



EP283U Ethical Hacking 7.5 credits

Etisk hackning

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

Establishment

Course syllabus for EP283U valid from Spring 2022

Grading scale

P, F

Education cycle

Second cycle

Main field of study

Computer Science and Engineering, Electrical Engineering

Language of instruction

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

Intended learning outcomes

Ethical hackers are contracted for practical assessment of computer network security. Furthermore, for an effective defense against cyber attacks, a deep understanding of attackers' available range of action is required. After completed course, the student should therefore 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
- customize exploits for software vulnerabilities
- deploy 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
- carry out legal and ethical security testing.

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

- INL2 - Home assignment, 0.5 credits, grading scale: P, F
- PRO1 - Project assignment, 7.0 credits, grading scale: P, F

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.