


The version you're consulting is not final. This course description may change. The final version will be published on 1st June.

5.00 credits	30.0 h + 30.0 h	Q1
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Language :	English > French-friendly
Place of the course	Louvain-la-Neuve
Main themes	<ul style="list-style-type: none"> • network architectures and the role of virtual networks • quality of service • provision of multicast • network reliability • principles of network management
Learning outcomes	<p>At the end of this learning unit, the student is able to :</p> <p>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:</p> <ul style="list-style-type: none"> • INFO1.1-3 • INFO2.2-4 • INFO5.2, INFO5.4-5 • INFO6.1, INFO6.3, INFO6.4 <p>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:</p> <ul style="list-style-type: none"> • SINF1.M1 • SINF2.2-4 • SINF5.2, SINF5.4-5 • SINF6.1, SINF6.3, SINF6.4 <p>Students completing successfully this course will be able to</p> <ul style="list-style-type: none"> • 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
Evaluation methods	<ul style="list-style-type: none"> • Oral exam (65%) • Projects (25%) • Peer review (10%) <p>Peer reviews cannot be repeated in the second session. An individual project may be repeated in the second session. In this case, it replaces all projects from the first session.</p> <p>The use of generative AI software such as chatGPT, GitHub copilot, ... is forbidden for assistance in writing the reports and source code required for this course. In addition, external sources of information must be systematically cited in compliance with bibliographic referencing standards.</p>
Teaching methods	<ul style="list-style-type: none"> • Inverted classroom • Network design and management project in small groups
Content	<ul style="list-style-type: none"> • BGP • Traffic control in IP networks • IP Multicast • MultiProtocol Label Switching • BGP/MPLS VPNs • Evolution of the Internet architecture
Inline resources	https://moodle.uclouvain.be/course/view.php?id=2046
Bibliography	Slides available on moodle reference articles available on moodle

Faculty or entity in charge	INFO
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Programmes containing this learning unit (UE)				
Program title	Acronym	Credits	Prerequisite	Learning outcomes
Master [120] in Computer Science and Engineering	INFO2M	5		
Master [120] in Computer Science	SINF2M	5		