Course Syllabus for CSCI 226

Introduction and Course Description

**SYLLABUS FOR COURSE NAME (CSCI 226)**

<table>
<thead>
<tr>
<th>Fall 2011</th>
<th>California State University, Fresno</th>
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</thead>
<tbody>
<tr>
<td><strong>Course Information:</strong> Advanced database management system design principles and techniques.</td>
<td><strong>Instructor Name:</strong> Cui Lin</td>
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<tr>
<td><strong>Units:</strong> 3</td>
<td><strong>Office Number:</strong> Science II, R215</td>
</tr>
<tr>
<td><strong>Time:</strong> Tuesday, Thursday, 2:00 PM – 3:15PM</td>
<td><strong>E-Mail:</strong> <a href="mailto:clin@csufresno.edu">clin@csufresno.edu</a></td>
</tr>
<tr>
<td><strong>Location:</strong> MCF 208</td>
<td><strong>Telephone:</strong> 559-278-4373</td>
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**Website:**
1. To access the course, login to Blackboard (http://blackboard.csufresno.edu) using your Fresno State username and password. For help with Blackboard, contact Technology Innovations for Learning and Teaching at 278-7373 or send an email to dcfedback@csufresno.edu.
2. The most updated course schedule and assignment will be announced in the course website: http://zimmer.csufresno.edu/~clin/html/course226.html

**Office Hours:**
3:30PM – 5:30 PM, Tuesday, R215
You are allowed to request consultation hour (< 1 hour) by synchronous and/or asynchronous electronic communication.

**Prerequisites**

The prerequisites for this course are CSCI 144, and CSCI 126 (or an undergraduate database course), or permission from the instructor.

You are assumed to have good knowledge of any modern high-level programming language such as Java, C++ and C#, and proficient in programming, though the choice of programming languages is flexible. We will not cover programming issues in this course.

If you do not meet the above prerequisites, you MUST come and talk with the instructor in the first week of this class. The instructor reserves the right to drop you from the course if it becomes obvious that you do not meet the prerequisites.
Required Textbooks and Materials


Course Organization

This course will draw materials mostly from the textbook (Fundamentals of Database Systems) as well as recent database literature. Students will study the selected chapters of the textbook, do the homework, and complete a final project. Reading assignments, homework instructions, and project instructions will be listed and updated in the course website.

Examinations and Major Assignments

There will be one in-class midterm exam (closed book), one in-class comprehensive final exam (closed book), three in-class quizzes (closed book), five assignments and one final project.

The reading assignments, homework, exams will be posted in course website as the course progresses. Late homework submissions will not be graded.

The final project can be conducted in a group, with maximum 2 members. The details of project instructions will be announced in Blackboard and course website. Students are allowed to design their own final project with the permission of the instructor. Each project group is required to present at the last class. A sign-up sheet for the presentations will be available at the last week of the class.
We will NOT normally give make-ups for missed midterm exams. Note that, to help you prepare the exams, you are guaranteed that most exam questions similar to homework or quiz.

It is usually expected that students will spend approximately 2 hours of study time outside of class for every one hour in class. Since this is a 3-unit class, you should expect to study an average of 5 hours outside of class each week. Some students may need more outside study time and some less.

**Participation Standards**

*Participation* refers to how you attend to class activities, such as lectures, project meetings, and everything that enhances the interaction and exchange of the class. Lecture notes will be posted online. Students are also expected to participate in class discussions to a reasonable extent. The instructor reserves the right to lower the grade of any student, who is deficient in attendance and/or participation.

**Grading**

<table>
<thead>
<tr>
<th></th>
<th>Percentage of the Total</th>
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<tbody>
<tr>
<td>Class Participation</td>
<td>5%</td>
</tr>
<tr>
<td>Quizzes</td>
<td>10%</td>
</tr>
<tr>
<td>Assignments</td>
<td>30%</td>
</tr>
<tr>
<td>Midterm Exam</td>
<td>20%</td>
</tr>
<tr>
<td>Final Exam</td>
<td>20%</td>
</tr>
<tr>
<td>Final Project+ Presentation</td>
<td>12% + 3% = 15%</td>
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The preliminary grading scale is as follows:

<table>
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<tr>
<th>% Total</th>
<th>Minimum Grade</th>
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<tr>
<td>90-100%</td>
<td>A</td>
</tr>
<tr>
<td>80-89%</td>
<td>B</td>
</tr>
<tr>
<td>70-79%</td>
<td>C</td>
</tr>
<tr>
<td>60-69%</td>
<td>D</td>
</tr>
<tr>
<td>0-59%</td>
<td>F</td>
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This table indicates minimum guaranteed grades. Under certain limited circumstances, we may select more generous ranges. Grades may be curved at end of the semester at the discretion of the instructor. We will use the Blackboard for all grades.

Course Goals and Primary Learning Outcomes

Course Goals:

The course offers a broader introduction that covers advanced database management system design principles and techniques, which mostly focuses on databases from the perspective of a database administrator. The course materials will be drawn from both classic and recent research literature. A spectrum of topics may include a subset of the following: Database Transaction Processing, Concurrency Control, Recovery Techniques, Distributed Database Concepts and Architecture, Database Connectivity and Web Technology, Database Security, Data Mining, Data Warehousing and OLAP on Large-scale Databases, etc. Programming projects are required.

Primary Learning Outcomes:

Upon completion of the course, students are expected to be able to:

- Design and develop database applications proficiently and understand the advanced concepts that underlie various distributed database management systems.
- Process and optimize database transactions.
- Implement concurrency and recovery of database transactions.
- Analyze the security issues of database systems and implement proper security measures in database systems.
- Understand the architectures and implementations of various distributed database systems.
- Understand the fundamental concepts of data mining and data warehousing.
- Practice programming for a creative research-oriented project and communicating complex technical material, both orally and in written form.

Assignment and Examination Schedule

The assignment and examination schedule will be posted in course website (http://zimmer.csufresno.edu/~clin/html/course226.html) as the course progresses.

The syllabus and schedule are subject to change in the event of extenuating circumstances. If you are absent from class, it is your responsibility to check on announcements made while you were absent.
Course Policies & Safety Issues

There are no make-up quizzes, midterm exam and final exam except in verified medical emergencies and with immediate notification before tests. (Rescheduling a final exam in order to catch a plane flight in order to go back home is unacceptable.) Allow plenty of additional time in the event that Blackboard crashes.

You are responsible for all the readings assigned throughout the semester.

Students are to work on test and quizzes individually. Students may not discuss, show, give, sell, borrow, trade, share, etc. their tests or quizzes. Penalty on cheating will be extremely severe. Standard academic honesty procedure will be followed.

Providing answers for any assigned work or examination when not specifically authorized by the instructor to do so. Or, informing any person or persons of the contents of any examination prior to the time the examination is given is considered cheating. Penalty for cheating will be extremely severe and may result in an F for this course. Failing to report to the instructor any incident in which a student witnesses an alleged violation of the Academic Honesty Code is considered a violation of the academic honesty code.

The University Policy on Disruptive Classroom Behavior (APM 419) is well worth reading and can be found in the Class Schedule and the Academic Policy Manual. In addition to defining disruptive behavior and detailing formal procedures for dealing with it, the policy contains a useful description of the learning environment (see excerpt below).

Plagiarism Detection:

The campus utilizes the SafeAssign plagiarism prevention service through Blackboard. In this course, students may be required to submit written assignments to SafeAssign. Submitted work will be used by SafeAssign for plagiarism detection and for no other purpose. The student may indicate in writing to the instructor that he/she refuses to participate in the SafeAssign process, in which case the instructor can use other electronic means to verify the originality of their work. SafeAssign Originality Reports WILL be available for the instructor’s viewing.

University Policies

Below are the statements that provide university policy on Students with Disabilities, the University Honor Code, the Policy on Cheating and Plagiarism, a statement on copyright, and the university computer requirement.

Students with Disabilities:

Upon identifying themselves to the instructor and the university, students with disabilities will receive reasonable accommodation for learning and evaluation. For more information, contact Services to Students with Disabilities in the Henry Madden Library, Room 1202 (278-2811).
Honor Code:

“Members of the CSU Fresno academic community adhere to principles of academic integrity and mutual respect while engaged in university work and related activities.” You should:

a) understand or seek clarification about expectations for academic integrity in this course (including no cheating, plagiarism and inappropriate collaboration)

b) neither give nor receive unauthorized aid on examinations or other course work that is used by the instructor as the basis of grading.

c) take responsibility to monitor academic dishonesty in any form and to report it to the instructor or other appropriate official for action.

Cheating and Plagiarism:

"Cheating is the actual or attempted practice of fraudulent or deceptive acts for the purpose of improving one's grade or obtaining course credit; such acts also include assisting another student to do so. Typically, such acts occur in relation to examinations. However, it is the intent of this definition that the term 'cheating' not be limited to examination situations only, but that it include any and all actions by a student that are intended to gain an unearned academic advantage by fraudulent or deceptive means. Plagiarism is a specific form of cheating which consists of the misuse of the published and/or unpublished works of others by misrepresenting the material (i.e., their intellectual property) so used as one's own work." Penalties for cheating and plagiarism range from a 0 or F on a particular assignment, through an F for the course, to expulsion from the university. For more information on the University's policy regarding cheating and plagiarism, refer to the Class Schedule (Legal Notices on Cheating and Plagiarism) or the University Catalog (Policies and Regulations).

Computers:

"At California State University, Fresno, computers and communications links to remote resources are recognized as being integral to the education and research experience. Every student is required to have his/her own computer or have other personal access to a workstation (including a modem and a printer) with all the recommended software. The minimum and recommended standards for the workstations and software, which may vary by academic major, are updated periodically and are available from Information Technology Services (http://www.csufresno.edu/ITS/) or the University Bookstore. In the curriculum and class assignments, students are presumed to have 24-hour access to a computer workstation and the necessary communication links to the University's information resources."

Disruptive Classroom Behavior:

"The classroom is a special environment in which students and faculty come together to promote learning and growth. It is essential to this learning environment that respect for the rights of others seeking to learn, respect for the professionalism of the instructor, and the general goals of
academic freedom are maintained. ... Differences of viewpoint or concerns should be expressed in terms which are supportive of the learning process, creating an environment in which students and faculty may learn to reason with clarity and compassion, to share of themselves without losing their identities, and to develop and understanding of the community in which they live. Student conduct which disrupts the learning process shall not be tolerated and may lead to disciplinary action and/or removal from class."

Copyright policy:

Copyright laws and fair use policies protect the rights of those who have produced the material. The copy in this course has been provided for private study, scholarship, or research. Other uses may require permission from the copyright holder. The user of this work is responsible for adhering to copyright law of the U.S. (Title 17, U.S. Code). To help you familiarize yourself with copyright and fair use policies, the University encourages you to visit its Copyright Web Page (http://csufresno.edu/library/information/copyright/).

Technology Innovations for Learning & Teaching (TILT) course web sites contain material protected by copyrights held by the instructor, other individuals or institutions. Such material is used for educational purposes in accord with copyright law and/or with permission given by the owners of the original material. You may download one copy of the materials on any single computer for non-commercial, personal, or educational purposes only, provided that you (1) do not modify it, (2) use it only for the duration of this course, and (3) include both this notice and any copyright notice originally included with the material. Beyond this use, no material from the course web site may be copied, reproduced, re-published, uploaded, posted, transmitted, or distributed in any way without the permission of the original copyright holder. The instructor assumes no responsibility for individuals who improperly use copyrighted material placed on the web site.

Tentative Course Schedule

The tentative course schedule will be posted in course website (http://zimmer.csufresno.edu/~clin/html/course226.html) as the course progresses. The schedule and procedures for this course are subject to change in the event of extenuating circumstances.

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<thead>
<tr>
<th>Finals week</th>
<th>Days</th>
<th>Dates</th>
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<tbody>
<tr>
<td>Final Exam Preparation &amp; Faculty Consultation Days:</td>
<td>Thursday and Friday</td>
<td>Dec. 8 - 9</td>
</tr>
<tr>
<td>Final Semester Examinations</td>
<td>Monday-Thursday</td>
<td>Dec. 12 - 15</td>
</tr>
<tr>
<td>Final Exam in this course</td>
<td>Thursday 3:30PM-5:30PM</td>
<td>Dec. 15</td>
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