General Information

**Instructor:** Richard C. Fry, PhD, Associate Professor of Computer Science  
**Instructor Open Office Hours** Tuesday, Wednesday, Thursdays 9:30 AM – 11 AM (EH 383)  
**Preferred Email:** rich@richfry.com (direct/fastest) or rfry@weber.edu (forwarded)

LIVE Instruction / Open Labs (TUESDAYs and THURSDAYs 7:30A – 9:20A in TE 202S)

Course Description

This course covers the theoretical foundation of modern data base systems, concentrating on practical use of relational data base management systems to model, design and implement business and commercial systems. It includes Structured Query Language (SQL), normalization, and rational algebra. It does not use any specific language.

Course Objectives & Outcomes

- To help students acquire a comprehensive understanding of the principles of database systems, particularly the relational model.
- To teach students the essential methods and techniques in relational database specification and design.
- To introduce students to relational algebra and relation calculus as the foundation for modern database languages.
- To facilitate students’ acquaintance with and mastery of SQL – the universal database language.
- To expose students to various examples of database management system (DBMS) software.

At the end of the course, students will be able to do the following:

- Explain what a database system is, its importance to a software system, and its role in the business organization.
- Demonstrate mastery of the relational model for database modeling and design.
- Demonstrate mastery of database normalization.
- Demonstrate working knowledge of other database models including the extended relational model and the unified modeling language (UML) model.
- Demonstrate working knowledge of relational algebra and relational calculus.
- Demonstrate mastery of structured query language (SQL).
- Demonstrate working knowledge of advanced database topics including database administration, distributed databases, data warehousing, and Web-accessible databases.

Course Fees

Course fees for the Computer Science major are designed to cover the costs of lab equipment maintenance and replacement including desktop and server computer systems and software; consumable materials and supplies; and support for lab aides, student tutors, and online instructional resources.
**Accommodations**

Any student requiring accommodations or services due to a disability must contact Services for Students with Disabilities (SSD) in room 181 of the Student Services Center. SSD can also arrange to provide course materials (including this syllabus) in alternative formats if necessary.

**Textbook & Required Materials**

**REQUIRED:** Database Systems  
By: Elvis C. Foster; Shripad V. Godbole  
Publisher: Apress (December 24, 2014)  

**RECOMMENDED:** SQL Queries for Mere Mortals  
By: Viescas and Hernandez  
Publisher: Addison-Wesley Professional; 3 edition (June 21, 2014)  

*Note: Both these books are available in electronic format for FREE, via Safari Books Online with an active Internet Connection FROM CAMPUS (no downloading of content allowed). No login is required if logging on from campus. From off campus, you will need to login through the WSU’s library website to access the Safari materials for free, via proxy.

**Software** – [SQL Server Express 2016](http://www.microsoft.com/sqlserver/experiences/default.aspx) (2014 okay) will be used for this course. It will be installed on computers in the Computer Lab and classroom.

**Discussion Forum**

Students are strongly encouraged to use the discussion forum to provide assistance to each other on assignments or any material related to the course. When posting a question, please mark the subject with a #hashtag to facilitate searching. Posting guidance and/or hints on this public class discussion forum is NOT considered a violation of the cheating policy, unless you blatantly post full solutions to an assignment. The discussion forums are for students to help each other outside of class.

**Grading Criteria**

- 4 Group Assignments (15%)
- 2 Exams (25%)
- 5 Individual Assignments (45%)
- 1 Mini (Group or Individual) Project (15%)

\[
94.5-100 = A, 89.5-92.4 = A-, 87.5-89.4 = B+, 81.5-87.4 = B, 79.5-81.4 = B-, 77.5-79.4 = C+, 71.5*-77.4 = C
\]

*Minimum passing grade is 71.5%.

**Assignment Due Dates**

All Assignment due dates are clearly posted several weeks in advance. The posted due date (normally 11:59PM MST on a SUNDAY – to give me time to grade before class on TUESDAY. All students get ONE FREE late assignment (up to 48 hours only) without penalty. Beyond that, I will not accept any other late work for full credit under any circumstances (even emergencies). Late assignments are my pet peeve and are penalized 10% (1 minute to 12 hours late), 25% (13-24 hours late), 50% (25-48 hours late), 75% (49-72 hours) late, and not accepted after 3 days late.
Cheating and Plagiarism Policy

Although cheating has many forms, I generally consider cheating to be any attempt to claim someone else’s work as your own. Any assistance provided and/or received on problem solving or programming assignments without being publically posted on our course discussion forum (so I know about it) is considered cheating...because I always assume you are doing your own original work. Also, any possession of materials from previous semesters is considered “cheating”. You are encouraged to assist other students whenever possible or cite internet website resources that provide help, but this help must be transparent, and posted via the discussion forum so everyone gets the same information. If you have any questions about this policy, please ask me.

WARNING: CS Department policy dictates that any verifiable evidence of student academic cheating, as defined and determined by the instructor above, will result in: 1) an automatic failing grade for the class and 2) a report to the Dean of Students that will include a detailed description of the student’s dishonest conduct.

Calendar and Due Dates (SUBJECT TO CHANGE!! ALWAYS VIEW THE LIVE CALENDAR FOR DETAILS)

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<thead>
<tr>
<th>CLASS (TUES/THUR)</th>
<th>MATERIAL COVERED IN CLASS</th>
<th>CORRESPONDING READINGS</th>
<th>HOMEWORK DUE (SUNDAY)</th>
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<td>Aug 30 / Sept 1</td>
<td>Database Systems (A1-G)</td>
<td>Chapters 1&amp;2 + Supplemental Notes</td>
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<td>Sept 6/8</td>
<td>The Relational Database Model (A2-G)</td>
<td>Chapter 3 + Supplemental Notes</td>
<td>Sept 11: Group A1</td>
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<td>Oct 4/6</td>
<td>Exam I: Chapters 1-7 (and Notes)</td>
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<td>Oct 9: Group A3</td>
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<tr>
<td>Oct 11/13</td>
<td>Introduction to Structured Query Language (A4-G) Introduction to SQL Server</td>
<td>Chapters 10 &amp; 18 + Mere Mortals + Supplemental Notes</td>
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<td>Oct 18/20</td>
<td>SQL (A3-I)</td>
<td>Chapter 11 + Mere Mortals</td>
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<td>Nov 1/3</td>
<td>No Class Tuesday Nov 1 Transaction Management and Views (A4-I)</td>
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<td>Nov 8/10</td>
<td>Business Intelligence and Data Warehouses (A5-I)</td>
<td>Chapter 24</td>
<td>Nov 13: Ind. A4</td>
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<td>Reporting Services (A5-I)</td>
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<td>Nov 22/24</td>
<td>Exam 2: Chapters 10-13 + 18 &amp; 24 (and notes)</td>
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<td>Nov 29/ Dec 1</td>
<td>Group or Individual Mini-Project</td>
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<td>Dec 6/8</td>
<td>Group or Individual Mini-Project</td>
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<td>Dec 11: Group or Individual Mini-Project</td>
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<td>Finals Week</td>
<td>Nothing</td>
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Last Update: 25 Aug 2016