



## **COSC 1336 (101CL)**

### **Programming Fundamentals I**

**Spring 2022, 1/18/2022 – 5/13/2022**

**9:30 – 10:50 Monday and Wednesday**

**STEAM classroom on the first floor: S1.146**

#### **Instructor Information:**

**Name:** Faith (Fay) Alexander

**Email:** fbryan@com.edu

**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, 11:00am – 12:30 pm, S225.55

Tuesday, 9 – 9:30am, 11:00am – 12:30 pm, S225.55

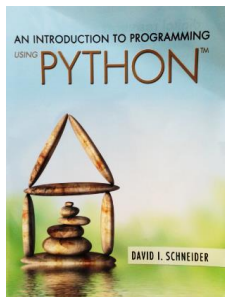
Wednesday, 9 – 9:30am, 11:00am – 12:30 pm, S225.55

Thursday, 9 – 9:30am, 11:00am – 12:30 pm, S225.55

Other days and times are by appointment with the instructor.

#### **Course Description:**

This course introduces the fundamental concepts of structured programming and provides a comprehensive introduction to programming for computer science and technology majors. Topics include software development methodology, data types, control structures, functions, data structures, and the mechanics of running, testing, and debugging software programs. This course assumes computer literacy. This course is included in the Associate of Science Degree for Computer Science, in COM's Programming Certificate and in the Occupational Skills Award for SQL Server Database Fundamentals.



#### **Required Textbook:**

An Introduction to Programming Using Python™

David I. Schneider, University of Maryland

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ISBN-13: 9780134089454

The textbook is required. The textbook comes with an access code to MyProgrammingLab, which is a web-based tool that provides practice exercises and immediate feedback to the student. Online versions of MyProgrammingLab usually do not have this access code. The website, title and course ID for MyProgrammingLab will be documented in Blackboard.

A hardcopy textbook is recommended and is stocked in the bookstore. Throughout the course, you will regularly refer to specific sections and exercises in your textbook while writing software programs.

**Course Requirements:**

Programming Fundamentals I 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, as well as work practice exercises listed for each chapter. 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 will need to download Python from the website <http://www.python.org/download>. Detailed instructions are in Blackboard. Python is open-source software and is free of charge. The Integrated Development Environment (IDLE) is also included in the download and is the tool we will use for this course. If you do not have a computer to use at home, the Innovations Lab in TVB 1324 and the COM library have computers with Python/IDLE installed that you may use during the hours they are open.

**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 programming assignments, tests, and Group Project assignments as described in the grading formula below.

COURSE ITEM	% of Total Grade
Chapter Assignments	30%
Tests	60%
Group Projects	10%
<b>Total</b>	<b>100%</b>

**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:

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.

**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.

You may communicate with the instructor through email, phone and during student hours.

Student Learner Outcome	Maps to Core Objective	Assessed by Assignment(s)
1. Describe how data are represented, manipulated, and stored in a computer.	Critical Thinking	Chapter 2 Programming Assignment
2. Categorize different programming languages and their uses.	Critical Thinking	Test 1
3. Understand and use the fundamental concepts of data types, structured programming, algorithmic design, and user interface design.	Empirical and Quantitative Skills	Test 1
4. Demonstrate a fundamental understanding of software development methodologies, including modular design, pseudo code, flow charting, structure charts, data types, control structures, functions, and arrays.	Critical Thinking	Chapter 3 Programming Project
5. Develop projects that utilize logical algorithms from specifications and requirements statements.	Empirical and Quantitative Skills	Chapter 4 Programming Project
6. Demonstrate appropriate design, coding, testing, and documenting of computer programs that implement project specifications and requirements.	Critical Thinking	Chapter 4 Programming Project
7. Apply computer programming concepts to new problems or situations.	Communication (written)	Chapter 6, Turtle Graphics Assignment

### 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	Due Date	Topic
1	1/19	Introduction and Syllabus Review. Chapter 1 – An Introduction to Computing and Problem Solving Downloading Python and Setting Up IDLE
2	1/24 – 1/26	Chapter 1 (continued) Programming logic
3	1/31 – 2/1	Chapter 2 -Variables, Input and Output Assignment statements, strings
4	2/7 – 2/9	Chapter 2 – Lists, printing and interactive input
5	2/14 – 2/16	Test Review and Test Number 1. Covered are Chapters 1 and 2, emphasizing logic, variables, input and output, lists and list operations.
6	2/21 – 2/23	Chapter 3 - Structures that Control Flow
7	2/28 – 3/2	Chapter 3 (continued) ,
8	3/7 – 3/9	Chapter 4 - Functions
	3/14 – 3/16	SPRING BREAK
9	3/21 – 3/23	Chapter 4 (Functions continued)
10	3/28 – 3/30	Test Review and Test Number 2. Covered are Chapters 3 and 4, emphasizing control structures and functions
11	4/4 – 4/6	Chapter 5 – Processing Data
12	4/11 – 4/13	Chapter 5 – Processing Data (continued), Chapter 6 - Exception Handling, Random Values
13	4/18 - 4/30	Chapter 6 – Turtle Graphics
14	4/25 – 4/27	Chapter 7 - Classes
15	5/2 – 5/4	Chapter 7 - Classes
16	5/9 – 5/11	Test Number 3

## 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](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. [https://build.com.edu/uploads/sitecontent/files/student-services/Student\\_Handbook\\_2019-2020v5.pdf](https://build.com.edu/uploads/sitecontent/files/student-services/Student_Handbook_2019-2020v5.pdf)

**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 Holly Bankston at 409-933-8520 or [hbankston@com.edu](mailto:hbankston@com.edu). The Office of Services for Students with Disabilities is located in the Student Success Center.

**Counseling Statement:** Any student needing counseling services is requested to please contact Holly Bankston in the student success center at 409-933-8520 or [hbankston@com.edu](mailto:hbankston@com.edu). Counseling services are available on campus in the student center for free and students can also email [counseling@com.edu](mailto:counseling@com.edu) to set up their appointment. 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 permitted to withdraw only six times during their college career by state law. The last date to withdraw from the 1<sup>st</sup> 8-week session is March 2. The last date to withdraw from the 16-week session is April 25. The last date to withdraw for the 2<sup>nd</sup> 8-week session is May 4.

**F<sub>N</sub> Grading:** The F<sub>N</sub> grade is issued in cases of *failure due to a lack of attendance*, as determined by the instructor. The F<sub>N</sub> 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 F<sub>N</sub> grade is at the discretion of the instructor. The last date of attendance should be documented for submission of an F<sub>N</sub> 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.

**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](http://www.com.edu/coronavirus). In compliance with Governor Abbott's May 18 Executive Order, face

coverings/masks will no longer be required on COM campus. Protocols and college signage are being updated. We will no longer enforce any COM protocol that requires face coverings. We continue to encourage all members of the COM community to distance when possible, use hygiene measures, and get vaccinated to protect against COVID-19. Please visit [com.edu/coronavirus](http://com.edu/coronavirus) for future updates.

**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 Blackboard announcements.