IV139V Server-Side-programming for SQL-servers 7.5 credits

Server-Side-programmering för SQL-servrar

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

Establishment

Course syllabus for IV139V valid from Spring 2009

Grading scale

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

Education cycle

First cycle

Main field of study

Technology

Specific prerequisites

Completed upper secondary school including documented proficiency in Swedish and English.

Language of instruction

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

Intended learning outcomes

The overall aim of the course is to provide an understanding of how programming with T-SQL can be used to build up application logic in a MS SQL Server 2005 database.

To pass, the student shall be able to do the following after a completed course:

- Describe how a relational database works.
- Describe the concepts table, column, primary key, foreign key, constraint, data type and view.
- Describe what a MS SQL Server 2005 database is composed of.
- Use SQL DDL commands to on a very basic level create and edit a MS SQL Server 2005 database.
- Use SQL DML commands to select, update and delete data in a MS SQL Server 2005 database.
- Use built-in functions and dynamic SQL in a MS SQL Server 2005 database.
- Use T-SQL to build procedures, functions and triggers with variables, cursors, flow control and error management in MS SQL Server 2005.

For a higher grade, the student shall be able to do the following after a completed course:

- Give a thorough description of how SQL DML-commands can be used to manage data in a MS SQL Server 2005 database.
- Give a thorough description of how built-in functions can be used to simplify and improve T-SQL commands in a MS SQL Server 2005 database.
- Give a thorough description of how T-SQL can be used to build advanced application logic in a MS SQL Server 2005 database.

Course contents

The course is composed of a number of lectures, projects and exams.

The three lectures bring up the contents which is included in the course: MS SQL Server 2005, relational database design, database structure, SQL DML, SQL DDL, built-in functions, dynamic SQL, flow control, error handling, variables, cursors, procedures, functions and triggers.

The two projects bring up practical tasks within the contents of the course.

The three exams bring up theoretical tasks within the contents of the course split up into three parts.

Disposition

The course is given in 25% of full-time during the autumn and spring terms, and in 50% of full-time during the summer term. The course is given at distance. The course is given in Swedish and in English. For more information see Contents.

As the course is a distance course there is no requirement for attending at KTH at all, the course is entirely IT-based and is attended through the course platform Ping Pong. The lectures are only meant to act as support for those who want to attend. Course registration can be done through a web form.

Course literature

The course material consists of a course book (given at course start) and software from Microsoft.

Equipment

Access to a qualified PC with Windows 2000 or newer, CPU min 500MHz (1GHz is recommended), 512 MB of RAM, internet access, CD-rom reader, 1 GB of free HD space for software needed in the course. Database software can be download from the Internet.

Examination

- PRO2 - Project, 1.5 credits, grading scale: P, F
- PRO1 - Project, 1.5 credits, grading scale: P, F
- TEN3 - Examination, 1.5 credits, grading scale: A, B, C, D, E, FX, F
- TEN2 - Examination, 1.5 credits, grading scale: A, B, C, D, E, FX, F
- TEN1 - Examination, 1.5 credits, grading scale: P, 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.

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

Other requirements for final grade

- Passed exam 1 (TEN1;1,5p) – grade P-F.
- Passed exam 2 (TEN2;1,5p) – grade A-F.
- Passed exam 3 (TEN3;1,5p) – grade A-F.
- Passed project 1 (PRO1;1,5p) – grade P-F.
- Passed project 2 (PRO2;1,5p) – grade P-F.

The final grade is given when TEN1, PRO1 and PRO2 are Passed (betyg P) and when TEN2 and TEN3 have the lowest grade of E.

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.