

SAULT COLLEGE OF APPLIED ARTS AND TECHNOLOGY

SAULT STE. MARIE, ONTARIO



**SAULT
COLLEGE**

COURSE OUTLINE

COURSE TITLE: WEB GIS

CODE NO. : GIS416 SEMESTER: W13

PROGRAM: GIS

AUTHOR: M. VanLandeghem

DATE: Jan 2013 PREVIOUS OUTLINE DATED: Jan 2012

APPROVED: "C. Kirkwood"

DEAN

DATE

TOTAL CREDITS:

PREREQUISITE(S):

HOURS/WEEK: 3

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**Environment/Technology
(705) 759-2554, Ext. 2688**

I. COURSE DESCRIPTION:

The fastest growing part of GIS is distributing maps on the Internet. This Web GIS course develops student skills in Web page design. The course will review basic HTML/HTML5 commands, Style sheets and basic theory needed to understand and make use of the various options for creating websites.

ARCGIS Server and ARCGIS Online development will also be researched and implemented. Other GUI based software applications and content management systems will also be reviewed.

Research and development of a project that is supported by remote devices will also be covered in this semester.

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II. LEARNING OUTCOMES AND ELEMENTS OF THE PERFORMANCE:

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

1 Understand basic web page fundamentals

Potential Elements of the Performance:

- Understand the role of web pages
- Understand The New Internet
- Understand web page content
- Understand the Internet/Web Page/FTP concept

2. Web Page Programming Using HTML/HTML5 & Style Sheets

Potential Elements of the Performance:

- Understand the basic code to create a web page
- Using basic formatting techniques
- Add text, graphics, forms and special features into a web page
- Insert Video in a web page
- Create a basic web application using HTML
- Introduction to XML and Style Sheets
- Uploading web pages to a server (FTP)

3. Using Application software to create Web Applications

Potential Elements of Performance

- Create advanced web applications GUI based tools.
- Create advanced web applications Hosting Applications
- Using Premade Templates
- Advanced Project Development.

4. Web GIS and ArcGIS Server

Potential Elements of the Performance:

- Describe the available Web GIS software packages
- Understand the issues involved with Web GIS
- Create a GIS web page application using ArcGis Server
- Research Additional Tools To Create Web Maps
- Create Web Application to support Remote devices.

5. Working With ArcGis Online

Potential Elements of the Performance:

- Understand theory behind ArcGIS Online
- Understand how to create basic map applications
- Student Project

III. TOPICS

- 1. Web Page Fundamentals**
- 2. Web Page Programming HTML/Html5 & Cascading Style Sheets**
- 3. Using GIU based application software to create websites**
- 4. Using ARCGIS Server**
- 5. Using ArcGIS Online**

IV. Required Student Resources

On Line Help and Student Resource Files
Internet Research
Lecture Notes and Printed Handouts from Instructor
Material From LMS/Instructors Web Site

V. EVALUATION PROCESS/GRADING SYSTEM

Tentative Breakdown*:

The marks for this course will be arrived as follows:

Lab Assignments

- | | |
|---------------------------------|-----|
| • HTML/Style Sheets Assignments | 20% |
| • Project | 20% |
| • GIU Based Applications | 20% |
| • ArcGIS Server Assignments | 20% |
| • ArcGis Online Assignment | 20% |

Some minor modifications to the above percentages may be necessary. The professor reserves the right to adjust the mark up or down 5% based on attendance, participation, leadership, creativity and whether there is an improving trend.

The professor reserves the right to adjust the number of tests, practical tests and quizzes based on unforeseen circumstances. The students will be given sufficient notice to any changes and the reasons thereof.

- Successful completion of this course is greatly improved with a disciplined approach and consistent attendance to both the lab and lecture / theory classes.
- Students must complete and pass both the test and assignment portion of the course in order to pass the entire courses.

- All Assignments must be completed satisfactorily to complete the course. Late hand in penalties will be 5% per day. Assignments will not be accepted past one week late unless there are extenuating and legitimate circumstances. It is not acceptable to miss classes and / or labs without a reasonable explanation.
- There will also be a lab exercise each and every week that will be due during that lab period. In the event that it cannot be completed during lab time, you will be allowed to complete it as a homework exercise and demonstrate it the following lab with no penalty.

ATTENDANCE:

Absenteeism will affect a student's ability to succeed in this course. Absences due to medical or other unavoidable circumstances should be discussed with the professor. Students are required to be in class on time and attendance will be taken within the first five minutes of class. A missed class will result in a penalty in your marks unless you have discussed your absence with the professor as described above. The penalty depends on course hours and will be applied as follows:

Course Hours	Deduction
5 hrs/week (75 hrs)	1% per hour
4 hrs/week (60 hrs)	1.5% per hour
3 hrs/week (45 hrs)	2% per hour
2 hrs/week (30 hrs)	3% per hour

The following semester grades will be assigned to students:

Grade	<u>Definition</u>	<i>Grade Point Equivalent</i>
A+	90 – 100%	4.00
A	80 – 89%	3.00
B	70 - 79%	2.00
C	60 - 69%	1.00
D	50 – 59%	0.00
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.

VII. COURSE OUTLINE ADDENDUM:

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