



# EP2500 Networked Systems Security 7.5 credits

Säkra nätverkssystem

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

## Establishment

Course syllabus for EP2500 valid from Autumn 2019

## Grading scale

A, B, C, D, E, FX, F

## Education cycle

Second cycle

## Main field of study

Information and Communication Technology, Computer Science and Engineering

## Specific prerequisites

Completed courses corresponding to:

IV1013 Introduction to computer security, 7.5 credits

IK1552 Internetworking, 7.5 credits

IK2560 Mobile networks and services, 7.5 credits.

## Language of instruction

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

## Intended learning outcomes

Having passed the course, the student should be able to:

- identify, explain and analyse vulnerabilities, threats and attacks against a number of modern network systems
- state clear properties and requirements of security solutions for network systems
- analyse and design security protocols and mechanisms that protect the network operation against attacks
- explain and analyse qualitatively and quantitatively general security mechanisms
- identify and analyse best practice for security systems that currently are generally used in network systems

in order to

- become prepared for future advanced studies in the subject
- be able to handle open, real technical problems.

## Course contents

Basically, the course will bring up security including integrity for a spectrum of network systems that includes:

- Internet and TCP/IP networks,
- Mobile voice and data networks,
- Wireless local and personal networks,
- Wireless sensor networks,
- Mobile ad hoc and hybrid networks, such as vehicle communication systems

The emphasis in the course lies on basic concepts and technologies about joint security requirements in different systems and about how the functions in each system decide the latest security solutions.

## Course literature

Reading list is presented no later than 4 weeks before the start of the course on

## Equipment

Students are assumed to have access to computers.

## Examination

- KON1 - Assignment, 2.5 credits, grading scale: P, F
- INL1 - Assignment, 2.5 credits, grading scale: P, F
- TEN1 - Examination, 2.5 credits, grading scale: A, B, C, D, E, FX, 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.

In agreement with KTH's coordinator for disabilities, it is the examiner who decides to adapt an examination for students in possess of a valid medical certificate.. The examiner may permit other examination forms at the re-examination of few students

## 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.