Linnæus University

Course syllabus

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

1DV20U 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 by the Board of the School of Computer Science, Physics and Mathematics 2011-06-10

The course syllabus is valid from spring semester 2012

Prerequisites
At least 30 credits in Computer Science, including Problem Solving and Programming (1DV006), 7.5 credits 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 according to SBA method
- 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 Fail (U), Pass (G) or Pass with Distinction (VG).
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.

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.

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

Required reading
Pfleeger, C,*Security in Computing* 4th ed. Prentice Hall, 2007. Pages 640 (880).
DFM,*Distributed material*.Pages 100.