

Programming with C++

Boston University

MET CS231-A1

Fall 2022

Day: Mondays, 6:00-8:45 PM

Location: Charles River Campus, Boston

Instructor: Mike Hadavi

E-mail: hadavi@bu.edu

Office Hours: After class

Website: <http://onlinecampus.bu.edu>

COURSE DESCRIPTION

Covers the elements of object-oriented programming and the C++ language. Data types, control structures, functions, library functions, classes, inheritance, and multiple inheritance. Use of constructors, destructors, function and operator overloading, reference parameters and default values, friend functions, input and output streams, templates, and exceptions. Laboratory course.

PREREQUISITE

MET CS 201; or instructor's consent

TEXT

Required: C++ HOW TO PROGRAM, 10th Edition, by Deitel and Deitel, published by PEARSON, 2017, with ISBN-13: 978-0134448237 (ISBN-10: 0134448235)

GRADING

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|-------------------------|-----|
| Programming assignments | 40% |
| Homework assignments | 05% |
| Project | 10% |
| Exam | 45% |

PROGRAM EVALUATION CRITERIA

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|---------------------|-----|
| Program correctness | 50% |
| Documentation | 20% |
| Readability | 20% |
| Etc. | 10% |

"To write a good program takes intelligence, taste, and patience. You are not going to get it right the first time; experiment!"

Bjarne Stroustrup, The C++ Programming Language, 2nd edition

continued...

SCHEDULE (very tentative)

| DATE | TOPIC | READING (TEXT CHAPTER) |
|-------------|--|-------------------------------|
| 09/12 | Introduction | 1, 2, App. D |
| 09/19 | Classes, Objects, Strings | 3 |
| 09/26 | Control Statements / Functions, Preprocessor | 4, 5, 6, App. E |
| 10/03 | Templates | 7, 18 |
| 10/10 | No Class – Indigenous People’s Day | |
| 10/11 | (Tuesday) Pointers | 8 |
| 10/17 | Exceptions | 9, 17 |
| 10/24 | Operator Overloading | 10 |
| 10/31 | Inheritance / Polymorphism | 11, 12 |
| 11/07 | Stream I/O, File Processing, String | 13, 14, 21 |
| 11/14 | Standard Template Library | 15, 16 |
| 11/21 | More on Exceptions | 17 |
| 11/28 | More on Templates | 18 |
| 12/05 | Review | |
| 12/12 | Exam | |
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IMPORTANT NOTES

- Reading the relevant material in the textbook is essential for gaining a thorough understanding of the topics covered in the course.
- Not all of the material in each chapter will be covered during lecture/discussion, but the material should be read in any case.
- Your programs must be done in C++. One point will be deducted from the grade for each week a programming assignment is late after a one-week grace period.
- Be sure to see the school’s website: <http://www.bu.edu/met/> It contains lots of useful information, important dates, etc.

ACADEMIC HONESTY

The course is governed by the Academic Conduct Committee policies regarding plagiarism (any attempt to represent the work of another person as one's own). This includes copying (even with modifications) of a program or a segment of code. You can discuss general ideas with other people, but the work you submit must be your own. Collaboration is not permitted.

ELECTRONIC MAIL

To be sure you *can* communicate with the instructor electronically and to add your name to the class distribution list, please send a test message with the subject line *CS231 TEST* to the instructor’s email address.