**Database Management and Design**

**CISC 401 CRN 48136**

**Fall 2018 (08/22/2018 – 12/17/2018)**

**Instructor:  Duane Wesley**

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This course uses the following online environment:

**BlackBoard Learn 9.1** **–** a learning management system provided by [San Diego Community College District](http://www.sdccdonline.net/)

Blackboard technical support is available to students **24/7/365**. If you are having a technical problem with Blackboard please reach out for help using the Helpdesk contact information below:

Helpdesk phone: 1-866-271-8794

Helpdesk website: <https://www.sdccdonline.net/help>

**COURSE DESCRIPTION:** This course is an introduction to database management and design. The primary concepts covered in this course include programming language, current database structures utilized in healthcare, effective communication with end users and key stakeholders, identifying goals and requirements in database projects, performing end user analysis, and creating data models for performance improvement. Students will explore all aspects of the data lifecycle from capture to storage and utilization to destruction. This course is designed for health information management majors.

CONTENT LEARNING HOURS PER WEEK: 4

EQUIVALENT LAB HOURS PER WEEK: 2

**COURSE OBJECTIVES:**  Upon successful completion of this course, students will have achieved the following Student Learning Outcomes:

1. Explain relational database management systems.
2. Explain the purpose of Normalization.
3. Differentiate between data and information.
4. Describe a table structure representing objects or events.
5. Explain data integrity.
6. Define a mission statement and mission objectives.
7. Create data structures.
8. Determine and define business rules.
9. Determine and define views.
10. Validate data integrity.
11. Conduct interviews.
12. Establish keys for each table.
13. Explain foreign keys and the role they play in table relationships.
14. Apply knowledge of database querying and data exploration and mining techniques to facilitate information retrieval. III. C. 5
15. Evaluate administrative reports using appropriate software. III. C. 6.

**OFFICIAL STUDENT LEARNING OUTCOMES:**

Each year the CISC Department measures and reports achievement data regarding the Official SLOs (OSLOs). These OSLOs are as follows:

* Create a database, table(s), and fields.
* Clarify what data integrity is, and why it is important.
* Explain why field specifications are important to an organization and the types of information they hold.
* Describe how business rules affect a database.

**Weekly Schedule**

To know what activities/assignments/quizzes/etc. are due each week go to the Learning Module section of our Blackboard Learn 9.1 class. Here you will find a Learning Module for each week of the semester. Each module contains the complete list of what is due for that week, including links to the resources needed to complete the tasks.

Note: The information in the online course calendar is incomplete. Instead, be sure to always use the Learning Modules for a complete list of all that is due each week.

**Attendance Requirements**

Consistent participation is critical to learning the material for this course. Students who fail to participate will fall behind in acquiring course content and skills, resulting in reduced academic success.

For the online version of CISC 401, your attendance is based on your participation in online activities and discussions. The Blackboard Learn 9.1 System® provides detailed tracking/monitoring information to the instructor of student activities on the site. For online courses, excessive absences per San Diego Community College District guidelines includes: lack of assignment submissions; lack of survey/quiz/exam taking; lack of participation (active posting in discussions, messages); and lack of logging in.

Petitions to add, drop, or withdraw after the deadline will not be approved without proof of circumstances beyond the student's control, which made him/her unable to meet the deadline. Lack of money to pay fees is not considered an extenuating circumstance. Students anticipating difficulty in paying fees before the add deadline should check with the Financial Aid Office about sources of funds or other alternatives for which they may be eligible.

If a student decides to withdraw or drop from this course, they must do so on or before the date specified by the Academic Calendar as to the last day to withdraw or drop. Failure to drop by the “last day to drop” date will result in a grade being assigned, regardless of attendance. Students are responsible for processing the WITHDRAWAL or DROP action.

In Summary:

* *It is the student’s responsibility to drop all classes in which he/she is no longer participating.*
* *It is the student’s responsibility to drop all classes in which he/she is no longer attending*
* *It is the instructor’s discretion to withdraw a student after the add/drop deadline (8/31/2018) due to excessive absences (typically more than three pre-arranged absences)*
* *Students who remain enrolled in a class beyond the published withdrawal deadline, as stated in the class schedule, will receive an evaluative letter grade in this class.*

**Policy Regarding Late or Incomplete Work**

There is no process for "making up" course activities such as quizzes, exams and assignments, except in case of documented extreme hardship. No "extra-credit" activities will be given. Approval of any alternative activities is at the discretion of the instructor. Activities are set up online to not be accessible after their due date. Incomplete work will either be rejected or will lead to a reduction of the grade for that assignment relative to the amount of information missing. Submissions not uploaded on time will be either rejected or penalized for late submission in the form of a reduction in grade. Submissions more than 1 week late will be rejected and/or receive no points. (Note: Submit early. Last-minute submission attempts may be rejected or penalized for late submission due to a difference between your computer clock being a few minutes slower than the Blackboard Learn 9.1 server clock. This does *not* constitute a valid excuse for missing a submission deadline.)

**Online Behavior and Student Code of Conduct**

Students are expected to respect and obey standards of student conduct while in communication online and while on campus in person. No foul language or conduct that disrupts learning will be tolerated. Respectful communication with the instructor and fellow students using English language syntax and structure appropriate for an academic environment is expected. The Student Code of Conduct, Disciplinary Procedure, and Student Due Process (Policies 3100, 3100.1, and 3100.2) are documented in the College Catalog and at the Office of the Dean of Student Affairs (Room I4-408). Charges of misconduct and disciplinary sanctions may be imposed upon students who violate these standards of conduct or provisions of college regulations.

**Accommodation of Disability**

Every effort has been made to ensure that this course is accessible to all students, including students with disabilities. If you encounter a problem accessing any portion of this course, please contact the professor or the administration immediately. Students with disabilities registered with the DSPS Office who may need academic accommodations must notify the instructor within the first week of the course to receive special consideration or accommodation. A written notice of their registration with DSPS is required for any accommodations to be made.

**Academic Integrity**

This class will be conducted in accordance with the college Student Code of Conduct and basic standards of academic honesty. Cheating, plagiarism, and other forms of academic dishonesty are not acceptable and will not be tolerated. Violations of standards of academic honesty will be reported to the school dean for appropriate action. There will be no warning before strict administrative action is enforced. Academic dishonesty is not only detrimental to student education; it is also unfair to other students who spend the time and effort to learn the material. Special attention is paid to academic honesty given the online format of the class, and online students are strictly held to the highest level of integrity.

Plagiarism is defined for this course as the use of materials in assignments produced by others with or without reference information: students are expected to use third-party material only as input for their own work, including writing. Specific quotes from other sources need to be short and fully identified, preferably using a standard format, such as APA or MLA. "Cutting-and-pasting" from web sites or other sources results in a substantial loss of credit points or the rejection of the submission with a failing grade. There is no "make-up" option for this situation.

In summary, *Students are expected to be honest and ethical at all times in the pursuit of academic goals. Students who are found to be in violation of Administrative Procedure 3100.3 Honest Academic Conduct will receive a grade of zero on the assignment, quiz, or exam in question and may be referred for disciplinary action in accordance with Administrative Procedure 3100.2, Student Disciplinary Procedures.*

**Course Schedule:**

The course will progress according to the following schedule:

**Week 1** **Reading Assignment**

**8/22/18 *Database Design for Mere Mortals: Chapter 1***

The Relational Database

**Week 2** **Reading Assignment**

**8/29/18 *Database Design for Mere Mortals: Chapter 2***

Design Objectives

**Week 3** **Reading Assignment**

**9/5/18 *Database Design for Mere Mortals: Chapter 3***

Terminology

**Week 4 Reading Assignment**

**9/12/18 *Database Design for Mere Mortals: Chapter 4***

Conceptual Overview

**Week 5 Reading Assignment**

**9/19/18 *Database Design for Mere Mortals: Chapter 5***

Starting the Process

**Essay Assignment #1 Due:**

“Requirements Analysis”

**Week 6 Reading Assignment**

**9/26/18 *Database Design for Mere Mortals: Chapter 6***

Analyzing the Current Database

**Week 7 Reading Assignment**

**10/3/18 *Database Design for Mere Mortals: Chapter 7***

Establishing Table Structures

**Week 8 Reading Assignment**

**10/10/18 *Database Design for Mere Mortals: Chapter 8***

Keys

**Week 9 Reading Assignment**

**10/17/18 *Database Design for Mere Mortals: Chapter 9***

Field Specifications

**Essay Assignment #2 Due:**

“Business Rules, Data Consistency, and Data Integrity”

**Week 10 Reading Assignment**

**10/24/18 *Database Design for Mere Mortals: Chapter 10***

Table Relationships

**Week 11 Reading Assignment**

**10/31/18 *Database Design for Mere Mortals: Chapter 11***

Business Rules

**Week 12 Reading Assignment**

**11/7/18 *Database Design for Mere Mortals: Chapter 12***

Views

**Essay Assignment #3 Due:**

“Case Study Analysis and Design”

**Week 13 Reading Assignment**

**11/14/18 *Database Design for Mere Mortals: Chapter 13***

Reviewing Data Integrity

**Week 14 Reading Assignment**

**8/28/18 *Database Design for Mere Mortals: Chapter 14***

Bad Design—What Not to Do

**Week 15 Reading Assignment**

**8/28/18 *Database Design for Mere Mortals: Chapter 15***

Bending or Breaking the Rules

**Week 16 Group Project Due**

**12/5/18** **Presentations Due**

**SQL Exam**

The instructor reserves the right to change the above schedule without prior notice.

**Class Communication Caveat**

Do not post assignment submission material in discussion forums.

**Evaluation**

A student's grade will be based on multiple measures of performance and will reflect the objectives set forth for this course. A final grade of C or better indicates the student has the ability to successfully apply theory and techniques taught in this course in subsequent courses and in practice.

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| **Course Items** | **Point Value** | **Due Dates** |
| Essay Assignments (3) | 60% | See Learning Modules section in Blackboard Learn 9.1 for details |
| Group Project | 25% |
| Presentation | 5% |
| SQL Exam | 10% |
| Extra Credit | 3% (max) | Special Event Attendance (1% per event) – Credit may be granted at the discretion of your professor. Alternatively, this 3% can be obtained if the Special Event Speaker was arranged by the student. |

*Note:* Dates and weights of deliverables are subject to change.

**Grading**

A= 90-100    B = 80-89    C = 70-79    D = 60-69    F = less than 60

Note: Percentage fractions are NOT rounded up. Examples: 89.5% = B; 79.9% = C; 89.9999% = B

**Instructional Approach**

Active learning is encouraged and best accomplished through sharing of experiences, teamwork, joint research and discussion. For the on-campus version of CISC 401, the first place to look for help is during lecture and lab. The instructor and your classmates are important resources for helping you learn and stay on track. For the online version of CISC 401, the first place to look for help and the first place to share experiences is the discussion board. Post your introductions, problems doing assignments, problems installing software, etc. This will allow other students to participate in the solving of the problem/challenge and benefit from the answers of others.

Please only use email or course shell mail messages to communicate with your professor regarding matters that only have a personal value to you, such as your grade. If you use email or course shell mail messaging to ask a question about class material, the instructor may reply to everyone in the class. If you have an immediate class issue it is best to check the discussion board first.

Note: All emails and course shell messages need to be appropriate for an academic online environment, following proper English syntax and grammar (including proper salutation and capitalization). Carelessly written emails and messages will be rejected or will remain unanswered. Consider this class as a "work environment" that requires high standards of professionalism. This goes for our publishers and professors too. If you find errors on pages or slides, please report them to your professor. Students should make an effort to establish effective communications with each other and with the instructor.

All activities must be completed individually. Microsoft Windows, MySQL Community Edition, and MySQL Workbench are required tools. A UML tool such as Visual Paradigm for UML or Visio will also be used. Students are expected to comply with [SDCCD Online computer infrastructure requirements](http://www.sdccdonline.net/distance_education.htm#requirements). All submissions associated with any activity are to be completed and submitted electronically. Handwritten assignments or assignments completed in a format other than the one specified will not be accepted.

**Required Text and Access Code**

***Please purchase your materials promptly!*** While it is recommended that your purchase your materials at the Mesa College Bookstore, it is possible to purchase the materials directly through Pearson Publishing. These two options are delineated below:

**SAN DIEGO MESA COLLEGE BOOKSTORE PURCHASE**

***Database Design for Mere Mortals, 3rd Edition,* by Michael Hernandez,** Addison-Wesley Professional, 2013.

**ISBN-10: 0321884493 • ISBN-13: 978-0321884497**

***It is critical that you purchase your textbook as soon as possible!***