



# DD1368 Database Technology

## 6.0 credits

### Databasteknik för D

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

On 04/21/2020, the Head of the EECS School has decided to establish this official course syllabus to apply from the autumn semester 2020, registration number J-2020-0869.

### Grading scale

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

### Education cycle

First cycle

### Main field of study

Computer Science and Engineering, Technology

### Specific prerequisites

Completed course in programming equivalent to DD1310/DD1311/DD1312/DD1314/DD1315/DD1316/DD1318/DD1331/DD1337/DD100N/ID1018 and computer science equivalent to DD1320/DD1321/DD1325/DD1327/DD1338/DD2325/ID1020.

Active participation in a course offering where the final examination is not yet reported in LADOK is considered equivalent to completion of the course. This applies only to students who are first-time registered for the prerequisite course offering or have both that and the applied-for course offering in their individual study plan.

## Language of instruction

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

## Intended learning outcomes

After completing the course you will be able to:

- explain the functions and architecture of a database system,
- discuss the advantages and disadvantages of different database models,
- model and structure data according to actual constraints,
- explain the implications of different constraints on the database,
- use a query language to formulate queries, and describe the mathematical foundations for data manipulation languages,
- write embedded SQL in a 3rd generation programming language.

## Course contents

Definition of the relation model. Information structuring according to the “Entity Relationship”-model. Functional dependencies and what they mean for good database design. Normalization. Query languages and the mathematics behind them. Transaction handling. Overview of different models for data representation. Laboratory assignments using experimental and commercial systems.

## Examination

- LAB2 - Laboratory Assignments, 3.0 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

The students participating in the course are expected to take part in all activities on the course with a particular emphasis on the exercises and laboratories.

In addition the course focuses on training:

- independently acquiring knowledge,
- oral presentation.

Examination by one written exam and laboratory assignments.

## **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.