Title of Course: Computer Programming I   **Class Hours:** 3

CSC 110   **Laboratory Hours per Week:** 2

Fall 2019

Students: Write in Instructor Information here(Phone#, Office#, email):

Credits : 4

Course Description: This course is an introduction to the fundamental concepts and terms of computer science, including algorithms, problem solving techniques and data types. Student will use a high-level computer programming language to solve a variety of problems.

Prerequisites: CSC 101 (or departmental approval),ENG 088; ESL 062; ACR 094; MAT 012/ 051

Learning Outcomes:

Course Student Learning Outcomes (Students will be able to...)	Measurements (means of assessment for student learning outcomes listed in first column)
1. Explain what an algorithm is and design algorithms to solve problems.	1. Homework and programming projects.
2. Choose an appropriate problem solving technique for developing an algorithmic solution to a problem.	2. Exam questions and programming projects.
3. Apply concepts of Object Oriented Programming (OOP).	3. Programming projects, lab exercises and exam questions.
4. Trace the execution of a computer program.	4. Exam questions and homework.
5. Test and debug a computer program.	5. Programming projects and lab exercises.

	General Education Learning Outcomes	Measurements
X	**Communication Skills-** Students will be able to write, read, listen and speak critically and effectively.	Program documentation and exam questions
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.	

*If your course is a Pathways course, please fill out the appropriate chart (see attached) and include it with your syllabus submission.

Required Text:

Textbook: **Starting Out With Java: From Control Structures through Objects -7th edition**

Author: **Tony Gaddis**

Pub: **Addison Wesley**

ISBN 978-0-13-480221-3

Other Resources: Flash drives are strongly recommended.

Use of Technology (If Applicable)

Evaluation and Requirements of Students:

Exam 1/Quiz	25%
Exam 2/Quiz	25 %
Final	30%
Homework/Project	10%
Instructor Evaluation	10%
	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.

Ch 1: Introduction to Computers and Java
Ch 2: Java Fundamentals
Ch 3: Decision Structures
Ch 4: Loops and Files
Ch 5: Methods
Ch 6: A First Look at Classes

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).

CUNY COMMON CORE Location

Please check below the area of the Common Core for which the course is being submitted. (Select only one.)

Required	Flexible	
☐ English Composition	☐ World Cultures and Global Issues	☐ Individual and Society
☐ Mathematical and Quantitative Reasoning	☐ US Experience in its Diversity	☐ Scientific World
☐ Life and Physical Sciences	☐ Creative Expression	

Learning Outcomes

In the left column explain the assignments and course attributes that will address the learning outcomes in the right column.

Scientific World

A Flexible Core course <u>must meet the three learning outcomes</u> in the right column.

	• Gather, interpret, and assess information from a variety of sources and points of view.
	• Evaluate evidence and arguments critically or analytically.
	• Produce well-reasoned written or oral arguments using evidence to support conclusions.

A course in this area (II.E) <u>must meet at least three of the additional learning outcomes</u> in the right column. A student will:

Use a high-level computer programming language to create application software	• Identify and apply the fundamental concepts and methods of a discipline or interdisciplinary field exploring the scientific world, including, but not limited to: computer science, history of science, life and physical sciences, linguistics, logic, mathematics, psychology, statistics, and technology-related studies.
Use formulas and concepts of mathematics to solve problems in programming assignments	• Demonstrate how tools of science, mathematics, technology, or formal analysis can be used to analyze problems and develop solutions
	• Articulate and evaluate the empirical evidence supporting a scientific or formal theory
Program documentation and exam questions	• Articulate and evaluate the impact of technologies and scientific discoveries on the contemporary world, such as issues of personal privacy, security, or ethical responsibilities
	• Understand the scientific principles underlying matters of policy or public concern in which science plays a role