t.CNI - Corporate Network Infrastructure

Person responsible for the course:	Kurt Hauser, husr
Credits:	4
Valid for:	2010/2011
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Learning objectives:

- The students will be enabled to apply Gigabit Ethernet technologies 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:

- Gigabit and 10 Gigabit Ethernet, media (copper and fiber), Ethernet Switching, Virtual LANs.
- Routing Protocols RIP, OSPF, IGRP, EIGRP: How will they be applied in a Corporate Network.
- IP Multicast Routing; routing protocols for IP Multicast.
- Network Management and Monitoring; Simple Network Management Protocol (SNMP).
- Network Security: Threats; Firewall, Intrusion Detection systems; network surveillance and monitoring.
- Quality of Service and performance aspects in the LAN and WAN
- Connectivity Services

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	70%
	Reports on the lab	
1	Written work on special topic	30%

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 for information only. The details of the requirements of the course have to be seen in https://olat.zhaw.ch/ ... Kurse....CNI