



Business School

UNIVERSITY OF COLORADO DENVER

Information Systems Program

Module 10

Schema Conversion

Lesson 3: Conversion problems

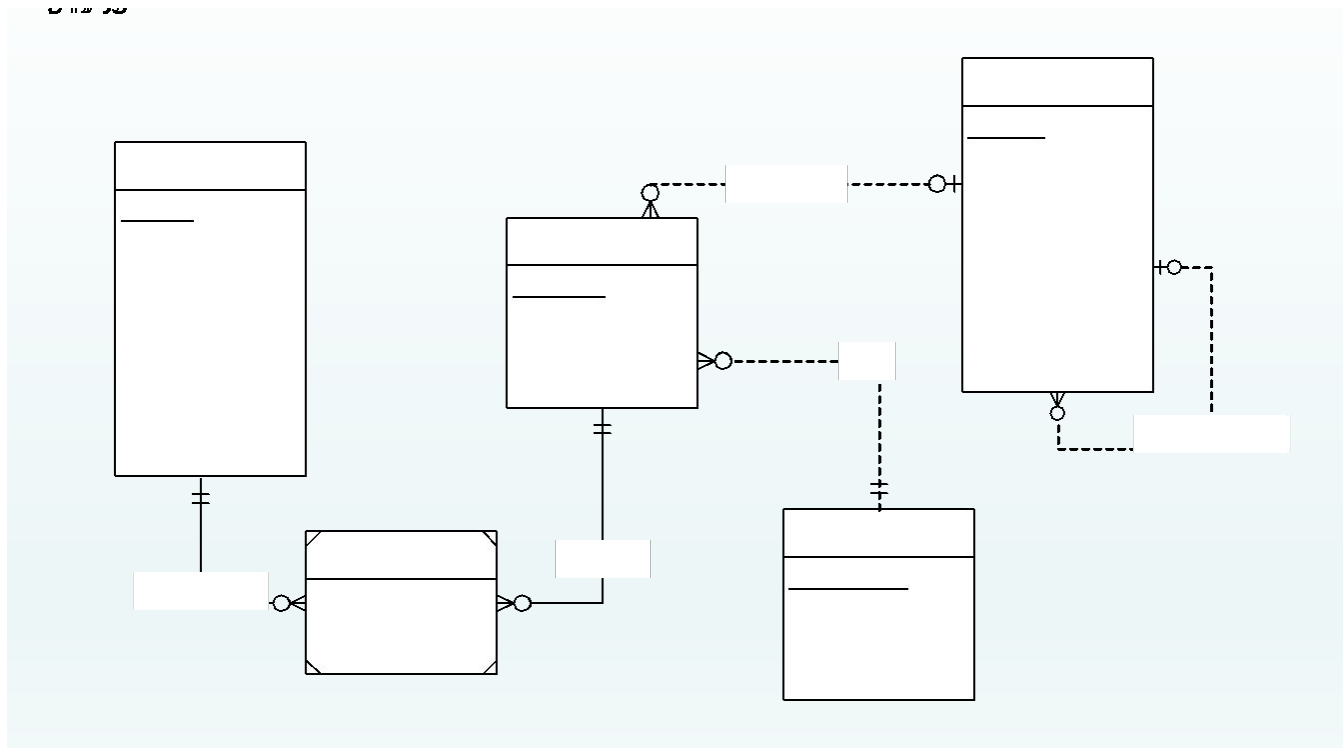


Lesson Objectives

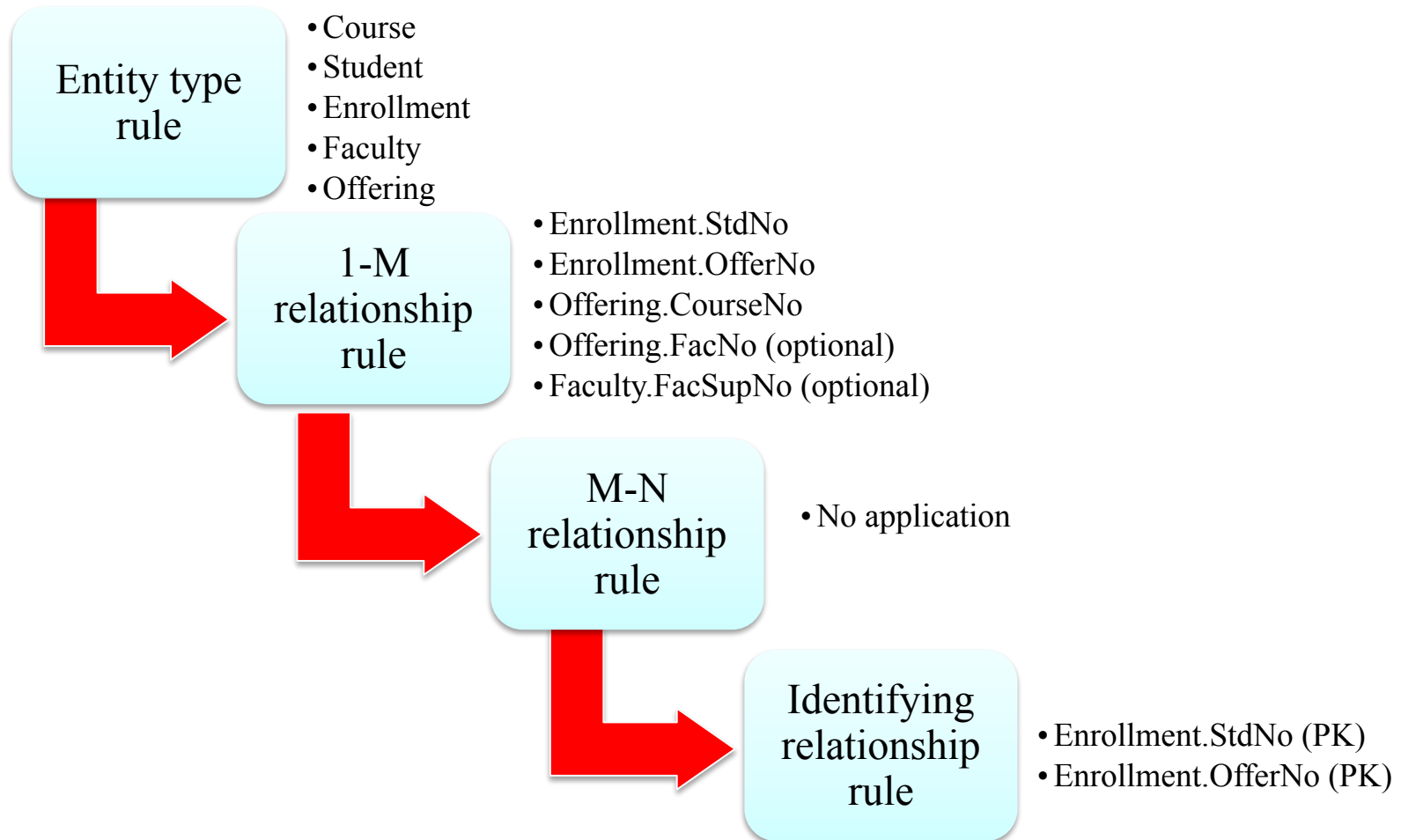
- Practice on moderate size ERDs
- Gain insight about notation differences



University Database ERD



Conversion Rule Application



University Database Table Design

```
CREATE TABLE Course (... , PRIMARY KEY (CourseNo) )
```

```
CREATE TABLE Student (... , PRIMARY KEY (StdNo) )
```

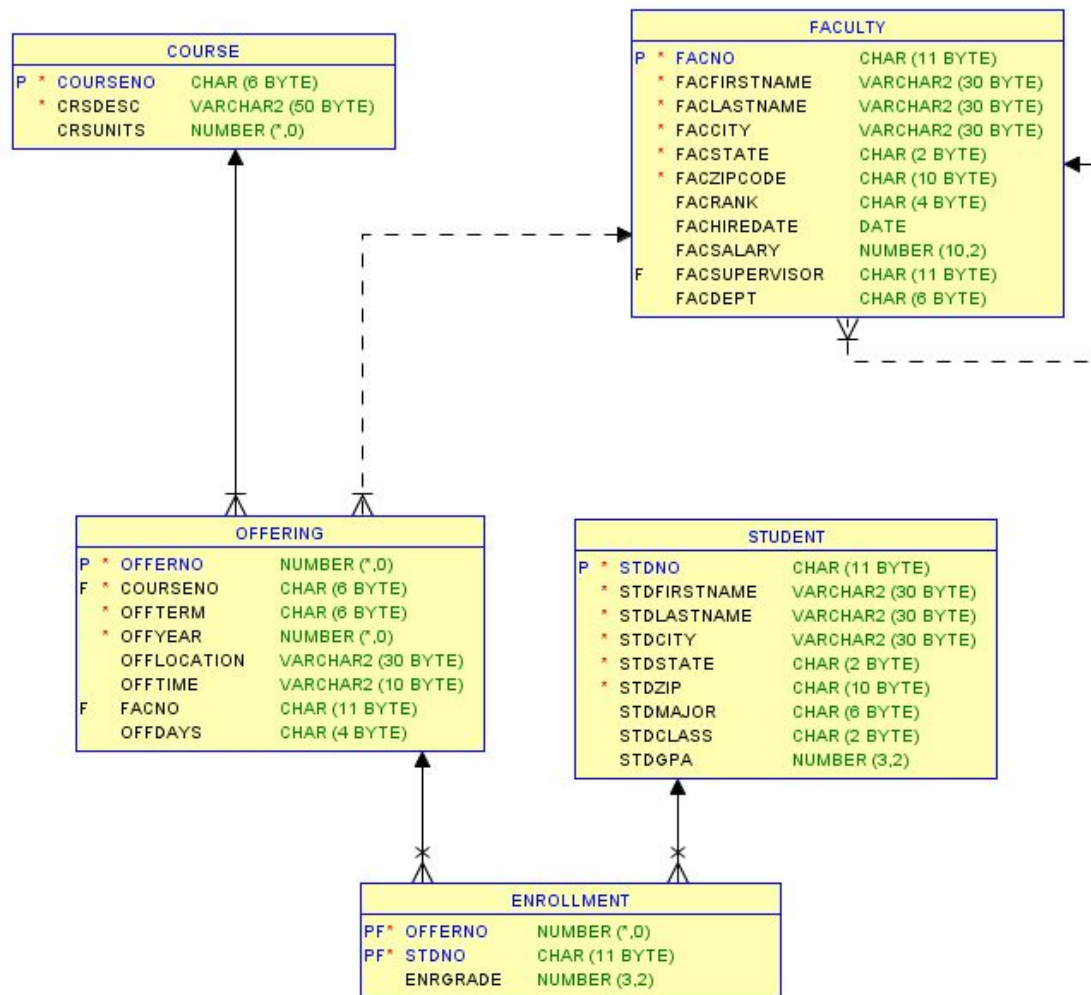
```
CREATE TABLE Faculty (... , PRIMARY KEY (FacNo) , FOREIGN  
KEY (FacSupNo) REFERENCES Faculty )
```

```
CREATE TABLE Offering (... , PRIMARY KEY (OfferNo) ,  
FOREIGN KEY (CourseNo) REFERENCES Course , FOREIGN  
KEY (FacNo) REFERENCES Faculty , CONSTRAINT CourseNo  
NOT NULL )
```

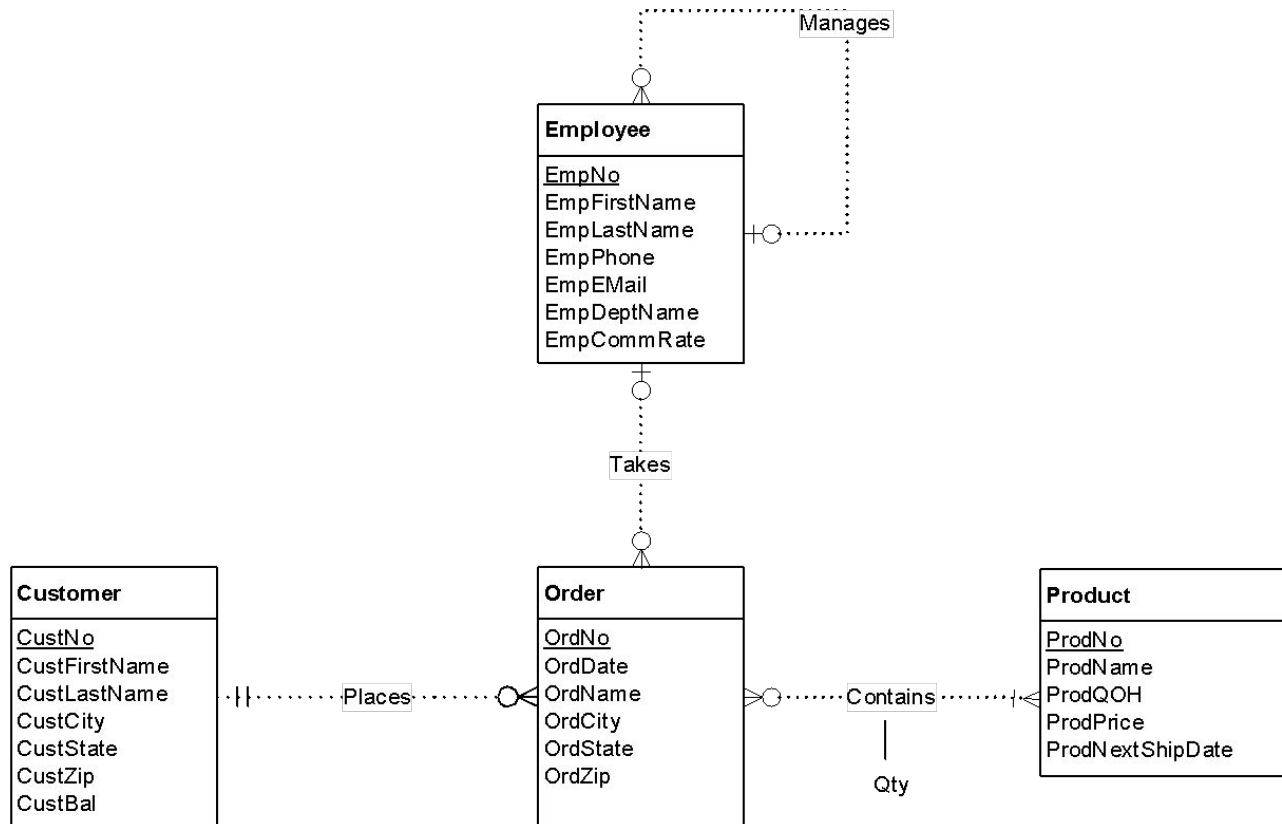
```
CREATE TABLE Enrollment (... , PRIMARY KEY (OfferNo ,  
StdNo) , FOREIGN KEY (OfferNo) REFERENCES Offering ,  
FOREIGN KEY (StdNo) REFERENCES Student )
```



University Database Relational Diagram



Practice Conversion Problem



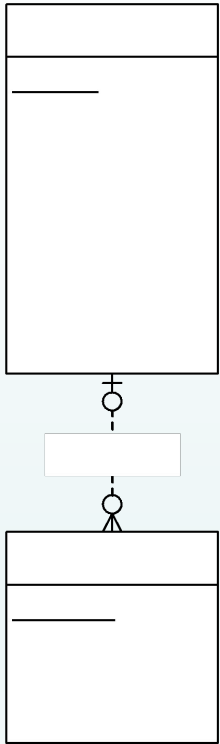
Summary

- Apply rules on practice and graded problems
- Knowledge of conversion rules clarifies notation differences



Common Conversion Error

Incorrect



Incorrect application of 1-M relationship rule

```
CREATE TABLE Faculty(..., PRIMARY KEY (FacNo), FOREIGN  
KEY (OfferNo) REFERENCES Offering, ... )
```

Correct application of 1-M relationship rule

```
CREATE TABLE Offering (... , PRIMARY KEY (OfferNo),  
FOREIGN KEY (FacNo) REFERENCES Faculty, ... )
```

