

UNIVERSITY *of* MARYLAND
UNIVERSITY COLLEGE - *Asian Division*

CMIS 140: Programming in C++

Credits: 3

Monday through Thursday 16:40 to 17:55, Iwakuni MCAS, Japan

Prerequisites: CMIS 102 or experience with another programming language utilizing sequential, conditional, and sequential program control structures.

Instructor: Robert Laurie

Email: rlaurie@ad.umuc.edu

Web Site: <http://www.islandman.org>

Textbooks:

1. *Programming & Problem Solving with C++*, 2nd Ed.
Dale/Weems/Headington, ISBN#: 0763710636
2. *Simple Program Design*, Robertson, ISBN#: 61901590X (Optional.)

Description:

A study of structured programming using the C++ language. The discipline, methodologies, and techniques of software development are covered. Algorithms and simple data structures are developed and implemented in C++. Object-oriented concepts such as classes and encapsulation are introduced. (Not open to students who have completed CMIS 315. The first in a sequence of courses in C++. Taking CMIS 140 and 240 in consecutive semesters is recommended.)

Objectives:

1. Understand the syntax and semantics of the C++ programming language
2. Proceed through all steps of the Program Development Life Cycle to develop a working C++ program from a problem description.
3. Apply design techniques, such as top-down design, to reduce complex problems by dividing them into component modules that can be implemented as C++ functions
4. Properly and clearly document a C++ program
5. Design, code, debug C++ programs to implement applications that utilize:
 - a. Sequential, Conditional and Repetition flow control structures
 - b. Functions with parameters and return values
 - c. External disk file input and output
 - d. User-defined data types
 - e. Structured data types such as arrays
 - f. Object types using classes and applying object oriented programming concepts.

Exams:

The midterm exam will cover topics discussed in that portion of the class. The final exam will be comprehensive and cover topics discussed throughout the course.

The examination days are listed on the course schedule by week number. Only students with officially excused absences will be able to make up the exams, others will receive a grade of zero. You must contact me via email, for me to authorize a makeup exam time prior to the scheduled exam time.

You need to provide me with documentation verifying the excused absence. Failure to comply with these requirements will result in a score of zero on the exam.

There will be no extra credit awarded in the course, so do your best on the given assignments.

Grades:

The grade in the course will be based on 2 exams and several projects:

Items	Scores	Percent
Midterm	100	25%
Final Exam	150	37.5%
Projects	150	37.5%
Total	400	100%

Grade	Score	Percent
A	400 to 360	100.0 to 90.0%
B	359 to 320	89.9 to 80.0%
C	319 to 280	79.9 to 70.0%
D	279 to 240	69.9 to 60.0%
F	< 240	Less than 60%

Projects:

Project assignments of various point values will be given throughout the term. Completed project reports must be submitted on the due dates. Late assignments will not be accepted. No projects will be accepted after the final exam time.

Grading will be 80% objective (results, explanations, conclusions) and 20% subjective (neatness, clarity, conciseness, extra work). A project report that minimally meets all specifications will receive a score of 80% of the total points. If any portion of a project is plagiarized (Using some one's code and saying it is your own), the entire project will receive a score of zero.

Attendance:

Class attendance is mandatory. If you miss a class or are late for class, it remains your responsibility to obtain information concerning the material covered and upcoming assignments. Excessive absences may result in your being assigned a grade of *F(n)*! *Failure due to non-attendance.*

CMIS 140 Course Schedule (Tentative *)

Date:	Topics:	Read Before Class:
Week 1	Review or CMIS 102 Concepts Functions	Dale: Chapters 1 through 6, Dale: Chapters 7 Robertson: Chapter 6 and 8
Week 2	Scope, and Lifetime	Dale: Chapters 8 Robertson: Chapters 9
Week 3	More Control Structures: switch, for, do-while; More Data Types and Operators	Dale: Chapters 9 and 10
Week 4	Structured Data Types MIDTERM EXAM (Last Class)	Dale: Chapter 11
Week 5	Arrays Strings	Dale: Chapter 12 and 13 Robertson: Chapter 7
Week 6	Object Oriented Development and Classes	Dale: Chapter 14 Robertson: Chapter 11
Week 7	Object Oriented Development and Classes	Dale: Chapter 14 Robertson: Chapter 12
Week 8	Final Program Due Wednesday Class FINAL EXAM (Last Class)	(No Late Accepted)

* This syllabus is tentative and is subject to change.