



COURSE SYLLABUS

Object-oriented Software Development, 6 credits

Objektorienterad mjukvaruutveckling, 6 högskolepoäng

Course Code: TOMK18	Education Cycle: First-cycle level
Confirmed by: Dean Apr 6, 2018	Disciplinary domain: Technology
Valid From: Aug 20, 2018	Subject group: DT1
Version: 1	Specialised in: GIF
	Main field of study: Computer Engineering

Intended Learning Outcomes (ILO)

After a successful course, the student shall

Knowledge and understanding

- display knowledge of different methods for system development and their pros and cons
- display knowledge of system design, requirements specifications and validation
- display understanding of the most common components of the Unified Modelling Language (UML)
- display understanding of established design patterns for object-oriented analysis, object-oriented programming, and system architecture

Skills and abilities

- display the ability to, via analysis of a requirement specification, create UML-diagrams that describe an IT-system that meets said requirements
- display the ability to transform UML-diagrams into object-oriented program code
- display the ability to apply object-oriented programming with design patterns for development of IT-systems

Contents

The purpose of the course is to provide students with knowledge required to carry out object-oriented design in accordance with established practice, and to be able to implement the results of said design in program code.

The course includes the following topics:

- Introduction to system development methods: waterfall methods, iterative methods, agile methods
- Software validation and requirements specifications for software validation
- Unified Modelling Language: class diagram, sequence diagram, use-case diagram, etc.
- Design patterns: object-oriented patterns, analysis patterns, patterns for system architecture

Type of instruction

The teaching is normally conducted in Swedish, but can occasionally be in English.

Prerequisites

General entry requirements and taken course Object-oriented Programming, 7,5 credits or the equivalent.

Examination and grades

The course is graded 5,4,3 or Fail.

Registration of examination:

Name of the Test	Value	Grading
Written examination [†]	4 credits	5/4/3/U
Laboratory Work	2 credits	U/G

[†] Determines the final grade of the course, which is issued only when all course units have been passed.

Course literature

Literature

The literature list for the course will be provided one month before the course starts.

Title: Applying UML and Patterns: An Introduction to Object-Oriented Analysis and Design and Iterative Development (3rd Edition)

Author: Craig Larman

Publisher: Prentice Hall

ISBN: 978-0131489066