# COSC 1436.201CL
## Programming Fundamentals I
### Fall 2023, 8/28/2023 – 12/15/2023
### 7:30 p.m. – 8:50 p.m., Monday and Wednesday
### STEAM classroom on the first floor: S1.146

**Instructor Information:**
**Name:** Joe Mills, M.S., PMP
**Email:** jmills12@com.edu
**Contact phone**: 281-513-5919
**Office Location: 323 – Adjunct Workroom**

**Student hours and location:**
I will be available in-person approximately 20 minutes prior to and after our Monday and Wednesday classes in room S1.146.

If you need an alternate time, please send me an email to schedule one-on-one time. Make sure you plan ahead and send an email at least 48 hours prior to the time you are requesting.

**Required Textbook/Materials:**
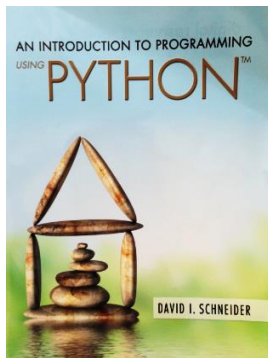


An Introduction to Programming Using Python™
David I. Schneider, University of Maryland
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ISBN-13: 9780134089454

The textbook is required. Throughout the course, you will regularly refer to specific sections and exercises in your textbook while writing software programs.

**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.

**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 online in BrightSpace D2L. 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 Tutoring Center in the Industrial Careers Building and the COM library have computers with Python/IDLE installed that you may use during the hours they are open.

**Determination of Course Grade/Detailed Grading Formula:**
The grade is determined by the completion of the programming assignments, tests, and Blackboard Discussion assignments as described in the grading formula below.

| COURSE ITEM | % of Total Grade |
|---|---|
| Chapter Assignments (typically 2 programs/assignments per week) | 30% |
| Tests (3 tests, each worth 20% of total grade) | 60% |
| Classroom / Brightspace 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:**
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. (Faculty may add additional statement requiring monitoring and communication expectations via D2L or other LMS)

| 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 | Dates | Topic |
|---|---|---|
| 1 | 8/28 – 8/30 | Introduction and Syllabus Review.<br>Chapter 1 – An Introduction to Computing and Problem Solving<br>Downloading Python and Setting Up IDLE |
| 2 | Labor Day Holiday (9/4) - 9/6 | Chapter 1 (continued)<br>Programming logic |
| 3 | 9/11 – 9/13 | Chapter 2 -Variables, Input and Output<br>Assignment statements, strings |
| 4 | 9/18 – 9/20 | Chapter 2 – Lists, printing and interactive input |
| 5 | 9/25 – 9/27 | **Test Review and Test Number 1.** Covered are Chapters 1 and 2, emphasizing logic, variables, input and output, lists and list operations. **Classroom only.** |
| 6 | 10/2 – 10/4 | Chapter 3 - Structures that Control Flow |
| 7 | 10/9 – 10/11 | Chapter 3 (continued) , |
| 8 | 10/16 – 10/18 | Chapter 4 - Functions |
| 9 | 10/23 – 10/25 | Chapter 4 - Functions |
| 10 | 10/30 – 11/1 | Test Review. **Test Number 2 on Wednesday. Classroom only.** Covered are Chapters 3 and 4**.** |
| 11 | 11/6 – 11/8 | Chapter 5 – Processing Data (continued), Chapter 6 – Exception handling, Random Values |
| 12 | 11/13 -  11/15 | Chapter 6 – Turtle Graphics |
| 13 | 11/20- 11/22 | Chapter 7 – Classes and instances |
| 14 | 11/27 – 11/29 | Chapter 7 – Classes and instances |
| 15 | 12/4 – 12/6 | Chapter 7  - Classes, Review for Test |
| 16 | 12 /11 | **Test Number 3, Classroom only.** Covered are selected sections in Chapters 5, 6 and 7. |

# 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/docs/Student_Handbook_2023-2024_v2.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 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 at 409-933-8919 or klachney@com.edu. The Office of Services for Students with Disabilities is located in the 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 11. The last date to withdraw from the 16-week session is November 28. The last date to withdraw for the 2nd 8-week session is December 7.

**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.

**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.