

**BRONX COMMUNITY COLLEGE**  
**of the City University of New York**  
**DEPARTMENT OF MATHEMATICS AND COMPUTER SCIENCE**

**SYLLABUS:** CSI 32 Introduction to Computer Programming II. 3 credits/4 hours.

**PREREQUISITE:** CSI 31; and CUNY English Proficiency, or ENG 100 or 110, if required

**TEXT:** *Programming -- Principles and Practice Using C++, Second Edition*, by B. Stroustrup, 2014.  
 ISBN: 978-0-321-99278-9

**Content:** This course is an introduction to the C++ programming language. It covers fundamental C++ language structures, data structures, memory management, object-oriented programming including encapsulation, polymorphism and inheritance, recursion and recursive analysis, software development life cycle, and debugging.

**Objectives:** By the end of this course the successful student will be able to work in the language C++ to:

- (1) Program with the object-oriented concepts classes, objects, data members, member functions and create classes;
- (2) Use pointers and have a basic understanding of memory management;
- (3) Use array-like structures;
- (3) Access class members and learn the order of constructor and destructor calls;
- (4) Use operator overloading;
- (5) Understand polymorphism, inheritance, use constructors and destructors in inheritance hierarchies;
- (6) Use C++ input and output streams;
- (7) Build C++ programs that create, update and process data files;
- (8) Understand Exception Handling, use try, catch and throw;

<b>Week</b>	<b>Topic</b>
1	Course Information Chapter 2: Hello, World! Chapter 3: Objects, Types, and Values
2	Chapter 4: Computation Chapter 5: Errors
3	Chapter 8: Technicalities: Functions, etc.
4	Chapter 9: Technicalities: Classes, etc.
5	Chapter 10: Input and Output Streams
6	<b>Midterm Exam</b>
7	Chapter 14:
8	Chapter 17: Vector and Free Store
9	Chapter 18: Vector and Arrays
10	Chapter 19: Vector, Templates, and Exceptions
11	Recursion with C++
12	Chapter 20: Containers and Iterators
13	Chapter 21: Algorithms and Maps

14	Reserved for any unfinished topics
15	<b>Final Exam</b>

**Academic Integrity:** Academic dishonesty (such as plagiarism and cheating) is prohibited at Bronx Community College and is punishable by penalties, including failing grades, dismissal and expulsion. For additional information and the full policy on Academic Integrity, please consult the BCC College Catalog.

**Accommodations/Disabilities** Bronx Community College respects and welcomes students of all backgrounds and abilities. In the event you encounter any barrier(s) to full participation in this course due to the impact of a disability, please contact the disAbility Services Office as soon as possible this semester. The disAbility Services specialists will meet with you to discuss the barriers you are experiencing and explain the eligibility process for establishing academic accommodations for this course. You can reach the disAbility Services Office at: [disability.services@bcc.cuny.edu](mailto:disability.services@bcc.cuny.edu), Loew Hall, Room 211, (718) 289-5874.

NN 01/23

EA 01/23 for COVID -removed 08/23

NN 07/23