Database Technology

Single subject and programme course

6 credits

Databasteknik

732A57

Valid from: 2016 Autumn semester

Determined by
The Quality Board at the Faculty of Arts and Sciences

Date determined
2016-09-30

Main field of study
Computer Science

Course level
Second cycle

Advancement level
A1X

Course offered for
- Masters Programme in Statistics and Machine Learning

Entry requirements
A bachelor's degree in one of the following subjects: statistics, mathematics, applied mathematics, computer science, engineering, or equivalent. Completed courses in calculus, linear algebra, statistics and programming are required. Documented knowledge of English equivalent to Engelska B/Engelska 6

Intended learning outcomes
After the completion of the course you should on an advanced level be able to:
- explain and use the most important terminology within databases and database technology in a correct way
- design a data model using EER diagrams.
- design, implement and use a relational database.
- explain the theory behind the relational model and how this affects good design of databases.

Course content
The aim of this course is to give a thorough introduction to:
- the theoretical and practical issues underlying the design and implementation of modern database systems
- principles for general database management systems: DBMS,
- methods for database design and use.
- datamodelling with EER, Relational databases, Datastructures for databases, SQL, Relational algebra, query optimization, transactions, serialisation, concurrency.

Teaching and working methods

The course consists of lectures and laboratory work. Lectures are devoted to theory and techniques. Database design and implementation techniques are practised in the laboratory work.
Homework and independent study are a necessary complement to the course.
Language of instruction: English.

Examination

Written examination. Laboratory work.
Detailed information about the examination can be found in the course's study guide.

Students failing an exam covering either the entire course or part of the course twice are entitled to have a new examiner appointed for the reexamination.

Students who have passed an examination may not retake it in order to improve their grades.

Grades

ECTS, EC

Other information

Planning and implementation of a course must take its starting point in the wording of the syllabus. The course evaluation included in each course must therefore take up the question how well the course agrees with the syllabus.

The course is carried out in such a way that both men´s and women´s experience and knowledge is made visible and developed.

Department

Institutionen för datavetenskap