CIS 111 - Introduction to Programming and Algorithms – Spring 2015
BEST WAY TO GET AN A - TURN YOUR WORK IN EARLY

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TEXTBOOK: Java From Control Structures... - Gaddis, Tony - ISBN 0-13-285583-6
ADVISORY: Completion of CA 103, or CA 221, or CIS 101, and eligibility for ENGL 099, READ 099, MATH 102.

DESCRIPTION: This is a first course for students planning or exploring a career in software design and development. This course emphasizes a careful disciplined approach to computer programming. Problem solving through stepwise development of algorithms is presented. Students will learn programming language syntax, coding, program logic, and program testing. Students will plan, create, test and run their own programs to solve typical problems. BEFORE ENROLLING: students should have basic computer experience and be able to save and retrieve files, run applications and print documents.

ASSIGNMENTS: During the course of the semester, you will be assigned one programming and one homework assignment per week. Obviously copied work will be graded only once and the grade divided among those students who submitted them. You will be expected to turn programming assignments in at the beginning of class one week after the assignment was made. They will, however, be accepted up to two weeks later. A programming assignment not turned in after two weeks will be given NO credit, REGARDLESS of the reason. Assignments may NOT be printed in class the day of the deadline. Homework assignments are due WITHOUT EXCEPTION, no later than Wednesday at 8:00am the week the chapter was covered.

IMPORTANT STUFF TO REMEMBER IF YOU WANT 10 POINTS ON A PROGRAMMING ASSIGNMENT!!!
1. The first thing I want to see at the top of your paper is your name on one line all by itself. On the second line, I want to see the chapter number.
2. Assignments must be turned in at the BEGINNING of class on or before the deadline to receive credit. NO CREDIT WILL BE GIVEN TO LATE WORK (no exceptions).
3. Your assignments must have your name and the chapter number clearly displayed at the top of the front page. (see #1)

OTHER IMPORTANT STUFF TO REMEMBER:
1. Always bring your flash drive, a pencil, your textbook, and paper to class!
2. Keep all of your returned assignments.
3. Show up on time and stay until the end of class. You may only leave early if your work is up to date.
4. Check your AVC email daily!
5. If you get an assignment back with less than the maximum points, you can fix it and resubmit as long as the deadline has not passed.
6. During the first two weeks of class, if you miss class without notifying the instructor prior to class start time, you WILL BE DROPPED.

EXAMS: Three exams will be given. Two exams during the semester and one final exam. All three are equal credit. You will not be allowed to make up a missed exam unless I receive prior notice that you are going to be absent. You will be expected to be prepared to take the exam on your return.

GRADING:
quizzes 10 @ 5 points each 50 points
homework 10 @ 5 points each 50 points
assignments 10 @ 10 points each 100 points
tests 3 @ 50 points each 150 points
total 350 points
315 - 350 A
280 - 314 B, etc.
LAB RULES:
1. Food and drinks are not allowed on the third floor of this building with the exception of bottled water. There will be no exceptions to this rule.
2. Computers must be turned off during the lecture unless otherwise specified.

ATTENDANCE: Missing a total of two weeks of class will result in you being dropped from the class. 3 tardies = 1 class meeting. It is recommended that you become friends with another student in class and exchange email addresses or phone numbers so that you can contact them in case you do have to miss class. Be here and BE ON TIME. You may leave early only if your homework that is due has been turned in. During the first two weeks of class, if you miss class without notifying the instructor prior to class start time, you WILL BE DROPPED.

Academic Honesty Policy: Dishonesty, including but not limited to, cheating, or plagiarism. Plagiarism—from the Latin word for “kidnap”—involves using another’s work without giving proper credit, whether done accidentally or on purpose. This includes not only words and ideas, but also graphs, artwork, music, maps, statistics, diagrams, scientific data, software, films, videos and the like. Plagiarism is plagiarism whether the material is from published or unpublished sources. It does not matter whether ideas are stolen, bought, downloaded from the Internet, or written for the student by someone else—it is still plagiarism. Even if only bits and pieces of other sources are used, or outside sources reworded, they must still be cited. To avoid problems, students should cite any source(s) and check with the instructor before submitting an assignment or project. Students are always responsible for any plagiarism in their work. An instructor who determines that a student has cheated or plagiarized has the right to give an “F” grade, or numerical equivalent, for the assignment or examination. AVC reserves the right to utilize electronic means to investigate possible academic violations. Enrollment in any class implies student agreement and consent that all assignments are subject to submission for textual similarity review to an electronic database. Violation of class assignments, examination rules, e.g., communicating or transferring information to another student, using any materials such as books, notes, etc., other than those expressly allowed for the exam, looking at another student’s exam, etc.

Student Learning Outcomes (to be assessed each semester):

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<tr>
<th>Learning Outcome</th>
<th>Achievement Method</th>
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<tr>
<td>Describe and explain the essence of a programming language and characteristics specifically related to logic flow, simple data structures and common syntax rules.</td>
<td>Short answer questions assessed with a rubric developed by faculty.</td>
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<tr>
<td>Plan, code, run and correct required problems.</td>
<td>Based on a set of requirements, students will create and test simple programs written in a high-level language containing basic programming structures to be assessed using a rubric developed by faculty.</td>
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<tr>
<td>Describe the components of a computer system as they relate to programming.</td>
<td>Short answer questions assessed with a rubric developed by faculty.</td>
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COURSE OBJECTIVES:
1. Describe and explain the essence of a programming language and characteristics specifically related to:
   a. classes, objects and methods
   b. inheritance and polymorphism
   c. libraries and interfaces
   d. documentation
   e. error handling
   f. control structures
   g. variables
   h. data types
   i. arrays and collections
   j. software development
2. Plan, code, run and debug required problems.
3. Create well documented, highly modular and easily maintainable programs.

COURSE OUTLINE:
I. Introduction
   a. Hardware
   b. Programming Languages
   c. Software Design
   d. Compilation process
   e. Documentation
II. Object Oriented Programming
   a. Classes
   b. Methods
   c. Instance variables
   d. Constructors
   e. Inheritance
   f. Polymorphism
   g. Libraries
   h. Interfaces
   i. Error handling
III. Data Types
   a. Intrinsic Types
   b. Constants
   c. Arithmetic
   d. Strings
   e. Input
   f. Output
IV. Control Structures
   a. Decisions
   b. Iterations
V. Arrays
   a. Array Algorithms
   b. Multidimensional Arrays
VI. Files
   a. Text Files