



AN HONORS UNIVERSITY IN MARYLAND

## CMSC 201 – Spring 2017 Syllabus

### Section 1: Course Information

<b>Course Number</b>	CMSC 201
<b>Course Name</b>	Introduction to Computer Science I for Majors
<b>Locations</b>	Dependent on Course Section
<b>Term</b>	Spring 2017
<b>Instructors</b>	Katherine Gibson, Krystle Wilson
<b>Course Website</b>	<a href="http://www.csee.umbc.edu/courses/undergraduate/201/spring17/">http://www.csee.umbc.edu/courses/undergraduate/201/spring17/</a>
<b>Contact Information</b>	See course website
<b>Office Hours</b>	See course website (and by appointment)
<b>Textbook</b> (highly recommended)	Python for Everyone (2nd edition) by Cay Horstmann and Rance Necaise

### Section 2: Course Overview

An introduction to computer science through problem solving and computer programming. Selected topics in computer science are introduced through programming projects in the Python language running under a UNIX operating system. The core material for this course includes functions, strings, loops, and files. Programming techniques covered by this course include modularity, abstraction, top-down design, specifications, documentation, debugging, and testing. No prior programming experience is required.

### Section 3: Course Objectives

By the end of this course, students should be able to:

1. Solve programming problems using a modern coding language such as Python.
2. Define key concepts in programming including loops, lists, functions, and selection structures.
3. Make use of problem-solving skills, especially in the use of computers to solve real-world problems.
4. Explain and apply the proper steps in developing and creating a computer program.
5. Demonstrate the ability to debug a program so it runs successfully and solves the problem.
6. Use UMBC's UNIX system to create, test, and execute Python programs.
7. Transfer the skills learned to achieve success in future courses, projects, and employment.

## Section 4: Grading Criteria

<u>Type</u>	<u>Quantity</u>	<u>Points Per</u>	<u>Subtotal</u>
Homeworks	6	40	240
Projects	3	80	240
Surveys	4	5	20
Labs*	13	10	100
Midterm	1	200	200
Comprehensive Final	1	200	200
<b>Total</b>			<b>1000</b>

\* For Labs, only the 10 highest scores are used in calculating the final grade.

### Grading Scale:

900 - 1000	A	
800 - 899	B	Required for CMSC & CMPE (entered Fall 2016)
700 - 799	C	Required for CMPE (entered prior to Fall 2016)
600 - 699	D	
< 600	F	

## Section 5: Course Policies

**Late Work:** No late work will be accepted in this course. All assignments must be submitted by 8:59:59 PM on the day due. The lab assignments are to be done during your weekly discussion session, so attendance is mandatory.

**Grade Appeals:** You have one week after assignment grades are sent out (or exams are handed back) to appeal for a regrade or to request that your grade be changed.

**Course Preparedness:** You are responsible for all material covered in the lecture, even if it is not in the course slides or web pages. You are responsible for the material in the course slides or web pages, even if it is not covered during lecture.

## Section 6: Attendance

You are expected to attend all lectures and your weekly discussion session. Although lecture attendance is not a direct component of your grade, students who attend class generally perform more highly than their non-attending peers. The lab assignments are to be done during your weekly discussion session, so lab attendance is mandatory; arriving more than 15 minutes late for lab means you will receive a zero for that week's lab.

All discussion sections meet in the Engineering Building (ENG). You **MUST** attend the discussion section you are registered for in order to receive credit for the labs.

## Section 7: Communication

All communication with CMSC 201 staff should be through your UMBC email as per the dictation of the Family Educational Rights and Privacy Act (FERPA). Email subject lines must contain the course designation, your section number and a meaningful title. (For example, "CMSC 201, Sec 3, HW4 Question" is a good subject line. However, "201 Question" is not.) Course staff may not respond to emails without proper subject lines.

Course material and information about assignments and exams will be posted on the course website. It is your responsibility to keep track of deadlines and assignments, and to check the website regularly.

## **Section 8: Academic and Technology Resources**

Students have several avenues for receiving help on homeworks, labs, and with general content. Your first stop should be the TAs: they hold office hours in ITE 240 Monday through Friday. Please note that you may attend the office hours of any TA, not just the TA whose discussion section you attend. You may also visit the office hours of any of the instructors. The office hour details can be found on the course website.

You can also visit the Learning Resources Center (LRC), where you can find tutoring for CMSC 104, CMSC 201, CMSC 202, and CMSC 203 by appointment. Each appointment is 50 minutes once a week, with a small group of other students taking the same course. To sign up for CMSC tutoring, fill out their [enrollment form](#).

For technology support, you can contact the Technology Support Center (TSC) on the first floor of the Albin O. Kuhn Library. For more information, call 410-455-3838 or check out the website: <http://doit.umbc.edu/tsc/>

## **Section 9: Mental Health Resources**

Diminished mental health can interfere with optimal academic performance. The source of symptoms might be related to your course work; if so, please speak with your instructor. However, problems with other parts of your life can also contribute to decreased academic performance. UMBC provides cost-free and confidential mental health services through the Counseling Center to help you manage personal challenges that threaten your personal or academic well-being.

Remember, getting help is a smart and courageous thing to do -- for yourself and for those who care about you. For more resources get the Just in Case mental health resources Mobile and Web App. This app can be accessed on this web page: <http://counseling.umbc.edu/justincase>

The UMBC Counseling Center is in the Student Development & Success Center (between Chesapeake and Susquehanna Halls). Phone: 410-455-2472. Hours: Monday-Friday 8:30am-5:00pm.

## **Section 10: Students with Accommodations**

UMBC is committed to eliminating discriminatory obstacles that may disadvantage students based on disability. UMBC complies with federal legislation for individuals with disabilities (Section 504 of the Rehabilitation Act of 1973, the Americans with Disabilities Act of 1990, and the ADA of 2009) that offers reasonable accommodations to qualified students with disabilities. Student Disability Services (SDS), formerly Student Support Services, is the UMBC department designated to:

- receive and maintain confidential files of disability-related documentation,
- certify eligibility for services,
- determine reasonable accommodations,
- develop with each student plans for the provision of such accommodations, and
- serve as a liaison between faculty members and students regarding disability-related issues.

If you have a documented disability and need to request accommodations, please refer to the SDS website at <http://sds.umbc.edu> or contact the office by phone at 410-455-2459, via email at [disability@umbc.edu](mailto:disability@umbc.edu), or in person in Math/Psychology Room 212. If you require accommodations for this class, make an appointment to meet with your instructor to discuss your SDS-approved accommodations.

## Section 11: Guided Review Section

In the Spring 2017 semester, the department has designated one discussion sections as being available only to students with no prior programming experience. In addition to only being open to new programmers, this section also requires that its students attend an hour-long guided review session (GRS) with a TA each week. This hour of required guided review is in addition to the hour of required computer lab practice and the two 75-minute lectures each week. The section covers the same material at the same pace, and with the same evaluations (test, homeworks, labs, etc.).

The guided review session (GRS) is required; however, as it is meant to be a review, students are not given a GRS grade each week. Instead, in order to enforce attendance, failure to attend a GRS will result in a zero for that week's lab (even if the student successfully completed the lab). In the interest of fairness, in addition to dropping the three lowest lab grades, three GRS absences will be forgiven.

## Section 12: Academic Integrity

CMSC 201 is a difficult course for many students, and requires a substantial amount of time and effort outside of the classroom. Many of you are learning to code for the first time, and will need to learn new ways of thinking about a problem, new methods for solving a problem, and new techniques for analyzing a problem. Doing the assignments, finding (and fixing) errors and bugs, and improving your coding skills are 100% necessary for you to succeed in computer science.

For this reason, CMSC 201 has very strict rules about academic integrity and student collaboration on all assignments. Cases of academic dishonesty will be dealt with *severely*. If your assignment is found to be "substantially similar" to that of another student, both you and the other student will receive a **grade of 0** for that assignment. Furthermore, all parties concerned will have their prior assignments more closely examined for cheating. A second incident will result in a grade of 'F' for the semester.

We will be using special software to check for cheating. The software is quite sophisticated and has surprised many students in the past. There is no difficulty in comparing every pair of assignments, or comparing assignments submitted to other sections of this course, from previous semesters, or code found online.

Nonetheless, being able to collaborate effectively with other programmers is also an important skill, and we want students to start cultivating it early. To that purpose, we will allow collaboration on some assignments; this will be clearly stated both on the assignment page and in the individual assignment documents. Some will be marked "individual work only," which means you are only allowed to solicit help from the TAs, instructors, and tutors. Other assignments will be marked "collaboration allowed," which means that you will be allowed to work with other current CMSC 201 students (even those in other sections). However, in order to foster individual understanding of the material, there are still restrictions on what collaboration "means" in CMSC 201. See Section 13 of the syllabus for more details.

**Regardless of if an assignment allows collaboration or not, there are some basic rules and restrictions that you should never violate in completing your work. If you have questions about what is acceptable, please contact an instructor or TA. What follows is a *non-exhaustive* list of restrictions for completing your assignments in this course.**

- **You may not download or obtain anyone else’s work.**
  - You should think carefully about the assignment, and the assignment you turn in should be entirely a product of your own understanding of the material.
  - You may not google or search for the solution to an assignment, even if it’s “only for reference,” even if you put it aside before programming, and even if that code is not from another student.
  - You may not copy code other than that provided in the course materials (slides, book, labs, etc.).
  - You may not purchase or otherwise contract someone else to do the assignment (in whole or in part) for you. If we find that you have done so, it will result in an automatic ‘F’ in the course.
- **You may not share or upload the work you do on this course’s assignments (homeworks, projects, labs, etc.).**
  - You may not email code, in whole or in part. Do not even email code to course staff!
  - You may not post screenshots of your code, in whole or in part.
  - You may not post code to public repositories or forums, in whole or in part.
  - You may not allow anyone to access your files. This means **properly protecting your work!** Do not leave your computer unlocked if you step away; do not allow someone to copy code from your monitor; do not give your password to another student.
- **You will be held to UMBC’s Undergraduate Student Academic Conduct Policy.**
  - The details of the policy can be found here: <http://www.umbc.edu/policies/pdfs/iii-1.10.03.pdf>
- **You should come to office hours for assistance.**
  - Come early and often! The day an assignment is due will be very busy!
  - You may go to any office hours, including those held by a TA or instructor other than your own.
  - Part of the learning process of Computer Science is getting stuck – the TAs are there to help answer your questions, and to teach you how to find your own solutions.
  - Make sure you have a specific question, and can explain to the TA what it is you’re having trouble understanding and/or what techniques you’ve already tried to solve your problem.

### Section 13: Collaboration Policy

The restrictions above may seem overbearing and artificial. After all, in the “real world,” computer scientists and programmers aren’t beholden to these rules. In both the industry and in many upper-level CMSC classes, uploading your work, accessing other’s files, googling for solutions, and even using other people’s code are all permitted and encouraged. However, in the “real world,” programmers need to be able to work in both collaborative and independent environments; we’re doing our best to ensure that you will master both skills. To that end, we will be allowing you to collaborate on some assignments this semester.

If you collaborate with another student on any homework or project, you must both fill out a Google form with the details. Your submitted form must include the other student’s name and UMBC email, and a brief description of what the collaboration was about. Even if someone helped you, but you didn’t get a chance to help them (or vice versa), you both still need to fill out the form.

The link for the Google form will be provided on the course website’s Assignments page, and in each collaborative assignment. You must fill the form out within 24 hours of the collaboration occurring (we recommend filling it out immediately, so you don’t forget any details).

“**Writing/typing must be done separately, thinking can be done together.**” is a good rule of thumb if you are working on a collaborative assignment with a classmate. In other words, if the assignment allows collaboration, you can discuss a general solution, but no one should be writing down the details or taking notes. When you finish a collaboration session, all of the ideas and details that were discussed should be contained only in your brain.

Another good rule of thumb is that you should never touch someone else’s keyboard. It can be easy to get carried away -- you just want to help them “fix one thing,” but what you end up doing is typing your code into their assignment.

To give you a better idea of the difference between individual work, collaboration, and violating the Academic Integrity policy, we’ve created a chart with some examples. As always, if you have questions or are unsure if an action would violate the Academic Integrity policy, please ask a TA or instructor.

Action	Allowed for Individual Work	Allowed for Collaborative Work
Getting help from an instructor or TA	<b>Allowed</b>	<b>Allowed</b>
Consulting the official Python documentation You can find it at <a href="https://docs.python.org/release/3.3.2/">https://docs.python.org/release/3.3.2/</a>	<b>Allowed</b>	<b>Allowed</b>
Discussing course topics covered by assignments	<b>Allowed</b>	<b>Allowed</b>
Creating, sharing, or copying notes about course topics	<b>Allowed</b>	<b>Allowed</b>
Getting or receiving help with using GL or the UMBC Linux system	<b>Allowed</b>	<b>Allowed</b>
Comparing output from your assignments As long as you do not look at each other’s code when it’s individual.	<b>Allowed</b>	<b>Allowed</b>
Discussing how to test your code We don’t always tell you every little thing that could go wrong with your code, so working together on this is a great idea.	<b>Allowed</b>	<b>Allowed</b>
Borrowing verbatim from the course slides or book You don’t need to cite your sources if you use the book or slides.	<b>Allowed</b>	<b>Allowed</b>
Working together on practice problems or Interactivities	<b>Allowed</b>	<b>Allowed</b>
Helping someone else debug their code	<b>Not allowed</b>	<b>Allowed</b>
Planning a general design for your program	<b>Not allowed</b>	<b>Allowed</b>
Brainstorming general solutions to the assignment	<b>Not allowed</b>	<b>Allowed</b>
Explaining why you made a specific design decision in your code	<b>Not allowed</b>	<b>Allowed</b>
Looking at someone else’s code on their screen, with their permission	<b>Not allowed</b>	<b>Allowed</b>
Looking at someone else’s code without their permission	<b>Not allowed</b>	<b>Not allowed</b>
Looking at someone else’s code on your screen	<b>Not allowed</b>	<b>Not allowed</b>
Copying someone else’s code	<b>Not allowed</b>	<b>Not allowed</b>
Two (or more) people writing a single solution to an assignment	<b>Not allowed</b>	<b>Not allowed</b>
Collaborating with someone who is not a current CMSC 201 student (This includes siblings, parents, and students from last semester.)	<b>Not allowed</b>	<b>Not allowed</b>
Giving (or receiving) a detailed explanation of a solution	<b>Not allowed</b>	<b>Not allowed</b>
<b>Looking for solutions or help online</b>	<b>Not allowed</b>	<b>Not allowed</b>
Purchasing solutions (This includes paying a tutor to help solve your assignment.)	<b>Not allowed</b>	<b>Not allowed</b>