SAULT COLLEGE OF APPLIED ARTS AND TECHNOLOGY

SAULT STE. MARIE, ONTARIO

Sault College

COURSE OUTLINE

COURSE TITLE: Java II

CODE NO. : CSD313   **SEMESTER:** 5

PROGRAM: Computer Studies

AUTHOR: Fred Carella

DATE: Fall 2004   **PREVIOUS OUTLINE DATED:** Fall 2003

APPROVED:

_____ _____
                          DEAN   **DATE**

TOTAL CREDITS: 6

PREREQUISITE(S): CSD305

HOURS/WEEK: 4

Java II   CSD313

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.

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 (Chap 14 of Java 2 Text).
    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 (Chapter 15 of Java 2 Text).
    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 16 of Java 2 Text
    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.
    (Chap 8 of Advanced Java 2 Text)
    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 programs incorporating basic and advanced GUI components (Chap 2 of Advanced Java 2 Text).
   <u>Potential Elements of the Performance</u>:
   - demonstrate an understanding of the following concepts and components by writing example programs that implement
   - view styled documents
   - multiple document interfaces
   - drag and drop
   - internationalization
6. Writing Java Applications demonstrating the Model View Controller Architecture.(Chap 3 of Advanced Java 2 Text)
   <u>Potential Elements of the Performance</u>:
   - understand the MVC Architectures' role in separating data, presentation and user input logic.
   - Understand and apply MVC's use in Swing GUI components.
   - Understand and apply the use of TableModels to represent data for JTables.
   - Understand and apply the use of TreeModels to represent data for JTrees.

III.   TOPICS:

1. Exceptions in Java.
2. Multi threading in Java Applications.
3. Files and Streams.
4. Database access in Java
5. Advanced GUI components.
6. The Model View Controller Architecture.

IV.   REQUIRED RESOURCES/TEXTS/MATERIALS:

Text: - Advanced Java II Platform: How to Program,
                First Edition,
                Deitel and Deitel,
                Prentice Hall,
                ISBN 0-13-089560-1

Note** Student already has the following text from the Java I course.

Text: - Java: How to Program,
                Fourth Edition,

           Deitel and Deitel,
           Prentice Hall,
           ISBN 0-13-0345151-7
     - instructor supplied notes
     - various magazine articles to be supplied

V.   EVALUATION PROCESS/GRADING SYSTEM:

Tests:
       Topics 1-3 – 30%
       Topics 4-6 – 30%
Assignments:
       Topics 1-6 – <u>40%</u>
             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.

VI.   SPECIAL NOTES:

<u>Special Needs</u>:
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 703

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.

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.   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.