

New Course

Practical Network Security

A 5 ECTS special course on practical network security is being offered in the 3 week period in June. The course is intended for students who follow the Computer Security study line and it is mandatory for students who wish to obtain the special Diploma in Cyber Security.

General course objectives:

The aim of this course is to provide a working knowledge of practical network security.

The course will be split into three main subjects:

- Recon (Reconnaissance)
- Attack
- Detect/Prevent

Learning objectives:

A student who has met the objectives of the course will be able to:

- List commonly-used security standards and regulations
- Explain common threats against companies in today's connected world
- Identify services on a host system
- Analyze a host system for known (and unknown) vulnerabilities
- Exploit vulnerabilities using publicly available tools
- Explain how to mitigate the threat from analyzed and exploited vulnerabilities
- Select appropriate measures to protect a networked host system

Course content:

- Practical tests in each of the subjects - Recon, Attack and Detect/Prevent (Yes, this means hacking!)
- Applied network security in LAN and WAN environments
- Advanced security aspects of Protocols for client-server communication
- Secure communications and data processing to ensure confidentiality, integrity and authenticity

Exam form:

An overall grade (7-scale) will be given for the course. The grade is based on a number of small reports following each of the three main subjects and a final oral presentation.

Practical Information:

This course is primarily taught by the course responsible, who this year will be assisted by experts from Accenture, Dubex and F-Secure who all have extensive experience in practical network security.

Course responsible: Christian D. Jensen (cdje@dtu.dk)

Registration for this course is done through email to the course responsible; please include the string "Practical Network Security registration" in the email subject. There is a limited number of places available on this course, so priority will be given to students who follow the cyber security program; remaining places will be offered on a first come first served basis.

Disclaimer:

Throughout the Practical Network Security course, a number of hacking tools will be demonstrated. It should be emphasized that none of the companies, in no manner whatsoever, encourages the use of these tools for illegitimate purposes. If you are in doubt as to whether or not the application of a given tool is legal or not, you should contact either DTU's legal counsel or relevant public authorities.