Université de Neuchâtel

COURSE DESCRIPTION 2007-2008

- Faculty of Economics
- www.unine.ch/seco

Data Warehousing

Characteristics

- 6 ECTS credits
- Compulsory course for Master in Statistics
- Elective course for Master in Information Systems, Master in Finance and Master IBD
- Autumn semester
- courses: 2 hours/week, exercices: 2 hours/week
- Evaluation: Project: 40%
  Exam: 60%
- Prerequisite : --

Teaching Team

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Objectives

A student attaining this course should be able to:

a) Identify differences between application operational data modelling and warehouse data modelling, explore the purpose of subject modelling, and develop a subject area model.

b) Apply techniques to develop a robust and representative list of business questions and translate them into data models.

c) Identify clusters of data elements with a natural affinity to be grouped as data marts.

d) Make informed choices between relational and dimensional data structures

e) Analyse dimension properties including domain size, density/sparsity, and volatility; describe advanced modelling techniques for slowly-changing dimensions.

Content

The course begins by describing the basic notions, like the objectives of Business Intelligence and the data warehouse, and also how they fit into the general Corporate Information Factory architecture. It explains why relational design techniques is chosen to model the data warehouse. A discussion about the impact of the relational modeling over the final delivery of data marts is presented.

The analysis and design issues are presented: life cycle, modelling of data warehousing and data marts (star and snowflake schema), cubes, fact tables and dimensional tables, aggregation, etc.

Special attention is given to the inter-communication between the business intelligence agents and the data warehousing development with interviewing examples.

Exercices

The students will develop their own data warehouse during laboratory exercices. After each step of the data warehouse life cycle a presentation is required and evaluated.

Textbooks

- Imhoff, Claudia et al.; Mastering Data Warehouse Design: Relational and Dimesional Techniques J Wiley 2003 ISBN: 0471324213 (available at the Library)
- Inmon, William H. Building the Data Warehouse 3e John Wiley & Sons Inc 2002 ISBN: 0471081302