Faculty of Arts and Social Science
Information Systems

Syllabus

Design Patterns, Java, and UML

Course Code:	ISGC08
Course Title:	Design Patterns, Java, and UML
	Designmönster, Java och UML
Credits:	7.5
Degree Level:	Undergraduate level
Progressive Specialisation:	First cycle, has at least 60 credits in first-cycle course/s as entry requirements (G2F)

Major Field of Study:
IKA (Information Systems)

Course Approval
The syllabus was approved by the Faculty of Arts and Social Science 2016-03-14, and is valid from the Autumn semester 2016 at Karlstad University.

Prerequisites
Information Systems 60 ECTS cr including the courses ISGA04 Introductory Programming 7.5 ECTS cr, and ISGB03 Object-Oriented Modeling 7.5 ECTS cr, or equivalent courses.

Learning Outcomes
Upon completion of the course students should be able to:
- give an account of what design patterns are and how they are used,
- identify, analyse, model and document object-oriented design problems textually as well as in UML-based models,
- use design patterns in modelling and in program development in Java, and
- solve object-oriented design problems by using design patterns applied in Java.

Content
The aim of the course is that students gain insights into the special design problems that come with object-oriented software development.

The course introduces design patterns as tools of creating robust Java applications and of improving conditions for organising and maintaining the software. Design patterns are standardized methods of combining objects and classes to solve design problems. The course also provides specialized knowledge of Java APIs and UML modelling with CASE tools.

The course includes a great deal of practical work with design problems and the handling of design patterns.

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

Reading List
See separate document.

Examination
Assessment is based on an oral exam and written individual hand-in assignments.

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.