

MONTGOMERY COLLEGE
Rockville Campus
Engineering, Physical and Computer Sciences Department
CMSC230 Advanced Object-Oriented Programming with C++

Instructor Information

Name:
Mailbox:
Email:
Office Hours:

Office Location:
Office Phone:

Course Information

Semester:
Class starts:
Class Meetings:
Midterm Exam:

Course CRN:
Class ends:
Classroom:
Final Exam:

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

Check MyMC class schedule for your Specific Refund Deadlines

Course Description

This course examines more advanced topics in object-oriented programming with C++ such as dynamic memory allocation, various data structures, recursion, and object-oriented design. Students are required to complete lab assignments using a computer.

PREREQUISITE(S): A grade of C or better in CMSC 226 or consent of department. Three hours each week. Formerly CS 249.

3 semester hours

Course Outcomes

#	Upon completion of the course, the student will be able to:
1.	Describe a concept of data abstraction.
2.	Apply object-oriented programming concepts.
3.	Demonstrate the use pointers.
4.	Apply encapsulation and inheritance.
5.	Demonstrate the implementation of various data structures, such as linked lists, stacks, queues and trees.
6.	Apply recursion, sorting, and searching concepts.

Course Materials

Textbook:

Title: C++ Plus Data Structures, 5th Edition
Publisher: Jones & Bartlett Learning
ISBN: 978-1-4496-4675-2

Grade Basis (Tentative)

Final Exam	25%
Midterm Exam	15%
Quizzes on Reading Assignments	10%
Discussions	10%
Programming Projects	40%
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.
- ❖ Incomplete assignments receive no more than 50% of the grade.
- ❖ Assignments are considered incomplete, if they do not compile, they do not contain reasonable comments.
- ❖ There is always a means to submit your assignments on time. Be creative, be persistent, and keep your instructor informed!
- ❖ All assignments (Tests, Quizzes, Assignments, Projects, and Discussions) 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 Exam is not taken, the student will receive a grade of F for the course.

Course Topics

Topics
Chapter1 Software Engineering Principles
Chapter2 Data Design & Implementation
Chapter3 ADT Unsorted List
Chapter4 ADT Sorted List
Chapter5 ADTs Stack & Queue
Chapter6 Lists Plus
Chapter7 Programming with Recursion
Chapter8 Binary Search Trees
Chapter 9 Priority Queues, Heaps, Graphs, and Sets
Chapter 10 Sorting & Searching Algorithms