

Draft - to be completed

CMSC 104 Section 02

Spring 2024

Syllabus

Section 1: Course Information

Course Number	CMSC 104 Section 02
Course Name	Problem Solving and Computer Programming
Locations	Engineering 122
Term	Spring 2024
Instructors	Alfred Arsenault
Contact Information	Email: arsenaul@umbc.edu
Office Hours	Up to 1 hour before lecture if arranged Monday/Wednesday after lecture Virtual appointments by arrangements
Textbook	<i>How to Program, 8th Edition</i> - Paul Deitel and Harvey Deitel
Final Exam	Monday, May 20, 6-8 pm

Section 2: Course Overview

This course will give the student an overview of Computer Science focusing on problem solving and algorithm development. The C programming language will be introduced by covering the beginning chapters of the textbook. The following is a list of the topics that will be covered:

- Introduction to Computer Organization and Architecture
- Data Representation and Memory Usage
- Introduction to Operating Systems
- Problem Solving and Algorithm Development
- Introduction to Software Engineering Using Top-Down Design
- Compilation, Linking, and Execution
- Basic C Programming
- Reuse Based on Algorithm Selection and Design Techniques

Note: This course does not fulfill any of the computer science major or information systems requirements. Students who have taken and received transfer credit for, or who are taking concurrently any programming course in a high-level programming language will not receive credit for CMSC104. The list of such computer programming courses includes, but is not limited to: CSMC 103, 106, 109, 201, 202, and sections of 291 that cover programming topics.

Section 3: Course Objectives

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

1. Solve programming problems using a modern coding language (Python).
2. Define key concepts in programming including loops, lists, and functions, variables, print, input.
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 LINUX 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

Section 5: Course Structure

Lectures and Attendance

Lectures for most of the sections of this course are in person this semester. We will be following whatever the current COVID-19 guidance is given by UMBC in lectures regarding the wearing of masks.

Lectures are where we will go over the most vital information in the course, and we expect you to attend them. I know that the transition from mostly online high school or previous college can be a bit daunting but we must all work together to get back to in-person lectures, which I think are probably far more effective than the online ones.

Office Hours: Office hours will be on a discord server. I will provide the link via email, and I'll add it to the syllabus when we're ready to deploy it to all of the students.

When you go into discord, there will be a bot who/which messages you and asks you for your key, so respond to the bot with !auth <<your key>> which is sent in the email.

Go into office hours and go into the room called "waiting room" and there you can type:

!request [help me for I am lost in the Bugblatter Beast of Traal, or something]

Your TA will see your cry for help, and respond by accepting your request and you will be placed into a voice/video chat with them, also with text and screen sharing capabilities.

Because everything is on a discord server, you may feel like using the DM feature. Ask your TA in your lab section room if it's ok to DM them before doing so.

If you DM a professor, we may respond, but we also may ignore you, so send an email if its important. The reason for this policy is that we can get flooded during project due dates and similar busy times, so DM-ing is not a perfect feature to keep everything straight.

Release of Projects and Homeworks: Release of these assignments will be done through blackboard announcements and probably in the announcement channel on discord as well. They will be links to google documents with the assignment.

Submission will be done through the GL system. We will show you how to log into the system on your first day of class.

Submissions will be due 11:59:59 Fridays in general, but the due date and time will be listed on the assignment as well. The system is automatic, so late assignments will not be accepted.

If you need an extension, ask before the due date and time. Projects are very challenging to new programmers, and you should expect to take multiple days of work, generally from 5-10 hours sometimes up to 20 hours if you are having difficulty. You have two weeks to complete these projects so you need to seek help early, start early, and work until you get stuck, then put it away until the next day, and repeat.

Structure of Midterms and the Final:

We will have two midterm exams for the semester and then a final. The first midterm is worth 75 points and the second one is worth 125 points.

Midterms will be composed of multiple choice, short answer portions asking questions about programming terminology as well as functionality, reading and understanding the function of short snippets of code (less than 10 lines at a time) and writing short pieces of code (ideally around 15 lines of code).

The final exam is a longer version of the midterm exams, with the same components, a multiple choice/ true/false section, short answers, reading code, and then writing code. The exact weight of each of these sections can vary depending on the exact exam written.

Exams are in person this semester, and are in the lecture hall in which your lecture is held during regular lecture times.

Section 6: Course Policies

Late Work: No late work will be accepted in this course. All assignments must be submitted by 11:59:59 PM on the day due. The lab assignments are to be done during your weekly discussion session, so attendance is mandatory.

In order to get an extension on an assignment you should have a valid university excuse, and contact your instructor **before** the due date, unless that is not possible given the nature of the excuse. It is the job of the student to be proactive about due dates and ensuring that all assignments are submitted on time.

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 7: Academic Integrity

Here in CMSC 201, we view academic integrity as vital for two reasons:

- 1) In order to proceed to CMSC 202 and further on in your computer science career, it is absolutely necessary for you to understand and be able to use and compose the basic aspects of programming. Academic integrity infractions mean that you probably have not gained the skills necessary to succeed in future courses.
- 2) The value of the grades of those who do not commit any infractions is lessened when someone can copy code and achieve the same result. In order to protect the hard work of those who honestly attempt the course, we cannot allow academic integrity violations to go ignored.

The reasons that students generally cheat are:

- 1) The course is difficult.
 - a) The course is certainly difficult for those learning to program for the first time. In order to help with this, we try to provide as much office hour, TA, and professorial support as we can.
 - b) There are other tutoring services available at the university.
 - c) Programming is not an easy discipline to master, and the course must reflect the subject. Our intent is never to make the course harder just to do so.
 - d) Our true intention is to make the most reasonable course possible which both accomplishes our objectives and teaches the required skills, but also gives the most people the opportunity to succeed.
- 2) Time management.
 - a) Read the assignments the day they come out. Just reading through an assignment will give you time to think about the problems. You should never start on the due date and expect to finish.
 - b) Start working as soon as possible. Get help on the discord, from TAs and the Professor in order to get your assignments started. Programming involves trying a number of wrong paths before you find the right one, so you can't expect to find the correct solution on the first try.

- c) Get help before the final two days of the assignment. TA office hours are normally extremely busy at these times. Getting help earlier is instrumental to success.
- d) Submit partial work multiple times. This will prevent the 11:59:59 pm submission problems.
- 3) Helping friends.
 - a) While helping out friends is generally a good thing in life, in CMSC 201, it's vital that you not provide too much assistance to your friends, roommates, etc.
 - b) Friends have occasionally stolen code from each other, so it's important to protect your code and your computer. You are responsible for ensuring that your code doesn't end up in someone else's hands.
 - c) If a friend begs for help, direct them to the TAs and Professors, do not take it upon yourself to help them with your own code. Even if you don't realize it, you will probably end up re-coding your project or homework in their files, which results in being caught.
 - d) If a friend continues to ask for code, or obtains your code, you should come to course staff immediately.

Academic Integrity Policy:

- 1) Obtaining, distributing, posting online, reproducing, copying, or otherwise using another student's code, or allowing your code to be used, copied, or reproduced in any manner is a violation of the academic integrity policy.
- 2) Each assignment is its own infraction. This means that if we find multiple assignments during a single scan, then each counts independently.
- 3) The penalty for an academic integrity violation is an F for the course.**
- 4) If we find a student who has posted problems to an online forum, like Chegg, CourseHero, etc, they will receive an F. This is because by posting your problem and getting a solution you're encouraging other students who find it to copy it.
- 5) You are entitled to a meeting to discuss the results of the cheating offenses. We will send an email informing you of the offense and the meeting is generally held either by google meet or in person. The meetings are generally 10-15 minutes, and involve an explanation of the consequences of the offense after you have been given an opportunity to explain.
- 6) We use software to check every student's code versus every other, as well as any code we find online.
- 7) A report is submitted to the ACC (Academic Conduct Committee) after any infraction.
 - a) After a first infraction a report is filed into the AIDB (Academic Integrity Database), but generally no further action is taken, beyond the course penalty.
 - b) A second report, if there is cheating detected in a different course, or in the same course the next semester may result in additional university penalties.

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.**
 - o 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.

- o 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.
- o You may not copy code other than that provided in the course materials (slides, book, labs, etc.).
- o 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.
(This includes paying a tutor to solve your assignment.)
- **You may not share or upload the work you do on this course's assignments (homeworks, projects, labs, etc.).**
 - o You may not email code, in whole or in part. Do not even email code to course staff!
 - o You may not post screenshots of your code, in whole or in part.
 - o You may not post code to public repositories or forums, in whole or in part.
 - o 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 should come to office hours for assistance.**
 - o Come early and often! The day an assignment is due will be very busy!
 - o You may go to any office hours, including those held by a TA or instructor other than your own.
 - o 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.
 - o 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.

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
Getting help from an instructor or TA	Allowed
Consulting the official Python documentation You can find it at https://docs.python.org/release/3.9.0/	Allowed
Discussing course topics covered by assignments	Allowed
Creating, sharing, or copying notes not HW, projects about course topics	Allowed
Getting or receiving help with using GL or the UMBC Linux system	Allowed
Comparing output from your assignments As long as you do not look at each other's code when it's individual.	Allowed
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.	Allowed
Borrowing verbatim from the course slides or book You don't need to cite your sources if you use the book or slides.	Allowed
Working together on practice problems or Interactivities	Allowed
Planning a general design for your program	Not allowed
Helping someone else debug their code	Not allowed
Brainstorming general solutions to the assignment	Not allowed
Explaining why you made a specific design decision in your code	Not allowed
Looking at someone else's code on their screen, with their permission	Not allowed
Looking at someone else's code without their permission	Not allowed
Looking at someone else's code on your screen	Not allowed
Copying someone else's code	Not allowed
Two (or more) people writing a single solution to an assignment	Not allowed
Collaborating with someone who is not a current CMSC 201 student (This includes siblings, parents, and students from last semester.)	Not allowed
Giving (or receiving) a detailed explanation of a solution	Not allowed
Looking for solutions or help online (We check chegg).	Not allowed
Purchasing solutions (This includes paying a tutor to help solve your assignment.)	Not allowed
Sharing code through discord.	Not allowed

Section 7B Academic Integrity – UMBC

Statement of Values for Student Academic Integrity at UMBC

In February 2001, the Faculty Senate affirmed the importance of our values and practices by adopting the Statement of Values for Student Academic Integrity that is placed on most course syllabi:

Academic integrity is an important value at UMBC. By enrolling in this course, each student assumes the responsibilities of an active participant in UMBC's scholarly community in which everyone's academic work and behavior are held to the highest standards of honesty. Cheating, fabrication, plagiarism, and helping others to commit these acts are all forms of academic dishonesty, and they are wrong. Academic misconduct could result in disciplinary action that may include, but is not limited to, suspension or dismissal.

The purposes of higher education are the learning students and faculty undertake, the knowledge and thinking skills developed, and the enhancement of personal qualities that enable students to be strong contributing members of society. In a competitive world, it is essential that all members of the UMBC community uphold a standard that places integrity of each student's honestly earned achievements above higher grades or easier work dishonestly sought.

All members of the UMBC community are expected to make a commitment to academic honesty in their own actions and with others. Academic misconduct can result in disciplinary action that may include suspension or dismissal. The following are examples of academic misconduct that are not tolerated at UMBC:

- **Cheating:** Using or attempting to use unauthorized material, information, study aids, or another person's work in any academic exercise.
- **Fabrication:** Falsification or invention of any information or citation in an academic exercise.
- **Facilitating academic misconduct:** Helping or attempting to help another student commit an act of academic misconduct.
- **Plagiarism:** Knowingly, or by carelessness or negligence, representing as one's own, in any academic exercise, the intellectual or creative work of someone else.
- **Dishonesty:** Lack of truthfulness or sincerity when interacting with the faculty member regarding an academic exercise

To this end, UMBC undergraduate students also adopted the following Undergraduate Honor Statement as it describes the high standards to which everyone in the community will be held:

I hereby assume the responsibilities of an engaged member in a scholarly and civic community in which academic work and behavior are held to the highest standards of honesty. It is my

active participation that affirms these principles and gives them true meaning as well as value in my education. I realize that by committing acts of dishonesty I hurt myself and place an indelible mark on the reputation of UMBC. Therefore, I will not cheat, fabricate materials, plagiarize, or help another to undertake such acts of academic dishonesty, nor will I protect those who engage in acts of academic dishonesty.

For more information on the topic of Academic Integrity, visit:

<https://academicconduct.umbc.edu/>

Section 8: Academic and Technology Resources

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: Title IX

See <https://ecr.umbc.edu/sample-title-ix-responsible-employee-syllabus-language/> for full details

- [Accessibility and Disability Accommodations, Guidance and Resources \(required\)](#)
- [Sexual Assault, Sexual Harassment, Gender Based Violence and Discrimination \(required\)](#)
- [Pregnant and Parenting Students](#)
- [Religious Observances & Accommodations](#)
- [Hate, Bias, Discrimination and Harassment](#)

Accessibility and Disability Accommodations, Guidance and Resources (required)

Accommodations for students with disabilities are provided for all students with a qualified disability under the Americans with Disabilities Act (ADA & ADAAA) and Section 504 of the Rehabilitation Act who request and are eligible for accommodations. The Office of Student Disability Services (SDS) is the UMBC department designated to coordinate accommodations that creates equal access for students when barriers to participation exist in University courses, programs, or activities.

If you have a documented disability and need to request academic accommodations in your courses, please refer to the SDS website at sds.umbc.edu for registration information and office procedures.

SDS email: disAbility@umbc.edu

SDS phone: 410-455-2459

If you will be using SDS approved accommodations in this class, please contact the instructor to discuss implementation of the accommodations. During remote instruction requirements due to COVID, communication and flexibility will be essential for success.

Sexual Assault, Sexual Harassment, and Gender Based Violence and Discrimination (required)

[UMBC Policy](#) in addition to federal and state law (to include Title IX) prohibits discrimination and harassment on the basis of sex, sexual orientation, and gender identity in University programs and activities. Any student who is impacted by sexual harassment, sexual assault, domestic violence, dating violence, stalking, sexual exploitation, gender discrimination, pregnancy discrimination, gender-based harassment, or related retaliation should contact the University's Title IX Coordinator to make a report and/or access support and resources. The Title IX Coordinator can be reached at titleixcoordinator@umbc.edu or 410-455-1717.

You can access support and resources even if you do not want to take any further action. You will not be forced to file a formal complaint or police report. Please be aware that the University may take action on its own if essential to protect the safety of the community.

If you are interested in making a report, please use the [Online Reporting/Referral Form](#). Please note that, if you report anonymously, the University's ability to respond will be limited.

Notice that Faculty and Teaching Assistants are Responsible Employees with Mandatory Reporting Obligations

All faculty members and teaching assistants are considered Responsible Employees, per UMBC's [Policy on Sexual Misconduct, Sexual Harassment, and Gender Discrimination](#). Faculty and teaching assistants therefore required to report all known information regarding alleged conduct that may be a violation of the Policy to the Title IX Coordinator, even if a student discloses an experience that occurred before attending UMBC and/or an incident that only involves people not affiliated with UMBC. Reports are required regardless of the amount of detail provided and even in instances where support has already been offered or received.

While faculty members want to encourage you to share information related to your life experiences through discussion and written work, students should understand that faculty are required to report past and present sexual harassment, sexual assault, domestic and dating violence, stalking, and gender discrimination that is shared with them to the Title IX Coordinator so that the University can inform students of their [rights, resources, and support](#). While you are encouraged to do so, you are not obligated to respond to outreach conducted as a result of a report to the Title IX Coordinator.

If you need to speak with someone in confidence, who does not have an obligation to report to the Title IX Coordinator, UMBC has a number of [Confidential Resources](#) available to support you:

[Retriever Integrated Health](#) (Main Campus): 410-455-2472; Monday – Friday 8:30 a.m. – 5 p.m.; For After-Hours Support, Call 988.

[Center for Counseling and Well-Being](#) (Shady Grove Campus): 301-738-6273; Monday-Thursday 10:00a.m. – 7:00 p.m. and Friday 10:00 a.m. – 2:00 p.m. (virtual) [Online Appointment Request Form](#)

Pastoral Counseling via [The Gathering Space for Spiritual Well-Being](#): 410-455-6795; i3b@umbc.edu; Monday – Friday 8:00 a.m. – 10:00 p.m.

Other Resources

[Women's Center](#) (open to students of all genders): 410-455-2714; womenscenter@umbc.edu; Monday – Thursday 9:30 a.m. – 5:00 p.m. and Friday 10:00 a.m. – 4 p.m.

[Child Abuse and Neglect](#)

Please note that Maryland law and [UMBC policy](#) require that faculty report all disclosures or suspicions of child abuse or neglect to the Department of Social Services and/or the police even if the person who experienced the abuse or neglect is now over 18.

Pregnant and Parenting Students

UMBC's [Policy on Sexual Misconduct, Sexual Harassment and Gender Discrimination](#) expressly prohibits all forms of discrimination and harassment on the basis of sex, including pregnancy. Resources for pregnant, parenting and breastfeeding students are available through the University's [Office of Equity and Civil Rights](#). Pregnant and parenting students are encouraged to contact the Title IX Coordinator to discuss plans and ensure ongoing access to their academic program with respect to a leave of absence – returning following leave, or any other accommodation that may be needed related to pregnancy, childbirth, adoption, breastfeeding, and/or the early months of parenting.

In addition, students who are pregnant and have an impairment related to their pregnancy that qualifies as disability under the ADA may be entitled to accommodations through the [Office of Student Disability Services](#).

Religious Observances & Accommodations

UMBC [Policy](#) provides that students should not be penalized because of observances of their religious beliefs, and that students shall be given an opportunity, whenever feasible, to make up within a reasonable time any academic assignment that is missed due to individual participation in religious observances. It is the responsibility of the student to inform the instructor of any intended absences or requested modifications for religious observances in advance, and as early as possible. For questions or guidance regarding religious observances and accommodations, please contact the Office of Equity and Civil Rights at ecr@umbc.edu.

Hate, Bias, Discrimination and Harassment

UMBC values safety, cultural and ethnic diversity, social responsibility, lifelong learning, equity, and civic engagement.

Consistent with these principles, [UMBC Policy](#) prohibits discrimination and harassment in its educational programs and activities or with respect to employment terms and conditions based on race, creed, color, religion, sex, gender, pregnancy, ancestry, age, gender identity or expression, national origin, veterans status, marital status, sexual orientation, physical or mental disability, or genetic information.

Students (and faculty and staff) who experience discrimination, harassment, hate, or bias based upon a protected status or who have such matters reported to them should use the [online reporting/referral form](#) to report discrimination, hate, or bias incidents. You

may report incidents that happen to you anonymously. Please note that, if you report anonymously, the University's ability to respond may be limited.