Course Syllabus: Computer Science I
Department of Computer Science,
McCoy College of Science, Mathematics & Engineering
CMPS 1044 Section 102
Fall 2023 August 28 - December 16, 2023
Contact Information
Instructor: Lopamudra Roychoudhuri
Office: Bolin 126E
Office hours: MTWR 12:30-1:30 pm; F 1:00-2:00 pm
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Classroom: Bolin Hall 109
Class Times: TR 9:30-10:50 am

Course Description

Introduction to methods of problem solving and algorithm development. A high-level programming language is taught with an emphasis on program design, coding, debugging, testing, and documentation. Discussion of ethical, social, and legal issues related to computing.

Credits

4 (3-hour lecture, 1-hour lab).

Course Prerequisites

Credit or concurrent enrollment in MATH 1233, 1534, or 1203.

Student Learning Objectives

At the conclusion of this course, students should be able to:
1. Analyze the requirements of a problem,
2. Identify steps and develop designs to solve moderately complex problems,
3. Implement solution designs by coding them into C++ programs, then compiling and executing them,
4. Write programs containing object-oriented concepts and arrays.

Major Topics

1. Algorithm discovery and design; application of problem-solving steps.
2. C++ programming basics, such as variables, expressions, file I/O, and formatting.
3. Conditional statements, including if, if-else, switch, and ternary.
4. Loops, including for, while, and do-while.
5. Object-Oriented programming concepts, such as functions and classes.
6. Arrays, including one-dimensional and two-dimensional.

Textbook & Instructional Materials

Starting Out with C++ Early Objects, 10th Edition, Gaddis, Walters, Muganda, Pearson © 2020
Paperback: ISBN-13: 9780135235003.
https://www.pearson.com/en-us/subject-catalog/p/starting-out-with-c-early-objects/P20000003336/9780135235003/
Loose-leaf: ISBN-13: 9780135241004.
https://www.pearson.com/en-us/subject-catalog/p/starting-out-with-c-early-objects/P20000003336/9780135241004/
Software: Microsoft Visual Studio - an Integrated Development Environment (IDE) to write, compile, run, debug and test programs in various languages, such as C++, C# and Visual Basic. We will use Visual Studio to write, compile and test our C++ programs.
-        Available on the machines in the classroom lab.
-        You can download the Community edition free of cost from visualstudio.com.
More information will follow when class starts.

Please bring a zip drive of at least 16GB to class. We will save all our class assignments in it.

Computer Science Tutoring
Tutors are available to assist with CS classes. A tutor may assist with programs and homework for computer science classes. *The tutor will not do your work.* NOTE: Any tutor who is also in this class, may not assist with programs and homework. You must seek out a different tutor. There is general tutoring at the Office of Tutoring and Academic Support Programs (TASP) in Moffett Library. Please see the TASP web page for schedules and availability.

Grading

Table 1: Course Grade

Grading Criteria	Dates	Weights	Topics Assessed
Programming Assignments	Daily/Weekly	30%	1-6
Quizzes	Daily/Weekly	10%	1-6
Labs	Weekly	10%	1-6
Exam 1	Tue 9/26/23	15%	1-3
Exam 2	Tue 11/7/23	15%	4-5
Final Exam	Tue 12/12/23 8:00-10:00 am	20%	1-6

Table 2: Grading Criteria

Grade	Percentage
A	90 or above
B	80 to 89
C	70 to 79
D	60 to 69
F	Less than 60

A grade of C or better is required to advance to the next course, CMPS 1063.

Table 3: Tentative Course Schedule

Week	Starting	Topics
1	8/28	Module 1: Intro to Computers and Programming
2	9/4	Module 2: Intro to C++
3	9/11	Module 3: Expressions and Interactivity
4	9/18	Module 3: Expressions and Interactivity cont.;
5	9/25	**Exam 1 on 9/26;** Module 4: Making Decisions
6	10/2	Module 4: Making Decisions cont.;
7	10/9	Module 5: Loops and Files
8	10/16	Module 5: Loops and Files cont.
9	10/23	Module 5: Loops and Files cont.; Module 6: Functions
10	10/30	Module 6: Functions cont.
11	11/6	**Exam 2 on 11/7**; Module 7: Arrays
12	11/13	Module 7: Arrays cont.
13	11/20	Module 7: Arrays cont.
14	11/27	Module 8: Structures, ADT, Classes, and Objects
15	12/4	Module 8: Structures, ADT, Classes, and Objects cont.
16	12/11	**Final Exam on Tue 12/12/23 8:00-10:00 am**

Class Policies

Flipped Classroom

Readings from the textbook and/or other sources and videos will be announced prior to class sessions. You will complete reading and watching these videos before class. We will work on many kinds of assignments in class based on this material.

Class Assignments

These fall in two categories.
Quizzes: We will work on quizzes that will validate the readings. The grade from the quizzes will constitute 10% of the total grade.

Programming Assignments: The purpose of the assignments is to give you individual practice on the topics that you are learning, and to explore some ideas more deeply. The grade from the programming assignments will constitute 30% of the total grade.

Lab Attendance

A weekly lab will be held in Bolin 103. Each student is required to attend one of the scheduled sessions each week. Lab consists of hands-on exercises that reinforce the material covered in lecture. *Attendance and completion of the assignment are required and are part of the course grade.* Students are allowed to attend more than one lab if desired, but only one is required. Labs begin the second week of classes; see the lab schedule posted in D2L. **Students who miss 5 labs will be dropped from the class with a grade of F.**

Exams

There will be three exams. *All students must take all the exams at the scheduled times.*
For planned absences: Exam may be taken early by prior arrangement.
For unplanned absences: Students need a valid university excuse (e.g., excuse from the doctor, death in the immediate family, etc.). The lowest or missed exam will be replaced with the next lowest non-final exam grade. All other missed exams will receive a zero.
The final exam must be taken on its assigned date and time.

General Policies

Computer Requirements

Taking this class requires you to have access to a computer (with Internet access) to access online course material. Personal computer technical difficulties will not be considered a reason for extra time to submit assignments, tests, or online discussion postings.

Students may complete programming assignments on their personal computers or one of the campus computers. C++ is available in Bolin labs 103 and 119. Bolin 103 is also used as a classroom, see availability posted outside the classroom door. Bolin 119 is open 8-5 M-F. There is also a computer lab in Clark Student Center that is open 24/7, and a lab in Moffett Library that is open during library hours. Computers are also available on campus in various areas of the buildings, as well as the Academic Success Center.

Contact your instructor immediately upon having computer trouble. If you have technical difficulties in the course, there is also a student helpdesk available to you. The university cannot work directly on student computers due to both liability and resource limitations, however they are able to help you get connected to our online services. For help, log into D2L.

Desire-to-Learn (D2L)

Extensive use of the MSU D2L program is a part of this course. Each student is expected to be familiar with this program as it provides a primary source of communication regarding assignments, examination materials, and general course information. You can log into D2L through the MSU Homepage. If you experience difficulties, please contact the technicians listed for the program or contact your instructor.

Assignment Submission Policy

All assignments, unless otherwise specified, must be submitted to D2L containing the student's name, course name, the title of the assignment, the due date and the date the assignment was turned in. *No e-mail or in-person submission is accepted.*

No late assignment will be accepted. There are no exceptions to this rule.

Attendance Policy

Although student attendance is not calculated into the grade, attendance will be taken each day to track students. If a student is absent more than 2 classes without an excuse and is not performing well in class, a report will be submitted to the Dean of Students and the student may be dropped from the class. Classes will not be streamed for absent students, whether it is excused or not.

Behavior in the classroom

Students are to assist in maintaining a classroom environment that is conducive to learning. This means that the presence of electronic devices other than your laptop are not to be seen, heard, or implied, ever. Questions are encouraged and discussion is acceptable, provided it is pertinent and does not distract from the lesson.

Policy on Testing Process

The Department of Computer Science has adopted the following policy related to testing.

·   All bags, purses, electronics (turned off), books, etc. will be placed in the front of the room during exams, or in an area designated by the instructor.

·   Unless otherwise announced by the instructor, nothing is allowed on the desk but pen/pencil/eraser and test papers.

·   A student who leaves the room during an exam must turn in the test and will not be allowed to return.

Academic Misconduct Policy & Procedures

Cheating, collusion, and plagiarism (the act of using source material of other persons or generators, either published or unpublished, without following the accepted techniques of crediting, or the submission for credit of work not the individual's to whom credit is given). The Department of Computer Science has adopted the following policy related to cheating (academic misconduct). The policy will be applied to all instances of cheating on assignments and exams as determined by the instructor of the course. (See below for link to MSU definitions.)

·   1st instance of cheating in a course: The student will be assigned a non-replaceable grade of zero for the assignment, project or exam. *If the final grade in the course, does not result in a one letter grade reduction, the student will receive a one letter grade reduction in course.*

·   2nd instance of cheating in a course: The student will receive a grade of F in course & immediately be removed from course.

·   All instances of cheating will be reported to the Department Chair and, in the case of graduate students, to the Department Graduate Coordinator.

Note: Letting a student look at your work is collusion and is academic misconduct!

See Also: MSU Student Handbook: Appendix E: Academic Misconduct Policy & Procedures.

University Policies and Procedures

Change of Schedule

A student dropping a course (but not withdrawing from the University) within the first 12 class days of a regular semester is eligible for a100% refund of applicable tuition and fees. Dates are published in the Schedule of Classes each semester.

Refund and Repayment Policy

A student who withdraws or is administratively withdrawn from Midwestern State University (MSU) may be eligible to receive a refund for all or a portion of the tuition, fees and room/board charges that were paid to MSU for the semester. HOWEVER, if the student received financial aid (federal/state/institutional grants, loans and/or scholarships), all or a portion of the refund may be returned to the financial aid programs. Two formulas (federal and state) exist in determining the amount of the refund. (Examples of each refund calculation will be made available upon request).

Student with Disabilities

Any student who, because of a disability, may require special arrangements in order to meet the course requirements should contact the instructor as soon as possible. Students should present appropriate verification from Disability Support Office during the instructor's office hours. Please note instructors are not allowed to provide classroom accommodations to a student until appropriate verification has been provided. For additional information, contact the Disability Support Office in Clark Student Center 168 - Phone: (940) 397-4140. For more details, please go to Disability Support Services.

Policy on Concealed Handguns on Campus

Senate Bill 11 passed by the 84th Texas Legislature allows licensed handgun holders to carry concealed handguns on campus, effective August 1, 2016. Please note, open carry of handguns, whether licensed or not, and the carrying of all other firearms, whether open or concealed, are prohibited on campus. Areas excluded from concealed carry are appropriately marked, in accordance with state law. For more information regarding campus carry, please refer to the University's webpage at MSU Campus Carry Policy. If you have questions or concerns, please contact Interim MSU Chief of Police at steven.callarman@msutexas.edu.

Recording of Class Lectures

Permission must be requested in writing and obtained from the instructor before recording of class lectures. If permission is granted, the recording may only be used by the student making the recording. Recordings (or any class materials) may NOT be posted on any internet source without written permission of the instructor. Failure to adhere to the policy may result in removal from the course with a grade of F or other appropriate punishment.

Midterm Progress Report

In order to help students keep track of their progress toward course objectives, the instructor for this class will provide a Midterm Progress Report for all students in the course. Midterm grades will not be reported on the students' transcript; nor will they be calculated in the cumulative GPA. They simply give students an idea of where they stand at the midpoint of the semester. Students earning below a C at the midway point should a) schedule a meeting with the professor and b) Seek out tutoring.

Important Dates

Visit MSU important dates from the Registrar's website.

Grade Appeal Process

Students who wish to appeal a grade should consult the Midwestern State University Undergraduate Catalog.

Notice

Changes in the course syllabus, procedure, assignments, and schedule may be made at the discretion of the instructor.