

CSIS 2101: Programming and Problem Solving I

Section 002 – Spring 2011 Syllabus

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Office Hours: Tuesdays & Thursdays: 11:00am-12:00noon
Available other times by appointment
Or, feel free to drop-in any time I'm in my office (if I'm there, I'd be happy to talk to you).

Course Time and Location:
Section 002: Tuesday, 2:30pm-4:20pm, F202
Thursday, 2:30pm-4:20pm, D027 (lab)

Course Description: An introduction to the fundamentals of software development, including logic, control structures, subprograms, classes, objects, documentation techniques, testing, and debugging. Assignments give hands-on experience writing, debugging, and running programs using an integrated development environment. This course is a serious introduction to computer science and preparation for more advanced courses in computing.

Course Objectives: The objectives of this course include:

- Gaining knowledge of programming terminology, methods, and trends, in particular object-oriented programming in the Java language;
- Learning the fundamentals of the Java programming language, and more generally object-oriented programming;
- Learning to apply programming skills developed in the course to solving problems;
- Developing the programming skills needed by professionals in software engineering and other computer science related careers.

Prerequisites: No prior programming experience is necessary. Only pre-requisite is mastery of 2 years of high school algebra.

Required Textbooks: *Java For Everyone*, by Cay Horstmann, © 2010 Wiley, ISBN 978-0-471-79191-1

Other Requirements:

- USB flash drive;
- An account on the Stockton Go Portal, which you already have. If you do not know your user id or password, go to the Office of Computer Services to obtain it. We will be using the Blackboard system that can be accessed within the Portal for assignment collection as well as for distributing lecture notes, sample programs, and many other things. Blackboard will also be used for all e-mail correspondence regarding this course. You will be responsible for checking your e-mail within this system on a regular basis. Any e-mail that I may send regarding assignments, tests, etc will be conducted via Blackboard. Assignments will be submitted via Blackboard.

Grading:	Exam 1	22.5%
	Exam 2	22.5%
	Quizzes	10%
	Programming assignments	40%
	Participation	5%

Grading Scale: 90+ is an A, 80+ is at least a B, 70+ is at least a C, 60+ is at least a D, Less than 60 is an F

Academic Honesty: Please familiarize yourself with Stockton's policy on academic honesty. Violations will result in a grade of F for the course and violations will be reported to the provost's office.

Incomplete Policy: In general, no grades of incomplete will be given. The only exception to this rule is an institutionally documented medical emergency that necessitates your complete absence from Stockton for at least two continuous semester weeks. Additionally, you must be caught up on all work up to the point where your medical emergency began and currently in the "C" range or better overall at the point where the emergency began.

Quizzes: There will be several “take-home” quizzes that will be conducted online (within the Blackboard system—on the “assessments” page). They will be short (designed to take no more than 10-20 minutes, but with a time limit of 30 minutes once you begin). It is possible that there may be more than 1 quiz in a week.

Quizzes will become available at 4:30pm on either a Tuesday or a Thursday and are due by 2:30pm on the next course meeting day (e.g., 2:30pm on Thursday if quiz became available on Tuesday; or by 2:30pm on Tuesday if the quiz became available on Thursday). They are to be completed independently without consulting other students. You may use your textbook or notes while taking a quiz.

Their purpose is three-fold: (1) to help ensure that you are keeping up with the material; (2) to provide me with feedback on what topics may require additional class coverage; and (3) to provide you with feedback on what topics you may need additional review prior to the exams. There will be no make-up quizzes. **Half of your grade on each quiz will come simply from taking it—the other half will be based on your answers.**

Exam 1, Exam 2: Exam 1 will cover material from the beginning of class until exam day. Exam 2 will cover material after Exam 1 up to Exam 2. Although the exams are not explicitly cumulative, due to the nature of the course content you may be implicitly tested on prior material. For example, on Exam 2, there won't be any problems that explicitly test your knowledge of material covered on Exam 1; however, there may be problems on Exam 2 that explicitly test post-Exam 1 material that depends on understanding pre-Exam 1 material.

Programming Assignments: All programming assignments can be worked on as a team of 2 or you can do them individually if you choose. If you do them as a team of 2, both receive the same grade for the assignment. Be sure to include both names on the assignment when it is submitted. Although all assignments can be completed by a single student working independently, I strongly encourage you to work on them in pairs. Also, some of the assignments will be allotted time during the lab day to get you started (e.g., the last 30-45 minutes). **Some assignments will be given more weight than others and will be indicated when assigned.**

Pair Programming: Researchers have shown that “pair” programming can improve students' understanding of course content. If you choose to work as a pair for an assignment, both students should work together from a single computer. One member should be the “pilot” for approximately half of the assignment while the other is the “co-pilot”, switching roles periodically. The pilot's job is to control the computer, writing the program. The co-pilot's job is to watch what the pilot is doing, alerting the pilot to syntax errors and logic errors and making suggestions. To get the most out of working as a pair, this is how the research indicates you should pair program.

Due Dates: Programming assignments will generally be due electronically via Blackboard and will be due by 11:59pm on the dates due, unless otherwise indicated. Late programming assignments will be penalized by 50% of the grade that would have been obtained if submitted on time, but will not be accepted if more than 1 week late. I strive to return assignments graded in a timely manner, and thus cannot accept lateness beyond 1 week since that would delay returning graded assignments to the class as a whole. **The first time you are late with an assignment, if it is less than one week late, the late penalty will be waived.** Due dates for the take-home electronic quizzes are strictly enforced (no late quizzes accepted).

Additional Exam/Quiz Info: The in-class exams are closed book, but you are allowed one sheet of notes no larger than an 8.5in by 11in sheet of paper. The take-home quizzes are open book / open notes, with strict time limit of 30 minutes. The following are also NOT allowed during exams: cell phones, calculators, pagers, PDAs, and other communications devices.

Make-Up Exams: Make-up exams in general will not be given (i.e., if you miss an exam, you get a 0). The only exceptions to this rule are the following:

1. Documented medical excuse: provide a note on doctor's letterhead the first class you return after the missed exam.
2. Other institutional excuses: Situations may arise related to Stockton that prevents you from being able to attend an exam. In most such cases, you should be aware of the conflict beforehand. Thus, I must be notified one week prior to the missed exam. Send me e-mail via Blackboard with the details of the planned absence, and provide me with proper documentation (e.g., memo from sports coach, from other faculty sponsoring a field trip, etc).
3. Other similar situations: similar documentation must be provided, generally beforehand, unless the nature of the situation makes this impossible.

Tentative Schedule: This schedule is subject to change (and likely to change). Changes will be announced via Blackboard (and in class). If tentative exam dates change, they will be announced at least one week prior. Number of programming assignments subject to change in either direction.

Tentative quiz dates can be found in Blackboard and are subject to change.

Date	Textbook	Topic
January 18	1.1–1.5	Syllabus, Course Overview, Introduction to Programming and the Java Language
20	1.4–1.7	Compiling, example programs, errors, algorithms; Assignment 1 begun in lab
25	2.1–2.2, 2.5	Declaring variables, number types, assignment statements, arithmetic operators
27	2.5, 2.3, 2.4	Java’s Math class, reading user input, constants; Assignment 2 begun in lab
February 1	2.6	Strings
3	3.1–3.2	The if statement, blocks, relational operators; Assignment 3 begun in lab
8	3.3–3.5	Multiple alternatives, nested branches, Boolean variables and operators
10	3.6	Using the if statement to validate input; Assignment 4 begun in lab
15	4.1, 4.4	The while loop; processing sentinel values
17	4.2	The for loop; Assignment 5 begun in lab
22	4.5, 4.7	Common loop algorithms, random numbers and simulations
24	4.6	Nested loops; Review for exam during 2 nd half of class
March 1	Chapters 1 – 4	EXAM 1
3	5.1–5.2	Methods as black boxes; Implementing methods; Assignment 6 begun in lab
8	5.3–5.6	Parameter passing, return values, stepwise refinement
10	5.7	Variable scope; Assignment 7 begun in lab
15	NO CLASS	SPRING BREAK – NO CLASS
17	NO CLASS	SPRING BREAK – NO CLASS
22	6.1–6.2	Arrays; the Enhanced for loop
24	6.3	Common array algorithms; Assignment 8 begun in lab
29	NO CLASS	NO CLASS DUE TO PRECEPTORIAL ADVISING
31	6.4	Using arrays with methods; Assignment 9 begun in lab
April 5	6.6	Array Lists
7	6.6	Array Lists; Assignment 10 begun in class
12	7.1–7.5	Object-Oriented Programming, public interface, instance fields & methods, constructors
14	7.1–7.5	Object-Oriented Programming (continued); Assignment 11 begun in class
19	7.7–7.8	Discovering classes, object references
21	7.6	Testing a class
26	7.9	Static variables and methods; Review for exam during 2 nd half of class
28	Chapters 5 – 7	EXAM 2