

**Class Meetings:** Tuesday and Thursday 9:30 – 11:00 AM @ CAS 226  
**Instructor:** Aaron Stevens  
**Office:** PSY 228B  
**Hours:** After class and by appointment.  
**Best way to contact me:** Email: [azs@bu.edu](mailto:azs@bu.edu). Always include “CS108” in the subject.  
**Class web-page:** [www.aaronstevens.net/academics/cs108](http://www.aaronstevens.net/academics/cs108)  
**Teaching fellow:** Gerald Fry [[gry@cs.bu.edu](mailto:gry@cs.bu.edu)]

**Course objective:** Introduce students to computer programming and application development.

**Course goals:** Stimulating the student’s curiosity with respect to the computer; analyzing business problems for the purpose of developing computer solutions; and articulating a process to develop solutions to these business problems in the form of computer programs.

This course will introduce students to the software development lifecycle (specification, design/planning, implementation/coding, testing), and the major paradigms for software development. A major portion of the course will be dedicated to learning the basics of object-oriented programming in Java. The course will culminate with a software development team project, which will simulate the process used by a team of software development consultants.

**At the end of this course, students will be able to:**

- Identify and explain the major aspects of an object-oriented computer program
- Analyze a business problem/situation and describe the process of building a computer program to solve the business problem.
- Implement a simple business application with a custom developed computer program.

### Learning Methodology

I believe that software development is something that can only be learned by doing. Therefore, the course will be assignment-focused (as opposed to topic focused). To prepare for each assignment, you are expected to read the assigned sections(s) from the textbook(s) or other source materials, and class discussion will cover the key concepts of the readings and provide examples.

### Books, Reference and Software

**Required:** Bronson, Gary: *Object-Oriented Program Development Using Java*. 2nd edition, 2005. This is a not-yet-published edition. I will provide handouts (free) in class.

**Recommended:** Horstmann and Cornell: *Core Java 2, Volume 1 – Fundamentals (7th Edition)*, 2004 Available at the bookstore, and on reserve at the Science and Engineering Library.

Eckel, Bruce: *Thinking in Java*, 2<sup>nd</sup> Edition. Prentice Hall, 2002. Available free on the web at [www.mindview.net](http://www.mindview.net).

**Java Software:** We will be using the **Java 1.5.0 Development Kit**, available from <http://java.sun.com>.

**Java API Specification:** The Java API Specification is the **MOST IMPORTANT REFERENCE** that you will use while programming. It is available at <http://java.sun.com/j2se/1.5.0/docs/api/index.html>

**NetBeans IDE:** We will be using the NetBeans Integrated Development Environment (IDE) and debugger to write, compile, and test Java code. <http://www.netbeans.org>.

**CodeLab (required)** Students are required to sign up for a *CodeLab* account at [www.turingscraft.com](http://www.turingscraft.com). The cost of this account is \$25. Weekly *CodeLab* homework problems will be assigned, and will be completed at the *CodeLab* website.

**Grading, Policies, and Miscellaneous**

Attendance & "2-minute" quizzes	5%
<i>CodeLab</i> Homework Problems	10%
Regular Assignments (about 5)	40%
Team Project and Presentation	20%
Final Exam (date & time TBD)	25%

**2-minute quizzes** are occasional, unannounced, single-question quizzes that will be given sporadically throughout the semester. Points will be awarded for attendance and answering the question correctly.

**CodeLab** is the web-based interactive programming exercise system for introductory programming classes in Java, C++, C and other languages. *CodeLab* has over 200 short exercises, each focused on a particular programming idea or language construct. The student types in code and the system immediately judges its correctness, offering hints when the submission is incorrect. Through this process, the student gains mastery over the semantics, syntax and common usage of the language elements.

**Writing component:** In addition to writing Java code, assignments will require a brief summary write-up (minimum ½ page, maximum one-page, double-spaced, 12-point font, black ink please) describing the programming concept used in the assignment; how your application uses this concept; and what problems you had/lessons you learned from doing the assignment. Failure to include this brief summary will result in the loss of 10 percent of your grade on the assignment.

**Attendance and discussion/asking questions are expected** and will be reflected in your grade. If you must be absent, please email me in advance to let me know you won't be in class, and to let me know what you will do to keep up with the assignments.

**Assignments are due on the date stated on the outline below.** Assignments received one class late will be accepted for a maximum of ½ credit, and assignments more than one class late will not be graded. Plan your work accordingly, and work on all assignments as soon as they are given so you can ask questions in class and get assistance in the labs.

**Independent work:** All assignments (except the final project) are independent work. You are encouraged to discuss the problem statements, and to seek and receive help with the Java programming language and NetBeans or other debugging tools. However, you must write your own code and other deliverables. Plagiarism, collaboration, and collusion will result in a grade of F. Boston University and the College of Arts and Sciences policies require that I refer cases of academic misconduct to the Dean's Office.

**Withdrawing from the course:** The last day to drop a class is 5 weeks from the start of the semester (**Friday, February 25, 2005**). The last date to withdraw and receive a "W" is 8 weeks from the start of the semester (**Friday, March 18, 2005**). If you feel that you want to drop or withdraw from the class, please come talk to me about it as early as possible; I want to help you succeed, but you need to ask for help.