

**ETM 555 Design of Information Systems**  
**Homework 3 (due Jan. 5th)**  
**(to be done in groups of 2 students)**

Design a neo4j graph database for a social network that stores students, instructors and relations for friends and courses offered/taken in a university. Your graphbase will contain:

- Students
- Friends of students
- Courses
- Instructors
- Courses taken by each student
- Courses offered by each instructor

Your graphbase will allow you to do various things:

- Query what courses each student has taken.
- Query what courses friends have taken.
- Query what courses friends like.
- Query from which instructors friends have taken courses.

You should draw your design as a diagram as shown in the Fig. 4.5 in Section 4.4.4 of the Neo4j manual (<http://docs.neo4j.org/pdf/neo4j-manual-milestone.pdf>). You should also give details of what are stored as properties on the nodes and edges (relations).

Also give an example involving 6 students, 4 instructors and 5 courses. Draw the graph diagram for this instance showing values of all properties.

Please submit your answers as a powerpoint slides. You are also required to present your design in class on Jan. 5th.