Linnæus University

Course syllabus

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

4DV109 Tjänsteorienterade arkitekturer, 7,5 högskolepoäng
Architectures for Service-based Systems, 7.5 credits

Main field of study
Computer Science

Subject Group
Informatics/Computer and Systems Sciences

Level of classification
Second Level

Progression
A1N

Date of Ratification
Approved by the Board of the School of Computer Science, Physics and Mathematics 2011-11-25

The course syllabus is valid from autumn semester 2012

Prerequisites
90 credits in Computer Science or equivalent.

Objectives

Upon completion of the course, the student should be able to:

- understand the basic principles of conventional middleware
- understand the motivation for service as a design abstraction
- understand architectures of service-based systems
- critically evaluate research studies of service-based systems
- design a service-based system
- implement an service-based system.

Content

The course gives a short overview of conventional middleware and motivates the need for service as a design abstraction. It elaborates on software architectures for services, and studies some advanced topics in the field. Students will study and critically examine research studies of service-based systems, and/or they will design a service-based system. Students will have the opportunity to get hands-on experience from designing and implementing a service-based system.

The course covers the following topics:

- introduction to conventional middleware
- service-based architectures
- motivation for services
- technologies for service-based systems
- selection of advanced topics related to service-based software architectures
- evaluation of research studies on service-based systems
- design of a service-based architecture
- hands-on experience with implementing a service based system

Type of Instruction
Lectures, seminars, assignments, controlled exercises, self-studies, and discussions.

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.

Assessemts of student performance consists of written and/or oral examinations and/or presentation of mandatory assignments. The assessment method will be decided at the start of the course.

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

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 degree will be issued upon successful completion of the full demands for that degree.

Students who receive a passing grade in the course may download a course certificate through the Student Portal. Otherwise they may request a course certificate from the school secretary.

Required Reading and Additional Study Material
Required reading
Relevant literature will be selected together with the supervisor and examiner.