The City College of New York
Department of Computer Science

The health and well being of you, your family, and those close to you are very important. As the University reopens, COVID-19 remains a risk. It is therefore of the utmost importance that you get vaccinated [*https://www.cuny.edu/coronavirus/faqs/*] *and follow the New York City and New York State health guidelines.*

In the case you or someone in your household having or being exposed to COVID-19, you should immediately seek the necessary help provided by qualified and knowledgeable health care professionals.

Whether you are attending classes online or in person, you will need to follow the CCNY Protocol for COVID-19 Notifications. Students, staff, and faculty are all obliged to follow this Protocol. Please follow the instructions and provide the information requested as indicated through the link [*https://www.ccny.cuny.edu/presidentsoffice/blog/protocol-covid-19-notifications*] *in a timely manner.*

Relief for class work affected by having or being exposed to COVID-19 may only be considered after making a proper and timely notification based on this Protocol and subject to the outcome of the review made.

Syllabus
CSc 33600 Introduction to Database Systems

Fall 2021 Section A34280: MW, 8:00 am – 9:15 am *Online*

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Office: NAC 8/202-O
Telephone: 212-650-6139

Office Hours *Online*
TTh 12:00 – 12:45 pm, or by appointment

Computer Science Prerequisites:

CSc 22000 Algorithms
CSc 22100 Software Design Laboratory

Students are expected to have a Java IDE and a Database Management System (DBMS) of their choice installed on their own personal computers or laptops.

Textbook and reference material:

[1] A First Course in Database Systems - Third Edition
Jeffery D. Ullman and Jennifer Widom
Pearson

[2] SQL manual and documentation of the DBMS of choice;
[3] Other material as needed.

Description:

This introductory course is concerned with DBMSs and their use in solving a wide range of information storage, management and retrieval problems commonly encountered in a variety of applications. The course aims to provide students with an overview of the design and management of relational and possibly other database systems, and a working, hand-on knowledge of the ISO standard SQL language. The course therefore combines the practical aspects of DBMS use with more theoretical discussions of database design methodologies and the internals of database systems.

The following topics are generally covered in some detail:

Relational database modeling
Entity-Relationship (ER) diagram
Database constraints, assertions, and triggers
Database schemas
Relational Algebra
Operations on relational databases
Functional dependencies
Normalization
Structured Query Language (SQL)
Database queries
Stored procedures
Database programming in Java
Transactions in SQL
Semi-structured data models
Extensible Markup Language (XML) schema

Other topics may be covered as applications in the class or topics of assignments.

Schedule:

Week	*Class*	*Notes*
1	25 August	*Semester begins*
	25 August	*First class*
2	30 August	
	1 September	
3	6 September	*No classes scheduled*

	8 September	
4	13 September	
	15 September	*No classes scheduled*
5	20 September	
	22 September	
6	27 September	
	29 September	
7	4 October	
	6 October	
8	11 October	*College closed*
	13 October	
9	18 October	
	20 October	
10	25 October	
	27 October	
11	1 November	
	3 November	
12	8 November	
	10 November	
13	15 November	
	17 November	
14	22 November	
	24 November	
15	29 November	
	1 December	
16	6 December	
	8 December	
17	13 December	*Last class; in-class examination*
	13 December	*Semester ends*

Assignments and Grading:

1- 3 assignments counted 40% of the final grade;
2- Final project (30%); and
3- One in-class exams (30%).

Policies:

1- The class will conducted online, in distance-learning form, in its entirety. Students are responsible to possess an appropriate desktop or laptop computers with a webcam and connected to the Internet.
2- All class meetings will be carried out using *Zoom*: *https://ccny.zoom.us*. Students are responsible for making the connection for the meetings scheduled at regular class times, and familiarizing themselves with the tool. For more information, see: *https://www.ccny.cuny.edu/it/zoom*.

3- Communication on all matters related to course material and class management will be conducted through Blackboard, either by announcements, postings, or emails, but you may still reach out to me through email with course related questions.

4- All course work must be carried out individually. Sharing materials with classmate, especially programming work including logic, and/or modifying the materials to fabricate and reproduce other versions is very seriously treated based on the CUNY Academic Integrity Policy (*posted on Blackboard*).

5- All assignments and projects must be *submitted by the deadline dates and times* in the form of *reports* showing the solution method, full codes developed, and outputs produced for the tasks indicated. You may also be asked to demonstrate and explain your program in person. *Submissions made by email will not be accepted. Deadline dates and times are strictly observed*.

6- One exam will be given in class. You are expected to be available at the beginning of the class period. No extra time will be given for late arrivals. No make-up exams will be considered for absent students.

7- Any disagreement resulting from grading must be reported in writing for resolution.

8- The school requires all faculty members to verify that students are actually attending the courses in which they are enrolled. Certification of enrolment is based on class attendance and made early in the semester. *Non-certification will result in a WN grade for the class*.

Computing Facilities:

Students are expected to complete their programming assignments and final project using a Java IDE and a DBMS of their own choice installed on their own personal computers or laptops.