

Business Analytics and Information Technology
Course Number: 33:136:470
Course Title: Business Data Management

COURSE DESCRIPTION

- Databases are an integral part of modern life. Graduating with a Business degree should come with a minimum appreciation for/understanding of what databases are and how they're managed.
- In this course, we will cover databases from a computer architecture perspective first, then with details about how databases can be modeled theoretically, and finally with hands on experience installing/maintaining/using a database system.
- The material in class will be based on the text book (see below), white board notes, and computer presentations.

COURSE MATERIALS

- Textbook: [Suggested but not required]. Database Management Systems, 3rd Edition, Ramakrishnan & Gehrke, ISBN-13: 978-0072465631
- Check Canvas (canvas.rutgers.edu) and your official Rutgers email account regularly.
- Use of a computer is mandatory

LEARNING GOALS AND OBJECTIVES

- This course is designed to help students develop skills and knowledge in the following area(s):

This course introduces principles and techniques for managing data resources, covering. Topics include database management, logical data models (entity-relationship models, relational schema design, and table normalization), relational database creation and administration, SQL queries, database design and normalization, and basics of database application development. Students expected to complete both written and programming homework assignments on database infrastructure that is provided to them (MySQL and Apache/PHP) Time provided, will also survey advanced database management topics such as “big data” and NoSQL technologies

- Students who complete this course will demonstrate the following:

Hands-on experience using current database technologies

A solid understanding of database management fundamentals and how they are applied in modern practice.

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 7 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. If you are going to be tardy, please send me an email before hand.
- 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 3-hour 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.

CLASSROOM CONDUCT

Food and drink are okay in class so long it doesn’t bother other students.

Cold calling and cell phone use is not permitted during lecture

Students may excuse themselves to the restroom at their leisure except for in the case of quizzes/tests. In the latter case, please see me first before excusing yourself.

Seating arrangements are optional, except for during quizzes/tests.

EXAM DATES AND POLICIES

There are 2 exams in this course:

Midterm Exam: [closed book]

Final Exam: details TBA.

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.
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GRADING POLICY

Course grades are determined as follows:

Homework	20%
Quizzes	10%
Midterm	15%
Final	15%
Term Project	40%

- Extra credit: Offered only as bonus questions on quizzes/exams. Above and beyond term projects may also be given extra credit.
- Grade distribution: Grades will be curved so that the average student (by mean weighted score) earns a B.

- Grade posting: On Canvas w/in 2 weeks of turning the assignment in.
- Warning grade roster: I will notify students of their grades before the midterm
- 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

Topic

Intro/Computer Architecture

Data structures for DB

File organization and indexes

Concepts and Models

Relational Algebra

MIDTERM THIS WEEK

SQL

Schemas

NO CLASS

File Organization and Indexes

Project Introduction/System

DB Application Programming

Schema Refinement and Normalization

Advanced Topics

Project Presentations

FINAL EXAM WEEK

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.]