Introduction to Java Programming
ITP 109 (2 Units)

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
Rob Parke

Contacting the Instructor
parke@usc.edu

Office Hours
Listed on Blackboard under Contacts

Lab Assistants
Listed on Blackboard under Contacts

Lecture / Lab
One hour and 20 minutes, twice a week, for a total of 2 hours and 40 minutes.

Required Textbooks
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.

<table>
<thead>
<tr>
<th>Component</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Class Participation</td>
<td>5%</td>
</tr>
<tr>
<td>Lab Assignments</td>
<td>50%</td>
</tr>
<tr>
<td>Midterm Exam</td>
<td>20%</td>
</tr>
<tr>
<td>Final Project</td>
<td>25%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Percentage Range</th>
<th>Letter Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>93% and above</td>
<td>A</td>
</tr>
<tr>
<td>90% - 92%</td>
<td>A-</td>
</tr>
<tr>
<td>87% - 89%</td>
<td>B+</td>
</tr>
<tr>
<td>83% - 86%</td>
<td>B</td>
</tr>
<tr>
<td>80% - 82%</td>
<td>B-</td>
</tr>
<tr>
<td>77% - 79%</td>
<td>C+</td>
</tr>
<tr>
<td>73% - 76%</td>
<td>C</td>
</tr>
<tr>
<td>70% - 72%</td>
<td>C-</td>
</tr>
<tr>
<td>67% - 69%</td>
<td>D+</td>
</tr>
<tr>
<td>64% - 66%</td>
<td>D</td>
</tr>
<tr>
<td>63% and below</td>
<td>F</td>
</tr>
</tbody>
</table>

Policies
No make-up exams (except for documented medical or family emergencies) will be offered nor will there be any changes made to the Final Exam schedule.

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.

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.
All assignments will be digitally submitted through Blackboard except where specifically specified. Do not email them to the lecturer or lab assistant.

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.

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).”

Statement on Academic Conduct and Support Systems

Academic Conduct
Plagiarism – presenting someone else’s ideas as your own, either verbatim or recast in your own words – is a serious academic offense with serious consequences. Please familiarize yourself with the discussion of plagiarism in SCampus in Section 11, Behavior Violating University Standardshttps://scampus.usc.edu/1100-behavior-violating-university-standards-and-appropriate-sanctions/. Other forms of academic dishonesty are equally unacceptable. See additional information in SCampus and university policies on scientific misconduct, http://policy.usc.edu/scientific-misconduct/.

Discrimination, sexual assault, and harassment are not tolerated by the university. You are encouraged to report any incidents to the Office of Equity and Diversity http://equity.usc.edu/ or to the Department of Public Safety http://capsnet.usc.edu/department/department-public-safety/online-forms/contact-us. This is important for the safety whole USC community. Another member of the university
community – such as a friend, classmate, advisor, or faculty member – can help initiate the report, or can initiate the report on behalf of another person. *The Center for Women and Men* [http://www.usc.edu/student-affairs/cwm/](http://www.usc.edu/student-affairs/cwm/) provides 24/7 confidential support, and the sexual assault resource center webpage [sarc@usc.edu](mailto:sarc@usc.edu) describes reporting options and other resources.

**Support Systems**

A number of USC’s schools provide support for students who need help with scholarly writing. Check with your advisor or program staff to find out more. Students whose primary language is not English should check with the *American Language Institute* [http://dornsife.usc.edu/ali](http://dornsife.usc.edu/ali), which sponsors courses and workshops specifically for international graduate students. *The Office of Disability Services and Programs* [http://sait.usc.edu/academicsupport/centerprograms/dsp/home_index.html](http://sait.usc.edu/academicsupport/centerprograms/dsp/home_index.html) provides certification for students with disabilities and helps arrange the relevant accommodations. If an officially declared emergency makes travel to campus infeasible, *USC Emergency Information* [http://emergency.usc.edu/](http://emergency.usc.edu/) will provide safety and other updates, including ways in which instruction will be continued by means of blackboard, teleconferencing, and other technology.

**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](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