

# Advanced Data Modeling

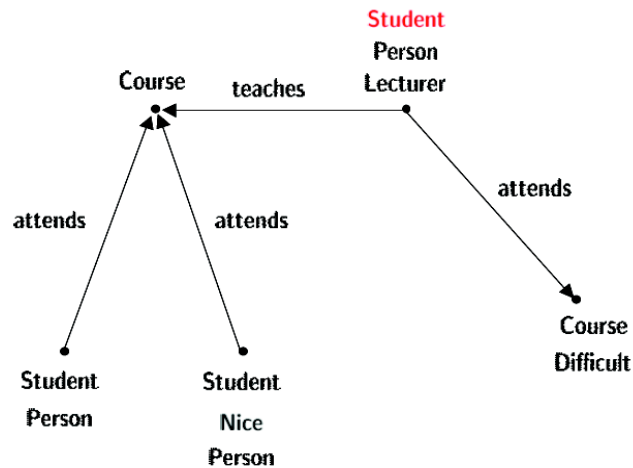
Summer Semester 2008

- Exercises VI -

To be handed in before **2008-06-08, 23:59** via e-mail to [sschenk@uni-koblenz.de](mailto:sschenk@uni-koblenz.de), subject line: [ADM] ...

- 1) Given the following ALC interpretation from the slides:

Add two more persons and two more courses, such that the result is still a model of the TBox from slide 12.



- 2) Add an ABox with 4 Individuals to the TBox on slide 12 and extend the model accordingly.
- 3) Design an ALC Tbox, that restricts the domain of the role „employs“ to „Company“ and the range to „Employee“. Define a „BigCompany“ as a Company, which employs at least 10 people. Try to define a small company as one, which employs at most 5 people. Is this possible in ALC?
- 4) Explain „Open World Assumption“ in the context of DIs.
- 5) Is the TBox on slide 12 definitorial? If yes, add aioms, such that it is no longer definitorial, otherwise remove axioms, such that it becomes definitorial.