CSCI 403
Database Management

Welcome!

CS@Mines

INTRODUCTIONS

Instructors

Christopher Painter-Wakefield

aka CPW, Dr. Painter-Wakefield, Professor Painter-Wakefield

Section B instructor and course coordinator

Pronouns: he/him

Email: cpainter@mines.edu

Office hours:

- Regular hours TBD
- By appointment
- When I'm in my office with the door open

Talk to me about: sci-fi (books), gardening, cooking, computing history.

Instructors

Hayden Cooreman

Call me what you want (just not Dr.)
Personal pronouns: he/him/his

Section A instructor

Office Hours:

- 2-3 Tuesday and 11-12 Friday
- By appointment on Zoom

Email: hcooreman@mines.edu
Private post on Ed Discussion

Talk to me about: being involved on campus, music, photography

ABOUT THIS COURSE

Learning Goals

This course is broken in to roughly 4 modules:

- SQL
  - Learn how to store data in a relational database and retrieve or modify that data
- Data modeling
  - Design a relational database using entity-relationship models and related visual languages
- Theory
  - Learn the underlying mathematics of relational databases
  - Normalize a relational database for effective use
- Miscellaneous topics, including:
  - Writing database client software in a high level programming language
  - Transaction control
  - Database query performance tuning
  - Database internals
  - NoSQL databases

Lecture

This course will use a traditional in-class lecture format, with some interactive elements.

Lecture notes will be posted on Canvas.

Textbook

We will assign regular readings from the course textbook.

Create an account at https://runestone.academy/user/login and register for the course with the ID "Mines_CSCI403_Spring24".

You do not need to make an account to use the book, but if you are logged in you can track your progress and see your previous answers to questions.

The textbook is:

- Free and open
- Online
- Interactive - you can perform live SQL queries embedded in the book

Please do the readings **and** test yourself on the end-of-chapter exercises (you get immediate feedback). We do not grade you on this.

Assessments

- Weekly check-ins (Canvas quizzes)
  - Primarily for your feedback
  - 5% of course grade, graded on completion only
- Labs
  - Take-home work
  - 30% of course grade
- Quizzes
  - 3 total:
    - SQL
    - Data modeling
    - Everything else
  - 30% of course grade
- Final project
  - Your opportunity to be creative!
  - 35% of course grade

Communications

- Course announcements via Canvas
- Questions? Please post on Ed Discussion (linked in Canvas)
  - Monitored by instructors and TAs as well as your peers
  - May get a faster response than email!
- You may email either instructor for any reason.
  - Response time may vary, especially evenings and weekends

More…

More syllabus info in Canvas:

- Quick tour now
- Please review syllabus:
  - Lots of boilerplate, should be same as other courses
  - Focus on course-specific info:
    - Grading policies
    - Collaboration policy
    - Generative AI policy

Up Next

Database Concepts and History