DD2477 Search Engines and Information Retrieval Systems 7.5 credits

Sökmotorer och informationssökningssystem

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

Establishment

This official course syllabus is valid from the autumn semester 2025 in accordance with decision by the director of first and second cycle education: HS-2025-0571.Date of decision: 2025-03-14

Grading scale

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

Education cycle

Second cycle

Main field of study

Computer Science and Engineering

Specific prerequisites

Knowledge and skills in programming, 6 credits, equivalent to completed course DD1310-DD1319/DD1331/DD1333/DD1337/DD1321/DD100N/ID1018.

Knowledge of algorithms and data structures, 6 credits, equivalent to completed course DD1320-DD1328/DD1338/ID1020/ID1021.

Knowledge of linear algebra, 7.5 credits, equivalent to completed course SF1624/SF1684/SF1672.

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

- explain and use concepts in information retrieval such as indexing, ranking, boolean search model, vector space model
- implement methods for indexing, search, and ranking of a very large number of documents with hyperlinks
- use tools and software libraries for information retrieval
- be able to evaluate algorithms and systems for information retrieval

in order to be able to

- work for companies that specialise in information retrieval
- carry out a master's degree project in computer science with a specialisation in information retrieval
- be an important link between systems designers, programmers, and interaction designers in industry as well as in research projects.

Course contents

Basic and advanced technologies for information retrieval, indexing and ranking; indexing of non-textual data; boolean models and vector space models for search; evaluation and user interface issues; the structure of Internet search engines.

Examination

- LAB1 - Computer assignments, 4.5 credits, grading scale: A, B, C, D, E, FX, F
- PRO1 - Project assignment, 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.

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.