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CSCI 240.01: Databases and SQL

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CSCI 240: Databases and SQL

Instructor information

Instructor: Jeff Arends

Office: MC324

Email: jeffrey.arends@mso.umt.edu

Office hours: Tuesday 11-12, Thursday 1-2

Course description:

Relational database design including: requirements analysis, data structure, entity relationships, normalization, relational algebra and integrity. Physical implementation focusing on data storage, retrieval and modification, concurrency, optimization, security, SQL, and XML.

Learning Outcomes:

- 1 Design and create tables based on rules of normalization
- 2 Create Entity Relationship Diagrams
- 3 Utilize SQL effectively to create, query, and change a relational database
- 4 Explain primary, secondary, and foreign keys
- 5 Utilize the SQL join statement

Required Materials and Resources:

- You will need to have a laptop with the following minimum requirements:
 - Windows, macOS or Linux
 - 4GB of RAM (16GB preferred)
 - 64 GB of HDD space
 - 2.0 GHz processor
- We will be using an online platform called zyBooks for this course.
 1. Sign in or create an account at learn.zybooks.com
 2. Enter zyBook code: UMTCS240ArendsFall2021
 3. Subscribe
- We will use the programming language Python for this course. You can download it for free at <https://www.python.org/>.
- We will also be using MySQL

Grading Categories:

- **Attendance:** 10% points are awarded for attendance (physical or remote) based on a ratio of present vs non-present. There is no excused.
- **Exams:** 25% There will be one midterm exam and one comprehensive final exam. These must be taken at the scheduled time except with prior approval or extenuating circumstances.
- **Homework:** 25% Homework will consist of a combination of assignments in zyBooks and labs assigned in Moodle.
- **Projects:** 30% There will be multiple projects during the semester representing larger tasks. Each project will explain the criteria by which it will be graded and due dates.
- **Quizzes:** 10% Quizzes are graded automatically in Moodle.

Late Policy

Late assignments will suffer a cumulative 10% per day late penalty, up to 4 days. After this they will no longer be accepted.

Grading Scale

Grade	Points	How this applies to assignments
A, A-	90-100	Exceeds Standard: The student has gone above and beyond the assignment requirements and has also done an excellent job mentioning and applying concepts found in the course materials to the assignment.
B+, B, B-	80-89	Meets Standard: The student has met the assignment requirements and has made some attempt to apply concepts found in the course materials to the assignment.
C+, C, C-	70-79	Approaching Standard: The student has met some of the assignment requirements and has made some attempt to apply concepts found in the course materials to the assignment.
D+, D, D-	60-69	Needs Work: The student has failed to meet many of the assignment requirements and has not applied the concepts found in the course materials to the assignment.
F	<60	Incomplete: The student has failed to meet any of the assignment requirements and has significant errors in submitted work.

Pass / No Pass (P/NP)

The Computer Science Department has determined that a passing grade is a 70% or greater, which is a C- or better.

Safety Considerations

Given the current circumstances with COVID-19 please keep in mind the following.

- Mask use is required within the classroom.
- Cleaning kits are available. Please make use of these and clean your space at the start of class and the end of class.
- Please avoid congregating before or after class.
- Please sit in the same seat for all semester.
- Food and drink are strongly discouraged within classrooms.
- If you feel sick stay home and attend class remotely.

Course guidelines and policies:

Student Conduct Code

All students must practice academic honesty. Academic misconduct is subject to an academic penalty by the course instructor and/or a disciplinary sanction by the University. All students need to be familiar with the Student Conduct Code. The Code is available for review online at [Student Conduct Code](#).

Disability modifications

The University of Montana assures equal access to instruction through collaboration between students with disabilities, instructors, and the Office for Disability Equity (ODE). If you anticipate or experience barriers based on disability, please contact the ODE at: (406) 243-2243, ode@umontana.edu, or visit www.umt.edu/disability for more information. Retroactive accommodation requests will not be honored, so please, do not delay. As your instructor, I will work with you and the ODE to implement an effective accommodation, and you are welcome to contact me privately if you wish.