Linnæus University

Course syllabus

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

1DV447 Avancerade LAN-teknologier, 7,5 högskolepoäng
Advanced LAN Technologies, 7.5 credits

Main field of study
Computer Science

Subject Group
Informatics/Computer and Systems Sciences

Level of classification
First Level

Progression
G1F

Date of Ratification
Approved by the Board of the School of Computer Science, Physics and Mathematics 2010-06-15

The course syllabus is valid from autumn semester 2010

Prerequisites
1DV418 Network technologies II or the equivalent.

Expected learning outcomes

The course aims to provide the student with knowledge including advanced multi-layer switching technologies, VLANs and Spanning Tree Technologies, as well as some redundancy techniques at different layers in the OSI model with the objective to independently design and configure a switched multi-layered network.

After completing the course students will be able to:

- identify and describe components of a switched multilayered local area network
- decide the appropriate placement of network components in a switched multilayered local area network
- identify, describe and implement advanced features in VLAN and Spanning Tree technologies
- describe different methods for routing in the local area network
- explain different redundancy methods that can be used in a local area network.

Content

The course blends theoretical and laboratory work and aims to provide knowledge of advanced features of VLAN management, Spanning Tree technologies, redundancy and routing functions as implemented in multilayered local area network.

The course covers the following topics:

- advanced switching in local area network
- redundancy in the local area network
- routing in the local area network.

Type of Instruction

Teaching is conducted in the form of seminars, lectures and laboratory exercises and the course mixes theory with laboratory work. Laboratory work with mandatory attendance will be conducted on some of the theoretical aspects as given in the course. Laboratory work with mandatory attendance will be conducted on some of the theoretical aspects of the course. In these labs the course participant, either alone or in group, will be presented with a problem that he must solve. Attendance and performance in seminars and project presentations is graded and is mandatory for these parts of the course.

Examination

The course is assessed with the grades U, 3, 4 or 5.
The grades are G (pass) and U (fail) for seminars, labs and projects. The grades are 5 (five), 4 (four), 3 (three) and U (fail) the exam. To receive a final grade the exam must have a grade of 3 or higher and the seminars, labs and projects must have the grade G.

Student at Linnaeus University can have their scores of course translated into the seven-point ECTS scale. In order to get their scores translated the student will submit a request to the teacher at the beginning of the course.

Re-exams are offered within six weeks under the regular semester periods. The number of examinations are limited to five times.

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.

Required Reading and Additional Study Material

Hucaby, David (2010). CCNP Switch 642-813: Official Certficiation Guide. Cisco Press.