



Course syllabus

Faculty of Technology

Department of Informatics

1IK171 Databaser och datamodellering, 7,5 högskolepoäng

1IK171 Databases and data modeling, 7.5 credits

Main field of study

Informatics

Subject Group

Informatics/Computer and Systems Sciences

Level of classification

First Level

Progression

G1N

Date of Ratification

Approved by Faculty of Technology 2022-02-07

The course syllabus is valid from autumn semester 2022

Prerequisites

General entry requirements for university studies.

Objectives

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

- A.1 describe basic concepts, structures and security for relational databases
- A.2 describe techniques and models for designing relational databases
- A.3 design data models based on business needs and implement a relational database
- A.4 improve database design by applying standardization and privacy conditions
- A.5 enter, change and search data from a relational database and change its schedule
- A.6 improve database interaction through search engine optimization and leverage functionality to create active databases
- A.7 use tools to support design, implementation and interaction with relational databases.

Content

The course deals with conceptual data modeling with the support of ER diagrams, normalization of relationships, and implementation of relationship databases.

Furthermore, the course deals with storage, retrieval and manipulation of data with the query language Structured Query Language (SQL), as well as creation and manipulation of database schema with SQL. The course also deals with security in the handling of stored data and its integrity, and highlights its importance from a business perspective.

Type of Instruction

The teaching consists of lectures, lessons, laboratory work and supervision.

Examination

The examination of the course is divided as follows:

Code	Designation	Grade	Credits
2201	Practical tasks	U/G	2,00
2202	Project	U/G	2,50
2203	Exam	U/G/VG	3,00

The course is assessed with the grades Fail (U), Pass (G) or Pass with Distinction (VG).

For students who have not been approved at the regular examination occasion, a re-examination is arranged in close connection with the ordinary examination. The final grade for the course is determined by the grade on the exam.

Repeat examination is offered in accordance with Local regulations for courses and examination at the first and second-cycle level at Linnaeus University.

If the university has decided that a student is entitled to special pedagogical support due to a disability, the examiner has the right to give a customised exam or to have the student conduct the exam in an alternative way.

Objectives achievement

The examination elements are linked to the course objectives in the following ways:

Goal	2201	2202	2203
A.1			<input checked="" type="checkbox"/>
A.2			<input checked="" type="checkbox"/>
A.3		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
A.4		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
A.5	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
A.6	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
A.7	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	

Course Evaluation

During the implementation of the course or in close conjunction with the course, a course evaluation is to be carried out. Results and analysis of the course evaluation are

to be promptly presented as feedback to the students who have completed the course. Students who participate during the next course instance receive feedback at the start of the course. The course evaluation is to be carried out anonymously.

Required Reading and Additional Study Material

Required Reading

Padron-McCarthy, Thomas, and Risch, Tore, Databasteknik, Studentlitteratur, 450 pages, latest edition.