Linnæus University

Course syllabus

Faculty of Technology
Department of Computer Science and Media Technology

2DV702 Internetsäkerhet, 7,5 högskolepoäng
Internet Security, 7.5 credits

Main field of study
Computer Science

Subject Group
Informatics/Computer and Systems Sciences

Level of classification
First Level

Progression
G2F

Date of Ratification
Approved 2014-10-03
Revised 2020-09-05 by Faculty of Technology. Prerequisites are revised.
The course syllabus is valid from autumn semester 2021

Prerequisites
Introduction to programming 7.5 credits (1DV501) or Problem Solving and Programming 7.5 credits (1DV506) and Computer Networks – Introduction 7.5 credits (1DV701) or the equivalent.

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

- describe the IT security landscape, especially network security
- understand and use basic security mechanisms, e.g. cryptography
- describe the main threats against network security and the methods available to thwart them
- identify intrusion attacks in computer systems and know how to prevent this type of security threat
- understand how hackers work and be acquainted with the tools they use

Content

This is a course in data security with a special emphasis on network security. The idea is to give a good coverage of threats against computers on a network and the tools to thwart them.

The following parts are treated:

- encryption and coding techniques
- authentication standards and applications
- electronic mail security
- IP Security
- Web Security
- network management security
- intruders and hackers
- malicious software
- firewalls

Type of Instruction

Teaching consists of lectures, seminars and practical assignments. Practical assignments are individual or carried out in groups. Attendance at some activities may be mandatory.

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 of the students performance is made through written examination and/or assignments which are presented orally and/or in written form. The assessment method is decided at the start of the course.

Repeat examination is offered in accordance with Local regulations for courses and examination at the first and second-cycle level at Linnaeus University.

If the university has decided that a student is entitled to special pedagogical support due to a disability, the examiner has the right to give a customised exam or to have the student conduct the exam in an alternative way.

Course Evaluation

During the implementation of the course or in close conjunction with the course, a course evaluation is to be carried out. Results and analysis of the course evaluation are to be promptly presented as feedback to the students who have completed the course. Students who participate during the next course instance receive feedback at the start of the course. The course evaluation is to be carried out anonymously.

Credit Overlap

The course cannot be included in a degree along with the following courses of which the content fully, or partly, corresponds to the content of this course: 1DV203 Network Security, 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

Stallings, W, *Network Security Essentials: Applications and Standards, 3/E*, Prentice Hall, (2007). Pages 432 (432).

FTK. *Distributed material*. Pages 100.