CSCI 6410  Advanced Database Systems (Online)

Department of Computer Science
Georgia Southwestern State University

Course  Syllabus

Semester  Spring  2015

INSTRUCTOR

<table>
<thead>
<tr>
<th>Name</th>
<th>A. C. Shah</th>
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<tbody>
<tr>
<td>Office</td>
<td>CWH Room 207</td>
</tr>
<tr>
<td>Office Phone</td>
<td>931 - 2114</td>
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<td>e-mail</td>
<td><a href="mailto:arvind.shah@gsw.edu">arvind.shah@gsw.edu</a></td>
</tr>
<tr>
<td>Class Hours</td>
<td>Online</td>
</tr>
<tr>
<td>Office Hours</td>
<td>9:00 – 12:00 Noon (M, W)</td>
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<tr>
<td>First Login</td>
<td>You must login to GAVIEW by January 21, 2015.</td>
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TEXTBOOK

<table>
<thead>
<tr>
<th>Title</th>
<th>Database Systems – Design, Implementation and Management 10th Ed.</th>
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<tbody>
<tr>
<td>Author(s)</td>
<td>Peter Rob and Carlos Coronel</td>
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<tr>
<td>Publisher</td>
<td>International Thompson Publishing</td>
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REQUIREMENTS

You are expected to have following environment to progress smoothly and successfully in the course:

- A laptop/desktop computer with Windows Operating System
- Reliable Internet access using browsers such as Explorer 8.0 or higher, latest version of Firefox 2.0, Java installed, and pop-up blocker turned off.
- Microsoft Office 2010 (Must include Word, Excel, Access, and PowerPoint) installed on your laptop
- Access to the GeorgiaVIEW to go to the course resources.
- You must have TEXTBOOK (mentioned above)
- Storage Devices: You must have one 1GB (or higher) USB Portable Storage Device

GSW-CS Virtual Lab:

- You must install ColdFusion 10 Developer Edition on your computer. It is free from Adobe and can be downloaded from the https://www.adobe.com/cfusion/tdrc/index.cfm?product=coldfusion. Before you download ColdFusion from Adobe website, you may be required to create your login if you don’t have one. Please read the ColdFusion installation procedure on the course site at GeorgiaVIEW.
Tests:
The students those who are within 30 miles radius of the Americus are required to come to the Department of Computer Science (Crawford Wheatley Hall) to take the tests. The time and the day of the test will be determined based on the most convenient time for all the students. This may require some students to make adjustments. Other students will be directed to take the test using ProctorU services. For this I will communicate individually with each student with more details during the semester.

GAVIEW SUPPORT
The GAVIEW will be the platform for us to interact, post discussions, and send/receive emails. You will regularly login to GAVIEW to get course related information. Announcements will be made here. Reminder for Assignments, Quizzes, and Tests will be announced here. You will be able to chat with me.

Please note: Always logout after you are finished using GeorgiaVIEW and log off your computer after every virtual lab session (don’t leave your session sleeping for a long time).

CATALOG DESCRIPTION
Course: CSCI 6410: Advanced Database Design: This course will discuss emerging advanced database technology to expose and prepare the students with currently practiced database tools such as web based database application development, object oriented database design, data warehousing, data mining, distributed databases. Prerequisite: CSCI 4400. (3-0-3)

GOALS
To prepare the students with skills needed to use advanced database techniques for designing business applications. Gain experience in emerging trends like Web based database application development, Object Oriented Database design, Data warehousing, Distributed Databases, etc. Hands-on experience with the application development tools suitable with the current technology.

LEARNING OUTCOMES
Students completing this course should be able to:
1. write efficient database transactions
2. design and create data warehouse databases, distributed databases, and OODB
3. design and develop e-commerce applications in ColdFusion
4. apply the techniques of application performance improvement
5. perform database administration
6. explore further advanced topics in database
COURSE OUTLINE

Following topics will be discussed in the course work.

1. Chapter 10 - Transaction management
2. Chapter 11 - Database Performance Tuning and Query Optimization
3. Chapter 14 - Database Connectivity and Web Development
5. Chapter 12 - Distributed Database Management System
6. Chapter 13 - The Data Warehouse
7. Chapter 15 - Database Administration