CPSC340A
Database Systems
Syllabus

Instructor: Dr. Durell Bouchard
Office Hours: MWF: 1:40-2:40, TTH: 2:40-3:40, also by appointment or open door
Office: Trexler 365-C
E-Mail: bouchard@roanoke.edu(mailto:bouchard@roanoke.edu)
Phone: 375-4901

Course Objectives

This course provides an introduction to relational database systems. Topics include the architecture of a database system, the query language SQL, database design, data mining, and issues data concurrency, security and integrity in the context of multi-user database systems. Students will put the knowledge and skills gained to use by creating a database for a local business.

Intended Learning Outcomes: At the end of the course the successful student will be able to

1. design a relational databases for a given data set.
2. use the Structured Query Language (SQL) to create relational databases.
3. formulate queries to extract appropriate data from a given relational database.

Course Content

Prerequisites: CPSC170

Texts:

- *SQL Queries for Mere Mortals: A Hands-On Guide to Data Manipulation in SQL: Third Edition*, by John Viescas and Michael J. Hernandez, Addison-Wesley, 2014.
- *Database Design for Mere Mortals: A Hands-On Guide to Relational Database Design*, by Michael J. Hernandez, Addison-Wesley, 2013.

Assignments: In addition to regular reading, and in-class activities, there will be programming and design assignments. These assignments are designed to give the student the opportunity to put into practice the programming and design skills they have learned.

Project: In addition to the smaller assignments there will be a large project. The project is to design and implement a database for a local company. Successfully completing the project will require knowledge and skills learned earlier in the semester.

Presentations: In addition to the final project presentation, students will give presentations on Data Mining and Non-SQL Databases. The information in these presentations will be useful in completing the project.

Exam: One midterm exam will be given on Thursday, February 25th.

Co-curricular: The Department of Mathematics, Computer Science, and Physics is offering a series of lectures designed to engage the campus community in discussions of ongoing research, novel applications, and other issues that face these disciplines. You are invited to attend all of the events but participating in at least three is mandatory. Within one week of attending an event you must submit a one page, single-spaced, paper (to Inquire) reflecting on the discussion. If you do not turn the paper in within the one week time frame you may not count that event as one you attended.

Grading: Course grades are assigned based on the following weights and scale:

Grade Weights: project……50% midterm…….20% assignments…..17%
presentation….10% co-curricular….3%

Grade Scale:

93-100….A	83-86……B	73-76……C	63-66……D
90-92……A-	80-82……B-	70-72……C-	60-62……D-
87-89……B+	77-79……C+	67-69……D+	0-60……..F

Course Policies

Attendance Policy: Class attendance is vital to your success in this course; material covered during missed sessions is the responsibility of the student. Conversations held in class illuminate the published class materials and are subject to evaluation on subsequent tests and quizzes. Moreover, quizzes and in-class assignments are not available for make-up. Students with excused absences will not be penalized for missing quizzes or in-class activities. Students with unexcused absences will receive no credit for missed quizzes and in-class activities.

Late Assignment Policy: Unless otherwise specified, assignments are to be turned in before the start of class on the due date. If you anticipate being unable to meet a deadline, talk to me at least 24 hours before the deadline. In extenuating circumstances we may be able to make special arrangements. Please note that this must be discussed – just sending an email does not automatically grant you extra time. If you have not been granted extra time ten percent per calendar day (24 hours) will be deducted for late work (including weekends and holidays); work more than 2 days late will receive no credit. Electronic "glitches" do not waive your responsibility to submit your work in a timely manner.

Make-up Policy: Everyone is expected to take the exam at the scheduled time. Make-ups will be given for legitimate, documented absences. Make-up tests, if given, may be oral.

Academic Integrity: It is accepted that you have read and understood the standards for academic integrity at Roanoke College. All tests and exams are to be the work of the individual student. You are encouraged to get help from the instructor if you need help with any aspect of the course including programs and assignments. Student assistants, tutors, and classmates may help you understand course concepts but may not show you how to do any particular aspect of an assignment. Students may discuss in-class activities and assignments and help each other out but in all cases the work you turn in must be your own. Copying someone else's work or turning in someone else's work is NEVER allowed. Using someone else's work or ideas as your own is plagiarism and an academic integrity offense. Examples of academic integrity violations include copying a program or part of a program (even one line) from someone else, writing code for someone else, telling someone else how to solve a problem or having someone tell you how to solve a problem. Discussion among students about programming projects should be limited to general concepts, not specific aspects of how to complete the work.

Electronic Devices: All cell phones must be turned off prior to entering the classroom. The use of any electronic device during a test or quiz is prohibited. This includes cell phones, personal media players, personal digital assistants, and laptops. Any use of such a device during a test or quiz will be considered a breach of academic integrity.

Disability Support Services: The Office of Disability Support Services, located in the Goode-Pasfield Center for Learning and Teaching in Fintel Library, provides reasonable accommodations to students with identified disabilities. Reasonable accommodations are provided based on the diagnosed disability and the recommendations of the professional evaluator. In order to be considered for disability services, students must identify themselves to the Office of Disability Support Services. Students requesting accommodations are required to provide specific current documentation of their disabilities. Please contact Dr. Bill Tenbrunsel, Director of the Center for Learning & Teaching, at 540-375-2247 or e-mail tenbruns@roanoke.edu(mailto:tenbruns@roanoke.edu).

If you are on record with the College's Office of Disability Support Services as having academic or physical needs requiring accommodations, please schedule an appointment with Dr. Tenbrunsel as soon as possible. You need to discuss your accommodations with him before they can be implemented. Also, please note that arrangements for extended time on exams, testing, and quizzes in a distraction-reduced environment must be made with the Center for Learning & Teaching at least 2 business days (M-F) *before every exam*.

Course Schedule

This course expects you to spend at least 12 hours of work each week inside and outside of class.

Date	Topic	Due
Jan 19 – Feb 25	SQL	Midterm
Mar 1 – Mar 3	Data Mining & Non-SQL Databases	Presentation
Mar 8 – Apr 12	Design	Interview

Apr 14 – Apr 29 Multi-user Databases Project