COSC 1437-101/601H3

Programming Fundamentals II

Fall 2025, 8/18/2025 – 12/04/2025

9:30 – 10:50 am, Tuesday and Thursday

STEAM classroom on the first floor: S1.146

Instructor Information:

Name: Faith (Fay) Alexander
Email: Email: fbryan@com.edu
Phone: Office phone: 409-933-8334
Office Location: STEAM 225.55

Office hours in STEAM 225.55

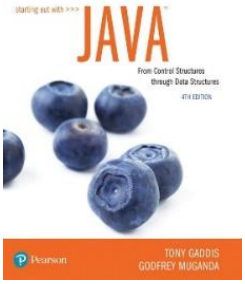
Monday	9:00 – 9:30 am, 12:30 – 2:00 pm
Tuesday	9:00 – 9:30 am, 11:00 am – 12:30 pm
Wednesday	9:00 – 9:30 am, 12:30 – 1:30 pm
Thursday	9:00 – 9:30 am, 11:00 am – 12:30 pm

Other days and times are by appointment with the instructor.

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 1336 Programming I, is a prerequisite.

Course Requirements:

Programming Fundamentals II consists of lectures delivered in the classroom and hands-on exercises, worked by the students in the classroom. Each student has access to a COM personal computer in the classroom. These computers have the necessary software installed for working the hands-on exercises.

Students are also required to complete assignments outside of class. Success in programming depends on a lot of practice. Students should plan to work at least one hour outside of class for every hour spent in class. More time might be necessary. Even though learning programming takes time, it is fun and satisfying to get programs to work properly.

If you have a computer to use at home, you need to download the Java Development Kit (JDK) and the NetBeans Integrated Development Environment to your own computer in order to work the Java programming assignments. Both are free of charge. Instructions are in Brightspace D2L and will be explained in class. If you do not have a computer to use at home, you may use the Tutoring Center on the first floor of the ICB (Industrial Careers Building) next to the STEAM Building, and the COM library. Both have computers with the JDK and Netbeans already installed that you may use during the hours they are open.

Determination of Course Grade/Detailed Grading Formula

COURSE ITEM	**% of Total Grade**
Chapter review quizzes	15%
Chapter Assignments	25%
Tests	60%
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:

Homework must be completed on time. Due dates will not be extended and late work will not be accepted. There are no test re-takes. See the instructor if you have a documented emergency. There is no extra credit in this course.

Attendance Policy:
Attendance in all classroom sessions is required. All students are expected to attend all sessions in the classroom. There are no recordings of lectures and labs. If you cannot attend a class, you are still responsible for that content. Please contact a classmate to find out what you missed, and be sure to meet all deadlines, as they will not be extended.

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.

Cell Phone Usage: Cell phone usage is not allowed during class.

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
2. Demonstrate a basic understanding of object-oriented 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 object-oriented, 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 the student will be referred to the Office of Student Conduct for the appropriate disciplinary action.

Use of Artificial Intelligence tools to write your programs is not allowed, either for assignments or on tests. It is vitally important for the student to learn critical thinking when writing and debugging programs, which is impossible if someone else writes your program for you. By the way, software developers themselves write the code for the AI algorithms using programming languages.

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.

Updates to this Syllabus: The instructor reserves the right to update this syllabus. All substantive changes will be communicated to students as soon as possible, in the classroom and through BrightSpace D2L announcements.

Course Outline:

Week	Date	Topic
1	8/19 – 8/21	Chapters 1 and 2, Introduction to Computers and Java, NetBeans setup, Algorithm Workbench, **Quiz (Review Questions page 21-22)**
2	8/26 – 8/28	Chapters 3 and 4, Decision Structures, Loops, Programming Challenge, **Quiz (Review Questions page 100 – 102)** **Quiz (Review Questions page 175 – 177)** **Quiz (Review Questions page 256-258)**
3	9/2 – 9/4	**Test on Chapters 1-4, in the classroom on Thursday**
4	9/9 – 9/11	Chapter 5, Methods, Programming Challenge, **Quiz (Review Questions page 306 – 308)**
5	9/16 – 9/18	Chapter 6, A First Look at Classes, **Quiz (Review Questions page 389 – 391)**
6	9/23 – 9/25	Chapter 6, Programming Challenge
7	9/30 – 10/2	Chapter 7, Arrays and ArrayList Class
8	10/7 – 10/9	Chapter 7, Arrays and ArrayList Class, Programming Challenge, **Quiz (Review Questions page 481 – 486)**
9	10/14 – 10/16	Chapter 8, A Second Look at Classes and Objects, Programming Challenge, **Quiz (Review Questions page 547 – 549)**
10	10/21 – 10/23	**Test 2, Chapters 5-8 in the classroom on Thursday**
11	10/28 – 10/30	Chapter 9, Text Processing and Wrapper Classes, Programming Challenge, **Quiz (Review Questions page 601 – 603)**
12	11/4 – 11/6	Chapter 9, Text Processing and Wrapper Classes, Programming Challenge
13	11/11 – 11/13	Chapter 10 Inheritance
14	11/18 – 11/20	Chapter 10 Inheritance, Programming Challenge, **Quiz (Review Questions pages 690 – 693)**
15	11/25	Chapter 10 Polymorphism, Interfaces, Lambda Expressions.
16	12/2	**Test on Chapters 9 and 10, in the classroom on *Tuesday***

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://www.com.edu/student-services/student-handbook.html**.** *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 careers. 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:
Kimberly Lachney, Student Accessibility Services Coordinator
Phone: 409-933-8919
Email: AccessibilityServices@com.edu
Location: COM Doyle Family Administration Building, Student Success Center

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 permitted to withdraw only six times during their college career by state law. The last date to withdraw from the 1st 8-week session is October 1. The last date to withdraw from the 16-week session is November 14. The last date to withdraw for the 2nd 8-week session is November 25.

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 capacities, and for which the student has failed to withdraw. The issuing of the FN grade is at the discretion of the instructor. The last date of attendance should be documented for submission of an FN grade.

Early Alert Program: The Student Success Center at College of the Mainland has implemented an Early Alert Program because student success and retention are very important to us. 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 Student Success Center who will schedule a meeting with you to see what assistance they can offer in order for you to meet your academic goals.

Resources to Help with Stress:
If you are experiencing stress or anxiety about your daily living needs including food, housing or just feel you could benefit from free resources to help you through a difficult time, please click here https://www.com.edu/community-resource-center/. College of the Mainland has partnered with free community resources to help you stay on track with your schoolwork, by addressing life issues that

get in the way of doing your best in school. All services are private and confidential. You may also contact the Dean of Students office at deanofstudents@com.edu or communityresources@com.edu.

Nondiscrimination Statement:
The College District prohibits discrimination, including harassment, against any individual on the basis of race, color, religion, national origin, age, veteran status, disability, sex, sexual orientation, gender (including gender identity and gender expression), or any other basis prohibited by law. Retaliation against anyone involved in the complaint process is a violation of College District policy.