lingi2142
2018

Computer networks: configuration and management

5 credits	30.0 h + 30.0 h	Q1

Teacher(s)	Bonaventure Olivier ;
Language :	English
Place of the course	Louvain-la-Neuve
Main themes	• network architectures and the role of virtual networks • quality of service • provision of multicast • network reliability • principles of network management
Aims	Given the learning outcomes of the "Master in Computer Science and Engineering" program, this course contributes to the development, acquisition and evaluation of the following learning outcomes: • INFO1.1-3 • INFO2.2-4 • INFO5.2, INFO5.4-5 • INFO6.1, INFO6.3, INFO6.4 Given the learning outcomes of the "Master [120] in Computer Science" program, this course contributes to the development, acquisition and evaluation of the following learning outcomes: • SINF1.M1 • SINF2.2-4 • SINF5.2, SINF5.4-5 • SINF6.1, SINF6.3, SINF6.4 Students completing successfully this course will be able to • design, deploy and manage data networks • explain the threats against networks and the defense strategies • deploy mechanisms to ensure quality of service, security and reliability - - - - *The contribution of this Teaching Unit to the development and command of the skills and learning outcomes of the programme(s) can be accessed at the end of this sheet, in the section entitled "Programmes/courses offering this Teaching Unit".*
Evaluation methods	• Oral exam (60%) • Projects (40%) Organized by groups of five students, the project won't be able to repeated in the second session.
Teaching methods	Lectures 4-5 projects by groups to the design and configuration of networks • sessions in computer rooms with the teaching assistants at the beginning of the projects (to get used with the main commands) • sessions of feedback at the end of the projects
Content	• Traffic control in IP networks • IP Mutlicast • IPv6 • QoS • MultiProtocol Label Switching • BGP/MPLS VPNs • Evolution of the Internet architecture
Inline resources	https://moodleucl.uclouvain.be/course/view.php?id=9209
Bibliography	transparents en ligne

Other infos	Background :
	• LINGI2141 or LINGI1341 : Networks (informations transfert, protocols, ...)
Faculty or entity in charge	INFO

Programmes containing this learning unit (UE)				
Program title	Acronym	Credits	Prerequisite	Aims
Master [120] in Computer Science and Engineering	INFO2M	5		🔍
Master [120] in Computer Science	SINF2M	5		🔍