NEW YORK CITY COLLEGE OF TECHNOLOGY

THE CITY UNIVERSITY OF NEW YORK

Department of Computer Engineering Technology

300 Jay Street, Brooklyn, NY 11201-1909

EMT 1111 – Logic and Problem Solving

Syllabus[1]

Term: Spring 2024
Credits: 1cr.
Instructor: Dr. José M. Reyes Álamo (you may address me as *Dr. Reyes* or *Prof. Reyes*)
Office: V621 or Online
Email: jreyesalamo@citytech.cuny.edu
Instructor's Website: http://openlab.citytech.cuny.edu/jreyesalamo/
Course Website: https://openlab.citytech.cuny.edu/emt1111/
Office Hours: https://openlab.citytech.cuny.edu/jreyesalamo/teaching/office-hours/

Textbook:
Starting Out with Python, 6th Edition by Tony Gaddis

References:
Think Python by Allen B. Downey.
Free eBook at https://greenteapress.com/wp/think-python-2e/

How to Think Like a Computer Scientist: Interactive Edition by
Free eBook at http://interactivepython.org/runestone/static/thinkcspy/index.html

Course Description: This course introduces the foundations of problem-solving and computer programming as it is applied to electromechanical engineering technology. It provides a basic understanding of number systems and programming techniques with practical examples implemented in a modern programming language. Concepts are developed through hands-on laboratory exercises.

Prerequisites:
CUNY proficiency in mathematics.

Learning Objectives:
This course will teach the students how to use logic and solve problems using computers. Students will learn the basics of computer programming using a modern high-level programming language and apply it to problems in the area of computer engineering technology. Students will be introduced to numbers systems.

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

General Education Learning 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 instructor 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 due to medical situation, 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 your official CityTech student email address. Emails sent from personal addresses may be blocked by the server or ignored. You must identify yourself in the first sentence of your email by indicating your name and the course and section you are in (e.g. Hello Dr. Reyes this is John Smith from EMT 1111 – HD123). Avoid sending messages via Blackboard, OpenLab, Facebook, etc. as they may not be delivered or answered.

Grading Criteria:
- **Labs:** Labs will consist of problem-solving and programming assignments where the students will apply the techniques learned in class. Some labs will be in class, other will be assigned as homework. Late labs will not be accepted and labs will be graded individually.
- **Exams:** Exams will be administered to test the knowledge acquired at different stages during the semester. These are partial exams. Students are required to take exams 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:** There will be a final examination at the end of the semester. This exam will be comprehensive and will test the material taught during the entire semester. Students are required to take the final exam the day and time it is scheduled. There is no make-up exam unless you have a valid reason according to CityTech's policy.

Academic Integrity:
Students and others 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 course schedule for appropriate deadlines and procedures. Course material as well as assignments and labs will be distributed mostly electronically via Blackboard or the class website. It is your responsibility to check for new material frequently, daily is recommended. Unawareness of applicable deadlines and procedures is not a valid reason for not fulfilling these.

In-Class Expected Behavior
Students must show respect to each other and to the professor. Students may not interrupt the class and 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 computers and the internet is solely for work related to the class. For online classes please mute yourself if not speaking.

Course Schedule

Week	Topic	Book Chapter
1	Syllabus, Introduction, and Number Systems	1
2	Input, Processing, and Output	2
3	Input, Processing, and Output (cont)	2
4	Functions	5
5	Exam 1	-
6	Functions (cont)	5
7	Decision Structures, Boolean Logic and Gates	3
8	Decision Structures, Boolean Logic and Gates (cont)	3
9	Repetition Structures	4
10	Exam 2	-
11	Repetition Structures (cont)	4
12	More About Strings	8
13	Lists and Tuples	7
14	Dictionaries	9
15	Final Exam	-

Grading Weights:

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$\overline{9}$