CS 3230 Spring 2012 Syllabus
Internet Multimedia Services and Applications Using Java

Your goal must be to learn, my goal must be to help you learn

Instructor: Delroy A. Brinkerhoff
Office Hours: 11:30 - 1:30 TTh, 1:30 - 2:00 MW
Office Location: TE 111A
Phone: 626-7345
Web Page: http://icarus.cs.weber.edu/~dab/ (please see “CS 3230” under the “Classes” section)
E-Mail: dabatwsu@gmail.com (class questions, read frequently), dbrinkerhoff@weber.edu (general)

Time and Room: 9:30 - 11:20 a.m., MW, TE 103D

Text: Core Java 2, Volume I, Fundamentals and Volume II, Advanced Features (8th ed, for J2SE 6.0)
Authors: Cay S. Horstmann and Gary Cornell

Prerequisites: CS 2420 (which has prerequisites of CS 1400 [Java] and CS 1410 [C++])

Grading:
- Programs 30% (see “Labs” on the web for dates and details)
- Exams 30% (in the testing centers on Chi Tester; closed book/note)
- Programming Tests 30% (in class)
- Homework 10% (answers recorded on Chi-Tester from home; may work together)

Grades:
- 90% ≤ total < 100% A
- 86% ≤ total < 90% A-
- 82% ≤ total < 86% B+
- 78% ≤ total < 82% B
- 74% ≤ total < 78% B-
- 70% ≤ total < 74% C+
- 62% ≤ total < 70% C
- 0 ≤ total < 62% E

Exams: Students are responsible for knowing the exam dates and the testing center hours and policies
Midterm #1: (Wed 2/22 - Wed 2/29); Chaps 3-8, 11, 13
Midterm #2/Final: (Wed 4/11 - Wed 4/18); Vol I: Chaps 8 - 10, 14 + Vol II: Chap 1, 3, & 7

Programs:
- Programming assignments are posted at the bottom of the CS 3230 web site under the heading
  Programming Assignments. Note that this portion of the web page is under constant revision as
  programming assignments become available. For your convenience, a section entitled “Page Updates”
  appears near the top of the CS 3230 web page and lists all significant changes and the date on which the
  change was made. Please review this section frequently. Programs are submitted via WSU Online and are
  due at 11:59 p.m. on the due date.

Bad Weather Policy: Please do not take unnecessary risks in inclement weather. Programming tests will be rescheduled in the
event of bad-weather.

Incomplete Grades: An “Incomplete” may be given only when the student, having satisfactorily completed approximately 80% of
the required work, is unable to complete the class work for a legitimate reason (such as illness or
accident) and can reasonably finish on his/her own.

Attendance: Attendance is mandatory! Please do not schedule work or leisure activities that conflict with class.

Study Time: A common “rule of thumb” for allocating study time is 2 to 3 hours of study per credit hour (i.e., 8 - 12
hours per week for CS 3230). Please do not overload your schedule.

Students with Disabilities: Any student requiring accommodations or services due to a disability must contact Services for
Students with Disabilities (SSD) in room 181 of the Student Services Center. SSD can also arrange to
provide course materials (including this syllabus) in alternative formats if necessary.

Recommendations: Read or forward your Weber e-mail daily. Check the “Page Updates” section of the class web site daily.
Ensure that your notebook (if used in class) is able to access Weber’s secure Internet.

Disclaimer: This syllabus is subject to change at any time. Alterations made in class or on the course web site
supercede this document. Please see the website for current information.
Honesty & Fair Use: Each student is expected to maintain high standards of honesty and ethical behavior. Each assignment must represent the student’s own, best effort. You are encouraged to study together and to work together on the labs. This means that it is okay to discuss algorithms, syntax, and Java in general with others. You may also get ideas and code fragments from books or from the Internet. However, you may not copy whole methods, classes, files, or programs from someone else, from a book or from the Internet; nor may you exchange or share code in any electronic format - including code from previous semesters. If this is or any other dishonesty is demonstrated, you will fail the course and may face University disciplinary action. If you have any questions about what is acceptable and what is not acceptable, you may ask the instructor.

Please do not ask students (passed or present) to see copies of their assignments. Please do not give other students (current or future) copies of your assignments. Plagiarism will result both in a failing grade and university sanctions. The university expels students plagiairism is proven the second time.

Course Description: You will learn the Java programming language this semester, which is frequently used for Internet and multimedia programming. Java has, in a few short years, become one of the most popular and most successful programming languages of all time. Its success and growth has paralleled and has been driven by the success and the growth of the Internet. Java is a member of a small, exclusive group of programming languages: the languages that operate over and drive the Internet. Java really is an appropriate topic for an Internet class, a topic that will easily fill an entire semester.

Instructor’s Goal: I want to help you learn how to solve problems and how to code the solution in Java. This entails several sub-goals. I want to help you understand: (a) how the object-model works; (b) how to solve problems before you attempt to code the solution in any language; (c) how to debug a program; and (d) how to build appropriate mental models of computer/language systems that will help you understand the tasks on which computer scientists work.

Course Goals: The text for the course is Core Java, which is an appropriate description of what you will learn. At the conclusion of the course, you will understand the “core” of the Java language. You will learn in this class those “core” features of the Java language that are used regardless of what area of specialized Java programming you may wish to pursue. This includes programming within the object model and advanced features such as graphics, GUIs, networking, and multithreading. Following are the objectives that we will undertake together as a class this semester.

Objectives and Outcomes: At the conclusion of the course you will:
1. Understand the fundamental or core concepts of the Java language; specifically, those parts of the language which are generally used regardless of the problem domain
2. Understand the Object-Oriented model and its relationship to and implementation in the Java programming language; specifically, you will understand the components and concepts:
   a. classes, objects, and instantiation
   b. relationships: inheritance, association, aggregation, composition, and dependency
   c. attributes and methods, and their relationship to encapsulation and abstraction
   d. abstract classes
   e. polymorphism
3. Understand the physical organization of the Java language system and the relationship of this organization with the Java Development Kit (JDK), used to create Java programs:
   a. .java and .class files
   b. the Java Virtual Machine (JVM) and how it relates to applications and to applets
   c. how multi-class programs are assembled into programs (including executable JAR files)
4. Understand and use interfaces and inner classes
5. Understand and use Java’s event delegation model (i.e., be able to create programs based on the event-drive programming model)
6. Be able to write graphical programs
7. Be able to write Graphical User Interface (GUI) programs
   a. AWT
   b. Swing
   c. Applications
   d. Applets
   e. Java’s GUI event interfaces
8. Understand and be able to use event handling, including Java’s event classes
9. Understand and be able to use exception handling
10. Understand and be able to use Java’s input and output philosophy and classes
11. Understand and be able to use Java’s networking classes
12. Understand the concept of multitasking in general and Java’s multithreading features specifically, and be able to write complex, multithreaded programs