



## Course syllabus

Faculty Board of Science and Engineering  
School of Computer Science, Physics and Mathematics

1IL527 Databaser: planering, lagring och användning, 7,5  
högskolepoäng

Databases: planning, storage and use, 7.5 credits

### **Main field of study**

Information Systems

### **Subject Group**

Informatics/Computer and Systems Sciences

### **Level of classification**

First Level

### **Progression**

GIN

### **Date of Ratification**

Approved by the Board of the School of Computer Science, Physics and Mathematics  
2012-12-10

The course syllabus is valid from autumn semester 2013

### **Prerequisites**

General entry requirements.

## Objectives

Upon completion of the course, the student should be able to:

- explain the theories and methods of conceptual database modelling and implementation modelling in database design
- explain the need for infrastructural changes in the organization and its databases for global availability
- describe different types of DBMS and the possibilities and limitations of these
- describe how the security of data and authorization can be managed in a database system
- explain database management in information logistics applications and the importance which database has on such application
- describe what data warehousing and data mining means for information supply in connection with organizations and activities
- understand and apply knowledge of security in connection with information in databases for public access in the global network.

## Content

The course comprises:

- basic theoretical database concepts
- conceptual modeling
- database modeling and design
- UML/ER modeling
- concurrency, security and integrity
- realization, implementation and use of a database
- a database management system, and SQL
- database shaping and structure for the processing of global networks such as Intranet/Internet
- different types and architectures of databases with connections to applications
- evaluation of DB use in applications and social networks
- data warehousing and data mining
- practical elements of planning, storage and use of databases

## Type of Instruction

The teaching consists of lectures, practicals, seminars and tutorials for the required assignment.

The mandatory laboratory assignments can be solved individually or in groups.

## Examination

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

Assessment of student performance is made through written test and/or oral examinations and/or presentation of mandatory assignments. The assessment method is decided at the start of the course.

Students who do not pass the regular examination will be offered retrials close to the regular examination.

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.

## 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

Mark L. Gillenson, Paulraj Ponniah, Alex Kriegel, Introduction to Database Management , March 16, 2007, John Wiley & Sons ISBN 0470101865

Stencils, Linnéuniversitetet, current year. Pages 150

### Reference literature

Databasteknik, Thomas Padron-McCarthy and Tore Risch, 2011

Databases DeMYSTiFieD, McGraw Hill, 2010