

ISE224 Information Systems Analysis and Design

Fall 2018

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Text:

David Kroenke, David J. Auer, *Database Processing: Fundamentals, Design, and Implementation, 14th Edition*, Prentice Hall, 2015

Course Description

An introduction to the technological as well as methodological aspects of computer information systems emphasizing database systems. Topics include design and evaluation, query languages and software implementation. Students that take CSE 241 cannot receive credit for this course.

Course Objectives

Upon completion of this course, students will:

- know the different types of databases, and the history of database processing
- understand the constructs and concepts of the entity relationship model and its use in expressing database users' requirements
- understand the relational model and normalization
- be able to transform entity-relationship data models into relational database designs
- understand the foundations of relational implementation and relational algebra
- know SQL in a DBMS-independent manner
- know the fundamental concepts in database application design and programming
- know how to access a database using a general purpose programming language
- know the basics of a personal database system
- know how to design and implement a database project using an enterprise level database system

Software

Students are required to have Microsoft Access. In addition, several public domain packages will be used reinforce the concepts from class.

Grading Policy

Final grades will be determined according to the following schedule. Plus/minus grading will be used for final grades.

Homework/Projects/Quizzes:	75%
Final Exam:	25%

Makeup/Late Submission Policy:

Quizzes may be announced or unannounced. A makeup for any excused missed quizzes will be offered during the last week of the semester.

Depending on the number of quizzes given, one or more of the lowest quiz grades will be dropped.

Late homework and projects will be accepted up to one week after the due date, unless the solutions have been posted.

Late submissions will receive a reduction of 25% for each day (or fraction of day) late.

Collaboration

Individual work is expected unless an assignment specifies a group or partner can be used. It is not acceptable to take someone else's work and make changes prior to submission. It is okay to exchange ideas or to get help debugging. However, once you are writing code, it should be your own. Individuals violating this policy will be referred to the University Committee on Discipline

Course Topic Areas.

I expect to cover the course topics as listed below. This is a list of topics to be covered not a schedule. Content may be adjusted in order to adapt to course dynamics. Chapter readings are in Kroenke.

<u>Topic</u>	<u>Readings/Reference</u>
Overview and History of Database	1
Introduction to SQL	2
Database Design	3,4,5,6
Database Implementation	7,8
Managing Databases	9,10
Database Access Standards	11,12

Using Microsoft Access
MySQL – Open Source Database
Python Programming
HTML/JavaScript/PHP Programming
Java Programming

Tutorials on Coursesite
<http://dev.mysql.com>
<http://www.python.org>
<http://www.w3schools.com>
<https://docs.oracle.com/en/>

Accommodations for Students with Disabilities

If you have a disability for which you are or may be requesting accommodations, please contact both your instructor and the Office of Academic Support Services, University Center C212 (610-758-4152) as early as possible in the semester. You must have documentation from the Academic Support Services office before accommodations can be granted.

Principles of Equitable Community

Lehigh University endorses The Principles of our Equitable Community (<http://www4.lehigh.edu/diversity/principles>). We expect each member of this class to acknowledge and practice these Principles. Respect for each other and for differing viewpoints is a vital component of the learning environment inside and outside the classroom.