SAULT COLLEGE OF APPLIED ARTS AND TECHNOLOGY

SAULT STE. MARIE, ONTARIO

Sault College

COURSE OUTLINE

COURSE TITLE:	**Web DBMS**
CODE NO. :	**CSD320** **SEMESTER: 5**
PROGRAM:	**COMPUTER PROGRAMMER/PROGRAMMER ANALYST**
AUTHOR:	**Dennis Ochoski**
DATE:	**Aug, 2009** **PREVIOUS OUTLINE DATED: Aug, 2008**
APPROVED:	"B. Punch"
	_____ _____
	CHAIR **DATE**
TOTAL CREDITS:	**5**
PREREQUISITE(S):	**CSD220**
HOURS/WEEK:	**4**

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I. COURSE DESCRIPTION:

This course will broaden the student's knowledge of database implementations. The focus will be to use their previous database skills and experiences and apply them to database driven web sites. A combination of technologies will be examined and used throughout the course to expose students to the alternatives that exist in web-based database applications.

The course covers the concepts and practical aspects of creating a web site and web database processing. It will also reacquaint students with relational database concepts, SQL, HTML and more importantly how they relate to creating a database driven web site. Students will be expected to create and manage a web server (Apache). They will be required to code and work with the scripting language, PHP(the "PHP Hypertext Preprocessor"), in the creation of server-side scripts.

The ultimate goal of the course is the creation and implementation of a soundly designed database that is integrated in a realistic and well-designed web site. The students will be expected to work together as team members in developing a fully integrated website.

II. TOPICS:

1. The web based database processing environment.
2. Developing scripts using PHP.
3. Designing and implementing a Web-based database using MySQL.
4. Designing, coding and implementing a fully integrated database driven web site in the PHP/MySQL environment.

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III. LEARNING OUTCOMES AND ELEMENTS OF THE PERFORMANCE:

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

1. Understand the web based database processing environment.
   (chapter 1)

   This learning outcome will comprise approximately **5%** of the course.

   Elements of the performance:

   - describe the difference between static and dynamic Web pages
   - describe the concept of "open-source" technologies with respect to PHP and MySQL
   - explore different technologies that can be used to create dynamic web pages that interact with a database
   - explore different technologies used to create a database-driven web site
   - describe the role each server product plays in creating and maintaining an appropriate web site

2. Incorporate programming components of PHP into a Website.
   (chapters 2-10, 16)

   This learning outcome will comprise approximately **55%** of the course.

   Elements of the performance:

   - describe the role of the PHP engine and the web server
   - define what is meant by interpretation and execution
   - discuss the different parameters associated with variables such as: data types, operations and naming conventions
   - discuss and apply two ways of sending form information (user input)
   - understand and apply the different methods that HTML forms can use to encapsulate data, such as: text fields, checkboxes, radio buttons, listboxes, hidden form fields, password fields, and Submit and Reset buttons
   - understand and apply the following programming structures of PHP:

if statement	comparison operators	equality operators
logical operators	***switch*** statement	include files
while loop	***do while*** loop	***for*** loop

arrays functions

Elements of the performance(cont'd):

- apply error handling for security and aesthetic purposes
- apply debugging techniques to solve logic errors
- understand the limitations of HTML and HTTP and how PHP overcomes them
- understand and apply the concept of ***"cookies"***
- understand the basic concept of object-oriented programming in PHP and how objects can facilitate code re-use
- manipulate objects and define new classes of objects
- understand and be able to manipulate files and directories
- send e-mail via PHP
- create, open, manipulate and output images with PHP
- insert records into a database table using PHP

3. Design and implement a database using MySQL Server.
(chapters 13, 14)

This learning outcome will comprise approximately **15%** of the course.

Elements of the performance:

- define and apply database analysis and design principles to create effective normalized database relations (using Entity Relationship Modelling)
- create the relations and populate them on the Server
- use SQL programming to add, modify, delete and view data from the Client

4. Combine PHP and MySQL to create a data-driven website.
(chapters 15, Appendices A, B, D)

This learning outcome will comprise approximately **25%** of the course.

Elements of the performance:

- understand and apply PHP functions that will allow connectivity to a database
- understand and apply the various ways of retrieving data stored in a MySQL database
- limit the number of results returned from a query
- order and group results

- insert, update and delete records in a database table using PHP
- create a fully functional “shopping cart” web site

*****NOTE: The topics specified above will overlap in several areas of skill development and are not necessarily intended to be explored in isolated learning units or in the order specified.**

IV. REQUIRED RESOURCES / TEXTS / MATERIALS:

Texts: PHP and MySQL by Example
by Ellie Quigley
ISBN: 0-13-187508-6

Websites:

1. **http://php.net/**
   PHP Documentation
2. **www.mysql.com/documentation/index.html**
   MySQL Documentation

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V. EVALUATION METHODS:

Tests/Assignments	Weight
Assignments	15%
Tests	70%
Project	15%
	100%

The following semester grades will be assigned to students in postsecondary courses:

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)	below 50%	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.

OTHER EVALUATION CONSIDERATIONS

In order to pass this course the student must obtain an overall quiz average of **50%** or better, as well as, an overall assignment average of **50%** or better. A student who is not present to write a particular quiz, and does not notify the instructor beforehand of their intended

absence, may be subject to a zero grade on that quiz.

ASSIGNMENT/PROJECT SPECIFIC INFORMATION

1. Assignments/Projects will be assigned to student "assignment/project teams", each consisting of two or three students.

2. It is the responsibility of the project team to clarify any system requirements with the user / professor.

3. At various intervals, the instructor will require each assignment/project team to report on the progress made on their respective assignment/project. At that time, each team member will be required to complete a Peer Evaluation Form used to "grade" each team member's contribution to the assignment/project.

4. At the completion of an assignment/project, the respective assignment/project team may be required to present and demonstrate the functionality of their system to the user / professor.

5. The grade assigned to the overall assignment/project and to each team member will be determined using two sources:

    a) Presentation of project to professor(s)
    b) Instructor observation of classroom work

6. Assignments/projects must be submitted by the due date according to the specifications of the instructor. Late assignments will normally be penalized at 10% per day late. Late assignments will only be marked at the discretion of the instructor in cases where there were extenuating circumstances.

    ** Note: When an assignment/project is presented to the professor, each team member will be required to demonstrate his/her assigned task(s). The assignment/project will receive an overall grade and each team member will receive an individual grade that may or may not be equivalent to the overall assignment/project grade or to the grades of other team members.

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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.

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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.

The professor reserves the right to use other tools and / or techniques that may be more applicable. These other tools and / or techniques for effective communication will be discussed, identified and presented throughout the delivery of the course content.

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, in addition to announcements, news, academic calendar of events, class cancellations, your learning management system (LMS), and much more. Go to https://my.saultcollege.ca.

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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 may not be granted admission to the room.*

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)	1.0% /hr
4 hrs/week (60 hrs)	1.5% /hr
3 hrs/week (45 hrs)	2.0% /hr
2 hrs/week (30 hrs)	3.0% /hr

Absentee reports will be discussed with each student during regular meetings with Faculty Mentors. Final penalties will be reviewed and assessed at the discretion of the professor.

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