Linnæus University

Course syllabus

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

1DV429 IT-Säkerhet, 7,5 högskolepoäng
IT Security, 7.5 credits

Main field of study
Computer Science

Subject Group
Informatics/Computer and Systems Sciences

Level of classification
First Level

Progression
G1N

Date of Ratification
Approved by the Board of the School of Computer Science, Physics and Mathematics 2009-06-23

Revised 2011-05-13. Revision made for change of literature, expected learning outcomes and content.

The course syllabus is valid from autumn semester 2011

Prerequisites
General entry requirements and Mathematics B and Physics A (Field-specific entry requirements 7).

Expected learning outcomes

After completing this course the student should be able to:

- explain the concepts of IT security
- explain and describe how security is planned and controlled.
- identify and describe the external and internal threats that can affect computer systems and networks
- identify and describe non-technical threats and risks
- identify, describe and analyze potential vulnerabilities in a software or service.

Content

The course contains both theoretical aspects with practical. Laboratory work are carried out on the theoretical aspects of the course. In these lab works the students faces problem that must be solved either in group or individual.

Covered areas within the course:

- PC-security
- network security
- internet security
- hackers and their methods
- malicious software – types and consequences
- physical security
- information security
- secure code

Type of Instruction
Teaching consists of lectures and laboratory exercises. Participation in laboratory work is mandatory.

Examination
The course is assessed with the grades U,3,4 or 5.
For laboratory work the grades are G (pass) and U (fail). For the exam the grades are U (fail), 3, 4, 5. To obtain final grade the student must have attained G (pass) on laboratory work and lowest grade 3 on exam.

On request, students may have their credits translated to ECTS-marks. Such request must be sent to the examiner before the grading process starts.

The student should be offered a new examination within six weeks, under the regular semester periods. The number of examinations is 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
Required Reading
Goodrich, T. M & Tamassia R. (2011) Introduction to Computer Security. Boston: Pearson. ISBN 0-321-70201-8.

Reference literature
Lundblad, N. (2005) Informationssäkerhet för chefer och ledare. Säkra ditt företag. (1) Solna: Liber. ISBN 978-91-47-07378-8.
Mitnick, K. D., Simon, W. L. & Wozniak, S. (2003) Controlling the Human Element of Security. The Art of Deception. (1) Indianapolis: JOHN WILEY & SONS. ISBN 076454280X.
Syrén, A. (2005) En handbok om informationssäkerhet. På egen risk. Stockholm: SIS Förlag AB. ISBN 9171626468.