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Business Database Management

Fall 2019

1WP-518

Monday 2:30p.m.-5:20p.m.

Instructor: Yuan Qu

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Office Hour: Monday 1:00pm-2:00pm

COURSE DESCRIPTION

The purpose of this course is to provide students with an understanding of database technology and its application in managing data resources. The conceptual, logical, and physical design of databases will be analyzed. A database management system will be used as a vehicle for illustrating some of the concepts discussed in the course.

COURSE MATERIALS

- Textbooks:

Database Systems: Design, Implementation, & Management 11th Edition by Carlos Coronel, Steven Morris ISBN-13: 978-1285196145

- The Blackboard site for this course will contain lecture notes, reading materials, assignments, and late breaking news. It is accessible via: <https://blackboard.newark.rutgers.edu>. You should check it frequently to remain updated. You are responsible for keeping aware of the announcements on the course web site.

LEARNING GOALS AND OBJECTIVES

LGO1. Students will learn the tools, techniques, and methods of managing business data

LGO2. Students will learn the tools, techniques, and methods of securing and optimizing business data

LGO3. Students will learn the tools, techniques, and methods of SQL driven database management and implementation

- Students develop these skills and knowledge through the following course activities and assignments:

- * Lectures. Class lectures generally include an introduction to the specific business database system concepts being covered, and follow a slide presentation of the material to transfer the database system knowledge to the students. Lectures make use of practical examples from business and industry, and interactive exercises to help ensure thorough comprehension of the material.

- * Homework Assignments. Homework is assigned to reinforce concepts in the course and for students to practice newly acquired skills. Homework is turned in, graded, and then reviewed in class to ensure knowledge transfer.

- * Quizzes and Exam. The course includes two exams to formally assess students' knowledge and comprehension. Tests consist of true/false, multiple choices, and comprehensive questions.

PREREQUISITES

There is no formal prerequisite for this course. However, student must preserve the confidence and nearest attitude to understand the whole content in class.

ACADEMIC INTEGRITY

I do NOT tolerate cheating. Students are responsible for understanding the RU Academic Integrity Policy (http://academicintegrity.rutgers.edu/files/documents/AI_Policy_2013.pdf). I will strongly enforce this Policy and pursue *all* violations. On all examinations and assignments, students must sign the RU Honor Pledge, which states, “On my honor, I have neither received nor given any unauthorized assistance on this examination or assignment.” Don’t let cheating destroy your hard-earned opportunity to learn. See business.rutgers.edu/ai for more details.

ATTENDANCE AND PREPARATION POLICY

- Expect me to attend all class sessions. I expect the same of you. If I am to be absent, my department chair or I will send you notice via email and Blackboard as far in advance as possible. If you are to be absent, report your absence in advance at <https://sims.rutgers.edu/ssra/>. If your absence is due to religious observance, a Rutgers-approved activity, illness, or family emergency/death and you seek makeup work, also send me an email with full details and supporting documentation within 3 days of your first absence.
 - For weather emergencies, consult the campus home page. If the campus is open, class will be held.
 - Expect me to arrive on time for each class session. I expect the same of you.
 - Expect me to remain for the entirety of each class session. I expect the same of you.
 - Expect me to prepare properly for each class session. I expect the same of you. Complete all background reading and assignments. You cannot learn if you are not prepared. The minimum expectation is that for each 80 minutes class session, you have prepared by studying for at least twice as many hours.
 - Expect me to participate fully in each class session. I expect the same of you. Stay focused and involved. You cannot learn if you are not paying attention.
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CLASSROOM CONDUCT

Students are permitted to use computers during class for note-taking and other class-related work only. Students are **not** allowed to check emails, access Web sites not related to the course or work on something that is beyond the scope of this course during the class time. Those using computers during class for work not related to that class must leave the classroom for the remainder of the class period.

EXAM DATES AND POLICIES

There are two exams in this course (*tentative):

[Exam I] Oct 21, 2019.

[Exam II] Dec 9, 2019.

During exams, the following rules apply:

- If you have a disability that influences testing procedures, provide me an official letter from the Office of Disability Services at the start of the semester.
- No cell phones or other electronics are allowed in the testing room.
- You must show a valid Rutgers photo ID to enter the room and to turn in the exam.
- Alternate seating; do not sit next to another student or in your usual seat.
- Use the bathroom prior to the exam start; bathroom breaks, if essential, will be escorted.
- Your exam will not be accepted unless you sign the Honor Pledge.

GRADING POLICY

Course grades are determined as follows:

Exam I: 30%

Exam II: 30%

Homework: 30%

Attendance: 10%

Assignments have to be submitted **before** the beginning of the class on the specified due day. **No late submissions will be accepted.** **No assignment will be accepted after class or late including the reasons of absence.** Early submission will not be reviewed until the due date.

The scores for exam will be posted to Blackboard in 3 days after submission. At the end of course, homework, and exam scores with the weights specified in the syllabus will be combined to get an overall score from 0-100. This score may contain fractions, but it won't be rounded. Note that the final letter grade is based on a curve. I then rank these scores, and choose sensible cutoffs between A, B+, B, C+, C, D and F. The cutoffs do not come in predetermined places. An example, 90 is not guaranteed to be an "A".

There will be no make-up exams. You are required to present a written proof for situations such as going on to an emergency room due to unexpected and serious illness. Chatting during the exam is **not** allowed. **No** collaboration between class members will be allowed during any exam.

Your final grade is not subject to negotiation. If you feel I have made an error, submit your written argument to me within one week of receiving your final grade. Clarify the precise error I made and provide all due supporting documentation. If I have made an error, I will gladly correct it. But I will adjust grades only if I have made an error. I cannot and will not adjust grades based on consequences, such as hurt pride, lost scholarships, lost tuition reimbursement, lost job opportunities, or dismissals. Do not ask me to do so. It is dishonest to attempt to influence faculty in an effort to obtain a grade that you did not earn, and it will not work.

COURSE SCHEDULE

*Schedule is tentative and Subject to Change

Date	Topic	Items Due
Sep 9	<ul style="list-style-type: none">• Overview of course logistics• Intro to Database Systems	
Sep 16	<ul style="list-style-type: none">• Data Models• SQL Lab	
Sep 23	<ul style="list-style-type: none">• Relational Database Model• SQL Lab	
Sep 30	<ul style="list-style-type: none">• Entity Relationship Modeling• SQL Lab	Homework 1
Oct 7	<ul style="list-style-type: none">• Advanced Data Modeling• SQL Lab	
Oct 14	<ul style="list-style-type: none">• Normalization of Database Tables• SQL Lab	
Oct 21	<ul style="list-style-type: none">• Exam I	
Oct 28	<ul style="list-style-type: none">• Database Design• SQL Lab	
Nov 4	<ul style="list-style-type: none">• Transaction Management and Concurrency Control• SQL Lab	Homework 2
Nov 11	<ul style="list-style-type: none">• Database Performance Tuning and Query Optimization• SQL Lab	
Nov 18	<ul style="list-style-type: none">• Distributed Database Management Systems• SQL Lab	
Nov 25	<ul style="list-style-type: none">• Business Intelligence	
Dec 2	<ul style="list-style-type: none">• Big Data and Data Warehouse	
Dec 9	<ul style="list-style-type: none">• Exam II	Homework 3

SUPPORT SERVICES

If you need accommodation for a *disability*, obtain a Letter of Accommodation from the Office of Disability Services. The Office of Disability Services at Rutgers, The State University of New Jersey, provides student-centered and student-inclusive programming in compliance with the Americans with Disabilities Act of 1990, the Americans with Disabilities Act Amendments of 2008, Section 504 of the Rehabilitation Act of 1973, Section 508 of the Rehabilitation Act of 1998, and the New Jersey Law Against Discrimination. <https://ods.rutgers.edu>

If you are a military *veteran* or are on active military duty, you can obtain support through the Office of Veteran and Military Programs and Services. <http://veterans.rutgers.edu/>

If you are in need of *mental health* services, please use our readily available services. <http://counseling.newark.rutgers.edu/>

If you are in need of *physical health* services, please use our readily available services. <http://health.newark.rutgers.edu/>

If you are in need of *legal* services, please use our readily available services: <http://rusls.rutgers.edu/>

If you are in need of additional *academic assistance*, please use our readily available services. <http://www.ncas.rutgers.edu/rlc> , <http://www.ncas.rutgers.edu/writingcenter>