

BOROUGH OF MANHATTAN COMMUNITY COLLEGE

City University of New York

Department of Computer Information Systems**Office F930/Phone: 212-220-1476****Title of Course: Introduction to Programming****Instructor: Matthew Conroy****Credits: 4****Class Hours: 3****CSC 111 Spring 2020****Laboratory Hours per Week: 2****Phone: 212-776-2434****Office S140M****Email: msconroy@bmcc.cuny.edu****Announcements by Email and Blackboard****Office Hours: Tuesday - Friday 5:00-6:00 PM (all hours by appointment)****Course Site: <https://github.com/free-monad/CSC111-Spring2020>****Course Description :**

This course is an introduction to the fundamental concepts and terms of computer science, including algorithms, problem solving techniques, data types, concept of loops, conditional statements, modular programming, pointers, arrays, strings, basic file processing, structures and simple classes. Student will use a high-level computer programming language to solve a variety of problems.

Prerequisites:

Basic skills- ENG 088; ESL 094; ACR 094; MAT 206; CSC 101 or departmental approval

Course Student Learning Outcomes (Students will be able to...)	Measurements (means of assessment for student learning outcomes listed in first column)
1. Understand and apply the basic programming constructs.	1. Homework and programming projects.
2. Apply an appropriate problem solving technique for developing an algorithmic solution to a problem.	3. Exam questions and programming projects.
3. Identify and provide solutions to common errors in programming by tracing the execution of a computer program.	4. Programming projects and exam questions.
4. Analyze and evaluate a computer program by applying the concept of debugging and testing.	5. Programming projects and lab exercises.
5. Develop a programming project by applying appropriate programming constructs.	6. Programming projects.

Below are the college's general education learning outcomes, the outcomes that are checked in the left-hand column indicate goals that will be covered and assessed in this course. (Check at least one.)

	General Education Learning Outcomes	Measurements (means of assessment for general education goals listed in first column)
	Communication Skills- Students will be able to write, read, listen and speak critically and effectively.	Essay questions and term project/paper.
x	Quantitative Reasoning- Students will be able to use quantitative skills and the concepts and methods of mathematics to solve problems.	Use formulas and concepts of mathematics to solve problems in programming assignments.
	Scientific Reasoning- Students will be able to apply the concepts and methods of the natural sciences.	
	Social and Behavioral Sciences- Students will be able to apply the concepts and methods of the social sciences.	

	Arts & Humanities- Students will be able to develop knowledge and understanding of the arts and literature through critiques of works of art, music, theatre or literature.	
x	Information & Technology Literacy- Students will be able to collect, evaluate and interpret information and effectively use information technologies.	Use a high-level computer programming language to create application software.
=	Values- Students will be able to make informed choices based on an understanding of personal values, human diversity, multicultural awareness and social responsibility.	

Required Text & Readings

Textbook: **Starting out with C++ from Control Structures through Objects, 9/E**

Author: **Tong Gaddis**

Publisher: **Pearson**

ISBN: **978-0-13-4498379**

Other Resources : Flash drives are required.

Evaluation & Requirements of Students:

Exam 1	15%
Exam 2	15 %
Final	25%
Homework	20%
Project	15%
Attendance/Participation/ Instructor Evaluation	<u>10%</u> 100%

Outline of Topics:

Students should read the text section of the following chapters as well as the exercises. Reading these sections will help you prepare for your homework and examinations. Your instructor will be assigning specific exercises and programming problems from each chapter as homework.

Week No		Topic
Week 1	Chapters 1 & 2	Introduction to C++
Week 2	Chapters 3 & 4	Expressions and Interactivity & Making decisions
Week 3	Chapter 5	Loops and Files
Week 4	Chapter 6	Functions
Week 5		Review & EXAM 1
Week 6	Chapter 20	Introduction to Recursion
Week 7	Chapter 7	Arrays and Vectors
Week 8	Chapter 7	Arrays and Vectors
Week 9	Chapter 8	Searching and Sorting Arrays
Week 10		Review & EXAM 2
Week 11	Chapter 9	Pointers
Week 12	Chapter 11	Structured Data
Week 13	Chapters 13	Introduction to Classes
Week 14	Chapter 10	C-Strings and the String Class & Review for FINAL EXAM
Week 15		Final Exam

Class Participation

Participation in the academic activity of each course is a significant component of the learning process and plays a major role in determining overall student academic achievement. Academic activities may include, but are not limited to, attending class, submitting assignments, engaging in in-class or online activities, taking exams, and/or participating in group work. Each instructor has the right to establish their own class participation policy, and it is each student's responsibility to be familiar with and follow the participation policies for each course.

BMCC is committed to the health and well-being of all students. It is common for everyone to seek assistance at some point in their life, and there are free and confidential services on campus that can help.

Single Stop www.bmcc.cuny.edu/singlestop, room S230, 212-220-8195. If you are having problems with food or housing insecurity, finances, health insurance or anything else that might get in the way of your studies at BMCC, come by the Single Stop Office for advice and assistance. Assistance is also available through the Office of Student Affairs, S350, 212-220- 8130.

Counseling Center www.bmcc.cuny.edu/counseling, room S343, 212-220-8140. Counselors assist students in addressing psychological and adjustment issues (i.e., depression, anxiety, and relationships) and can help with stress, time management and more. Counselors are available for walk-in visits.

Office of Compliance and Diversity www.bmcc.cuny.edu/aac, room S701, 212-220-1236. BMCC is committed to promoting a diverse and inclusive learning environment free of unlawful discrimination/harassment, including sexual harassment, where all students are treated fairly. For information about BMCC's policies and resources, or to request additional assistance in this area, please visit or call the office, or email olevy@bmcc.cuny.edu, or twade@bmcc.cuny.edu. If you need immediate assistance, please contact BMCC Public safety at 212-220-8080.

Office of Accessibility www.bmcc.cuny.edu/accessibility, room N360 (accessible entrance: 77 Harrison Street), 212-220-8180. This office collaborates with students who have documented disabilities, to coordinate support services, reasonable accommodations, and programs that enable equal access to education and college life. To request an accommodation due to a documented disability, please visit or call the office.

BMCC Policy on Plagiarism and Academic Integrity Statement

Plagiarism is the presentation of someone else's ideas, words or artistic, scientific, or technical work as one's own creation. Using the idea or work of another is permissible only when the original author is identified. Paraphrasing and summarizing, as well as direct quotations, require citations to the original source. Plagiarism may be intentional or unintentional. Lack of dishonest intent does not necessarily absolve a student of responsibility for plagiarism. Students who are unsure how and when to provide documentation are advised to consult with their instructors. The library has guides designed to help students to appropriately identify a cited work. The full policy can be found on BMCC's Web site, www.bmcc.cuny.edu. For further information on integrity and behavior, please consult the college bulletin (also available online).