COSC 1437-201HY

Programming Fundamentals II (Spring 2022), 1/18/2022 – 5/12/2022

Tuesday/Thursday: STEAM classroom 146 on the first floor: 7:30 pm - 8:50 pm

Instructor Information:

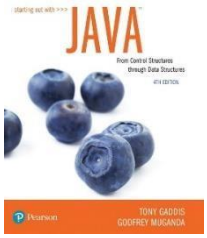
Name: HIep Lee
Email: hlee8@com.edu
Phone: N/A

Office Location: N/A

Student / Office Hours and Location:
Tuesday & Thursday: 6:00pm-7:30pm (by appointment)

Required Textbook:

Starting Out with Java: From Control Structures through Data Structures, 4th Edition by Tony Gaddis
Publisher: Pearson
Print ISBN: 9780134787961
eText ISBN: 9780134757223
Edition: 4th
Copyright year: 2019



Course Description:

This course focuses on the object-oriented programming paradigm, emphasizing the definition and use of classes along with fundamentals of object-oriented design. The course includes basic analysis of algorithms, searching and sorting techniques, and an introduction to software engineering processes. Students will apply techniques for testing and debugging software. This course is included in the Associate of Science Degree for Computer Science. It is also included in COM's Programming Certificate.

COSC 1436 (or 1336), Programming I, is a prerequisite.

Course Requirements:

COSC 1437/1337 is designed as a lecture/lab course. It is held in the classroom STEAM 146. You are required to attend both parts. Quizzes and exams will be given after covered chapters (see the Course Outline section for more details).

You must download the Java Development Kit (JDK) and the NetBeans Integrated Development Environment (IDE) to your own computer in order to do the Java programming assignments. Both are free of charge. Instructions are in Blackboard and will be explained in class. You can also use Eclipse or STS IDE in place of the NetBeans IDE if you wish.

Computer and Internet access:

Regarding problems with your own computer and with Internet access, COM is not responsible for outages, and due dates will not be extended.

Determination of Course Grade/Detailed Grading Formula

The grade is determined by the completion of the lab assignments, programming assignments, quizzes, and exams as described in the grading formula below.

COURSE ITEM	% of Total Grade
Chapter quizzes	10%
Chapter Lab Assignments	10%
Programming Assignments	30%
Exams (Mid-term & Final)	50%
Total	**100%**

Grading Scale:

Letter Grade	Percent
A	90% - 100%
B	80% - 89%
C	70% - 79%
D	60% - 69%
F	Below 60%

Late Work, Make-Up, and Extra-Credit Policy:

All assignments must be completed according to the deadline date. Late work will **not** be accepted. Contact the instructor if you miss a test due to an unavoidable circumstance. You must document your reason in writing to the instructor. There is no extra credit in this course.

Attendance Policy:

Attendance in both lecture and lab sessions is required. Neither is optional.

Communicating with your instructor:

ALL electronic communication with the instructor must be through your COM email. Due to FERPA restrictions, faculty cannot share any information about performance in the class through other electronic means.

Student Learner Outcome	Maps to Core Objective	Assessed by Assignment(s)
1. Identify and explain a programming development lifecycle, including planning, analysis, design, development, and maintenance.	Critical Thinking	Chapter 1 Assignment
Student Learner Outcome	**Maps to Core Objective**	**Assessed by Assignment(s)**
2. Demonstrate a basic understanding of objectoriented programming by using structs and classes in software projects.	Critical Thinking	Chapter 6 Assignment from Programming Challenges
3. Use object-oriented programming techniques to develop executable programs that include elements such as inheritance and polymorphism	Empirical and Quantitative Skills	Chapter 10 Assignment from Programming Challenges
4. Document and format code in a consistent manner.	Communication (written)	Chapter 6 Assignment from Programming Challenges
5. Apply basic searching and sorting algorithms in software design.	Empirical and Quantitative Skills	Chapter 10 Assignment for searching and sorting
6. Apply single- and multi-dimensional arrays in software.	Critical Thinking	Chapter 7 Assignment from Programming Challenges
7. Use a symbolic debugger to find and fix runtime and logical errors in software.	Critical Thinking	Chapter 6 Assignment from Programming Challenges
8. Demonstrate a basic understanding of programming methodologies, including objectoriented, structured, and procedural programming.	Critical Thinking	Chapter 1 Review Questions Quiz
9. Describe the phases of program translation from source code to executable code.	Communication (written)	Chapter 1 Review Questions Quiz

Academic Dishonesty:

Any incident of academic policy will be dealt with in accordance with college policy and the Student Handbook. Academic dishonesty – such as cheating on exams is an extremely serious offense and will

result in a grade of zero on that exam (and possibly an F for the course). In addition, the student will be referred to the Office of Student Conduct for the appropriate disciplinary action.

Student Concerns:

If you have any questions or concerns about any aspect of this course, please contact me using the contact information previously provided. If, after discussing your concern with me, you continue to have questions, please contact Mr. Leslie Richardson, Math and Computer Science Department Chair, at 409933-8329, email lrichardson@com.edu.

Course Outline:

COURSE CALENDAR	
Topics	**Textbook Reading**
Introduction to Computers and Java **Lab Assignment 1 Due**	**Text**: Chapter 1, Appendix D **Java Tutorial**: *https://docs.oracle.com/javase/tutorial/getStarted/index.html*
Java Fundamentals (Program Construct, Java Expression and Primitive Data Types) **Lab Assignment 2 Due** **Quiz 1**	**Text**: Chapter 2, Appendix A, B, C **Java Tutorial**: *http://docs.oracle.com/javase/tutorial/java/concepts/index.html* *http://docs.oracle.com/javase/tutorial/java/nutsandbolts/index.html*
Decision Structures **Lab Assignment 3 Due** **Programming Assignment 1 Due**	**Text**: Chapter 3 **Java Tutorial:** *https://docs.oracle.com/javase/tutorial/java/nutsandbolts/if.html* *https://docs.oracle.com/javase/tutorial/java/nutsandbolts/switch.html*
Loops and Files **Lab Assignment 4 Due** **Quiz 2**	**Text**: Chapter 4 **Java Tutorial:** *https://docs.oracle.com/javase/tutorial/java/nutsandbolts/while.html* *https://docs.oracle.com/javase/tutorial/java/nutsandbolts/for.html* *https://docs.oracle.com/javase/tutorial/essential/io/*
Java Methods **Lab Assignment 5 Due** **Programming Assignment 2 Due**	**Text**: Chapter 5 **Java Tutorial**: *https://docs.oracle.com/javase/tutorial/java/javaOO/methods.html*
Mid-term	

Java Classes **Lab Assignment 6 Due**	**Text**: Chapter 6 **Java Tutorial:** *http://download.oracle.com/javase/tutorial/java/javaOO/index.html*
Java Arrays and ArrayList Class **Lab Assignment 7 Due** **Quiz 3**	**Text**: Chapter 7 **Java Tutorial:** *https://docs.oracle.com/javase/tutorial/java/nutsandbolts/arrays.html*
Advanced Classes and Objects **Lab Assignment 8 Due**	**Text**: Chapter 8 **Java Tutorial:** *https://docs.oracle.com/javase/tutorial/essential/regex/index.html* *https://docs.oracle.com/javase/tutorial/collections/intro/index.html*
Text Processing and Wrapper Classes **Lab Assignment 9 Due** **Quiz 4**	**Text**: Chapter 9 **Java Tutorial:** *https://docs.oracle.com/javase/tutorial/i18n/text/index.html*
Inheritance **Lab Assignment 10 Due** **Programming Assignment 3 Due**	**Text**: Chapter 10 **Java Tutorial:** *https://docs.oracle.com/javase/tutorial/java/IandI/subclasses.html*
Final	

Institutional Policies and Guidelines

Grade Appeal Process: Concerns about the accuracy of grades should first be discussed with the instructor. A request for a change of grade is a formal request and must be made within six months of the grade assignment. Directions for filing an appeal can be found in the student handbook.<https://build.com.edu/uploads/sitecontent/files/student-services/Student_Handbook_20192020v5.pdf. *An appeal will not be considered because of general dissatisfaction with a grade, penalty, or outcome of a course. Disagreement with the instructor's professional judgment of the quality of the student's work and performance is also not an admissible basis for a grade appeal.*

Academic Success & Support Services: College of the Mainland is committed to providing students the necessary support and tools for success in their college career. Support is offered through our Tutoring Services, Library, Counseling, and through Student Services. Please discuss any concerns with your faculty or an advisor.

ADA Statement: Any student with a documented disability needing academic accommodations is requested to contact Holly Bankston at 409-933-8520 or hbankston@com.edu. The Office of Services for Students with Disabilities is located in the Student Success Center.

Counseling Statement:

Any student that is needing counseling services is requested to please contact Holly Bankston in the Student Success Center at 409-933-8520 or hbankston@com.edu. Counseling services are available in the student center for free. Appointments are strongly encouraged. However, some concerns may be addressed on a walk-in basis.

Textbook Purchasing Statement:

A student attending College of the Mainland is not under any obligation to purchase a textbook from the college-affiliated bookstore. The same textbook may also be available from an independent retailer, including an online retailer.

Withdrawal Policy:

Students may withdraw from this course for any reason prior to the last eligible day for a "W" grade. Before withdrawing students should speak with the instructor and consult an advisor. Students are only permitted to withdraw six times during their college career by State law. The last day to withdraw for the Fall 16-week session is November 19, 2020**.**

FN Grading: The FN grade is issued in cases of *failure due to a lack of attendance*, as determined by the instructor. The FN grade may be issued for cases in which the student ceases or fails to attend class, submit assignments, or participate in required activities, and for which the student has failed to withdraw. The issuing of the FN grade is at the discretion of the instructor.

Early Alert Program :

The Counseling Center at College of the Mainland has implemented an Early Alert Program. I have been asked to refer students to the program throughout the semester if they are having difficulty completing assignments or have poor attendance. If you are referred to the Early Alert Program you will be contacted by someone in the Counseling Department who will schedule a meeting with you to see what assistance they can offer in order for you to meet your academic goals.

COVID-19 Statement: All students, faculty and staff are expected to familiarize themselves with materials and information contained on the College of the Mainland's Coronavirus Information site at www.com.edu/coronavirus. Students are required to watch a training video, complete the self-screening, and acknowledge the safety guidance at: www.com.edu/selfscreen. In addition, students, faculty, and staff must perform a self-screening prior to each campus visit. Finally, students, faculty, or staff which have had symptoms of COVID-19, received a positive test for COVID-19, or have had close contact with an individual infected with COVID-19 must complete the self-report tool.

Changes to this Syllabus

The instructor reserves the right to make changes to this syllabus. All changes will be communicated to the students both in the virtual classroom and on a Blackboard announcement in a timely manner.