

MIS0855: Data Science

In-Class Exercise for Mon, Apr 6 – Designing Course Database

Objective: Learn how to draw an Entity-Relationship Diagram (ERD)

Dick Scudder, the chairperson of the information technology department at the University of Denver, needs to create a database to keep track of all the courses offered by the department. In addition, Dick would like the database to include each instructor's basic contact information, such as ID number, name, office location, and phone number. Currently, Dick has nine instructors (seven full-time faculty members and two adjuncts) in the department.

For each course, Dick would like to keep track of the course ID, title, and number of credit hours. When courses are offered, the section of the course receives an ID number, and with that number, the department keeps track of which instructor is teaching the course.

Finally, Dick needs to be able to keep track of the IT students and to know which courses each student has taken. The information he would like to know about each student includes ID number, name, and phone number.

In a group of three or four, draw an Entity-Relationship Diagram for the above case.

- Your ERD should include all necessary entities, attributes, and relationships.
- You need to specify relationship names and types (1:1, 1:M, or M:N) as well. A relationship should have a name with a verb.
- Do not forget underline entity identifiers.
- HINT: There should be four entities.
- Make sure that the model is normalized (i.e. there will be no redundant data).