

Course syllabus

Objektorienterad modellering och design

Object-oriented Modelling and Design

EDAF60, 4,5 credits, G2 (First Cycle)

Valid for: 2023/24

Faculty: Faculty of Engineering, LTH

Decided by: PLED C/D

Date of Decision: 2023-04-18

General Information

Main field: Technology.

Compulsory for: C2, D2

Elective for: E4-pv, F4, I4-pvs, L5-gi, Pi4

Language of instruction: The course will be given in Swedish

Aim

The course will give ability to sustainable and resource aware construction of programs that can be reused and modified with respect to changing requirements in an industrial context.

Learning outcomes

Knowledge and understanding

For a passing grade the student must

- be able to identify the use of common design principles and design patterns in given programs. This and all other course objectives refer to programs with some hundreds or thousands lines of code.

Competences and skills

For a passing grade the student must

- be able to design and implement object-oriented programs with many classes and a few packages,

- be able to choose and implement suitable design patterns in typical problems,
- be able to use the central parts of an integrated development environment to design, implementation, and refactoring of programs,
- be able to describe program design with UML (Unified Modelling Language).

Judgement and approach

For a passing grade the student must

- be able to evaluate a program design with respect to design principles,
- be able to construct programs that are easy to understand for those who need to modify them.

Contents

Design principles for object-oriented programs. Design patterns and frameworks. A development environment for object-oriented modelling, implementation, and refactoring.

Examination details

Grading scale: TH - (U,3,4,5) - (Fail, Three, Four, Five)

Assessment: The grade is based on the written exam. Compulsory course items: Design and programming assignments.

The examiner, in consultation with Disability Support Services, may deviate from the regular form of examination in order to provide a permanently disabled student with a form of examination equivalent to that of a student without a disability.

Parts

Code: 0117. **Name:** Project.

Credits: 2. **Grading scale:** UG. **Assessment:** For a final grade, the students must have completed the project work.

Code: 0217. **Name:** Written Examination in Object-oriented Modelling and Design.

Credits: 2,5. **Grading scale:** TH. **Assessment:** Written examination. The final grade of the course is based on the result of the written exam.

Admission

Admission requirements:

- EDAA01 Programming - Second Course or EDAA30 Programming in Java - Second Course

The number of participants is limited to: No

The course overlaps following course/s: EDA060, EDA065, EDA666, EDAF10, EDA061

Reading list

- Materials provided by the department.

Contact and other information

Course coordinator: Christian Söderberg, christian.soderberg@cs.lth.se

Course homepage: <http://cs.lth.se/edaf60>