IV1201 Design of Global Applications 7.5 credits

Arkitektur och design av globala applikationer

This is a translation of the Swedish, legally binding, course syllabus.

Establishment

Course syllabus for IV1201 valid from Spring 2018

Grading scale

A, B, C, D, E, FX, F

Education cycle

First cycle

Main field of study

Technology

Specific prerequisites

- ID1018 Programming I, 7.5 credits, or the equivalent.
- IV1350 Object-oriented design, 7.5 credits, or the equivalent.

Language of instruction

The language of instruction is specified in the course offering information in the course catalogue.

Intended learning outcomes

On completion of the course, you should, based on a given specification, be able to retrieve architecture and design for an Internet-based system. Architecture and design should be implemented in code of production quality and follow established guidelines. You should also be able to critically and systematically evaluate different architectures. To achieve these aims, you should after the completed course:

- Be able to use important design principles of example low connection, high cohesion and encapsulation on Internet-based applications.
- Be able to implement non-functional requirements in Internet-based applications. The implementation shall follow established best practices.
- Be able to handle complex software development according to proven engineering methods by means of appropriate tools.
- Be able to write texts that explain and evaluate both your own architecture and published articles about architecture. The evaluation shall be based on scholarly journals or publications concerning proven engineering experience.
- Be able to critically review other student's texts, based on correctness, relevance and references to scholarly journals or publications concerning proven engineering experience.

Course contents

This is a practical course, with a focus on how to implement a good architecture in code. The course covers solutions satisfying common non-functional requirements and other common architectural issues in Internet-based systems. The course participants shall understand advantages and disadvantages of covered solutions and be able to implement them in code.

Examples of fields that are treated:

- flexible and robust design
- security
- transactions
- **O/R mapping**
- performance
- internationalisation
- error handling
- working methods and tools.

The course does not give a comprehensive image of architectures for many various types of applications. Instead, possible architectures for systems are presented based on business logic and data, above all with web-based user interface.

Examination

- INL1 - Written assignment, 7.5 credits, grading scale: A, B, C, D, E, FX, F

Based on recommendation from KTH’s coordinator for disabilities, the examiner will decide how to adapt an examination for students with documented disability.

The examiner may apply another examination format when re-examining individual students.

If the course is discontinued, students may request to be examined during the following two academic years.

Ethical approach

- All members of a group are responsible for the group's work.
- In any assessment, every student shall honestly disclose any help received and sources used.
- In an oral assessment, every student shall be able to present and answer questions about the entire assignment and solution.