Computer Security

Programme course

4 credits

Datasäkerhetsmetoder

TSIT01

Valid from: 2017 Spring semester

Determined by
Board of Studies for Computer Science and Media Technology

Date determined
2017-01-25

Main field of study

Information Technology, Computer Science and Engineering, Computer Science

Course level

First cycle

Advancement level

G2X

Course offered for

- Computer Engineering, B Sc in Engineering
- Programming

Entry requirements

Note: Admission requirements for non-programme students usually also include admission requirements for the programme and threshold requirements for progression within the programme, or corresponding.

Prerequisites

Basic knowledge about computers, operating systems and computer communications.

Intended learning outcomes

After passing the course, the student should be able to understand and apply the basic goals of computer security. This is shown through an analysis of a situation from a computer security point of view, including recommendations of correct measures and tools to achieve security, and an evaluation of these recommendations concerning there suitability for given goals and resources in the analysed situation. Specific knowledge is required concerning principles for user authentication, tools for network security and cryptography as a security tool.

Course content

Structure and terminology of computer security. User authentication. Access control. Cryptography as a computer security tool. Tools and protocols for networks and distributed systems.

Teaching and working methods

The course contains lectures, seminars and computer laboratory assignments.

Examination

PRA1	Written Analysis of a Basic Situation	U, 3, 4, 5	3 credits
LAB1	Laboratory Work	U, G	1 credits

Grades

Four-grade scale, LiU, U, 3, 4, 5

Department

Institutionen för systemteknik

Director of Studies or equivalent

Klas Nordberg

Examiner

Jan-Åke Larsson

Course website and other links

http://www.icg.isy.liu.se/courses/tsit01/

Education components

Preliminary scheduled hours: 26 h
Recommended self-study hours: 81 h

Course literature

Additional literature

Books

Ross Anderson, (2008) *Security Engineering* 2nd ed, Wiley

Common rules

Regulations (apply to LiU in its entirety)

The university is a government agency whose operations are regulated by legislation and ordinances, which include the Higher Education Act and the Higher Education Ordinance. In addition to legislation and ordinances, operations are subject to several policy documents. The Linköping University rule book collects currently valid decisions of a regulatory nature taken by the university board, the vice-chancellor and faculty/department boards.

LiU's rule book for education at first-cycle and second-cycle levels is available at http://styrdokument.liu.se/Regelsamling/Innehall/Utbildning_pa_grund-_och_avancerad_niva.