Linnæus University

Course syllabus

Faculty of Technology

Department of Computer Science and Media Technology

4ME307 Internetarkitektur, 7,5 högskolepoäng
4ME307 Internet Architectures, 7.5 credits

Main field of study
Media Technology

Subject Group
Media Production

Level of classification
Second Level

Progression
A1F

Date of Ratification
Approved 2015-05-22
Revised 2019-10-03 by Faculty of Technology. Prerequisites have been changed.
The course syllabus is valid from spring semester 2020

Prerequisites
30 credits in G2F level in Media Technology or the equivalent.

Objectives

The aim of this course is to provide students with in depth understanding of the fundamental concepts and ideas that underline the architectural patterns of the web and mobile Internet.

Upon completion, the student should be able to:

- Have a deep understanding of concepts, principles, methods and techniques, required for the design, analysis, and maintenance of large and scalable web and mobile application and services.
- Understand and be able to make appropriate design decisions regarding persistence, flexibility, scalability and maintainability of different software architectures used in web and mobile applications.
- Have a deep understanding and explain the complex Internet infrastructure and protocols required for the establishment of social media applications and mobile services.
- Have a good understanding of different architectural patterns for deploying

large-scale web and mobile applications.
- Understand and make use of different integration approaches for expanding existing web application in order to meet the social requirements of online communities.

Content
The course comprises of the following topics:

- An overview of relevant concepts and contemporary approaches used to design and implement web architectures for deploying social media applications.
- Different integration approaches and techniques for bridging web and mobile applications.
- Different data management approaches and techniques for developing large web applications.
- Different case studies for making appropriate design decisions for scalable and robust web architectures according to different aspects.

Type of Instruction
Lectures, seminars and workshops

Examination
The course is assessed with the grades A, B, C, D, E, Fx or F.

The grade A constitutes the highest grade on the scale and the remaining grades follow in descending order where the grade E is the lowest grade on the scale that will result in a pass. The grade F means that the student's performance is assessed as fail (i.e. received the grade F).

Assessment in this course will be comprised of: written and/or oral examinations, assignments as well as mandatory seminar work. At the beginning of the course it will be decided on what types of assessment used.

Students who do not pass the regular examination are given the opportunity to do a reexamination shortly after the regular exam.

Course Evaluation
During the course or in close connection to the course, a course evaluation is to be carried out. The result and analysis of the course evaluation are to be communicated to the students who have taken the course and to the students who are to participate in the course the next time it is offered. The course evaluation is carried out anonymously. The compiled report will be filed at the Faculty.

Credit Overlap
The course cannot be included in a degree along with the following course/courses of which the content fully, or partly, corresponds to the content of this course: 4ME107 Internet Architectures, 7.5 credits

Other
Grade criteria for the A–F scale are communicated to the student through a special document. The student is to be informed about the grade criteria for the course by the start of the course at the latest.

Required Reading and Additional Study Material
Required Reading
Loudon, K. (2010). *Developing Large Web Applications*. O'Reilly Media. 200

(302)pages

Henderson, C. (2006). *Building Scalable Web Sites: Building, Scaling, and Optimizing the Next Generation of Web Applications*. O'Reilly Media. 150 (352) pages

DFM, Distributed materials, 250 pages