



Faculty of Arts and Social Sciences
Information Systems

Syllabus

Object-Oriented Modeling with programming

Course Code:	ISGB36
Course Title:	Object-Oriented Modeling with programming <i>Objektorienterad modellering med programmering</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:
IKA (Information Systems)

Course Approval

The syllabus was approved by the Faculty of Arts and Social Sciences 2024-03-15, and is valid from the Autumn semester 2024 at Karlstad University.

Prerequisites

Registered for ISGA03 Acquisition of Information Systems (7.5 ECTS credits) and ISGB01 Database Design (7.5 ECTS credits), or equivalent

Learning Outcomes

Upon completion of the course, students should be able to:

1. apply object-oriented modeling methods and Unified Modeling Language (UML) for organisational analysis,
2. apply basic object-oriented concepts for modeling and design,
3. use Unified Modeling Language (UML) to define and visualise static and dynamic systems aspects,
4. give an account of key theories and methods in object-oriented software development,
5. apply object-oriented programming, and
6. solve object-oriented design problems in programming.

Content

The course covers the following:

- The semantics of a graphic language to express object-oriented concepts.
- The systems design process which develops the students' skills in object-oriented modeling.
- Integration of systems analysis, systems design, and implementation aspects.
- Object-oriented programming based on UML models.

Students complete a practical group assignment, which includes different aspects of modeling and programming through presenting the development of an object-oriented system based on UML models.

Reading List

See separate document.

Examination

Assessment is based on a written hand-in assignment completed in groups 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 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 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.