Courses in English
Course Description

Department 07 Computer Science and Mathematics
Course title Secure Network Management
Hours per week (SWS) 4
Number of ECTS credits 5
Course objective Learn the principles of computer network management techniques such as:
Management Information Bases (MIB II, RMON1, RMON2, Private MIB), Network Management Protocols (SNMP1, SNMP2, SNMP3), Abstract Syntax Notation.One (ASN.1), Network Security Management (Analysis of network attacks, Firewall, Intrusion Prevention)
Apply management techniques on various network configurations and network components based on exercises in the network management virtual laboratory.

Prerequisites Basic knowledge in computer networks or data communications.

Recommended reading
4. Online tutorials, online exercises, and over 100 questionnaires with explained answers within the virtual laboratory on:

Teaching methods Electronic media presentations, demos, case studies
Assessment methods 40% of the grade will be based on reports/questions on the results of exercises, project, 60% of the grade will be based on final exam questions.
Language of instruction English
Name of lecturer Prof. Dr. Alexandru Soceanu
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Course content
Network Management Tools: Network General Sniffer, Wireshark, HP-Open View, 3COM-Transcend, VLAN Manager, RMON-Tool Hifn, Firewall Checkpoint One, Intrusion Prevention System (McAfee)
Online exercises within the virtual laboratory of vhb:
1) Frame analyses based on Wireshark-Analyzer, 2) Using a RMON-Tool based on Hifn Tool, 3) Using a Network Management Tool based on HP-Open View, 4) Configuration and setup Spanning Tree for Bridges, 5) Setup 3Com/Sonix ISDN Router, 6) Setup CISCO ISDN Router, 7) Setup CISCO Ethernet Router, 8) Setup a VLAN-Manager for a switch 3COM-CB 5000, 9) Setup Quality-of-Service (QoS) for CISCO-Routers, 10) Setup a Firewall System from Check Point One, 11) Setup an Intrusion Prevention System: IPS McAfee

Remarks