CMPS 1044: Computer Science I

Fall 2021

Instructor	Saikat Das	
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Hours:	Class:	TR 12:30 – 1:50 PM
	Office:	MW 3:30 - 4:30PM, TR 2:30 – 3:30 PM, M 1:00-2:00PM, or by appointment

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 Prerequisite: Credit or concurrent enrollment in MATH 1233, 1534, or 1203

Required Textbook and Materials:

- Starting Out with C++, 10th Edition, Gaddis, Walters, Muganda, Chapters 1-8

Recommended Texts:
- The Web Application Hacker's Handbook, 2nd ed., by Dafydd Stuttard and Marcus Pinto

General Objectives:
1. To learn "software engineering" approaches to designing and implementing computer programs
2. To learn the concepts of data abstraction and modularization
3. To learn the syntax and structure of C++ concepts such as objects and arrays

Specific 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

Instructional Methods and Techniques:
1. Class will meet three times a week, MWF, for 50 minutes of lecture each week
2. Students will attend a weekly lab for 1-2 hours
3. Lectures will provide topic overview, demonstrations, and hands-on activities
4. Assignments will provide independent practice with concepts and programming

Course Content:
Students are responsible for all material, regardless of attendance.
1. Readings from the textbook
2. Lectures, slides, and in-class handouts
3. <u>Weekly labs</u>
4. Homework assignments
5. Quizzes
6. Programming assignments
7. Exams

Exams and Assignments: There will be three exams and one comprehensive final exam. Exams cover material from the text as well as programming activities. The lectures may not cover all material in the textbook and required readings. Programming projects will be expected to be complete and robust, including good documentation, user interfaces, and the ability to handle improper input.

Course Evaluation:

Homework 10 HW assignments, 1% each	**10%**
Quizzes 10 quizzes, 1% each	**10%**
Labs 12 labs	**10%**
Programming Assignments 5 programs, 5% each	**25%**
Exams 3 exams, 10% each	**30%**
Final Exam	**15%**

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

Final Exam: <u>December 9th Thursday at 10:30 AM – 12:30 PM</u> as per <u>MSU website</u>

Grading scale breakdown: Grades may be determined according to this scale (approximate):
A: 90 – 100, **B:** 80 – 89, **C**: 70 – 79, **D**: 60 – 69, **F:** <60

Attendance: Attending class is one of the primary keys to doing well in this class. Students with excessive absences may be reported to the dean of students and may receive a grade of F in the class. There is no distinction made between excused and unexcused. Make-up exams will be given only if the student has a reasonable excuse and if the instructor is contacted within 24 hours of the exam and arrangements are made for the make-up prior to the next class meeting. Students are expected to be in the classroom when class begins and to stay the entire period.

Academic Honesty: The Department of Computer Science had 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. In addition, 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.

See the <u>MSU Student Handbook</u> for more information on the academic misconduct policy.

Behavior in the Classroom: Students are to assist in maintaining a classroom environment that is conducive to learning. Electronic devices should be silenced, and there should not be off-topic conversation while the instructor is lecturing. Disruptive students may be asked to leave the room.

Electronic Devices: The use of electronic devices is encouraged during the in-class assignments in class, but not during other times. Electronic device use should not disrupt other students from learning.

Lab Attendance: <u>A weekly lab will be held in Bolin 103</u>. 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 is required and 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.**

Computer Availability: 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.

Technical difficulty will not be considered a valid reason for an extension on submitting online materials. Computers are available on campus in various areas, as well as the Academic Success Center. Contact your instructor immediately upon having computer trouble. There is also a student help desk available to you.

Computer Science Tutoring: Tutors are available to assist with CS classes. Please see the [TASP](#) web page for schedules and availability.

Programming Assignment Requirements: Students MUST turn in ALL 5 programming assignments to pass the course. Programs that do not compile will not be accepted. **Students that do not submit all 5 programming assignments will be dropped with an F in the course.**

Late Policy: Assignments and programs will be accepted late up to one week after the due date with a penalty of 10% off per day. Late work will not be accepted for a grade after one week, but may be submitted for credit to avoid being dropped from the class.

Make Up Assignments:
- For planned absences: exams may be taken early *by prior arrangement*.
- For unplanned absences: a missed exam can be replaced by the final exam grade.
- Missed quizzes may not be made up.

The final exam can replace the lowest exam grade for all students. If a student missed an exam, the final will replace that grade. No distinction is made between excused and unexcused absences. Taking an exam early requires at least one week's notice, and is granted at the instructor's discretion. There is one make up lab that can replace a missing or low lab assignment.

Research and Creative Opportunities at MSU: Enhancing Undergraduate Research and Creative Activities (EURECA) is a program that provides opportunities for undergraduate students to engage in high-quality research and creative activities with faculty. EURECA provides incentives and funding through a system that supports faculty and students in a cooperative research process. For more information contact the Office of Undergraduate Research, (940) 397-6275 or eureca@mwsu.edu. Information and resources are available at www.mwsu.edu/eureca.

Counseling Center: MSU offers personal, group, career, and academic counseling. Students are encouraged to take advantage of these ***free*** services by contacting the Counseling Center: Corner of Hampstead and Louis J. Rodriguez Drive, 397-4618, counseling@mwsu.edu.

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. Areas excluded from concealed carry are appropriately marked, in accordance with state law. For more information regarding campus carry, refer to the university's webpage at [MSU Campus Carry Policy](#). For questions or concerns, contact MSU Chief of Police Patrick Coggins.

Policy on Testing Process: No electronics of any kind, including ear buds and smart watches, are allowed on the student, unless the instructor has approved a calculator. 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.*

COVID-19 Policy: Masks are not required but are recommended. The instructor will wear a mask when not social distancing.
   Any student (vaccinated or not) that tests positive for COVID-19 MUST self-report here.

Services for Students with Disabilities: In accordance with Section 504 of the Federal Rehabilitation Act of 1973 and the Americans with Disabilities Act of 1990, Midwestern State University endeavors to make reasonable accommodations to ensure equal opportunity for qualified persons with disabilities to participate in all educational, social, and recreational programs and activities. After notification of acceptance, students requiring accommodations should make application for such assistance through Disability Support Services, located in the Clark Student Center, Room 168, (940) 397-4140. Current documentation of a disability will be required in order to provide appropriate services, and each request will be individually reviewed. For more details, please go to Disability Support Services.

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.

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.

Midterm Progress Report: In order to help students keep track of their progress toward course objectives, the instructor will provide a Midterm Progress Report for all students through WebWorld. Midterm grades will not be reported on the transcript, nor will they affect 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 schedule a meeting with the instructor and seek out tutoring.

Grade Appeal Process: Update as needed. 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.

Important Dates: MSU Registrar's Important Dates