

Computer Science
Course Number: 22:198:603
Course Title: Business Data Management

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 Rutgers Canvas site for this course will contain lecture notes, reading materials, assignments, and late breaking news. It is accessible via: <https://canvas.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. The course includes four quizzes to formally assess students' knowledge and comprehension. Tests are consisting 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/>).

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." I will screen all written assignments through *SafeAssign* or *Turnitin*, plagiarism detection services that compare the work against a large database of past work. 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 Canvas 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. No matter the campus is open or not, class will be held.
 - Expect me to arrive on time for each online session. I expect the same of you.
 - Expect me to remain for the entirety of each online 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 four quizzes in this course (*tentative):

[Quiz I]

[Quiz II]

[Quiz III]

[Quiz IV]

During quizzes, 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.
- You must show a valid Rutgers photo ID in front of web camera to start online quiz.
- Use the bathroom prior to the exam start; There is no bathroom breaks.
- Your quiz will not be accepted unless you sign the Honor Pledge.

GRADING POLICY

Course grades are determined as follows:

QUIZ I: 25%

QUIZ II: 25%

QUIZ III: 25%

QUIZ IV: 25%

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 Canvas 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 quizzes. 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 quiz is **not** allowed. **No** collaboration between class members will be allowed during any quiz.

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

Topic	Items Due
<ul style="list-style-type: none"> • Overview of course logistics • Intro to Database Systems 	
<ul style="list-style-type: none"> • Data Models • SQL Lab 	
<ul style="list-style-type: none"> • Relational Database Model • SQL Lab 	
<ul style="list-style-type: none"> • Entity Relationship Modeling • QUIZ I 	Homework 1
<ul style="list-style-type: none"> • Advanced Data Modeling • SQL Lab 	
<ul style="list-style-type: none"> • Normalization of Database Tables 	
<ul style="list-style-type: none"> • SQL Lab • QUIZ II 	Homework 2
<ul style="list-style-type: none"> • Database Design • SQL Lab 	
<ul style="list-style-type: none"> • SQL Lab 	
<ul style="list-style-type: none"> • SQL Lab • QUIZ II 	
<ul style="list-style-type: none"> • Transaction Management and Concurrency Control • SQL Lab 	Homework 3
<ul style="list-style-type: none"> • Database Performance Tuning and Query Optimization 	
<ul style="list-style-type: none"> • Distributed Database Management Systems 	
<ul style="list-style-type: none"> • QUIZ IV 	

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. More information can be found at ods.rutgers.edu.

[Rutgers University-New Brunswick ODS phone (848)445-6800 or email dsoffice@echo.rutgers.edu]

[Rutgers University-Newark ODS phone (973)353-5375 or email ods@newark.rutgers.edu]

If you are *pregnant*, the Office of Title IX and ADA Compliance is available to assist with any concerns or potential accommodations related to pregnancy.

[Rutgers University-New Brunswick Title IX Coordinator phone (848)932-8200 or email jackie.moran@rutgers.edu]

[Rutgers University-Newark Office of Title IX and ADA Compliance phone (973)353-1906 or email TitleIX@newark.rutgers.edu]

If you seek *religious accommodations*, the Office of the Dean of Students is available to verify absences for religious observance, as needed.

[Rutgers University-New Brunswick Dean of Students phone (848)932-2300 or email deanofstudents@echo.rutgers.edu]

[Rutgers University-Newark Dean of Students phone (973)353-5063 or email DeanofStudents@newark.rutgers.edu]

If you have experienced any form of *gender or sex-based discrimination or harassment*, including sexual assault, sexual harassment, relationship violence, or stalking, the Office for Violence Prevention and Victim Assistance provides help and support. More information can be found at <http://vpva.rutgers.edu/>.

[Rutgers University-New Brunswick incident report link: <http://studentconduct.rutgers.edu/concern/>. You may contact the Office for Violence Prevention and Victim Assistance at (848)932-1181]

[Rutgers University-Newark incident report link: https://cm.maxient.com/reportingform.php?RutgersUniv&layout_id=7 . You may also contact the Office of Title IX and ADA Compliance at (973)353-1906 or email at TitleIX@newark.rutgers.edu. If you wish to speak with a staff member who is confidential and does **not** have a reporting responsibility, you may contact the Office for Violence Prevention and Victim Assistance at (973)353-1918 or email run.vpva@rutgers.edu]

If students who have experienced a temporary condition or injury that is adversely affecting their ability to fully participate, you should submit a request via <https://temporaryconditions.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.

[Rutgers University-Newark Counseling Center: <http://counseling.newark.rutgers.edu/>]

[Rutgers Counseling and Psychological Services–New Brunswick: <http://rhscaps.rutgers.edu/>]

If you are in need of *physical health* services, please use our readily available services.

[Rutgers Health Services – Newark: <http://health.newark.rutgers.edu/>]

[Rutgers Health Services – New Brunswick: <http://health.rutgers.edu/>]

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

Students experiencing difficulty in courses due to *English as a second language (ESL)* should contact the Program in American Language Studies for supports.

[Rutgers–Newark: PALS@newark.rutgers.edu]

[Rutgers–New Brunswick: eslpals@english.rutgers.edu]

If you are in need of additional *academic assistance*, please use our readily available services.

[Rutgers University-Newark Learning Center: <http://www.ncas.rutgers.edu/rlc>]

[Rutgers University-Newark Writing Center: <http://www.ncas.rutgers.edu/writingcenter>]

[Rutgers University-New Brunswick Learning Center: <https://rlc.rutgers.edu/>]

[Optional items that many faculty include:

- Students must sign, date, and return a statement declaring that they understand the RU Academic Integrity Policy.

- Students must sign, date, and return a statement declaring that they understand this syllabus.]