CSE 002: Fundamentals of Programming
Syllabus

Software is transforming the world, and software programming is becoming an essential part of many emerging careers. This class is an introduction to software programming designed especially for people who use computers, but have no programming experience. Using the Java programming language, we introduce students to the basics of software developmentl, software problem solving, and, crucially, to the process of debugging.

Prerequisites:

None.

Meetings:

The class will generally meet for lecture at Drown 209, Mondays and Wednesdays, at 10:10 to 11am. The class will also meet Fridays at 10:10am to 11am, at Packard Lab 122 and 112 for a laboratory session. Occasionally due to holidays, these dates will be shifted and another day will be designated for lab.

Textbook:

The required text is *Introduction to Java Programming, 9th Ed.* (Comprehensive Version), by Y. Daniel Liang (2013, Pearson). It is available from the university and online bookstores.

Course Staff:

Professor: Dr. Brian Y. Chen (chen [at] cse.lehigh.edu)
        Office Hours: Monday and Tuesday, 2:30-3:30pm, Packard Lab 328
Teaching Assistant: Liangie Hong
        Office Hours: TBD
Teaching Assistant: Zaihan Yang
        Office Hours: TBD

Grader: Seth Blumenthal
    Office Hours: TBD
Grader: Steven Stinson
    Office Hours: TBD

Grading:

Exams will be closed book and closed notes, and offline. No make-up exams will be given. Except in extraordinary circumstances, you will receive a zero for a missed test. If you are going to miss an exam because of an extraordinary circumstance you must notify the instructor well before the exam is given.

Class Component	% of grade
Final Exam	25%
Hourly Exams	10% each
Homework	20% total
Labs	10% total
Quizzes, class participation	15% total

Attendance is required and pop quizzes may occur at any time. You are responsible for everything that occurs in class as well as assigned readings. A grade may be changed up to two weeks after an assignment, quiz, or exam is returned. After the final exam, no grades may be contested.

For each programming assignment you will hand in an electronic copy using an on-line file-transfer procedure which will be explained in class. The electronic copy will be automatically collected at 11:00 PM the day it is due unless I state otherwise.

Each assignment will be graded on a 100-point scale. Your grade on assignments will be reduced 10 points for being one day late, and an additional 10 points for more than one day late. In general, there will be three opportunities to submit programming assignments: (1) the time it is normally due, (2) one day later, and (3) two days later (the final collection).

Failure to complete an assignment by the final collection will result in a zero grade.

Grading:

Homework, when assigned on paper, will be graded with some degree of partial credit, depending on the complexity of specific questions.

Most homework will be composed of programming assignments. Here are some guidelines that we will use when grading your programs. The percentage of each category may change with each programming assignment, depending on the emphasis of the assignment.

- The code will compile without errors (10%)
- The code runs correctly (40%), meaning that it produces correct output when given correct input; also handles incorrect input well: e.g., detects it and returns an error.
- Good Programming Style (40%)
    - Written top-down, i.e., modularized
    - Avoids repetitive code
    - No glaring inefficiencies
    - Uses data structures as specified in program description
    - Informative output
    - Output well formatted
    - Uses style indicated by instructor.
- Good documentation (10%)
    - Helpful, mnemonic choice of identifiers
    - Explanation of overall purpose of the program
    - Sketch of the purpose and algorithm of each method
    - State Pre and Post conditions for each method
    - Avoid excessive use of comments

Exams will generally require you to write code on paper. Naturally, this is an imperfect effort without the corrective support of a compiler, much like typing without a spell checker. Syntactic errors (like matching braces and missing semi-colons) that would cause code to not compile in homework will not generally lead to large losses of credit, but conceptual errors (e.g. did you design your code in an efficient manner, or is your code a Rube Goldberg machine of inexplicable components that have a dubious connection with anything?) will lose considerable credit. Do not assume, however, that we will give you the benefit of the doubt if a syntactic error obscures a conceptual one.

Topics to be covered:

Introduction to Computers, Programming, and Java; Elementary Programming; Selections; Loops; Methods; Single-Dimensional Arrays; Multidimensional Arrays; Introduction to Objects and Classes.

Testing Facilities: the Sandbox Lab and the Sun Lab

While you may develop your programs anywhere you have a Java compiler, they will be tested using the CSE Sun Workstations running Solaris. These facilities will also be used for our labs. The labs are open six days a week (see the lab monitor schedule for

exact times) so you can work here outside of class. However, you'll also have to avoid coming during times that the sandbox and sunlab labs are used for classes.

Policy on Academic Integrity and Collaboration

All work, unless explicitly stated in the problem definition, is to be an individual effort. You are encouraged to discuss assignments with one another, your friends, and with the instructors and graders of the course. Indeed, this may be the most effective method of learning. You may share concepts, approaches and strategies for producing a solution. However all work submitted in your name must be your own. If necessary, violations will be considered as cases of academic dishonesty.

Policy on Disabilities

If you have a disability for which you are or may be requesting accommodations, please contact both your instructor and the Office of Academic Support Services, University Center C212 (610-758-4152) as early as possible in the semester. You must have documentation from the Academic Support Services office before accommodations can be granted.