SYLLABUS CMPS 1044-103: Computer Science 1

Catalog 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.

Instructor:	Dr. Catherine V. Stringfellow
Office:	Bolin Science Hall, Room 126A
Office phone:	397-4578
<u>E-Mail:</u>	catherine.stringfellow@msutexas.edu
Virtual Office Hours:	M W 9:30-10:30, 1:30-2pm, T R 1:30-3pm and by appointment https://msutexas-edu.zoom.us/my/cstringfellow

Credits: 3 (3 hour lecture)

Course Prerequisite: Credit or Concurrent enrollment in MATH 1233, 1534, or 1203.

Required Textbook and Materials:

Starting Out with C++, 9th edition, Chapters 1-8, Gaddis, Walters, Muganda

General Objectives

- 1) to learn the "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) analyse the requirements of a problem;
- 2) develop designs to solve moderately complex problems;
- 3) implement solution designs by coding them into the C++ programs, then compile and execute them.
- 4) write programs containing object-oriented concepts and arrays

Major Topics

- 1) Complex algorithm discovery and design
- 2) Introduction to software engineering programming concepts
- 3) The syntax of C++ for object-oriented programming and arrays
- 4) Introduction to the idea of a data structure

Instructional Methods and Techniques

- 1) The class will meet twice for 1 1/2 hours of lecture each week.
- 2) Lectures will stress exploration, demonstrations, and hands-on activities
- 3) Assignments will provide an opportunity for the students to explore, develop and program

solutions to problems in C++

Course Content:

Students are responsible for all material regardless of attendance.

- 1) Readings from the textbook
- 2) Lectures
- 3) Homework assignments and Quizzes
- 3) Programming assignments
- 4) Exams

<u>Exams and Assignments:</u> 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 the material in the textbook. There will be several major programming projects as well as small programming assignments. The projects will be expected to be complete and robust, including good user interfaces and the ability to handle improper input.

Course Evaluation:

Homework Assignments/quizzes = 10 %.
Programming Assignments = 15 %.
Three Tests = 45 %.

The lowest exam grade will be replaced by the next lowest non-final exam grade

1 Final Exam = 20 %. Lab = 10 %

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

In order to help students keep track of their progress toward course objectives, the instructor for this class will provide grade updates using D2L. Only final grades will be reported on the students' transcripts. Students earning below a C at the midway point should discuss progress with professor.

Grades may be determined according to this scale (approximate):

A 90% - 100% B 80% - 89% C 65% - 79% D 55% - 64%

Course and Department Policies

Attendance Policy: Attending class is one of the primary keys to doing well in this class. Although student attendance is not calculated into the grade, attendance will be taken each day to track students. If a student is absent 3 consecutive classes without notifying the instructor, a report will be submitted to the Dean of Students and the student may be dropped from the class. There is no distinction made between excused and unexcused. Students are expected to be in the classroom when class begins and to stay the entire period.

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 calculator 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.

Electronic Devices: The use of electronic devices is discouraged in this class. Students who intend to use a laptop or tablet should sit in the back row(s) of the class to avoid distracting other students.

Lab Attendance: A weekly lab will be held in Bolin 103. Each student is required to attend one of the scheduled sessions

each week. The lab will consist of hands-on exercises to reinforce the material being covered in the lecture portion of the class. Attendance and completion of the assignment is required and will be part of the course grade. Students need to attend ONLY ONE of the scheduled sessions each week, though you are allowed to attend more than one. Labs begin week 2 of classes. The lab schedule will be provided as a separate document. *Students who miss 5 labs will be dropped from course with grade F.

Open Labs: Students may complete program assignments on their personal computers or in one of the campus labs. Currently, C++ is available in Bolin labs 119 and 103. Bolin 103 is also used as a classroom. Open times are posted on the door. Bolin 119 is open from 8 a.m. to 5 p.m. M-F. The lab in Clark Student Center is open 24-7. The lab in Moffett Library is open during library hours.

Missed Programs: If a student fails to turn in an executing program for any project, a zero will be assigned. If a student fails to turn in a second project, he/she will receive an F in the course.

Late Policy: Assignments and programs will be accepted late up to two weeks after the due date with a penalty of 5 points per day. A program turned in after the beginning of class on due date will be considered one day late. Late work will not be accepted for a grade after two weeks from the due date, but may be accepted for credit to avoid being dropped from the course. Programs submitted for credit only will be displayed with a grade of 1 in the gradebook.

Make Up Work/Exams/Quizzes:

- For planned absences: Exam may be taken early by prior arrangement.
- For unplanned absences: The lowest or a missed exam will be replaced with the next lowest non-final exam grade. All other missed exams will receive a zero.
- Missed quizzes may not be made up.

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.* Computers are 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.

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.

Computer Science Tutoring:

A tutor may assist with programs and homework for CS classes. The tutor will not do your work.

Academic Misconduct Policy & Procedures: Cheating, collusion, and plagiarism (the act of using source material of other persons, 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 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 Also: MSU Student Handbook (https://msutexas.edu/academics/hs2/_assets/files/appeal-policy-notice.pdf)

University Policies and Procedures

COVID-19 Policy:

All members of the MSU Texas Community (students, faculty, staff, visitors, vendors and contractors) are required to wear protective face coverings on campus or in University facilities as provided below:

I. Requirements

- a. In common areas on campus including, but not limited to, classrooms and other spaces used for teaching, research, and creative activity, student center, library, hallways, elevators, stairwells, restrooms, break rooms, foyers, event rooms and lobbies;
- b. Other areas where physical distancing of at least 6 feet is not maintained. Even when physical distancing of at least 6 feet can be maintained, face coverings are strongly recommended.

II. Exceptions

- a. When eating or drinking, which should still be conducted maintaining physical distance;
- b. In accordance with applicable law (e.g., an accommodation, including for medical reasons, under the Americans with Disabilities Act (ADA), or pursuant to a bona fide religious belief);
- c. For children under the age of 2 years old; or
- d. By an instructor/presenter in a classroom or event room when a physical distance of at least 10 feet can be maintained from the class members/audience.

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

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. 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 https://msutexas.edu/campus-carry/rules-policies. If you have questions or concerns, please contact MSU Chief of Police Patrick Coggins at patrick.coggins@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 through each student's WebWorld account. 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's Registrars website <u>Important Dates</u> https://msutexas.edu/registrar/_assets/files/pdfs/fall20front.pdf.