DD1334 Database Technology 6.0 credits

Databasteknik

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

Establishment

The official course syllabus is valid from autumn semester 2026 as decided by the Director of First and Second Cycle Education. Decision date: 2026-04-16

Grading scale

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

Education cycle

First cycle

Main field of study

Information Technology, Technology

Specific prerequisites

- Knowledge and skills in programming, 6 credits, equivalent to completed course DD1337/DD1310-DD1319/DD1321/DD1331/DD1333/DD100N/ID1018/ID1022.
- Knowledge in algorithms, data structures and basic software development techniques, 6 credits, equivalent to completed course DD1338/DD1320-DD1328/DD2325/ID1020/ID1021 or completed exam elements KONT and LABD in DD1326.

Intended learning outcomes

After passing the course, the student should be able to:

- explain the functions and structure of a database management 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 structure
- use a query language to formulate queries and describe the mathematical foundation for query languages
- write embedded SQL statements in a third generation programming language
- present independently acquired necessary knowledge orally and in writing.

Course contents

Definition of the relational data model. Information structuring according to the Entity-Relationship model.

Functional dependencies and their importance for good database design. Normalization. Query languages and their underlying mathematics.

Transaction management. Overview of different models for data representation.

Laboratory assignments using experimental and commercial systems.

Examination

- LABA - Laboratory Assignments, 3.0 credits, grading scale: A, B, C, D, E, FX, F
- HEM1 - Home assignments, 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.

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

Transitional regulations

The earlier component TEN1 is replaced by HEM1.

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.