Introduction to Java Programming
ITP 109 (2 Units)

USC
Viterbi
School of Engineering

Objective

This course is intended to teach the basics of programming, the foundations of object oriented programming, and the process of building a project in a modular fashion using the Java programming language.

Concepts

Programming fundamentals including variables, control statements, arrays, and object-oriented programming in Java applications.

Prerequisites	None. This class is intended for non-programmers.
Instructor	Kendra Walther
Contacting the Instructor	kwalther@usc.edu
Office Hours	Listed on Blackboard under Contacts
Lab Assistants	**Jordan Komoda**
Lecture / Lab	One hour and 20 minutes, twice a week, for a total of 2 hours and 40 minutes. 10:00 am – 11:20 am, Monday and Wednesday
Required Textbooks	*Java: Introduction to Problem Solving and Programming.* Walter Savitch, Frank M. Carrano. Pearson Prentice Hall. ISBN: 0132162709.
Optional Textbooks	None
Website	All course material will be on Blackboard (http://blackboard.usc.edu).
Grading	The following percentage breakdown will be used in determining the grade for the course.

Class Participation	5%
Lab Assignments	50%
Midterm Exam	20%
Final Project	25%
Total	100%

Grading Scale

The following shows the grading scale to be used to determine the letter grade.

93% and above	A
90% - 92%	A-
87% - 89%	B+
83% - 86%	B
80% - 82%	B-
77% - 79%	C+
73% - 76%	C
70% - 72%	C-
67% - 69%	D+
64% - 66%	D
63% and below	F

Policies

No make-up exams (except for documented medical or family emergencies) will be offered. The University determines the Final Exam schedule. No changes can be made to it. The final project is due during the final exam time for this class, and attendance is required.

The labs will be posted on Blackboard under the "Assignments" section. Each lab will include instructions, a due date, and a link for electronic submission. Labs must be submitted using this link. All assignments will be digitally submitted through Blackboard except where specifically specified. Do not email them to the lecturer or lab assistant.

Assignments turned in up to three days late will have 50% of the total points deducted from the graded score. After three days, submissions will not be accepted and you will receive a 0. It is the responsibility of the student to contact the grader when posting late projects.

You are required to save your labs using a USB flash drive or a website such as http://www.dropbox.com. You must keep a copy of all labs. You will not be able to save your work on the ITP lab computers. If available, you will be given one USB flash drive from ITP.

ITP will have open lab hours starting the second week of the semester. The open labs will not have a lab assistant for this specific class. These lab times are there in case you need extra time to complete a lab.

A roster will be passed around the room during each lecture session. Please sign by your name for the appropriate week. Do not sign in for another student. Doing so is an academic integrity violation.

Incomplete and Missing Grades

Excerpts for this section have been taken from the University Grading Handbook, located at http://www.usc.edu/dept/ARR/grades/gradinghandbook/index.html. Please see the link for more details on this and any other grading concerns.

A grade of Missing Grade (MG) "should only be assigned in unique or unusual situations… for those cases in which a student does not complete work for the course before the semester ends. All missing grades must be resolved by the instructor through the Correction of Grade Process. One calendar year is allowed to resolve a MG. If an MG is not resolved [within] one year the grade is changed to [Unofficial Withdrawal] UW and will be calculated into the grade point average a zero grade points.

A grade of Incomplete (IN) "is assigned when work is no completed because of documented illness or other 'emergency' **occurring after the twelfth week** of the semester (or 12th week equivalency for any course scheduled for less than 15 weeks).

Academic Integrity

USC seeks to maintain an optimal learning environment. General principles of academic honesty include the concept of respect for the intellectual property of others, the expectation that individual work will be submitted unless otherwise allowed by an instructor, and the obligations both to protect one's own academic work from misuse by others as well as to avoid using another's work as one's own. All students are expected to understand and abide by these principles. **SCampus** is USC's Student Guide to Policies and Conduct Code and can be found at: http://scampus.usc.edu. Section 11 contains the Behavior Violating University Standards and Appropriate Sanctions and can be found at: http://scampus.usc.edu/1100-behavior-violating-university-standards-and-appropriate-sanctions/. Students will be referred to the Office of Student Judicial Affairs and Community Standards (SJACS) for further review, should there be any suspicion of academic dishonesty. The Review process can be found at: http://www.usc.edu/student-affairs/SJACS/. An academic integrity tutorial can be found at: http://www.usc.edu/libraries/about/reference/tutorials/academic_integrity/index.php

Examples of behavior violating University standards:
- The submission of material authored by another person but represented as the student's own work, whether that material is paraphrased or copied in verbatim or near-verbatim form.
- Acquisition of term papers or other assignments from any source and the subsequent presentation of those materials as the student's own work, or providing term papers or assignments that another student submits as his/her own work.
- Obtaining for oneself or providing for another person a solution to homework, a project or other assignments, or a copy of an exam or exam key without the knowledge and expressed consent of the instructor.
- Unauthorized collaboration on a project, homework or other assignment. Collaboration between students will be considered unauthorized unless expressly part of the assignment in question or expressly permitted by the instructor.

- Fabrication: Submitting material for lab assignments, class projects or other assignments which is wholly or partially falsified, invented or otherwise does not represent work accomplished or undertaken by the student.
- Forgery, unauthorized alteration or unauthorized use of any university document, records, keys or instruments of identification, or of documents or records related to functions of the university.

If the instructor, a grader, or a lab assistant suspects you of academic dishonesty, it has to be reported to SJACS. Do not share lab assignments with another student. Do not submit another student's work as your own. Do not look at other students' papers during exams. Do not leave the room during an exam. Do not cheat! As Trojans, we are faithful, scholarly, skillful, courageous, and ambitious.

A Note about Collaboration and Cheating

Assignments and projects in computer programming course are different from those in some other types of courses.   Students may **NOT** collaborate, work together, share code, or in any way exchange solutions for assignments and projects. All assignments are analyzed by software that looks for similarity.   Any sharing of ideas or code will be considered a violation of academic integrity (cheating): students involved will receive an F for the course and an SJACS report will be filed.

Students with Disabilities

Any student requesting academic accommodations based on a disability is required to register with Disability Services and Programs (DSP) each semester. A letter of verification for approved accommodations can be obtained from DSP. Please be sure the letter is delivered to your course instructor (or TA) as early in the semester as possible. If you need accommodations for an exam, the form needs to be given to the instructor at least two weeks before the exam.

DSP is located in STU 301 and is open from 8:30am to 5:00pm, Monday through Friday. Contact info: 213-740-0776 (Phone), 213-740-6948 (TDD only), 213-740-8216 (FAX), ability@usc.edu, http://sait.usc.edu/academicsupport/centerprograms/dsp/home_index.html.

Emergency Preparedness/Course Continuity in a Crisis

In case of emergency, when travel to campus is difficult, if not impossible, USC executive leadership will announce a digital way for instructors to teach students in their residence halls or homes using a combination of the Blackboard LMS (Learning Management System), teleconferencing, and other technologies. Instructors should be prepared to assign students a "Plan B" project that can be completed 'at a distance.' Additional information about Campus Safety and Emergency Preparedness can be found at: http://preparedness.usc.edu.

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Course Outline
Note: Subject to change

Week 1 – Introduction
- Course overview
- About programming

Reading
Chapter 1

Assignment/Lab
Lab 0 – Tool setup
Lab 1

Week 2 – Data types
- Variables
- Input & output

Reading
Chapter 2

Assignment/Lab
Lab 2

Week 3 – Operators
- Math expressions
- Other operators

Reading
Chapter 2

Assignment/Lab
Lab 3

Week 4 – Decisions
- Boolean expressions
- Branching code

Reading
Chapter 3

Assignment/Lab
Lab 4

Week 5 – Loops
- Various Java loops
- Debugging

Reading
Chapter 4

Assignment/Lab
Lab 5

Week 6 – Methods
- Method definitions
- Variable scope

Reading
Chapter 5

Assignment/Lab
Midterm preparation

Week 7 – Midterm
Assignment/Lab
Lab 6

Week 8 – Arrays
- Programming with arrays
- Arrays in methods

Reading
Chapter 7

Assignment/Lab
Lab 7

Week 9 – Classes
- Class definitions
- Instance variables

Reading
Chapter 5

Assignment/Lab
Lab 8

Week 10 – Class methods
- Object oriented programming
- Packages

Reading
Chapter 6

Assignment/Lab
Lab 9

Week 11 – Inheritance
- Superclass or base class
- Subclass or derived class
- Overloading methods

Reading
Chapter 8

Assignment/Lab
Lab 10

Week 12 – Polymorphism
- Interfaces and abstract cases
- Overloading methods

Reading
Chapter 8

Assignment/Lab
TBD

Week 13 – Graphical user interfaces
- Swing
- Java events

Reading
TBD

Assignment/Lab
TBD

Week 14 – Exceptions
- Swing
- Java exceptions

Reading
TBD

Assignment/Lab
Final project

Week 15 –Grab Bag
- Utilities (ArrayList)
- Documentation
- Debugging

Reading
Chapter 11

Assignment/Lab
Final project

Final Exam/Project
Assignment
Final project due at the end of the scheduled final exam time