UCL Université catholique de Louvain

LINGI2142

2015-2016

Computer networks: configuration and management

5.0 credits	30.0 h + 30.0 h	2q

Teacher(s) :	Bonaventure Olivier ;
Language :	Anglais
Place of the course	Louvain-la-Neuve
Inline resources:	> https://moodleucl.uclouvain.be/course/view.php?id=9209
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%) A failed practical project can be resubmitted for the August exam as en individual project, but without any support from the teaching staff.
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
Bibliography :	slides online
Other infos :	Background : -- LINGI2141 or LINGI1341 : Networks (informations transfert, protocols, ...)
Faculty or entity in charge:	INFO

Programmes / formations proposant cette unité d'enseignement (UE)				
Intitulé du programme	Sigle	Credits	Prerequis	Acquis d'apprentissage
Master [120] in Computer Science and Engineering	INFO2M	5	-	
Master [120] in Computer Science	SINF2M	5	-	
Master [120] in Electrical Engineering	ELEC2M	5	-	