



EP274U Ethical hacking I 3.5 credits

Etisk hackning I

This is a translation of the Swedish, legally binding, course syllabus.

Establishment

On 06/23/2020, the Head of the EECS School has decided to establish this official course syllabus to apply from autumn semester 2020, registration number: J-2020-1399.

Grading scale

P, F

Education cycle

Second cycle

Main field of study

Computer Science and Engineering

Specific prerequisites

- Basic programming skills
- Knowledge in English equivalent to English B/English 6.

Language of instruction

The language of instruction is specified in the course offering information in the course catalogue.

Intended learning outcomes

After passing the course, the student should be able to

- perform reconnaissance, identifying and selecting targets for attack, e.g. by means of network scanning
- identify vulnerabilities in network equipment and applications
- communicate and execute exploits on vulnerable systems
- install and use remote access trojans for remote system control
- identify password files and extract passwords
- exfiltrate data
- implement solutions to strengthen the information security of computer networks
- give an account of Swedish legislation applicable in the area in order to be able to evaluate the information security in computer networks by having extensive knowledge of the assailant's possibilities practically.

Course contents

The main activity of the course is a project where students independently attack a corporate computer network with the aim of exfiltrating specific information. The network is rigged by the course responsables in a virtual environment. To carry out the attack, the students are free to use their imagination and tools available on Internet. Tools for network and vulnerability scanning, platforms for exploit development, command and control, password cracking, etc. are presented during the course, but students are free to employ methods and tools of their own choice.

Examination

- PROA - Project assignment, 3.5 credits, grading scale: P, F

Based on recommendation from KTH's coordinator for disabilities, the examiner will decide how to adapt an examination for students with documented disability.

The examiner may apply another examination format when re-examining individual students.

If the course is discontinued, students may request to be examined during the following two academic years.

Ethical approach

- All members of a group are responsible for the group's work.
- In any assessment, every student shall honestly disclose any help received and sources used.
- In an oral assessment, every student shall be able to present and answer questions about the entire assignment and solution.