

Endicott College
Beverly, Massachusetts
School of Arts and Sciences
Computer Science Department
Course Syllabus

Course #: CSC 340.01
Course title: Database Management Systems
Credits: 3
Pre-requisites: CSC 200 (Website Development & Programming)
Semester: Fall 2014
Meeting times: Lectures T/Th 2–3:15pm in LSB 212
Textbook: A First Course in Database Systems (3rd ed.)
Ullman & Widom, 2008; ISBN: 978-0-13-600637-4
Web page: <http://hank.feild.net/courses/2014-fa/csc340>

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Office hours: Wed. 10am–12pm and 1–2pm; other times by appointment

Catalog Description

Survey of the basic concepts and theories in data modeling and relational database management. The course covers the development of database applications and solutions to satisfy user needs. In addition, students examine the use of the database in contemporary organizations and explore issues surrounding database access, use, and confidentiality.

Learning Outcomes

At the completion of this course the student should be able to demonstrate the ability to:

- assess user needs and develop satisfactory database solutions
- reason about basic concepts in database design and management
- construct SQL statements to manipulate data in a database
- build database applications
- use contemporary database application software
- assess database system design and security
- describe fundamentals of database administration

Teaching/Learning Strategies

This course will be taught using a flipped classroom approach. That means students are expected to read and watch assigned texts and videos outside of class in lieu of classroom lectures. Class time will be used to resolve questions about the content, work on assignments, and go over examples. A large portion of the grade is placed on student's participation in and preparedness for class meetings.

Outline

Week	Dates	Topic
1	Sep. 4	Relational databases
2	Sep. 9, 11	Data formats: XML and JSON
3	Sep. 16, 18	NoSQL; Relational algebra
4	Sep. 23, 25	Relational algebra
5	Sep. 30	SQL
Oct. 2		Exam 1
6	Oct. 7, 9	SQL
7	Oct. 14, 16	Querying XML and NoSQL
8	Oct. 21, 23	Relational design theory; UML
9	Oct. 28, 30	Indexes; Transactions
10	Nov. 4, 6	Constraints; Triggers
Nov. 11		Exam 2
11	Nov. 13	Views
12	Nov. 18, 20	Views
<i>Nov. 25, 27</i>		<i>No class—Thanksgiving break</i>
13	Dec. 2, 4	Authorization, OLAP
14	Dec. 9, 11	Project presentations; Review
Dec. 16		Final Exam (cumulative; 1–3pm in LSB 212)

Grading

Exam 1	15%	Assignments	30%
Exam 2	15%	Participation/Preparedness	20%
Final Exam	20%		

100–94 = A	89–87 = B+	79–77 = C+	69–67 = D+	59–0 = F
93–90 = A-	86–83 = B	76–73 = C	66–63 = D	
	82–80 = B-	72–70 = C-	62–60 = D-	

Working with Others

Assignments may be done individually or small groups. Each student must submit the assignment, even if working in a group, and must indicate who they worked with.

Required Texts/Technology

There is a required textbook (see above). In addition, there are several YouTube video lectures from one of the book's authors (Jennifer Widom) that will be assigned. Students are expected to have the equipment and Internet connectivity required to view these videos.

Students are expected to bring laptops to class. This is essential as we will meet in LSB 212, which is a laptop room. Laptops will be used to access database systems used in the class exercises.

Late Policy and Resubmission

Late assignments will be accepted, but will incur a 15% lateness penalty. In addition, students may re-work problems for up to 75% of the original score (not including late penalties). The motivation is to encourage students to reconsider their work and fix mistakes.

ADA Policy

If you as a student qualify as a person with a disability as defined in Chapter 504 of the Rehabilitation Act of 1973, the Americans with Disabilities Act (ADA) of 1990, the Americans with Disabilities Act Amendments Act of 2008 (ADAAA), you are strongly encouraged to register with the Center for Teaching and Learning. The Center for Teaching and Learning is located in the Diane M. Halle Library room 201 and online at <http://www.endicott.edu/academicresources>. As a student registered with the Center for Teaching and Learning, it is your responsibility to present your accommodation letter to your instructor at the beginning of each semester.

Course Expectations

For each credit hour, students are expected to spend a minimum of two hours on work out-side of class each week. For this three credit course, that is a minimum of six hours each week. Due to the amount of reading and watching necessary for this class, students should expect to spend more than this amount of time outside of class.

Students must review the Academic Calendar published by the Registrar's Office online at: <http://www.endicott.edu/Academics/AcademicCalendar.aspx>. Class attendance is expected of all students up to and including the last day of scheduled classes in the semester. Students must plan accordingly.

Academic Integrity

Students are expected to abide by the *Academic Integrity Policy* of Endicott College. Cheating will result in failure of the assignment or course or dismissal from the College. Make sure to always cite sources and if you confer with classmates on an assignment, list who those individuals are at the top of your submission. You are expected to be capable of explaining any code you submit to the professor when asked. Submitting identical or near identical assignments, submitting code that is not your own (whether or not you indicate whose it is), not making clear

who you consulted with, or not being able to explain your submitted code when prompted will all be considered a violation of the Academic Integrity Policy.

Attendance, Participation, and Preparedness

Students should attend every class. However, students may miss up to three classes excused or unexcused, without notifying the professor. In-class exercises cannot be made up for credit and office hours will not be used to cover material missed due to an absence. Participation will also be affected. **Absences beyond three classes may result in up to a 5% penalty on the final course grade per absence.** Please contact the professor in the event of extenuating circumstances resulting in the need for a prolonged absence.

Participation and preparedness make up a significant portion of the course grade. To earn full credit, students should be sure to come to class prepared to discuss and use the material covered in the assigned readings and videos.

While in class, students are expected to be fully present and engaged. Using phones or lab computers in class for any non-class purpose—e.g., texting, making calls, checking email, watching videos, etc.—is strictly forbidden. Side discussions, covert texting, or any other failure to pay attention will negatively impact your grade.

Students will incur a 25% penalty on their Participation/Preparedness grade for being unprepared for, off-task in, or disengaged from class. After four such penalties, a student's Participation/Preparedness grade will be 0.

Subject to Change

This syllabus is subject to change at the discretion of the professor. Updates will be announced and the most recent version will be available on the course website.