NEW YORK CITY COLLEGE OF TECHNOLOGY
THE CITY UNIVERSITY OF NEW YORK
Department of Computer Engineering Technology
300 Jay Street, Brooklyn, NY 11201-1909

CET 3640 – Software for Computer Control

Syllabus[1]

Term: Fall 2024
Credits: 3
Instructor: Dr. José M. Reyes Álamo (please address me as *Dr. Reyes* or *Prof. Reyes*)
Office: V621 or Online
Email: jreyesalamo@citytech.cuny.edu
Website: http://openlab.citytech.cuny.edu/jreyesalamo/
Course Website: https://openlab.citytech.cuny.edu/cet3640/
Office Hours: Check http://openlab.citytech.cuny.edu/jreyesalamo/

Textbooks:
Required: Building Java Programs – A Back to Basics Approach, 5th Edition by Stuart Reges and Marty Stepp.

Reference: Starting Out with Java: From Control Structures through Data Structures, 4th Edition by Tony Gaddis and Godfrey Muganda.

Reference: Think Java, How to Think Like a Computer Scientist by Allen Downey.
Free eBook available at http://www.greenteapress.com/thinkjava/

Course Description:
Programming concepts and software development techniques for computer-controlled systems. Laboratory exercises apply these concepts to a variety of systems and devices.

Prerequisites:
EMT 2410 or CST 2403, CET 3510

Learning Objectives:
This course will introduce the students to software for computer control, moving from basic programming to intermediate level programming. It is assumed that the students have a working knowledge of assembly language, operating system (OS), and a high-level programming language such as C++. This course will reinforce that knowledge and teach them object-oriented programming, popular data structures, code portability, multi-platforms support, and how to use these for computer control. At the end of the course the student should be able to write and understand code that interacts with devices, the OS, and other software. Student should have object-oriented programming concepts and widely used data structures clear.

Program Educational Objectives and Student Outcomes:
Please refer to http://www.citytech.cuny.edu/computer-engineering/computer-engineering-btech.aspx

General Education Outcomes:
SKILLS/Inquiry/Analysis: Employ scientific reasoning and logical thinking.
SKILLS/Inquiry/Analysis: Use creativity to solve problems.

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[1] The instructor reserves the right to modify the syllabus anytime.

Attendance Policy:
Attendance is required. The professor will take attendance at each class. If you are absent more than twice you may receive a WU grade. Excessive lateness (more than 15 minutes) will be considered an absence. You must provide credible documentation to justify an absence such as medical/doctor's certificate, jury duty, military service, etc. You are responsible for any material covered in class and compliance with deadlines.

Electronic Communication Policy:
Electronic communication with the instructor must be done using the official CityTech student email address. Emails send from personal addresses may be blocked by the server or ignored. You must identify yourself in the first sentence of your email using indicating your name and the course and section you are in (e.g. Hello Dr. Reyes this is John Smith from CET 3640 – ABC123). Avoid sending message via Blackboard, OpenLab, Facebook, etc. as these may not be delivered or answered.

Grading Criteria:

- **Labs:** Labs will consist of programming assignments where the students will have to solve different problem using the programming techniques learned in class. No late labs will be accepted.

- **Partial Exams:** Partial exams will be administered to test the knowledge acquired during the semester. Students are required to take exam the day and time they are scheduled. There is no make-up exam unless you have a valid reason according to CityTech's policy.

- **Final Exam:** A comprehensive Final exam will be administered at the end of the semester. Students are required to take the exam the day and time scheduled. There is no make-up exam unless you have a valid reason according to CityTech's policy.

Academic Integrity:
Students and other individuals who work with information, ideas, texts, images, music, inventions, and other intellectual property owe their audience and sources accuracy and honesty in using, crediting, and citing sources. As a community of intellectual and professional workers, the College recognizes its responsibility for providing instruction in information literacy and academic integrity, offering models of good practice, and responding vigilantly and appropriately to infractions of academic integrity. Academic dishonesty is prohibited in The City University of New York and is punishable by penalties, including failing grades, suspension, and expulsion.

Course Material:
Refer to the schedule of classes for appropriate deadlines and procedures. Course material as well as assignments and labs will be distributed mostly electronically on Blackboard and on the class website. It is your responsibility to check for new material frequently, daily is recommended. Ignorance of applicable deadlines and procedures is not a basis for a waiver of existing regulations.

In-Class Expected Behavior:
Students must show respect to each other and to the professor. Students may not interrupt the class. Students must follow instructions from the instructor. The use of smartphones, cameras, and other electronic devices during class is prohibited. Please put devices away and on silent mode or turn them off. The use of the computers and the internet is solely for work related to the class. For online classes, when not speaking please mute yourself.

Course Schedule:

Week	Material	Chapter
1	Introduction to Java Programming	1, 2
2	Conditionals and Loops	4, 5
3	Parameters and Objects	3
4	Classes	8
5	First Exam	-
6	Inheritance	9
7	Polymorphism	9
8	Arrays	7
9	ArrayLists	10
10	Second Exam	-
11	Java Collections	11
12	Recursion	12
13	Searching and Sorting	13
14	Stacks and Queues	14
15	Final Exam	-

Grading Criteria:

Exam 1	20%
Exam 2	20%
Final Exam	30%
Labs	30%

Grading Scale:

Letter	Range
A	$93 - 100$
A-	$90 - 92.9\overline{9}$
B+	$87 - 89.9\overline{9}$
B	$83 - 86.9\overline{9}$
B-	$80 - 82.9\overline{9}$
C+	$77 - 79.9\overline{9}$
C	$70 - 76.9\overline{9}$
D	$60 - 69.9\overline{9}$
F	$0 - 59.9\overline{9}$