

**BOSTON UNIVERSITY, METROPOLITAN COLLEGE**

**COMPUTER SCIENCE DEPARTMENT**

**MET CS231 C1, Programming With C++**

**Course Overview:**

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.

**Prerequisites:** MET CS201 or instructor's consent.

**Learning Objectives:**

Upon completion of the course, the student should be able to use C++ for writing well-organized object-oriented programs and will be ready to move on to other advanced computer science topics.

**Textbook:** Programming and Problem Solving With C++, Comprehensive ed., Dale & Weems, 6<sup>th</sup> edition, ISBN 978-1-284-02876-8.

**Evaluation and Grading:**

There will be a midterm exam, a final exam and assignments. If any grading criteria event will be missed it will be the responsibility of the student to arrange a mutually agreeable schedule for completion of work.

**Grades will be based on:**

Class assignments (delivered in hard copy) 30%

Midterm 30%

Final 40%

**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 segment of code. You can discuss general ideas with other people, but the work you submit must be your own. Collaboration is not permitted.

**Instructor information:**

Dr. Mehdi Abedinejad

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Office hours: 5:00 pm – 6:00 pm inside the class

**Schedule of Classes:**

<b>Week1</b>	<b>Data Types, Expressions, Control Structures</b>	<b>Chapters 1-4</b>
<b>Week2</b>	<b>Control Structures, Looping</b>	<b>Chapters 5-6</b>
<b>Week3</b>	<b>More Control Structures, Functions</b>	<b>Chapters 7-8</b>
<b>Week4</b>	<b>Scope, Lifetime, User Defined Data Types</b>	<b>Chapters 9-10</b>
<b>Week5</b>	<b>Arrays, Intro to Classes</b>	<b>Chapters 11-12</b>
<b>Week6</b>	<b>Midterm exam (Closed book, notes, ...)</b>	
<b>Week7</b>	<b>Classes and Abstraction, More on Arrays</b>	<b>Chapters 12-13</b>
<b>Week8</b>	<b>Dynamic Data, Linked Lists</b>	<b>Chapter 14</b>
<b>Week9</b>	<b>OOP, Inheritance</b>	<b>Chapter 15</b>
<b>Week10</b>	<b>Polymorphism, Dynamic Binding</b>	<b>Chapter 15</b>
<b>Week11</b>	<b>Templates, Operator Overloading, Exceptions</b>	<b>Chapter 16</b>
<b>Week12</b>	<b>Introduction to Data Structures</b>	<b>Chapter 17</b>
<b>Week13</b>	<b>Recursion</b>	<b>Chapter 18</b>
<b>Week14</b>	<b>Review</b>	

**Final Exam (Closed book, notes, ...)**