

**LAGUARDIA COMMUNITY COLLEGE  
CITY UNIVERSITY OF NEW YORK  
DEPARTMENT OF MATHEMATICS, ENGINEERING, and COMPUTER SCIENCE**

**MAC190 Object-oriented Programming  
4 credits; 5 hours (4 lecture, 1 lab)**

This is the second programming course in the computer program option. The focus of the course will be object-oriented programming. Topics include construction, superclasses, subclasses, strings, graphics, threads, polygon, inheritance, composition, and method overloading. Writing programs to implement user defined classes will be required.

**Prerequisite:** CIS101, CSE098/CSE099

**Pre-or Corequisite:** MAT200 or MAT241

**Instructional Objectives:**

1. Familiarize the students with classes.
2. Familiarize the students with constructors.
3. Familiarize the students with objects.
4. Enable the students to utilize objects.
5. Introduce the students to GUI objects and methods.
6. Introduce the students to multithreaded algorithms.
7. Introduce the students to exception handling.
8. Familiarize the student with files and streams.

**Performance Objectives:**

1. Write program to implement classes.
2. Write constructors for classes.
3. Design objects to solve problems.
4. Write programs to integrated objects.
5. Write GUI objects and methods.
6. Write programs using multithreaded algorithms.
7. Write programs to implement exception handling.
8. Write programs to implement files and streams.

**Grading Standards:**

6 Laboratory Assignments	30%
2 Quizzes	20%
Midterm	20%
Final	30%
Total	100%

**Books:**

Java: Introduction to Problem Solving and Programming, 5<sup>th</sup> Edition, by Walter Savitch and Frank Carrano; Pearson/Prentice Hall.  
ISBN# 0-13-613088-7

**Course Syllabus:**

**Week 1**

Object based programming

**Week 2**

Object-oriented programming

**Week 3**

Strings and characters

**Week 4 & 5**

Graphics and user interface

**Week 6 & 7**

Advanced Graphics user interface

**Week 8**

Exception handling

**Week 9**

Multithreading

**Week 10**

Files and Streams

**Week 11**

Multimedia: Images, Animation, Audio, and Video

**Week 12**

Final Examination