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IST659 Lab 4

1. **Page 195, 4-30**

1. This is currently in third normal form.

2. This is currently in third normal form.

3. This is in second normal form, as it is written. Capacity and room are functionally dependent, so this could be written:

Class (CourseNo, SectionNo, Room)

Room (Room, Capacity)

4. This would probably be first normal form due to the amount of duplication we’d see here. I’d break this out by giving Course its own entity.

Class (CourseNo, SectionNo, Room)

Course (CourseNo, CourseName)

Room (Room, Capacity)

1. **Page 195, 4-32**

**Enterprise Key- Referenced page 192 in textbook**

Object( CourseNo, Course Title, Instructor Name, Instructor Location, StudentNo, StudentName, Major, Grade)

Relations:

Object(OID, Object Type)

Course(OID, CourseNo, CourseTitle)

Instructor(OID, InstructorName, InstructorLocation)

Student(StudentNo, StudentName, Major)

Result(OID, CourseNo, StudentNo, Grade)

1. **Page 196, 4-36 (do all points, but submit only d)**

(StudentID, Studentname, Campus Address, Major, Course ID, CourseTitle, InstructorName, Instructor Location, Grade)

Instructor(InstructorName, Instructor Location)

Student(StudentID, StudentName, Campus Address, Major)

Course(CourseID, CourseTitle)

Result(CourseID, StudentID, Grade)

\*\*Note – I’m not sure about the directionality here in the flow. To have the result at the end, it would seem to me that this is the way that it would have to be modeled, with instructor going first, as it seems to be the overarching entity in the ERD.

Instructor has many students. Students have many courses. Courses have many results/outcomes.

