Course ITSS 3311 – Introduction to Programming

Instructor name: Si XIE

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Class Hours: Monday, 4:00pm - 6:45pm
Office Hours: Friday, 9:30am - 10:30 am Office: 3.226 Class Room: TBD

Course Description

This course introduces students to the fundamental concepts of programming. Students will also be introduced to the object-oriented paradigm. Topics include data types, control structures, objects, classes, iterations, functions, and arrays as they relate to developing business applications. In this course students will learn the mechanics of running, testing, and debugging programs. (3 semester hours)

Required Materials

- Laptop Required
- The following software is required from first day of class Java JDK - Java SE 8 Update 301 Edition: Standard Edition (SE), Version 8, Update 301
  • Important Note: Many editions, versions, and updates of Java JDK are available for downloads. Students must be sure that the correct version of Java JDK is selected, downloaded, and installed.
  • There are 2 versions of the Java JDK, 32-bit and 64-bit, available for downloads. Students should try to install the 64-bit version. However, you can install the 32-bit version if your machine is 32 bit machine.
  • Free download of Java JDK – Click following link:
  https://www.oracle.com/java/technologies/javase/javase-jdk8-downloads.html
  o Choose: Java SE Development Kit 8u301
  o Java JDK file name to download for 32-bit: Windows x86 o Java JDK file name to download for 64-bit: Windows x64 o Java JDK file name to download for Mac: Mac OS

Eclipse IDE for Java Developers
• Free download of Eclipse: http://www.eclipse.org/downloads/
• Important Notes: Many packages of Eclipse IDE are available for downloads. Students must be sure that the correct package of Eclipse (Eclipse IDE for Java Developers) is selected, downloaded, and installed.
• The version of Eclipse IDE must be compatible with the version of (32-bit or 64-bit) of the Java JDK. If the 32-bit Java JDK is installed, Eclipse IDE of 32 bits must be used.

Suggested Course Materials

Introduction to Java Programming, Brief Version, 10th edition, Y. Daniel Liang
ISBN-13: 978-0-13-359220-7
ISBN-10: 0-13-359220-0

1.Suggested tutorials: http://docs.oracle.com/javase/tutorial
2.Supplemental Notes will be posted on eLearning course site
3.All the required software applications are currently available in JSOM labs PCs. Students can use these PCs for their class work whenever the labs are open.
4.Step-by-step details on how to install the above required software applications will be provided in class.

Prerequisites/Corequisites

N.A

Course Objectives

1. Apply the basic mechanics of object-oriented programming which includes:
    - Syntax and program structure, including Java identifier rules;
    - Conditional execution with if, else if, and else;
    - Basic looping, including for and while loops;
    - Static methods and method invocation;
    - One-dimensional arrays of primitive types;
    - Strings including the following topics: declaration, initialization, assignment, traversal, and methods;
    - Basics of identifying and fixing errors;
    - Identify classes, objects, members of a class and the relationships among them
2. Interpret code by being able to trace the execution of code fragments, keeping track of the values of variables through a short series of computations, including branches, loops, and method calls.

Grade Component	Points
4 individual assignments	40%
Midterm Exam	25%
Final Exam/ Project	25%
2 Quizzes	10%
Total	100%

3. Develop programs using the Java Collection API and the Java standard class library.

4. Students will be introduced to Eclipse that is currently the most popular Integrated Development Environment (IDE) for Java development. Students will be able to effectively use the IDE to create projects, write programs, compile, and run their Java programs.

5. Students will develop programming skills to write programs in Java. Students will acquire basic skills of programming using different programming techniques such as selections, loops, etc., with basic data structures like arrays.

Final Score Range	Letter Grade
97 <= Final Score <= 100	A+
93 <= Final Score <97	A
90 <= Final Score <93	A-
87 <= Final Score <90	B+
83 <= Final Score <87	B
80 <= Final Score <83	B-
77 <= Final Score <80	C+
73 <= Final Score <77	C
70 <= Final Score <73	C-
67 <= Final Score <70	D+
63 <= Final Score <67	D
60 <= Final Score <63	D-
Final Score <60	F

letter grades

Course Instructor Policies

eLearning will be used for class content (e.g., class slides and assignment descriptions) and the recording of grades. Slides will be posted before class. Class announcements (e.g., change in project due dates) will also be posted. It is the students' responsibility to keep up with the changes that are posted on eLearning.
Instructor Response Policy: The instructor will respond to all student inquiries (emails, voice messages, etc.) within 48 hours (excluding holidays and weekends).
Midterm and Final Exams: All exams are closed-book, closed-notes, and require individual efforts.
Make-up Exams: No make-up tests will be offered except on medical grounds. You will be required to provide necessary documentations.
Changes: The course will be very dynamic, so expect changes. Changes in assignments or schedules will be posted on eLearning. It is the student's responsibility to keep up with the changes that are posted on eLearning.
In-Class Quiz: There will be NO MAKE-UP for in-class quizzes.
Late Work: All projects are due on the specified date provided in the Course Schedule. I do not accept late assignments unless prior arrangements have been made with the instructor.
Academic Integrity: The University is committed to academic excellence and expects academic honesty from all members of the University community and believes that it is essential for academic excellence and integrity. Academic honesty includes adherence to guidelines established by the instructor in a particular course for both individual and group work. It prohibits representing the work of others to be one's own (plagiarism); receiving unauthorized aid on an assignment (cheating); and using similar papers or other work products to fulfill the obligations of different classes without the instructor's permission. Penalties for academic dishonesty may include a grade of "F" on the work in question or for the course. In addition, any student engaged in academic dishonesty will be subject to disciplinary action. Please refer to the General Policies website (see below) for detailed information pertaining to academic dishonesty, including procedures for determining disciplinary action.
WORKING TOGETHER on Individual Projects: This course will have a considerable amount of computing work for application projects. Each student, is expected to do their own work on the "individual" projects. Copying another student's work (computer files) or having another person do your work is scholastic dishonesty and will be dealt with accordingly.

Schedule and weekly learning goals

The schedule is tentative and subject to change. The learning goals below should be viewed as the key concepts you should grasp after each week, and also as a study guide before each exam, and at the end of the semester.

Week	Description	Readings
1.01/24/2022	Course Overview// Basics of Java	Chapter 1
2.01/31/2022	Elemnetary Programming in Java	Chapter 2
3.02/07/2022	Selections//Assignment 1	Chapter 3
4.02/14/2022	Functions, Characters and Strings	Chapter 4
5.02/21/2022	Loops//Quiz 1	Chapter 5
6.02/28/2022	Loops//Assignment 2	Chapter 5
7.03/07/2022	Midterm Exame Review	
8.03/14/2022	No Class Spring break	
9.03/21/2022	Midterm Exam	
10.03/28/2022	Methods//Assignment 3	Chapter 6
11.04/04/2022	Methods 2	Chapter 6
12.04/11/2022	Single-Dimensional Arryas//Assignment 4	Chapter 7
13.04/18/2022	Single-Dimensional Arryas-2	Chapter 7
14.04/25/2022	Single-Dimensional Arryas-3	Chapter 7
15.05/02/2022	Final Exam Review	
16.05/09/2022	Final Exam	