Linnæus University

Jnr: 2015/1961–3.1.2

Course syllabus

Faculty of Technology
Department of Informatics

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
G1N

Date of Ratification
Approved 2012-12-10
Revised 2015-06-10 by Faculty of Technology.
The course syllabus is valid from autumn semester 2015

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 supplys 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

During the course or in close connection to the course, a course evaluation is to be carried out. The result and analysis of the course evaluation are to be communicated to the students who have taken the course and to the students who are to participate in the course the next time it is offered. The course evaluation is carried out anonymously. The compiled report will be filed at the Faculty.

Required Reading and Additional Study Material

Required reading
Thomas Padron-McCarthy Tore Risch, Databasteknik (2005). ISBN: 9789144044491. Pages 300 (646)

Stencils, Linnéuniversitetet, current year. Pages 150

Reference literature
Databasteknik, Thomas Padron-McCarthy and Tore Risch, 2011
Databases DeMYSTiFieD, McGraw Hill, 2010