Course title and number  
Database Systems CSCE 310-200

Term (e.g., Fall 200X)  
Summer 2018

Meeting times and location  
MTWF 12:00-1:35pm 113 HRBB

Course Description and Prerequisites

Modern databases enable the usage and manipulate large amounts of data. This course will help students grasp the fundamental concepts of databases, and learn the design and application of database systems. The course introduces how to model data in simple and yet powerful ways, how to design a database and optimize its structure, how to achieve both high performance and high reliability, and the mathematical theory that underlie these objectives.

Learning Outcomes or Course Objectives

The objective of this course is to study the principles and methods that enable database systems. Students are expected to obtain a comprehensive understanding of database modeling, relational algebra, query languages, transactions, data storage and representation, index structures, XML and semi-structured data, and high-level language interface with database systems.

Instructor Information

Name  
Anxiao Jiang

Telephone number  
979-845-7983

Email address  
ajiang@cse.tamu.edu

Office hours  
MTWF 1:35pm

Office location  
113 HRBB

Textbook and/or Resource Material


Grading Policies

Grading will be based on homework, project, a midterm exam and a final exam. Each part will be 25% of the overall grade. No late homework or project submission will be accepted except for cases allowed by the university rules. Students are required to attend all classes except for cases allowed by university policy.

Grading Scale

Standard Letter Grading Scale:
A = 85-100
B = 70-84
C = 60-69
D = 50-59
F = <50
## Course Topics, Calendar of Activities, Major Assignment Dates

<table>
<thead>
<tr>
<th>Week</th>
<th>Topic</th>
<th>Required Reading</th>
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<tbody>
<tr>
<td>1</td>
<td>Introduction, The Relational Model of Data, Design Theory for Relational Databases</td>
<td>Textbook Chapters 1, 2, 3</td>
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<tr>
<td>2</td>
<td>High Level Database Models, Algebraic and Logical Query Languages, The Database Language SQL</td>
<td>Textbook Chapters 4, 5, 6, 7</td>
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<td>3</td>
<td>The Database Language SQL, Constraints and Triggers, SQL in a Server Environment, Second Storage Management, Index Structures, Query Execution Languages</td>
<td>Textbook Chapters 6, 7, 13, 14, 15</td>
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<td>4</td>
<td>Query Execution, Query Compiler, Coping with System Failures</td>
<td>Textbook Chapters 15, 16, 17</td>
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<td>5</td>
<td>Semi-structured Data</td>
<td>Textbook Chapters 11</td>
</tr>
<tr>
<td>6</td>
<td>Course review</td>
<td></td>
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</tbody>
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Midterm Exam:
12:00-1:35pm on 7/23/2018
Final Exam:
1:00-3:00pm on 8/7/2018

**Other Pertinent Course Information**

None

**Americans with Disabilities Act (ADA)**

The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you believe you have a disability requiring an accommodation, please contact Disability Services, currently located in the Disability Services building at the Student Services at White Creek complex on west campus or call 979-845-1637. For additional information, visit [http://disability.tamu.edu](http://disability.tamu.edu).

**Academic Integrity**

*For additional information please visit: [http://aggiehonor.tamu.edu](http://aggiehonor.tamu.edu)*

*“An Aggie does not lie, cheat, or steal, or tolerate those who do.”*