonstrate appropriate presentation techniques. 2.2 Apply appropriate content coverage for a presentation. 2.3 Create an advanced computer-based presentation using PowerPoint. 2.4 Utilize effective graphics in Powerpoint presentations..
Course Outcome 3	**Learning Objectives for Course Outcome 3**
3. Effective and efficient use of spreadsheet software.	3.1 Perform data manipulation and organization using Microsoft Excel. 3.2 Utilize formulas\autofills and other various functionality within Excel. 3.3 Demonstrate how to `clean` tabular data for incorporation into GIS software.

Course Outcome 4	Learning Objectives for Course Outcome 4
4. Plan and design an industry-affiliated GIS Project.	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 usage. 4.3 Present project charter/plan for review and suggestions.
Course Outcome 5	**Learning Objectives for Course Outcome 5**
5. Identify ways in which GIS files and projects can be effectively submitted to clients.	5.1 Explain the purpose and appropriate scenario of when to use ArcReader. 5.2 Identify and demonstrate how ESRI Map Packages and Layer Packages can be used to share ArcGIS files with clients.

Evaluation Process and Grading System:

Evaluation Type	Evaluation Weight
Assignments	70%
Presentations	30%

Date: August 29, 2019

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