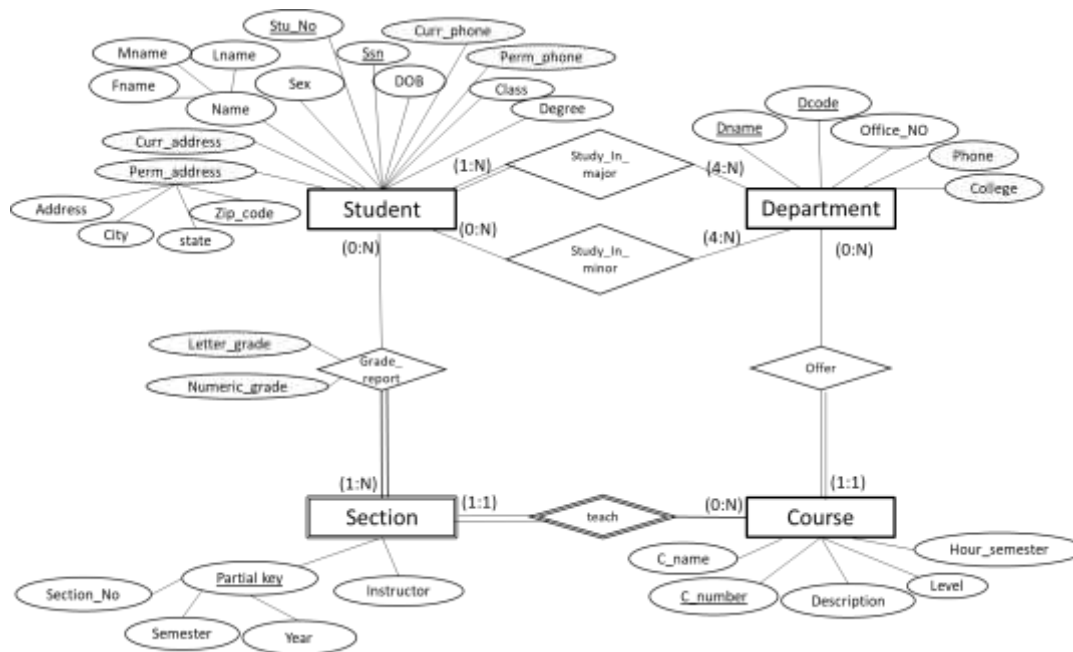


COMPSCI 751 S1 C – Lab 02

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1.



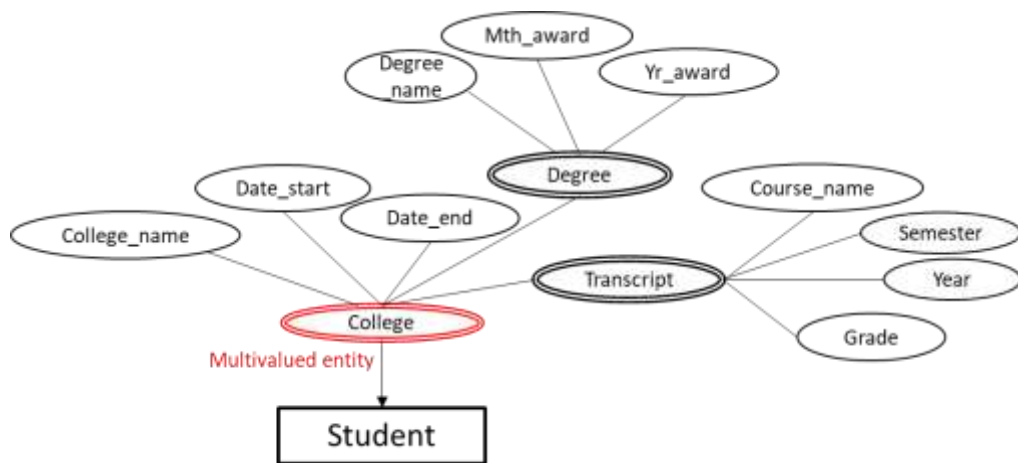
In this University ER diagram, there are,

1), **four identities** – Student with key attributes student number and SSN number, Department with department name and department code as key attributes, Course with key attribute course number, and Section is weak entity type with a combined primary key of section_No + semester + year.

2), **assumptions:**

- We assume one student can study in at least one major department (otherwise he/she would not be a student of this university), and the minor department is optional. Therefore, there is an existence dependence of student with major department. The minimum students per department is set as 4.
- A department can offer 0-N courses. One course can be arranged by only one department, there is 1:1 dependence of relationship.
- A course can be taught in 0-N section depends on semester and year. A section can be arranged for only one course. This is 1:1 dependence of relationship as well.
- A student can have 0-N grade report, a section can provide 1-N grade report, there is an existence dependence.

2.



The attribute of college for entity Student is shown above. College has many sub-attributes, among which degree and transcript are multi-valued attributes with their composite attributes.