COSC 2336-101HY

COSC 2436-101HY

Programming Fundamentals III (Fall 2021), 8/23/2021 – 12/10/2021

Tuesday Lecture: Online with Blackboard Collaborate Ultra : 11:00 am – 12:20 pm

Thursday Lab: STEAM classroom 146 on the first floor: 11:00 am – 12:20 pm

Instructor Information:

Name: Faith (Fay) Alexander
Email: Email: fbryan@com.edu
Phone: Office phone: 409-933-8334, if no answer, leave a message for a callback
Office Location: STEAM 225.55

Student / Office Hours and Location:

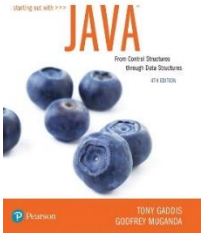
Monday,	9 – 9:30am, 12:30 – 1:30pm, and 3:30 – 4:00 pm, Blackboard Collaborate, virtual classroom for office hours
Tuesday,	9 – 9:30am and 1:30 – 3:30pm, Blackboard Collaborate, virtual classroom for office hours
Wednesday,	9 – 9:30am and 12:30 – 1:30 pm, STEAM 225.55
Thursday,	9 – 9:30am and 1:30 – 2:30 pm, STEAM 225.55

Other days and times by appointment only

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



There is no access code required for this course. All course materials will be available through the Blackboard site. However, this textbook has an access code inside the front cover that enables use of the textbook companion site, provided by the publisher. There are a variety of supplemental resources for the student, including videos, links for downloading software, and chapters and appendices.

Course Description:

Further applications of programming techniques, introducing the fundamental concepts of data structures and algorithms. Topics include data structures (including stacks, queues, linked lists, hash tables, trees, and graphs), searching, sorting, recursion, and algorithmic analysis. Programs will be implemented in the Java Programming Language. This course is included in the Associate of Science Degree for Computer Science. It is also included in COM's Programming Certificate. COSC 1437 (or 1337), Programming II, is a prerequisite.

Course Requirements:

COSC 2336 (2436) is designed as a lecture/lab course. Lecture will be delivered virtually each Tuesday on Blackboard Collaborate Ultra. Labs are on Thursday in the classroom, STEAM 146. Both are required. If you cannot attend the live virtual session, you must watch the recording before the next lab session. Lecture material will not be repeated in the labs. Lab assignments (for a grade) will be designated and worked on Thursdays.

You will need the Java Development Kit (JDK) and the NetBeans Integrated Development Environment on your own computer. Both are free of charge. These are the same tools used for Programming II, COSC 1437 or COSC 1337. Be sure you have the JDK Version 8, not a later version. Later versions do not work correctly with NetBeans.

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.

Grading Formula:

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

COURSE ITEM	**% of Total Grade**
Chapter review quizzes	20%
Chapter Assignments	70%
Blackboard Discussion	10%
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 the virtual sessions and lab sessions is required. Neither is optional. The virtual sessions will be recorded. That information will not be repeated in the lab sessions.

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. Design and develop programs that implement basic data structures, including stacks, queues, linked lists, hash tables, trees, and graphs.	Critical Thinking	Programming projects for Chapters 19 and 20
2. Apply recursive techniques and algorithms to solve problems.	Critical Thinking	Chapter 15 programming project
3. Implement sorting and searching algorithms	Empirical and Quantitative Skills	Chapter 16 programming project
4. Understand algorithm efficiency, Big-O notation, and why it should be considered in programming.	Communication (written)	Chapter 16 programming project
5. Analyze and select appropriate data structures to implement a solution to a problem	Empirical and Quantitative Skills	Chapter 20 programming project.
6. Design and implement data structures using classes and incorporating object-oriented concepts.	Critical Thinking	Chapter 17 (Generics) programming project.
7. Demonstrate best practices of software development including testing, validation, and documentation.	Critical Thinking	Chapter 17 (Generics) programming project.

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 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 409-933-8329, email lrichardson@com.edu.

Course Outline

Week	Date	Topic
1	8/24-8/26	Chapter 10: Inheritance Review, Chapter 11 Exceptions
2	8/31-9/2	Chapter 12: JavaFX: GUI and Basic Controls
3	9/7 - 9/9	Chapter 12: JavaFX: GUI and Basic Controls Review Question Quiz, Chapter 12, due 9/13 at 11:59 pm
4	9/14-9/16	Chapter 13: JavaFX: Advanced Controls

Week	Date	Topic
5	9/21-9/23	Chapter 13: JavaFX: Advanced Controls Review Question Quiz, Chapter 13, due 9/27 at 11:59 pm
6	9/28-9/30	Chapter 14: JavaFX: Graphics, Effects and Media
7	10/5-10/7	Chapter 14: JavaFX: Graphics, Effects and Media
8	10/12-10/14	Chapter 14: JavaFX: Graphics, Effects and Media Review Question Quiz, Chapter 14 due 10/18 at 11:59 pm
9	10/19-10/21	Chapter 15: Recursion Review Question Quiz, Chapter 15 due 10/25 at 11:59 pm
10	10/26-10/28	Chapter 16: Sorting, Searching and Algorithm Analysis Review Question Quiz, Chapter 16 due 11/1 at 11:59 pm
11	11/2-11/4	Chapter 17: Generics Review Question Quiz, Chapter 17 due 11/8 at 11:59 pm
12	11/9-11/11	Chapter 18: Collections and the Stream API
13	11/16-11/18	Chapter 18: Collections and the Stream API Review Question Quiz, Chapter 18 due 11/22 at 11:59 pm
14	11/23 - Thanksgiving Holiday	Chapter 19: Linked Lists Review Question Quiz, Chapter 19 due 11/29 at 11:59 pm
15	11/30-12/2	Chapter 20: Stacks and Queues Review Question Quiz, Chapter 20 due 12/6 at 11:59 pm
16	12/7 12/9 (no class)	Chapter 20: Stacks and Queues

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_2019-2020v5.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, 2021.

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.