COURSE OUTLINE: GIS424 - INDEPENDENT GIS PROJ

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Course Code: Title	GIS424: INDEPENDENT GIS PROJECT
Program Number: Name	4018: GIS-APPLICATION SPEC
Department:	GEOGRAPHIC INFORMATION SYSTEMS
Semesters/Terms:	20W
Course Description:	This course is designed to continue the development of students skills in project development/management as well as their GIS and cartographic abilities. Each student will come up with their own project idea (or in some cases be given one by the instructor), gather the necessary data, manipulate/edit the data, perform necessary spatial analysis and produce a final GIS report and poster/layout which clearly and aesthetically shows their project findings. ArcGIS will be the primary software used for the project, although supplemental software packages may be used as necessary. The students will hone their GIS skills, as well as perform peer-editing on the final cartographic products.
Total Credits:	2
Hours/Week:	2
Total Hours:	24
Prerequisites:	There are no pre-requisites for this course.
Corequisites:	There are no co-requisites for this course.
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 5 Be capable of designing and executing, in a progressive manner, algorithms and programs to handle spatial data and associated hardware devices in a programmatic environment of a GIS; 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.

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	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% 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. Demonstrate the ability to locate and collect spatial data pertinent to specific GIS projects.	1.1 Search out and identify open and proprietary spatial data sources in order to access data necessary for use in GIS projects.
	Course Outcome 2	**Learning Objectives for Course Outcome 2**
	2. Demonstrate the ability to create, manipulate and edit spatial and aspatial data for project purposes.	2.1 Utilize editing tools and various software packages in order to prepare data for entry and use in a GIS system.
	Course Outcome 3	**Learning Objectives for Course Outcome 3**
	3. Demonstrate problem solving skills by working through a GIS project and performing necessary methodologies and analyses throughout the project.	3.1 Identify and perform necessary project steps in order to determine accurate results.
	Course Outcome 4	**Learning Objectives for Course Outcome 4**
	4. Demonstrate the ability to recognize and create aesthetically pleasing map	4.1 Use various cartographic techniques to optimize the

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	layouts which communicate desired findings to a viewer.	aesthetics and communication level of map products.

Evaluation Process and Grading System:	**Evaluation Type**	**Evaluation Weight**
	Assignments	85%
	Presentation	15%

Date:	August 29, 2019
Addendum:	Please refer to the course outline addendum on the Learning Management System for further information.