SAULT COLLEGE OF APPLIED ARTS AND TECHNOLOGY

SAULT STE. MARIE, ONTARIO

Sault College

COURSE OUTLINE

COURSE TITLE: Java II

CODE NO. :   CSD313   **SEMESTER:**   08F

PROGRAM: Computer Studies

AUTHOR: Fred Carella

DATE: Fall 2008   **PREVIOUS OUTLINE DATED:**   Fall 2007

APPROVED:

_____   _____
                                                  CHAIR   **DATE**

TOTAL CREDITS: 6

PREREQUISITE(S)   CSD 305
:

HOURS/WEEK: 4

Java II   CSD 313

I.   COURSE DESCRIPTION:
This course continues the studies begun in the course CSD305 (Java I) by including more advanced topics such as exceptions, multi threading and database access. In addition, Web Application technologies such as JSP's and servlets will be introduced and programs written that demonstrate add, edit and delete of persistent data via a web interface. Other web related technologies such as Ajax and various other tools such as templating engines (Velocity) will be discussed and demonstrated.

II.   LEARNING OUTCOMES AND ELEMENTS OF THE PERFORMANCE:

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

1.   Write programs that demonstrate an understanding of exception handling
     Potential Elements of the Performance:
     Potential Elements of the Performance:
     - Write programs incorporating the following:
         - try/catch blocks
         - throw exceptions
         - use "finally" to release resources

2.   Write programs that demonstrate an understanding of multi threading (Notes supplied by instructor, Chapter 23).
     Potential Elements of the Performance:
     - understand what multi threading is and how it improves performance.
     - Create, manage and destroy threads.
     - Understand thread synchronization
     understand daemon threads and thread groups

3.   Write programs that demonstrate an understanding of files and streams. Chap 14.
     Potential Elements of the Performance:
     - create, read and write files
     - use FileInputStream and FileOutputStream classes
     - use ObjectInputStream and ObjectOutputStream classes
     - use RandomAccessFile class
     - use JFileChooser
     - use the File class

4.   Write programs demonstrating database access.
     (Chapter 25)
     Potential Elements of the Performance:
     - understand and apply the relational database model

(review)
- use classes and interfaces of java.sql packages to query, create, insert and delete data in a database
- understand and use SQL to perform database queries

5. Write servlet and jsp based web applications.
   <u>Potential Elements of the Performance</u>:
   - demonstrate an understanding of a web application and an application server.
   - Demonstrate an understanding of the web application life cycle.
   - Write web applications using servlets that demonstrate the following:
   - Handle form data.
   - Initialization parameters.
   - Deal with response headers and status codes.
   - Handle persistence through cookies and the session tracking API
   - Demonstrate an understanding of technologies such as Ajax and templating engines and other tools that assist in the development of Web Applications.

III.   TOPICS:

1. Exceptions in Java.
2. Multi threading in Java Applications.
3. Files and Streams.
4. Database access in Java
5. Web Application development with servlets

IV.   REQUIRED RESOURCES/TEXTS/MATERIALS:
Java, How To Program,
   Deitel, Deitel
   Prentice Hall,
   ISBN 0-13-148398-6
Teacher supplied notes.

V.   EVALUATION PROCESS/GRADING SYSTEM:
Tests:
   Topics 1-3 – 30%
   Topics 4-5 – 30%
   Assignments:
   Topics 1-5– <u>40%</u>
                     100%
The following semester grades will be assigned to students:

Java II   CSD 313

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:

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 2703 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.

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*. 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.

The student must pass both the test and assignment portions of the course in order to pass the entire course.

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.   ADVANCE CREDIT TRANSFER:

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.