JÖNKÖPING UNIVERSITY
School of Engineering

COURSE SYLLABUS
Wireless Networks, 7.5 credits

Trådlösa nätverk, 7,5 högskolepoäng

Course Code:	TTNK19	**Education Cycle:**	First-cycle level
Confirmed by:	Dean Jun 1, 2019	**Disciplinary domain:**	Technology
Revised by:	Director of Education Aug 30, 2021	**Subject group:**	TE9
Valid From:	Oct 25, 2021	**Specialised in:**	G1F
Version:	4	**Main field of study:**	Informatics

Intended Learning Outcomes (ILO)

After a successfull course, the student shall

Knowledge and understanding
- Demonstrate comprehension of the physical characteristics of radio waves and their impact on data communication
- Demonstrate comprehension of wireless network fundamentals regarding protocols and standards.

Skills and abilities
- Demonstrate the ability to plan and operate network environments with wireless networks
- Demonstrate the ability to build wireless networks for professional use

Judgement and approach
- Demonstrate the ability to evaluate existing wireless solutions and propose improvements

Contents

The course includes the configuration of wireless networks, how radio waves can be used for communication and how their physical properties influence the planning of wireless networks. The course also addresses how clients are used in wireless networks, how they can be physically moved without losing contact with the network, and how to secure and troubleshoot wireless networks.

The course includes the following topics:
- Introduction to wireless networks
- Installation of wireless access points and controller units
- Wireless clients
- Basic wireless network security
- Planning and troubleshooting of wireless networks

Type of instruction

Lectures and laboratory work.

The teaching is normally conducted in Swedish, but can occasionally be in English.

Prerequisites

General entry requirements and completed course Network Security, 7,5 credits (or the equivalent).

Examination and grades

The course is graded 5,4,3 or Fail.

The final grade will only be issued after satisfactory completion of all assessments.

Registration of examination:

Name of the Test	Value	Grading
Examination[I]	4.5 credits	5/4/3/U
Laboratory work	3 credits	U/G

[I] Determines the final grade of the course, which is issued only when all course units have been passed.

Other information

The prerequisites require that you:

- are competent in using and administering Cisco routers and switches

- have a solid knowledge of DHCP, 802.1q trunks and VLANs, and subnetting

Course literature

The litterature list for the course will be provided 8 weeks before the course starts.

Title: CWNA Certified Wireless Network Administrator Study Guide: Exam CWNA-108, 6th Edition (2021)
Author: David D. Coleman, David A. Westcott.
Publisher:
ISBN: 978-1-119-73450-5