MONTGOMERY COLLEGE
Rockville Campus
Engineering, Physical and Computer Sciences Department
CMSC100 Fundamentals of Computer Programming

Instructor Information

Name: Office Location:
Mailbox: Office Phone:
Email:
Office Hours:

Course Information

Semester: Course CRN:
Class starts: Class ends:

Class Meetings: Classroom:
Midterm Exam: Final Exam:

Check MyMC class schedule for your Specific   Check MyMC class schedule for your
Deadline to Drop without a grade W or to change   Specific Refund Deadlines
from audit to credit or from credit to audit

Course Description

Designed for students with no prior programming experience, this course introduces students to fundamental structures of sequence, selection, and repetition, emphasizes solving simple problems using a flowchart. With a high-level language, students code, test, and debug short programs. ***Assessment Level(s):*** ENGL 101/ENGL 101A, MATH 050, READ 120. Two hours each week. Formerly CS 100.

2 semester hours

Course Outcomes

#	Upon completion of the course, the student will be able to:
1.	Define the software development life cycle
2.	Describe the core features of programming languages: Variables, Constants, Data Types, Arrays and Flow Control
3.	Design, develop, and test basic computer programs using the core programming features.
4.	Decompose a software program into functional sub-programs

Course Materials

Textbook:
There is no required textbook for this course. Students
will use Online materials and tutorials that are
available for free on the Internet.

Grade Basis

Final Project including Design	26%
Weekly Discussions	12%
Programming Projects	50%
Weekly Quizzes	12%
Total:	**100%**

Grading Scale:

90 - 100%	A
80 - 89%	B
70 - 79%	C
60 - 69%	D
Below 60%	F

General Class Policies

❖ You are responsible for all work missed, and for meeting assignment due dates when absent. Please call or email your instructor if you are going to be late or absent.
❖ You are strongly encouraged to contact your instructor at home by phone or e-mail if you are having difficulties, or have any questions about assignments.
❖ Please include your name and the course information in the submitted assignments.
❖ There is always a means to submit your assignments on time. Be creative, be persistent, and keep your instructor informed!
❖ All assignments must be turned in on or before the due dates to receive full credits.
❖ Missed Tests, Quizzes, Assignments, and Discussions: NO MAKEUPS without a doctor's excuse. If the Final Project is not submitted, the student will receive a grade of F for the course.

Course Outline

Topics
Software Development life cycle (Requirements, Design, Implementation, Testing)
Animation Design (Storyboards, etc.)

Programming language features
     • Variables
     • Constants
     • Control structures (sequence, selection, repetition)
     • Subprograms (procedures, functions)
     • Data structure (arrays, lists)
     • Expressions

Using classes and objects, hierarchy, inheritance
Using build-in object methods and functions
Creating object methods and class methods

Animation Implementation
     • Motion
     • Events
     • Collisions
     • Camera view
     • Sound
     • Randomize