SAULT COLLEGE OF APPLIED ARTS AND TECHNOLOGY

SAULT STE. MARIE, ONTARIO

Sault College

COURSE OUTLINE

COURSE TITLE: Web Programming

CODE NO. : CSD315   **SEMESTER:** 3

PROGRAM: All Computer Studies Programs

AUTHOR: Frank Turco

DATE: July 2006   **PREVIOUS OUTLINE DATED:** June 2005

APPROVED:

_____   _____
                  DEAN   DATE

TOTAL CREDITS: Four

PREREQUISITE(S): CSD120

HOURS/WEEK: Four

I.   COURSE DESCRIPTION:

Students will gain a solid understanding of the fundamentals of building web sites and add professional features to websites using client and / or server side scripting languages. They will create scripting code that will be cross-browser compatible and follow the most recent published standards. In addition, they will be able to differentiate what code should be written on the client side and what should be done on the server side.

II.   LEARNING OUTCOMES AND ELEMENTS OF THE PERFORMANCE:

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

1.   Introduction to Scripting Languages

Potential Elements of the Performance:

- Study the history of the WWW
- Work with structured Web Pages
- Learn about the JavaScript and PHP programming languages
- Add structure to your scripts
- Learn about logic and debugging
- Work with variables
- Study data types
- Use expressions and operators
- Work with strings
- Study operator precedence
- Appreciate the syntactical similarities and differences between client side and server side scripting languages

This learning outcome will constitute approximately 15% of the course grade (possible weighting strategy) and take approximately 2 weeks.

Resources: JavaScript Text: Chapter 1 , 2, and 3
PHP Text: Chapter 1, 2, and 4
Professor's handouts and lectures

2.   Functions, Strings, Events, Objects and Control structures

Potential Elements of the Performance:

- Study how to use functions to organize your script code
- Review and know the built in functions available in the respective scripting languages
- Learn how to work with events
- Use if statements, if…else statements, and switch statements to make decisions
- Nest one if statement in another
- Use while statements, do…while statements, and for statements to repeatedly execute code
- Learn how to use continue statements to restart a looping statement
- Study the browser object model
- Work with the Window object
- Study the History, Location, and Navigator objects

This learning outcome will constitute approximately 40% of the course grade (possible weighting strategy) and take approximately 8 weeks.

Resources: JavaScript Text: Chapter 4 , 5, 6, 7, 11 and 15
Appendix A, B, C, D
PHP Text: Chapter 5, 6, 7, and 10
Appendix B
Professor's handouts and lectures

3.   Form Handling and making Web Sites Dynamic with
      Scripting Languages

      Potential Elements of the Performance:

      - Study form elements and objects
      - Use Scripting to manipulate and validate form elements
      - Learn how to submit and reset forms
      - Learn how to validate submitted form data
      - Use functions, events, objects and triggers to customize and
        or redirect web pages

      ***This learning outcome will constitute approximately 15% of the
      course grade (possible weighting strategy) and take
      approximately 2 weeks.***

         **Resources: JavaScript Text: Chapter 8 , 9, and 10
                       PHP Text: Chapter 3, 8
         Professor's handouts and lectures**

4.   Debugging Scripting Languages

      Potential Elements of the Performance:

      - Study debugging concepts
      - Learn how to trace error messages
      - Learn how to use comments to locate bugs
      - Use a Script Debugger where applicable and use a manual
        method where an interactive debugger is not possible
      - Study additional debugging techniques

      ***This learning outcome will constitute approximately 10% of the
      course grade (possible weighting strategy) and take
      approximately 1 week.***

         **Resources: JavaScript Text: Chapter 20
         Professor's handouts and lectures**

5.   Cookies, Sessions and Security Issues

Potential Elements of the Performance:

- Learn about state information
- Save state information with hidden form fields, query strings, and cookies
- Manipulate strings
- Work with session variables
- Learn about security issues

This learning outcome will constitute approximately 10% of the course grade (possible weighting strategy) and take approximately 1 week.

Resources: JavaScript Text: Chapter 12
PHP Text: Chapter 9
Professor's handouts and lectures

6.   Introduction to Databases with Server Side Scripting

Potential Elements of the Performance:

- Learn about connecting to a database using MySQL
- Create and Select a Database
- Insert Data into a Database
- Retrieve, Delete and Update Data in a Database

This learning outcome will constitute approximately 10% of the course grade (possible weighting strategy) and take approximately 1 week.

Resources: PHP Text: Chapter 12
Professor's handouts and lectures

III.   TOPICS:

Note: These topics sometimes overlap several areas of skill development and are not necessarily intended to be explored in isolated learning units or in the order below.

SPECIFIC TOPICS	**APPROXIMATE TIME**
1. Intro to Scripting Languages	2 Weeks
2. Functions, Strings, and things	8 Weeks
3. Form Handling and Dynamic Web Pages	2 Weeks
4. Debugging Scripting Languages	1 Week
5. Cookies, Sessions and Security Issues	1 Week
6. Introduction to Databases	1 Week

IV.   REQUIRED RESOURCES/TEXTS/MATERIALS:

JavaScript For the World Wide Web 5th Edition, Peachpit Press
    by Tom Negrino & Dori Smith (ISBN: 0-321-1507106)

PHP For the World Wide Web 2nd Edition, Peachpit Press
    By Larry Ullman (ISBN: 0-32124565-2)

Professor's Lecture Notes, Web Material, Class Discussions and Course Related Web Sites

V. EVALUATION PROCESS/GRADING SYSTEM:

Quizzes / Tests	40%
Assignments	50%
Lab Work, Participation and Attendance	10%
	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.

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.

A minimum of **80% attendance** required in the labs and lectures.

- Students must complete and pass both the test and assignment portion of the course in order to pass the entire course.
- 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.
- Makeup Tests are at the discretion of the professor and will be assigned a maximum grade of 60%.
- 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.
- A student who is absent for 3 or more times without any valid reason or effort to resolve the problem will result in action taken.

    NOTE: If action is to be taken, it will range from marks being deducted to a maximum of removal from the course.

Eligibility for X Grades/Upgrading of Incompletes   When a student's course work is incomplete or final grade is below 60%, there is the possibility of upgrading to a pass when a student meets all of the following criteria: The student's attendance has been satisfactory. An overall average of at least 50% has been achieved. The student has not had a failing grade in all of the theory tests taken. The student has made reasonable efforts to participate in class and complete assignments.

 Note: **The opportunity for an X grade is usually reserved for those with extenuating circumstances.**   The nature of the upgrading requirements will be determined by the instructor and may involve one or more of the following: completion of existing labs and assignments, completion of additional assignments, re-testing on individual parts of the course or a comprehensive test on the entire course.

Labs:
Lab activities represent a very important component of this course in which practical 'hands-on' skills will be developed. Because of this, attendance is mandatory and the satisfactory completion of all lab activities is required. Evaluation of lab work in-class will be done. It is the student's responsibility to discuss absences from regularly scheduled labs with the instructor so that alternate arrangements (where possible) can be made to complete the lab requirements.

Attendance:
Attendance is mandatory. 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 instructor, so that remedial activities can be scheduled. Absenteeism for tests can only be allowed for medical reasons and should be authorized ahead of time. Unauthorized absences could result in a zero grade being assigned.

VI.   SPECIAL NOTES:

Special Needs:
If you are a student with special needs (e.g. physical limitations, visual impairments, hearing impairments, or learning disabilities), you are encouraged to discuss required accommodations with your professor and/or the Special Needs office. Visit Room E1101 or call Extension 2493 so that support services can be arranged for you.

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.

Plagiarism:
Students should refer to the definition of "academic dishonesty" in *Student Rights and Responsibilities*. Students who engage in "academic dishonesty" will receive an automatic failure for that submission and/or such other penalty, up to and including expulsion from the course/program, as may be decided by the professor/dean. 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.

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.

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

VII.   PRIOR LEARNING ASSESSMENT:

Students who wish to apply for advanced credit in the course should consult the professor. Credit for prior learning will be given upon successful completion of a challenge exam or portfolio.

VIII.   DIRECT CREDIT TRANSFERS:

Students who wish to apply for direct credit transfer (advanced standing) should obtain a direct credit transfer form from the Dean's secretary. Students will be required to provide a transcript and course outline related to the course in question.