



Faculty of Economic Sciences, Communication and IT  
Information Systems

### Syllabus

#### Course Approval

The syllabus was approved by the Faculty Board of Economic Sciences, Communication and IT on 23 September 2009, and is valid from the Autumn semester of 2009 at Karlstad University.

**Course Code:** ISGB01

**Database Design, 7.5 ECTS Credits**

**(Database design, 7.5 Swedish credit points)**

**Degree Level:** Bachelor

**Progressive Specialisation:** G1F (First cycle, has less than 60 credits in first-cycle course/s as entry requirements)

#### Language of Instruction

Swedish

#### Prerequisites

General admission requirements

#### Major Field of Study

IKA (Information Systems)

#### Learning Outcomes

The aim of the course is that students should acquire knowledge of databases, database management systems and data base systems with emphasis on relation database, and also of database design and the database language SQL.

Upon completion of the course students should be able to:

- identify and describe the traits and characteristic components of relation databases,
- perform conceptual and logic design and use normalisation in the design of relation data bases,
- use SQL to create a database, updating it and querying against it,
- describe and assess transaction situations such as competition and restart and other critical problems in transaction management,
- assess different ways of formulating instructions for a relation database,
- assess the rewards of object-oriented thinking and treat it from a database perspective.

#### Content and Form of Instruction

The course deals with relation databases from the requirement specification, via conceptual modelling and logic design to physical design. A basic conceptual frame is set up with concepts such as database system, database management, users, relation model, integrity, relations algebra. Normalisation is applied in the design of relation databases.

Instruction is in the form of lectures, laboratory supervision and seminars.

## Reading List

See separate document.

## Examination

Examination is in the form of written or oral exams and/or reports of application exercises. All laboratory work must also be completed before a course grade is awarded.

Examination based on this syllabus may be completed up to one year after the syllabus is replaced. Two examination opportunities are provided during the first academic year in which the course is not offered, and one in the second year.

## Grades

One of the grades Distinction (VG), Pass (G), 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 assessment is based on student views and experiences as reported in written course evaluations and/or group discussions. Students will be informed of the result of the evaluation and of the measures to be taken.

## Course Certificate

A course certificate will be provided upon request.

## Additional Information

Students who enrolled before 1 July 2007 will complete their studies in accordance with the requirements of the earlier admission. Upon completion students may request degree and course certificates to be issued under the current ordinance if they meet its requirements.

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

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