Boston University

Metropolitan College

CS669 Database Design and Implementation for Business

Spring 2019

Instructor:	John P. Russo
Email:	jrusso44@bu.edu or jrusso440@gmail.com
Telephone:	(617) 960-8622 (cell)
Office Hours:	Before and After Class
Class Meeting Time:	Mondays 6:00PM – 8:45PM Hanscom AFB
Class Website:	https://onlinecampus.bu.edu

Course Objectives:

- Introduce students to relational database management systems and design
- Discuss SQL, how to create and query tables
- Introduce stored procedures, stored functions and triggers
- Discuss concurrency and transaction management
- Explain how queries are processed and can be optimized

Textbook: Coronel, C.M., Morris, S. Database Systems Design 13th Edition, Cengage. ISBN: 978-1337627900

You can also use the 12th edition

J. Russo, SQL By Example, 2018, Momentum Press
ISBN: 9781945612626

Software: Oracle RDBMS
Visio
LucidCharts

Grading

CS669

Weekly Quizzes	25%
Graded Homework	15%
Final Exam	20%
Term Project	30%
Class Participation	10%

Mapping to Modules on Blackboard Site

The course follows the same format as the E-Live course which is conducted over six weeks. I've stretched the modules out a bit more and of course added lectures and activities in class. You should submit all assignments in the Blackboard site referenced above. Feel free to utilize lectures and videos that have been provided within the Blackboard site. They are there for your benefit.

Quizzes

There are a series of quizzes, usually every other week. These will be due during the following week. You will have a week to complete the quiz. It will always be on the prior two weeks' material.

Homework Assignments

There are graded homework assignments, again usually one every two weeks or so. These reinforce the concepts of the lecture on database concepts. These also should be submitted on Blackboard. I have scheduled these so that they you can work on the homework during the week, bring your questions to ask before or after class and then submit the following weekend.

Project

For those taking the graduate class, there is a required project. If you are talking the undergraduate class, the project is for extra credit. The deliverables for the project are designed to dovetail with what you have learned in class. There will be a final project report due during the last week of class.

Final Exam

There will be an in-class final exam on December 19th.

Policy on Late Homework and Project Deliverables

Turning homework in late does not help either of us. It has been my experience that students get further behind when trying to catchup. Therefore, my policy is to deduct 10 points as a penalty for each week that an assignment or project deliverable is late up to three weeks. After three weeks, the assignment or deliverable cannot be submitted.

Contacting Me

The best way to reach me is via email. I will strive to get back to you within 24 hours. You can also send me a text or call on the cell phone number provided above.

Class Structure

I like to have time before and after class for office hours. We will spend some time at the beginning of class reviewing the previous week's materials and then we will jump into new material. I also like to break up our time between lectures and some activities.

Participation

I would like everyone in class to participate in discussions and activities. In addition, if you research a topic in the database area and would like to make a short presentation to the class, that would be beneficial to your participation grade. If you are looking for topics to present on, I am more than happy to provide some.

Academic Integrity Policy

·Cheating and plagiarism will not be tolerated in any Metropolitan College course. They will result in no credit for the assignment or examination and may lead to disciplinary actions.

·Please take the time to review the Student Academic Conduct Code:

http://www.bu.edu/met/metropolitan college people/student/resources/conduct/code.html.

This should not be understood as a discouragement for discussing the material or your particular approach to a problem with other students in the class. On the contrary – you should share your thoughts, questions and solutions. Naturally, if you choose to work in a group, you will be expected to come up with more than one and highly original solutions rather than the same mistakes.

Attendance and Absence

Attendance is not required but strongly encouraged. If a student misses a class it is his/her responsibility to catch up with the material discussed during the missed class.

Tentative Schedule

- The schedule may be adjusted according to the actual progress of the class.
- Students are strongly encouraged to read book chapters assigned for each lecture before coming to the class.

Week of	Topic	Reading	Assignment	Project	Quiz
January 28th	Data Modeling	Chpts 1 and 2			
February 4th	Intro to SQL	*12th Edition:* Coronel & Morris, sections 7.1 through 7.4 of chapter 7 *13th Edition:* Coronel & Morris, sections 7.1 through 7.3 of chapter 7, sections 8.1 and 8.2 in chapter 8	SQL Lab1	Iteration 1- Concept	1
February 11th	Relational Model and ERD	Chpts 3 & 4			
February 18th	ERD Continued and Interconnecting Data with SQL *Please note: Class will be held on 2/19 because of the Monday holiday*	*12th Edition:* Coronel & Morris, sections 7.5 through 7.7 of chapter 7, section 8.1 of chapter 8 *13th Edition:* Coronel & Morris, sections 7.4 through 7.6 of chapter 7, sections 8.3 and 8.4 in chapter 8 (note that 8.4b, subqueries, will be covered in more detail later	SQL Lab 2		2
February 25th	Advanced data modeling	Chpt 5		Iteration 2 – Business Rules	
March 4th	Normalization	Chpt 6			
March 11th	Spring Break				

Week of	Topic	Reading	Assignment	Project	Quiz
March 18th	Aggregating Data	*12th Edition:* Coronel & Morris, section 8.3 and 8.4 of chapter 8. Note that section 8.2 will be read later *13th Edition:* Coronel & Morris, sections 7.7, 7.9, 7.10, and 7.11 of chapter 7 (note that section 7.8 regarding subqueries will be later). Section 8.5 of chapter 8.	SQL Lab 3	Iteration 3 – Conceptual Design	3
March 25th	Database Design, Transaction Management and Concurrency Control	Chpts 9 and 10			
April 1st	Database Programming	Chpt 8	SQL Lab 4	Iteration 4 – Logical Design	4
April 8th	Performance tuning and query optimization	sections 11.1 to 11.7 of chapter 11,			
April 15th	Distributed DBMS and Subqueries	*Chapter 12 12th Edition:* Coronel & Morris, section 8.2 of chapter 8 *13th Edition:* Coronel & Morris, section 7.8 of chapter 7	SQL Lab 5	Iteration 5 - Submit SQL for use cases 2a, 2b, 3a, and 3b, and define your own use cases for 5a and 5b, for your Term Project in Iteration 5.	5

Week of	Topic	Reading	Assignment	Project	Quiz
April 22nd	Advanced Topics				
April 29th	Project Work			Final Project Report Due	6
May 6th	Final Exam				