



Course syllabus

Faculty of Technology

Department of Computer Science and Media Technology

1DV700 Datorsäkerhet, 7,5 högskolepoäng

Computer Security, 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 2015-05-22

Revised 2020-11-12 by Faculty of Technology. Prerequisites are revised.

The course syllabus is valid from autumn semester 2021

Prerequisites

Introduction to programming (1DV501), 7.5 credits or Module A in 1DV025, 7.5 credits or Problem Solving and Programming 7.5 credits (1DV506) or equivalent

Objectives

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

- describe the IT Security landscape and the different subfields within IT Security
- understand and use basic security mechanisms, e.g. cryptography
- conduct a security analysis of an organization
- describe the main threats against computer security and the methods available to thwart them
- evaluate and relate to problems of ethical and moral nature related to computer crime, surveillance and privacy.

Content

The course is an introductory course in IT Security. It should give basic understanding of threats and opportunities in the area and knowledge about tools available used to manage security. The main emphasis of the course is within Computer Security. The following parts are treated:

- IT and society's vulnerability
- Information Security
- Ethics and IT law
- Vulnerability analysis
- Cryptography
- Program Security
- Security in Operating Systems and Databases.

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 student's 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: 1DV200 Computer 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

Pfleeger C, Pfleeger S, Margulies J, *Security in Computing* 5 ed. Prentice Hall, 2015. Pages 760 (944).

DFM, *Distributed material*. Pages 100.

