



Faculty of Health, Science and Technology
Computer Science

Syllabus

Databases

Course Code:	DVGA21
Course Title:	Databases <i>Databaser</i>
Credits:	7.5
Degree Level:	Undergraduate level
Progressive Specialisation:	First cycle, has less than 60 credits in first-cycle course/s as entry requirements (G1F)

Major Field of Study:
DVA (Computer Science)

Course Approval

The syllabus was approved by the Faculty of Health, Science and Technology 2023-01-30, and is valid from the Autumn semester 2023 at Karlstad University.

Prerequisites

Registered for Programming Techniques, 7.5 ECTS credits, or Introduction to programming and data processing, 7.5 ECTS credits, or equivalent

Learning Outcomes

Upon completion of the course students should be able to:

- give an overall description of the structure of a modern database system,
- give an account of the different parts of the relational model,
- describe how a database system deals with transactions,
- apply different methods of database design in practice with a view to constructing a relational database system, and
- implement a relational database system and use the SQL language.

Content

The course covers the following:

- principles and use of general database systems (DBMS)
- the structure of database systems
- relational database model (computer structure, relational algebra, computer integrity)
- the programming language SQL
- methods of database design (E/R model, functional dependency, normalisation)
- transaction management and database security
- presentation of other database areas and types of databases

Instruction is mainly in the form of lectures, course literature and reading assignments, and other learning materials. The course includes hand-in assignments and a practical component that involves exercises and laboratory work.

Reading List

See separate document.

Examination

Assessment is based on laboratory assignments, hand-in assignments, and a written exam.

If students have a decision from Karlstad University entitling them to Targeted Study Support due to a documented disability, the examiner has the right to give such students an adapted examination or to examine them in a different manner.

Grades

One of the grades 5 (Pass with Distinction), 4 (Pass with Some Distinction), 3 Pass, or Fail (U) is awarded in the examination of the course.

Quality Assurance

Follow-up relating to learning conditions and goal-fulfilment takes place both during and upon completion of the course in order to ensure continuous improvement. Course evaluation is partly based on student views and experiences obtained in accordance with current regulations and partly on other data and documentation. Students will be informed of the result of the evaluation and of any measures to be taken.

Course Certificate

A course certificate will be provided upon request.

Additional information

The local regulations for studies at the Bachelor and Master levels at Karlstad University stipulate the obligations and rights of students and staff.

The course DVGA21 cannot be included in the same degree programme as the courses DVGB04 or ISGB01.