

CS315: Database Systems

Assignment 1 (50 marks)

Due on: 24th January, 2019, 10:00pm

Submit the assignment as a typed pdf file.

Q1 (40 marks)

Design an Entity-Relationship (ER) model for the entire academic system of IIT Kanpur. Draw the corresponding ER diagram.

Please ensure that your model takes care of all the nuances of the system including undergraduate and postgraduate systems, dual degree students, registration, thesis credits, etc.

If you are unaware of the entire system, discuss them with postgraduate students (e.g., the course TAs) and faculty members (e.g., the course instructor).

You need not model the pre-registration and registration process.

Please also explain the non-obvious parts of your ER model, and mention the different constraints and assumptions explicitly.

Q2 (10 marks)

Reduce the above model to relational model. Specify the schemas of the relations along with the primary and foreign keys.