

**OPIM 5272**  
**University of Connecticut**  
**Data Modeling Module 1 - Solutions**

**Exercise**

Slide 28 - Draw a diagram for each of the relationships. NOTE: As we discussed in class, the diagram will depend on the definition that you assign for the entities. I have defined each entity and used that definition for the diagram that I created.

- STUDENT and COURSE

We define a *student* as an individual who is enrolled in a class at a university. A *course* is a class that is listed in a university's course listing.



- BOOK and BOOK COPY

We define a *book* as a single edition of a written work. A *book copy* is a printed or digital copy of a book.



- COURSE and SECTION

We define a *course* as a class that is listed in a university's course listing. A *section* is one administration of a course.



- ROOM and SECTION

We define a *room* as a space occupied for a course. A *section* is one administration of a course. This will be many-to-many (consider our class).



- INSTRUCTOR and COURSE

We define an *instructor* as an individual assigned to lead a class. A *course* is a class that is listed in a university's course listing.



### Exercise

Slide 28 - Pet Store

- What is the relationship between PET and STORE?

As displayed, it is one-to-many. Each store contains one or more pets, while each pet is sold by exactly one store.

- What is the relationship between Customer and Pet

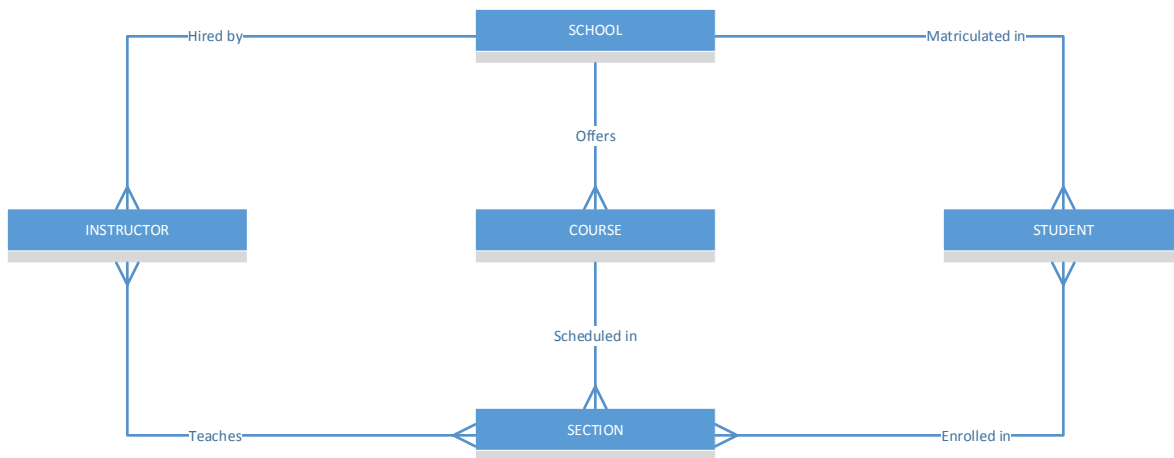
As displayed, it is one-to-many. Each customer buys one or more pets, and a pet is purchased by exactly one customer.

- Do you think there should be a relationship between Customer and Store?

This depends on if it is important to establish a connection between a customer and a store. Currently, it would be impossible to decipher whether or not a customer is just a customer of a single store, or of multiple stores. This may not even be important to establish, so it depends on the business needs. These types of decisions are made during the Planning phase of the SDLC.

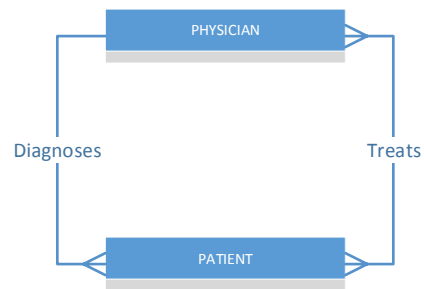
### Exercise

Slide 28 - University Enterprise Data Model (Answer depends on entities chosen)



### Exercise

Slide 29 - Physician to Patient



### Exercise

Slide 48 - Class Assignment

