SAULT COLLEGE OF APPLIED ARTS AND TECHNOLOGY

SAULT STE. MARIE, ONTARIO

COURSE OUTLINE

COURSE TITLE: Research Project / Presentation I

CODE NO. : GIS406 **SEMESTER:** 11F

PROGRAM: Geographic Information Systems Applications Specialist

AUTHOR: Heath Bishop

DATE: May, 2011 **PREVIOUS OUTLINE DATED:** May, 2010

APPROVED:

"B.Punch"

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CHAIR **DATE**

TOTAL CREDITS: 4

PREREQUISITE(S): None

HOURS/WEEK: 3

I. 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 research projects. Skills to be gained include the practical use of Global Positioning Systems, spreadsheet software, computer graphics, PowerPoint presentations, and designing research project proposals.

II. LEARNING OUTCOMES AND ELEMENTS OF THE PERFORMANCE:

Upon successful completion of this course, the student will demonstrate the ability to:

1. Understand and use Global Positioning Systems

   Potential Elements of the Performance:
   - Explain how Global Positioning Systems work
   - Capture GPS data in the field and integrate into a Geographic Information System
   - Understand the process of differentially correcting GPS data
   - Produce GPS-based map products

2. Develop high-quality computer-based presentations
   Potential Elements of the Performance:
   - Create an advanced computer-based presentation using PowerPoint
   - Use computer graphics software packages
   - Recognize different graphics file formats
   - Recognize good graphic presentation practice

3. Gain experience with spreadsheet software

   Potential Elements of the Performance:
   - Practice data manipulation and organization using Microsoft Excel
   - Increase experience and efficiency by using formulas\autofills within Excel

4. Design a GIS Project

Potential Elements of the Performance:

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

III. TOPICS:

1. Global Positioning Systems (GPS)

- GPS defined, GPS components, accuracy and error
- Differential correction of GPS data
- Field data collection and computer uploading and downloading
- Integration of GPS data into GIS

2. Microsoft Excel

- Introduction to Excel
- Basic Formulas
- Advanced Formulas
- Data manipulation

3. Computer presentation applications

- Computer graphics software
- Image file sizes and formats
- Scanning and using documents and images in presentations
- Graphic design elements and principles in computer presentation
- PowerPoint presentations
- Fundamentals of an effective presentation

4. GIS Project Design

- Fundamentals of GIS project management
- Designing a GIS project and mapping out GIS procedures
- Preparing a project charter and project plan
- Presenting a project proposal for review

IV. REQUIRED RESOURCES/TEXTS/MATERIALS:

None

V. EVALUATION PROCESS/GRADING SYSTEM:

Assignments (3)	50%
Presentations (2)	35%
Midterm Exam	15%
	100%

The following semester grades will be assigned to students:

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.

VI. SPECIAL NOTES:

Attendance:
Sault College is committed to student success. There is a direct correlation between academic performance and class attendance; therefore, for the benefit of all its constituents, all students are encouraged to attend all of their scheduled learning and evaluation sessions. This implies arriving on time and remaining for the duration of the scheduled session.

VI. COURSE OUTLINE ADDENDUM:

The provisions contained in the addendum located on the portal form part of this course outline.