IV1351 Data Storage Paradigms 7.5 credits

Datalagring

This is a translation of the Swedish, legally binding, course syllabus.

If the course is discontinued, students may request to be examined during the following two academic years

Establishment

Course syllabus for IV1351 valid from Autumn 2010

Grading scale

A, B, C, D, E, FX, F

Education cycle

First cycle

Main field of study

Information Technology,Technology

Specific prerequisites

Completed upper secondary education including documented proficiency in Swedish corresponding to Swedish B and English corresponding to English A. For students who received/will receive their final school grades after 31 December 2009, there is an additional entry requirement for mathematics as follows: documented proficiency in mathematics corresponding to Mathematics A. And the specific requirements of mathematics, physics and chemistry corresponding to Mathematics D, Physics B and Chemistry A.

Basic courses in programming equivalent to 7,5 ECTS credits

Language of instruction

The language of instruction is specified in the course offering information in the course catalogue.

Intended learning outcomes

After passing the course, the student shall be able to:
1. describe and explain basic concepts, principles and theories within the field of data/databases/data storage, as well as information administration and database technologies
2. model the information needs of a business based on a business description
3. use relational databases, XML and query languages
4. describe how a program kan access a database and write such a program

Course contents

Introduction to databases, data storage and information administration
The relational model
XML
Conceptual modeling and Logical database design
Query languages
Embedded query languages

Disposition

The course is carried out with lectures, lessons, tutorials, presentations, and tutoring. A project is conducted in two stages with compulsory presentations. The project is done in groups of 3 students.

Course literature

Course book:
Database Systems: A Practical Approach to Design, Implementation and Management, Connolly, Begg
Edition: 5 Publisher: Addison Wesley Year: 2009
ISBN: 0-321-52306-7

Course material:
- Course Information (including lesson exercises, project assignment, etc)
- Lecture slides
- Compendiums for Microsoft Access and MySQL

All the material is available electronically through Bilda (bilda.kth.se)
Other books than the specified course book about databases can be used instead. E.g.

Fundamentals of Database Systems by Elmasri/Navathe or Database System Concepts by Silberschatz et al

Examination

- LAB1 - Laboratory Works and Project, 4.5 credits, grading scale: A, B, C, D, E, FX, F
- TEN1 - Examination, 3.0 credits, grading scale: A, B, C, D, E, FX, F

Based on recommendation from KTH's coordinator for disabilities, the examiner will decide how to adapt an examination for students with documented disability.

The examiner may apply another examination format when re-examining individual students.

Other requirements for final grade

In order to pass the course, a student must have a pass grade on both examinations.

The average of the two grades (rounded up) constitutes the final grade.

Ethical approach

- All members of a group are responsible for the group's work.
- In any assessment, every student shall honestly disclose any help received and sources used.
- In an oral assessment, every student shall be able to present and answer questions about the entire assignment and solution.