

## Quiz 5: ER model (10 points), 10 minutes

Design an ER model for a course management application, with the following requirements:

- It should model instructors, students, courses, and quizzes, and their relationships.
- For each instructor, it should record his/her name and department (note that there may be multiple instructors from different departments with the same name). An instructor may teach multiple courses; and a course may be taught by multiple instructors.
- For each student, it should record his/her ID, name, and program (e.g., computer science) of students.
- For each course, it should record its title and number (e.g., INF 551). You may assume every course has a unique course number.
- For each quiz, it should record its number (e.g., 'q1') and duration (e.g., 10 minutes). Note that quizzes of different courses may have the same number (e.g., INF 551 and INF 553 both have quiz 'q1'). Note also that there may be some courses which do not have quizzes.
- It should also record quiz scores of students.

Make sure you indicate the multiplicity of relationships, weak entity sets, and keys of entity sets.

