



Programme: Networks, Infrastructure and Cybersecurity, 180 credits

Programme Manager: Sonny.Johansson@ju.se

The programme combines technical knowledge of network technology/network design, IT infrastructure and systems administration with knowledge that has more of an operational focus (e.g. information security, IT architecture, IT service management, etc.).

Before the industrial placement course during semester 4, the students will have taken the following courses:

Network technology (equivalent to CCNA) and network design

- TCP/IP & OSI models
- Ethernet
- IPv4 and IPv6
- Configuration of network units
- Scalable networks
- WAN incl. BGP
- Network design with the PPDIOO model (CCDA)

Network security

- Security concepts, CIA, AAA
- Security in local networks
- Firewalls, Cisco ASA
- IDS/IPS
- Encryption and VPN

Script programming

- Script programming with Python
- Data structures and simple algorithms
- File management, XML, JSON
- Basic object-oriented development

System administration

- Windows server
- Active directory and user management
- GNU/Linux environments
- VMware (ESXi)
- Database administration
- Public service (DNS, E-mail, etc.)
- Basic powershell

Virtualisation

- VMware
- Citrix
- Network virtualisation
- Cloud services, e.g. Azure, AWS

Operational focus

- Economics and entrepreneurship
- User research and requirements management
- Project management and methods