Course ITSS 3311 – Introduction to Programming

Instructor name: Si XIE

Fall 2023

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Class Hours: Tuesday and Thursday 2:30pm-3:45pm
Office Hours: Friday, 9:30am - 10:30 am Office: 3.226 Class Room: 12.210

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 classwork 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

There are no prerequisites for this course.

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.

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.

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 student's responsibility to keep up with the changes that are posted on eLearning.
Instructor Response Policy: The instructor will respond to all student inquiries (**only email with your utd email address**) within 48 hours (excluding holidays and weekends).
Midterm and Final Exams: All exams require individual efforts. Reference sheets might be allowed if announced before the exam.
Make-up Exams: No make-up tests will be offered except on medical grounds. A notice must be given before the absence. You will be required to provide the necessary documentation.
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.
Extra Grade Assignments: There are several extra grade assignments available. The maximum one can get is 5%.
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.

Grade Component	Points
Assignment 0	Negative Score
4 individual assignments	40%
Group Assignment	20%
End Semester Exam	30%
2 Quizzes	10%
Total	100%

Grading Policy

The grades will be based on performance in quizzes, assignments, and examinations. **Late submissions will not be graded.**

Grading Criteria

Your course grade will depend on your overall score relative to your peers.
1) The students with scores in the 80th percentile and above will get an A grade.
2) The students with scores between the 80th and the 55th percentile will get an A- grade.
3) The students with scores between the 55th and the 40th percentile will get a B+ grade.
4) The students with scores between the 40th and the 25th percentile will get a B grade.
5) The students with scores below the 25th percentile will be decided by the instructor.
Note: The above is an indicative policy and it may be adjusted based on the instructor's discretion.

Sl.no	Week	Description
1	21/8/2023	Course Overview // Basic of Java // Installation of JDK and Eclipse
2	28/8/2023	Elementary Programming in Java
3	4/9/2023	Selections
4	11/9/2023	Functions, Characters and Strings
5	18/9/2023	Quiz 1 // Exercise Lession
6	25/9/2023	Loops
7	2/10/2023	Loops Continued
8	9/10/2023	Group Assignment Presentation in Class
9	16/10/2023	Methods
10	23/10/2023	Methods Continued
11	30/10/2023	Quiz 2 // Exercise Lession
12	6/11/2023	Single Dimensional Arrays
13	13/11/2023	Single Dimensional Arrays Continued
14	20/11/2023	Fall Brak No Class
15	27/11/2023	Exercise Lession/ Final Exam Review
16	4/12/2023	End-Term Exam

Item	Due Dates
Assignment 0	28/8/2023
Assignment 1	17/9/2023
Assignment 2	8/10/2023
Assignment 3	29/10/2023
Assignment 4	26/11/2023
Group Formation	21/9/2023 in class
Group Assignment	10 or 12/10/2023 in class

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.

Due Dates

Quizzes will be conducted in class, while the end-semester exam will be in the test center.