

CMSC 210 Computers and Programming, Fall 2021
Course Syllabus

Course Listing Information:

Catalog listing:	CMSC 210 Computers and Programming
Course Level:	Undergraduate & Continuing Education
Prerequisites:	None
Instructor:	Debra Duke
Email:	s2dmduke@vcu.edu
Classroom:	Online
Class website:	Canvas

Key Course Dates:

For more details, visit the [Academic Calendar Page](#) .

Regular Office Hours and Contact Information:

I will hold live weekly office hours via Zoom on Tuesdays from 11am – 12 noon, or by appointment.

I can also be contacted via email. I will try to respond to your email within 24 hours. If I will be unavailable for a longer stretch of time, I will let you know in a Canvas announcement. Please use email for any personal issues or questions.

Interaction between students is also encouraged and will be promoted via online Discussion Forums throughout the course. Course questions of general interest should be posted to the appropriate discussion forum so that all students have an opportunity to respond and can benefit from all the responses.

Course Overview (Catalog Course Description):

Semester course; 3 lecture hours (delivered online). 3 credits. Introduction to object-oriented programming using Python. The course introduces students to structured programming logic and design techniques. The course content also includes instruction in critical thinking and problem-solving skills using contemporary tools. Specific topics include flowcharting, pseudocode and program control structures, including sequence, selection and repetition.

This course is part of a Baccalaureate Certificate in the Fundamentals of Computing which is open to all VCU undergraduates regardless of major. To earn this certificate, students must complete the following four courses:

- CMSC 210: Computers and Programming (prerequisite)
- CMSC 320: Software Engineering and Web Development
- CMSC 330: Data Science Skills
- CMSC 340: Cybersecurity Skills

Students who complete the three courses CMSC 210, CMSC 330, and CMSC 340 are eligible for the [Capital CoLab](#) Digital Technology Credential, which gives students exclusive hiring advantages with companies in the Capital Region.

Course Learning Goals:

1. Upon successful completion of the course, the student will be able to:
2. Define fundamentals of computer architecture
3. Analyze a computer programming problem using good problem-solving techniques that can be used with any programming language
4. Plan the logic for the program using structured methods
5. Design and write structured programs using Python
6. Test and debug a program
7. Describe the fundamental organization of programs
8. Use basic logic constructs that will serve as models for future program development
9. Include thorough documentation throughout programs
10. Correctly use arithmetic operations, input/output, accumulating totals, and comparing operations within a program
11. Use correct selection programming techniques
12. Use correct looping programming techniques
13. Create and call value-returning and void functions

Textbooks and Other Learning Materials

- a. The main textbook for this course is Programming Logic and Design, 9th Edition, Comprehensive by Joyce Farrell, published by Cengage Learning.
The ISBNs for the eBook are: ISBN-10: 1337669407 | ISBN-13: 9781337669405
This textbook is available at multiple sites for purchase or rental, including the [Cengage Learning website](#) where a four-month rental of the eBook version is offered for \$34.49.
This text provides a language-independent introduction to Computer Programming
- b. Videotaped lectures for Programming Logic and Design can be found [here on youtube](#).
- c. Python-specific computer programming tutorials and other learning materials created by your instructor or available online, such as the [W3Schools Python Tutorial](#)
- d. Codio Interactive Tutorial: Computers and Programming
This tutorial is focused primarily on problem-solving and algorithm analysis and design. It is tightly integrated with our Canvas course site but its interactive content and assignments are delivered via the Codio platform. Links to Codio assignments will be accessed exclusively from within our Canvas course site and grades for work completed and submitted using Codio will be automatically uploaded to your Canvas Gradebook. Please note that access to Codio will require a semester subscription which costs forty dollars. More information about Codio and instructions on how to properly subscribe will be provided later in a separate communication.

Online Course Delivery Structure:

This is a 15-week course conducted completely online. All course information and assignments (including Codio assignments) will be accessed through Canvas. Student assignments and projects will be submitted online via Canvas, Codio, and Gradescope.

Course content (readings, pre-recorded videos, discussions, quizzes, Codio assignments, Python projects, etc.) will be organized and delivered through a sequence of chronologically organized Canvas modules covering different topics..

Online Learning Considerations:

It is important to visit the course site on Canvas regularly to check the course schedule, familiarize yourself with the course content and assignment due dates.

Here are some tips for success in this and other online classes you may be taking:

- When taking online courses, your self-motivation and self-pacing are absolutely critical.
- Stay abreast of the course schedule and allow yourself enough time to complete assignments on time.
- Make yourself a calendar with all of your due dates across ALL of your courses.
- Plan for when you will work on each one for completion in advance of the due dates.
- Plan Ahead!! Study as you go instead of at the last minute!

Graded Course Work:

Graded course items and their contribution toward the final course grade will consist of the following:

Course Grading Scheme:

Your final letter grade for the course will be calculated based on your total percentage points earned from all the above graded course work items, as follows:

Category	% weight
Discussion Participation	5
Codio Assignments	20
Quizzes	25
Python Projects	40
Final Project	10

Letter Grading scheme:

- A: $\geq 90\%$
- B: $\geq 80\%$ and $< 90\%$
- C: $\geq 70\%$ and $< 80\%$
- D: $\geq 60\%$ and $< 70\%$
- F: $< 60\%$

General Instructions:

1. All projects and programming assignments must be uploaded to Canvas on or before the due date specified. Only files submitted to Canvas on or before the due date will be considered for grading.
2. Requests to re-grade projects must be made with two weeks from the date the project grade is posted in Blackboard, requests after this time will be denied.
3. No assignments will be accepted late unless special permission has been given prior to the due date.
4. No makeup assessments will be given unless special permission has been given prior to the date of the assessment.
5. Request to adjust scores or re-grade assessments must be made the week in which the assessment is returned, requests after this time will be denied.
6. All programs are to be individual efforts. This does not preclude the discussion of techniques to be used or ideas for algorithms. In addition, it is permissible to help each other find syntax errors or minor logic errors. However, the actual correction of such errors is up to the author of the program. Programs will be run through a plagiarism detection program to ensure individual effort.
7. **Do your own work. Plagiarism applies to source code as with any other intellectual property. Plagiarized code is a form of cheating and will be treated as such.**

IMPORTANT NOTE ON PLAGIARISM:

All projects must be individual efforts. You cannot submit code you copied from the Internet or from another student's work. Discussions with fellow students about techniques to be used or ideas for algorithms are perfectly fine. In addition, it is permissible to help each other find syntax errors or minor logic errors. However, the actual correction of such errors must be made by the student submitting the project. Programs will be run through a plagiarism detection program to ensure individual effort.

Honor System - Upholding Academic Integrity:

The VCU Honor System policy describes the responsibilities of students, faculty and administration in upholding academic integrity. According to this policy, "Members of the academic community are required to conduct themselves in accordance with the highest standards of academic honesty, ethics and integrity at all times." Students are expected to read the policy in full and learn about requirements specified on the [VCU Honor System page](#).

More on Discussion Forums:

Discussion Forums offer an important vehicle for promoting course community in an online course. A "Discussion Forum" is a Web-based conferencing system designed to serve as a discussion environment for students and the instructor to discuss course issues throughout the term. In our course, students will access the forums through the Discussions link found on the home page of the Canvas course.

Discussion forums will be assigned on various topics covered in the course. Students will be required to contribute to the forum discussions during the particular time period specified in the Weekly Schedule. All forum contributions must be written in a business professional

fashion, using correct spelling, complete sentences, and appropriate grammar. Forum contributions not following this format will be removed.

For each forum, students will typically also be required, in addition to posting their own contribution, to read and comment on contributions made by fellow students. Content contributed to these forums is expected to reflect thought and promote further interest in the topic, not just respond for the sake of meeting the participation requirement.

The instructor is the gatekeeper of the forums and reserves the right to delete any student postings that are considered inappropriate or irrelevant to the discussions.

Computer Literacy and Competencies Required

Success in the online learning environment requires working knowledge of computer and internet skills. Basic competencies expected of students in this course include, but are not limited to:

(a) Knowledge of basic computer hardware and software (keyboard, mouse/finger pad)

(b) Knowledge of basic computer hardware and software (keyboard, mouse/finger pad)

(c) Ability to perform computer operations such as:

- Managing files and folders: save, name, copy, move, backup, rename, delete, check properties
- Using software applications, such as Word, PowerPoint, Excel, etc.
- Knowledge of copying and pasting, spell-checking, saving files in different formats
- Sending and downloading email attachments

(d) Internet skills and ability to perform online research using various web browsers and search engines.

(e) Ability to use online communication tools, such as email (create, send, receive, reply, print, send/receive attachments), discussion boards (read, search, post, reply, follow threads), chats, and messengers.

Technical Support:

If you encounter any technical difficulties related to Canvas or any other course related technologies, you should:

- Clear your browser's cache.
- Shutdown and restart your computer.
- If your problems persist, contact the IT support center: itsc@vcu.edu or 804-828-2227.
- Codio technical support is available via chat when you log into your Codio account.

More syllabus information:

Students must also visit <http://go.vcu.edu/syllabus> and review the full university syllabus statement, which also includes information on safety, registration, more details on the VCU Honor Code, student conduct, course withdrawal, and more.