Linnæus University

Course syllabus

Faculty Board of Science and Engineering
School of Computer Science, Physics and Mathematics

4ME107 Internetarkitektur, 7,5 högskolepoäng
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 by the Board of the School of Computer Science, Physics and Mathematics 2011-08-17

The course syllabus is valid from spring semester 2012

Prerequisites
Foundations of Computational Media 7,5 credits (4ME102) 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 Fail (U), Pass (G) or Pass with Distinction (VG).
On request, students may have their credits translated to ECTS-marks. Such a request must be sent to the examiner before the grading process starts.

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
A course evaluation will be carried out at the end of the course in accordance with the guidelines of the University. The result of the course evaluation will be filed at the department.

Other
Upon request, a Swedish University course certificate will be awarded upon successful completion of the course.

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