CMSC 210 Computers and Programming, Spring 2021

Dr. John A. Palesis

Course Syllabus

1. **Course Listing Information:**

Catalog listing: CMSC 210 Computers and Programming
Course Level: Undergraduate & Continuing Education
Prerequisites: None
Instructor: John A. Palesis, Ph.D.
email: japalesis@vcu.edu
Classroom: Online
Class website: Canvas

2. **Key Course Dates:**

Jan 25:   Classes begin
Feb 8:   Last day to drop a course
May 5:   Last day of classes
May 5:   Last day to withdraw from a course with a mark of "W"
May 6 – 13: Final examinations

For more details, visit the Academic Calendar Page.

3. **Regular Office Hours and Contact Information:**

I will hold live weekly office hours via Zoom on Mondays 1:00 pm – 2:00 pm & Thursdays 5:30 pm – 6:30 pm. I will provide the links to these meetings once our course begins.

I can also be contacted via email at japalesis@vcu.edu. I will try to respond to your email within 48 hours. If I will be unavailable for a longer stretch of time, I will let the class know in a Canvas announcement.

4. **Course Overview (Catalog Course Description):**

This is an online 3-credit semester course. It introduces students to structured programming logic and design techniques, including critical thinking and problem-solving, using

contemporary learning tools. Specific topics include flowcharting, pseudocode, program control structures (including sequence, selection, and repetition), lists, and basic object-oriented concepts. We will be programming in Python, an easy to use and widely popular programming language. The course has been specifically developed for learners who have no computer science background. Computer science majors are not allowed to take this course.

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**

Note also that 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.

You can view descriptions of these courses on the VCU Bulletin Page.

5. **Course Learning Goals:**

Upon successful completion of the course, the student will be able to:

a. Define the fundamentals of computer architecture
b. Conduct algorithm analysis and design using pseudocode and flowcharts
c. Implement a computer program using Python structured programming, including: arithmetic operations, input / output functions, accumulating totals, decisions, loops, functions, and basic object-oriented programming structures
d. Use an IDE (Interactive Development Environment) to create, test, debug, and fully document a computer program

6. **Textbooks and Other Learning Materials:**

a) The main textbook for this course is *Programming Logic and Design, 8th Edition, Comprehensive* by Joyce Farrell, published by Cengage Learning. **The ISBN for the book is: 978-1-285-77671-2**.
   - This text provides a language-independent introduction to Computer Programming.

b) Python-specific computer programming tutorials created by the instructor or freely available online (such as the W3Schools Python Tutorial) will also be used regularly.

c) 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 and grades for work completed and submitted using Codio will be automatically uploaded to your Canvas Gradebook. Please note that access to Codio **requires a semester subscription which currently costs $40**. More information about Codio and instructions on how to properly subscribe will be provided later in a separate communication through Canvas.

7. **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, the new VCU learning management system. Student assignments and projects will be submitted online via Canvas and Codio.

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. New modules will usually be added and made accessible to students on a weekly basis. Modules will typically include an overview of the topic being covered that should serve as a study guide for that topic. Modules will be accessible from the *Modules* link on the Canvas course home page.

8. **Online Learning Considerations**:

Many students take an online class because they believe it will be "easy" but survey responses from students who have taken an online class describe the experience as "harder than expected." This is due to the unique nature of the online environment. **It is important to visit the course site on Canvas regularly to check the course schedule and 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!

9. **Graded Course Work:**

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

   a. Online quizzes testing your understanding of reading assignments – 25% of the course grade
   b. Discussion Forum Participation (see details below) – 5% of the course grade
   c. Codio Assignments – 20% of the course grade
   d. Python Programming Projects – 40% of the course grade
   e. Final Project – 10% of the course grade

10. **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:

Total Percentage Points Earned	Letter Grade
>= 90%	A
>= 80% and < 90%	B
>= 70% and < 80%	C
>= 60% and < 70%	D
< 60%	F

11. **Assignment Deadline Policy:**

All projects and programming assignments must be uploaded to Canvas on or before the due date specified in the assignment description. No assignments will be accepted late unless special permission has been granted prior to the due date. Contact me via email If you have a serious issue preventing you from submitting your assignment on time.

Any project grading issues or requests to re-grade projects must be communicated to me via email within two weeks from the date the project grade is posted in Canvas - requests after this time will be denied.

12. **IMPORTANT NOTE ON PLAGIARISM:**

The projects you submit **MUST BE 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.**

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.

13. <u>Honor System - Upholding Academic Integrity:</u>

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](#).

14. <u>More on Discussion Forums:</u>

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.

There will be three core Discussion forums which will remain open throughout the course:

a) Course Q&A: this discussion forum will be used to ask questions and post information, suggestions, issues, etc. about the course in general.
b) Python Q&A: this forum will provide a platform for discussing and sharing information about the Python programming language specifically.
c) Codio Q&A: this forum will provide a platform for discussing the Codio tool and the assignments we will complete using this tool.

Discussion forums will also be assigned on various other 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.

15. 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. 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

    c. Internet skills and ability to perform online research using various web browsers and search engines.

    d. 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.

16. <u>Technical Support:</u>

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

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

17. <u>More syllabus information:</u>

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.