

t.CNI - Corporate Network Infrastructure

Person responsible for the course:	Kurt Hauser, husr
Credits:	4
Valid for:	2011/2012
Last saved:	01.12.2011 16:24

Learning objectives:

- The students will be enabled to apply Gigabit Ethernet technologies and Virtual LANs (VLAN) in a corporate network successfully.
 - The students will know the key features of the important routing protocols. The students will be enabled to apply the protocols in a corporate network.
 - The students will be able to introduce a network management in a corporate network, including the most important network security standards.
 - The students will be able to optimize a corporate network with means of Quality of Service and connectivity services.
-

Course content:

- Ethernet Switching, Virtual LANs. How to apply VLANs in a Corporate Network.
 - Routing Protocols: Most important aspects. Examples OSPF and EIGRP in detail.
 - IP Multicast Routing; routing protocols for IP Multicast.
 - Network Management and Monitoring; Simple Network Management Protocol (SNMP).
 - Architecture and structural development of corporate networks
 - Network Security Architecture: Threats; Firewall, Intrusion Detection systems; network surveillance and monitoring.
-

Previous knowledge:

KT1, KT2 was desirable

Teaching method:

Type of lesson:	Number of lessons per week:
Lecture	14*2
Tutorial/Practicum	7*4
Group teaching	
Block instruction	
Seminar	

Assessment:

According to the table or as specified in writing by the lecture at the beginning of the semester!

Number	Type	Weighting
1	End of term exam	60%
4	Reports on the lab	20%
1	Written work on special topic	20%

Language of instruction:

German

Instruction material:

Script (80%), Slides (20%) and Scripts for the practical exercises.

Literature: Ethernet; Technologien und Protokolle für die Computervernetzung. Autor: Jörg Rech. Heise Verlag;
2. Auflage, 2008.

Comments:

This description is valuable as by the HS2012. For the FS2012 there is no chapter 'Architecture and structural development of corporate networks'.

In the FS2012 there is still:

- Connectivity Services
- Quality of Service and Performance aspects in the LAN and WAN.

This description is for information only. The details of the requirements of the course have to be seen in [https://olat.zhaw.ch/ ... Kurse...CNI](https://olat.zhaw.ch/...Kurse...CNI)