**New York University Tandon School of Engineering**

Computer Science

Course Outline CS-UY 2124 Object-Oriented Programming

**Summer 2018**

**Professor Eugene Callahan**

Tuesday, Wednesday, Thursday, Friday

10:00 AM – 1:00 PM; 2 MTC, 9.009

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Metrotech 2, 10.010

Phone: 646-997-3476

Office hours: after lectures, or by appointment

Course Pre-requisites CS-UY 1134

Course Description This intermediate-level programming course teaches object-oriented programming in C++. Topics: Pointers, dynamic memory allocation and recursion. Classes and objects including constructors, destructors, methods (member functions) and data members. Access and the interface to relationships of classes including composition, association and inheritance. Polymorphism through function overloading operators. Inheritance and templates. Use of the standard template library containers and algorithms.

Course Objectives

1. Understand object-oriented design.

2. Successfully write, compile, run and debug small C++ programs.

3. Create meaningful, helpful class hierarchies.

Course Structure

Four lectures per week, intermingled with lab time, and regular homework.

Readings

The required text for the course is: *Programming: Principles and Practices Using C++*, 2nd ed. Bjarne Stroustrup, Addison-Wesley.

Course requirements

Read all textbook material before class; complete all homework and labs.

A *rough* grade breakdown, which will be adjusted as the semester proceeds:

Homework: 25% of grade

Labs: 25% of grade

Mid-term Exam, 20% of grade

Final Exam, 30% of grade

These weights will be adjusted to give students the benefit of the doubt, i.e., an outstanding final will be weighted more heavily than a bad mid-term.

**We are going to attempt to cover two chapters in the textbook per week, but we will adjust this schedule as we go along.** A rough schedule is available on the course website.

**Moses Center Statement of Disability**

If you are student with a disability who is requesting accommodations, please contact New York University’s Moses Center for Students with Disabilities (CSD) at [212-998-4980](tel:212-998-4980) or [mosescsd@nyu.edu](mailto:mosescsd@nyu.edu).  You must be registered with CSD to receive accommodations.  Information about the Moses Center can be found at [www.nyu.edu/csd](http://www.nyu.edu/csd). The Moses Center is located at 726 Broadway on the 2nd floor.

**NYU School of Engineering Policies and Procedures on Academic Misconduct**

* + 1. Introduction: The School of Engineering encourages academic excellence in an environment that promotes honesty, integrity, and fairness, and students at the School of Engineering are expected to exhibit those qualities in their academic work. It is through the process of submitting their own work and receiving honest feedback on that work that students may progress academically. Any act of academic dishonesty is seen as an attack upon the School and will not be tolerated. Furthermore, those who breach the School’s rules on academic integrity will be sanctioned under this Policy. Students are responsible for familiarizing themselves with the School’s Policy on Academic Misconduct.
    2. Definition: Academic dishonesty may include misrepresentation, deception, dishonesty, or any act of falsification committed by a student to influence a grade or other academic evaluation. Academic dishonesty also includes intentionally damaging the academic work of others or assisting other students in acts of dishonesty. Common examples of academically dishonest behavior include, but are not limited to, the following:
       - 1. Cheating: intentionally using or attempting to use unauthorized notes, books, electronic media, or electronic communications in an exam; talking with fellow students or looking at another person’s work during an exam; submitting work prepared in advance for an in-class examination; having someone take an exam for you or taking an exam for someone else; violating other rules governing the administration of examinations.
         2. Fabrication: including but not limited to, falsifying experimental data and/or citations.
         3. Plagiarism: intentionally or knowingly representing the words or ideas of another as one’s own in any academic exercise; failure to attribute direct quotations, paraphrases, or borrowed facts or information.
         4. Unauthorized collaboration: working together on work that was meant to be done individually.
         5. Duplicating work: presenting for grading the same work for more than one project or in more than one class, unless express and prior permission has been received from the course instructor(s) or research adviser involved.
         6. Forgery: altering any academic document, including, but not limited to, academic records, admissions materials, or medical excuses.