SAULT COLLEGE OF APPLIED ARTS AND TECHNOLOGY

SAULT STE. MARIE, ONTARIO

COURSE OUTLINE

COURSE TITLE: WEB GIS

CODE NO. : GIS416   **SEMESTER:** W10

PROGRAM: Computer Analyst Programmer

AUTHOR: M.VanLandeghem

DATE: Jan 2010   **PREVIOUS OUTLINE DATED:** Jan 2009

APPROVED: "B. Punch"

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                        CHAIR   **DATE**

TOTAL CREDITS: 5

PREREQUISITE(S): CSD315 Web Programming

HOURS/WEEK: 3

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 also review basic XML commands as well as displaying maps on the Internet using ArcIMS software. Students will all be given a basic introduction to creating and maintaining a database over the internet.

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 graphic design in web pages
- Understand Internet security and privacy issues
- Design web page content
- Illustrate web pages as a marketing method

2.   Web Page Programming Using HTML

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
- Uploading web pages to a server (FTP)

3   Using Application software to create Web Applications

Potential Elements of Performance

Create advanced web applications Using Share Point Designer
Create advanced web applications using Macromedia Dreamweaver,
Advanced Project Development.

4.   Web GIS/XML

Potential Elements of the Performance:
- Describe the available Web GIS software packages
- Understand the issues involved with Web GIS
- Create a GIS web page using Arc/IMS
- XML vs HTML

5.   Setup an Online Database

Potential Elements of the Performance:
- Understand theory to create a web database
- Understand how PHP and MYSQL work together
- Understand what is required to attach to a web database
- Create basic programs to Add/Delete and Find Records

III. TOPICS

1.   Web Page Fundamentals
2.   Web Page Programming HTML And Cascading Style Sheets
3   Web Page Programming Using SharePoint Designer/Macromedia Dreamweaver
4.   Using   ARCIMS
5.   Introduction to setting up and programming an online database

IV.   Required Student Resources

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

V.   EVALUATION PROCESS/GRADING SYSTEM

Tentative Breakdown*:

The marks for this course will be arrived as follows:

Tests and Quizzes
- HTML /SharePoint/Dreamweaver   **20%**

Lab Assignments
- HTML Assignments   **20%**
- SharePoint/Dreamweaver   **25%**
- ArcGIS Server/ArcIms/XML   **15%**

Major Project   **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	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:

Course Outline Amendments:
The professor reserves the right to change the information contained in this course outline depending on the needs of the learner and the availability of resources.

Retention of Course Outlines:
It is the responsibility of the student to retain all course outlines for possible future use in acquiring advanced standing at other postsecondary institutions.

Prior Learning Assessment:
Students who wish to apply for advance credit transfer (advanced standing) should obtain an Application for Advance Credit from the program coordinator (or the course coordinator regarding a general education transfer request) or academic assistant. Students will be required to provide an unofficial transcript and course outline related to the course in question. Please refer to the Student Academic Calendar of Events for the deadline date by which application must be made for advance standing.

Credit for prior learning will also be given upon successful completion of a challenge exam or portfolio.

Substitute course information is available in the Registrar's office.

Disability Services:
If you are a student with a disability (e.g. physical limitations, visual impairments, hearing impairments, or learning disabilities), you are encouraged to discuss required accommodations with your professor and/or the Disability Services office. Visit Room E1101 or call Extension 2703 so that support services can be arranged for you.

Communication:
The College considers *WebCT/LMS* as the primary channel of communication for each course. Regularly checking this software platform is critical as it will keep you directly connected with faculty and current course information. Success in this course may be directly related to your willingness to take advantage of the *Learning Management System* communication tool.

Plagiarism:
Students should refer to the definition of "academic dishonesty" in *Student Code of Conduct*. A professor/instructor may assign a sanction as defined below, or make recommendations to the Academic Chair for disposition of the matter. The professor/instructor may (i) issue a verbal reprimand, (ii) make an assignment of a lower grade with explanation, (iii) require additional academic assignments and issue a lower grade upon completion to the maximum grade "C", (iv) make an automatic assignment of a failing grade, (v) recommend to the Chair dismissal from the course with the assignment of a failing grade. In order to protect students from inadvertent plagiarism, to protect the copyright of the material referenced, and to credit the author of the material, it is the policy of the department to employ a documentation format for referencing source material.

Student Portal:
The Sault College portal allows you to view all your student information in one place. **mysaultcollege** gives you personalized access to online resources seven days a week from your home or school computer. Single log-in access allows you to see your personal and financial information, timetable, grades, records of achievement, unofficial transcript, and outstanding obligations. Announcements, news, the academic calendar of events, class cancellations, your learning management system (LMS), and much more are also accessible through the student portal. Go to https://my.saultcollege.ca.

Electronic Devices in the Classroom:
Students who wish to use electronic devices in the classroom will seek permission of the faculty member before proceeding to record instruction. With the exception of issues related to accommodations of disability, the decision to approve or refuse the request is the responsibility of the faculty member. Recorded classroom instruction will be used only for personal use and will not be used for any other purpose. Recorded classroom instruction will be destroyed at the end of the course. To ensure this, the student is required to return all copies of recorded material to the faculty member by the last day of class in the semester. Where the use of an electronic device has been approved, the student agrees that materials recorded are for his/her use only, are not for distribution, and are the sole property of the College.

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. *It is the departmental policy that once the classroom door has been closed, the learning process has begun. Late arrivers will not be granted admission to the room.>*

Tuition Default:
Students who have defaulted on the payment of tuition (tuition has not been paid in full, payments were not deferred or payment plan not honoured) as of the first week of *March* will be removed from placement and clinical activities. This may result in loss of mandatory hours or incomplete course work. Sault College will not be responsible for incomplete hours or outcomes that are not achieved or any other academic requirement not met as of the result of tuition default. Students are encouraged to communicate with Financial Services with regard to the status of their tuition prior to this deadline to ensure that their financial status does not interfere with academic progress.

Special Notes – Additional

In order to pass this course the student must obtain an overall test/quiz average of 50% or better.

Assignments must be submitted by the due date according to the specifications of the instructor. Late assignments will normally be given a mark of zero. Late assignments will only be marked at the discretion of the instructor in cases where there were extenuating circumstances. Ask for permission from your instructor to hand assignments in late before the due date

Upgrading Of Incompletes:

When a student's course work is incomplete or final grade is below 50%, there is the possibility of upgrading to a pass when a student meets all of the following criteria:
1. The student's attendance has been good.
2. An overall average of at least 45% has been achieved by semester's end.
3. The student has made reasonable efforts to participate in class and maintain the recommended schedule for assigned activities.
The nature of the upgrading requirements will be determined by the instructor and may involve re-testing and/or additional lab assignments