



## Course syllabus

Faculty Board of Science and Engineering

School of Computer Science, Physics and Mathematics

1IL107 Databashantering och logistiktillämpningar, 7,5 högskolepoäng

1IL107 Database Management and logistics applications, 7.5 credits

### **Main field of study**

Informatics

### **Subject Group**

Informatics/Computer and Systems Sciences

### **Level of classification**

First Level

### **Progression**

G1N

### **Date of Ratification**

Approved 2009-12-15

Revised 2011-08-17 by School of Computer Science, Physics and Mathematics.

Revision made for English translation of the syllabus and literature list.

The course syllabus is valid from autumn semester 2011

### **Prerequisites**

General entry requirements for university studies.

## Objectives

After completing the course the student should be able to:

- Describe the theories and methods that are used for conceptual modeling and implementation modeling within database design
- Explain the relational model and relational principles
- Describe database management in the context of information logistic, as well as the importance of databases for this application area
- Describe how security issues are managed in a database system
- Describe the different types of transactions and transaction schemes that are used within a database system
- Manage the basic tools for description, design and operation of relational databases.

## Content

The course comprises following elements:

- Basic theoretical database concepts
- Conceptual modeling
- UML/ER -modeling
- The theories of normalization
- The relational model
- Structured Query Language, SQL
- Concurrency, security and integrity
- Database modeling
- Database design
- Practical issues in database design

### Type of Instruction

The course consists of lectures, laboratory assignments, seminars and tutoring, regarding the mandatory assignments. The mandatory laboratory assignments can be conducted both individually and in small groups.

### Examination

The course is assessed with the grades Fail (U), Pass (G) or Pass with Distinction (VG).

Assessment of the student's performance is made as follows:

- written and/or oral examination alternatively
- presentation of mandatory assignments.

On request, students may have their credits translated to ECTS-marks. Such a request must be sent to the examiner before the grading process starts.

Students who do not pass the regular examination are given the opportunity to do resit examination shortly after the regular examination.

### Course Evaluation

A course evaluation will be carried out at the end of the course in accordance with the guidelines of the University. The result of the course evaluation will be filed at the department.

### Required Reading and Additional Study Material

#### **Required reading**

Oppel, A. (2011) Databases DeMYSTiFieD, 2nd Ed. McGraw Hill. ISBN 978-0-07-174799-8.

#### **Supplementary reading**

Segerlund, S. & Stridsman, F. *SQL Introduktion*, Pontes, 1998.