New York City College of Technology
Mathematics Department

MAT 2440/D643 Discrete Structures and Algorithms I - Writing Intensive

Tuesday 10:00 am-11:40 am room N922
Thursday 10:00 am-11:40 am room N817

Instructor: Dr. Marianna Bonanome
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Office Hours: Tuesdays/Thursdays 12 pm - 1 pm, room N602B.

Text: Discrete Mathematics and Its Applications, 7th edition by Kenneth H. Rosen McGraw-Hill.

Course Description: This course introduces the foundations of discrete mathematics as they apply to computer science, focusing on providing a solid theoretical foundation for further work. Topics include functions, relations, sets, simple proof techniques, Boolean algebra, propositional logic, elementary number theory, writing, analyzing and testing algorithms.

Prerequisites: MAT 1375 or higher, and CST 2403 or CST 1201

Writing Intensive: This course has been designated as a "Writing Intensive" (WI) course by City Tech. The requirements include both formal (graded) and informal (non-graded) writing assignments. Both kinds of writing assignments must be completed. A large portion of your grade in this course (20% worth) will be based on the completion and quality of these assignments, so please take them seriously and talk to me about anything you find confusing. These assignments are not intended to make your life as a student difficult. Instead, they should help you to better understand the course material, evaluate it in light of your own lived experiences, and help you to think more closely and deeply about social problems.

Grading:

93.0–100	A	77.0–79.0	C+
90.0–92.9	A-	70.0–76.9	C
87.0–89.9	B+	60.0–69.9	D
83.0–86.9	B	0–59.9	F
80.0–82.9	B-		

W = withdrawal up to 11/6/18
WF = withdrawal after 11/6/18 (WF = F)

Note: Students who are failing should consider withdrawing officially before 11/6/18 to avoid an F or WF.

Exams (50% of grade):

Exam questions will be modeled after problems assigned for homework. There will be 4 exams + a final exam. The lowest of the 4 exam grades will be dropped. Exams will last for 1 hour and will start at the beginning of the period. No extra time is given for students who arrive late. Exam dates are: **9/25, 10/18, 11/13** and **12/11**.

***NO MAKE-UP EXAMS WILL BE GIVEN**
A missed exam will count as a 0 and will be the lowest grade that is dropped.

Final Exam (30% of grade):

A full period final examination is given the last class meeting of the semester **12/20**. It covers all topics studied. It **must** be taken to pass the course. No student will be allowed to take the final exam early.

Assignments (20% of grade):

It is crucial that you stay on top of the homework in this class. The course outline contains a list of homework problems for the whole course, and it can be found on our OpenLab site (see below) in the math dept's course outline under "Files" in our profile. Additionally, there will be 4 assignments given this semester which will be collected, each containing a strong writing component. They are due at the beginning of the class period on: **9/13, 10/11, 11/6** and **12/4**. Assignments late by 1 day will be penalized by 25%, 2 days late 50%, 3 days late 75%, any later and they will no longer be accepted.

Attendance:

Attendance will be taken at the beginning of every class. Lateness and students leaving before the end of the period will be recorded. It is important that you attend class and that you are on time. You may be absent during the semester without penalty for 10% of the class instructional sessions, i.e. 1 absence. **Two latenesses (this includes arriving late or leaving early) is equivalent to one absence**. Students who miss a class meeting should obtain all the information for that meeting. **Students who do not pass the course and who are absent more than 10% of the class time will be assigned the WU grade.**

Help:

Help is available during my office hours or in the Liberal Arts Learning Center AG18. Do not wait until the last minute before an exam to get help. If there is something you are having trouble with, get help as soon as possible.

OpenLab:

General information on the course, homework, assignments and tests can be found on our course OpenLab site at: https://openlab.citytech.cuny.edu/mat2440-d643/ You are expected to consult our OpenLab site and check your City Tech email regularly.

Classroom behavior:

Inappropriate behavior will **not** be tolerated in this classroom. Sleeping during class sessions will not be overlooked. Cell phones, smart watches and devices, iPods etc. are not allowed at

any time during the class session, please turn all devices off and take your headphones/ earphones off before entering the classroom.

Academic Integrity:

Students and all others 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. Accordingly, academic dishonesty is prohibited in The City University of New York and at New York City College of Technology and is punishable by penalties, including failing grades, suspension, and expulsion. The complete text of the College policy on Academic Integrity may be found in the catalog.

Accommodations:

If you need any special accommodations, please proceed to take your request to Student Support Center which is located at A237. For more information, please contact the department at 718-260-5143.

Session	Date	Sections	Exam/ Assignment
1	8/28	1.1, 1.2	
2	8/30	1.3	
3	9/4	1.4, 1.5	
4	9/6	1.6	
5	9/13	1.7	Assignment #1 due
6	9/20	1.7	
7	9/25		Exam #1
8	9/27	2.1, 2.2	
9	10/2	2.3	
10	10/4	2.4	
11	10/9	2.5, 3.1	
12	10/11	3.1	Assignment #2 due
13	10/16	3.1	

Session	Date	Sections	Exam/ Assignment
14	10/18		Exam #2
15	10/23	3.2	
16	10/25	3.2	
17	10/30	3.3	
18	11/1	3.3	
19	11/6	4.1, 4.2	Assignment #3 due
20	11/8	4.3, 4.4	
21	11/13		Exam #3
22	11/15	4.5	
23	11/20	4.6	
24	11/27	5.1	
25	11/29	5.5	
26	12/4	Intro. to quantum algorithms	Assignment #4 due
27	12/6	Finite state automata and the Tower of Hanoi	
28	12/11		Exam #4
29	12/13	Final Exam Review	
30	12/18		Final Exam

I reserve the right to make any changes to this syllabus that I see fit for your academic progress. All changes will be announced in class, and you are responsible for keeping up with such changes in case you were absent when they were announced.