

Due to the COVID-19 crisis, the information below is subject to change, in particular that concerning the teaching mode (presential, distance or in a comodal or hybrid format).





6 credits	30.0 h + 30.0 h	Q1
-----------	-----------------	----

Teacher(s)	Sadre Ramin ;
Language :	English
Place of the course	Louvain-la-Neuve
Main themes	<ul style="list-style-type: none"> <li>• Organization of operating systems</li> <li>• Management of devices by the operating system</li> <li>• Management of storage devices by the operating system</li> <li>• Filesystems</li> <li>• Virtualization</li> <li>• Evaluation and improvement of performance of computer systems</li> </ul>
Aims	<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"> <li>• INFO1.1-3</li> <li>• INFO2.4-5</li> <li>• INFO5.2-5</li> <li>• INFO6.1, INFO6.3</li> </ul> <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"> <li>• SINF1.1-3</li> <li>• SINF2.4-5</li> <li>• SINF5.2-5</li> <li>• SINF6.1, SINF6.3</li> </ul> <p><sup>1</sup> Given the learning outcomes of the "Master [60] 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"> <li>• 1SINF1.M1 1SINF1.M2</li> <li>• 1SINF2.4-5</li> <li>• 1SINF5.2-5</li> <li>• 1SINF6.1, 1SINF6.3</li> </ul> <p>Students completing this course successfully will be able to</p> <ul style="list-style-type: none"> <li>• compare different implementations for operating systems and highlight the advantages and disadvantages of these achievements</li> <li>• explain the interactions between the operating system and the hardware (storage, network, virtualization)</li> <li>• evaluate the performance of a computer system</li> <li>• identify factors that limit the performance of a computer system</li> </ul> <p>-----</p> <p><i>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".</i></p>
Evaluation methods	<p><b>Due to the COVID-19 crisis, the information in this section is particularly likely to change.</b></p> <p>Envisaged mode of evaluation:</p> <ul style="list-style-type: none"> <li>• Project (40% of the final mark)</li> <li>• Final exam (60% of the final mark)</li> </ul> <p>Depending on the circumstances and the number of participating students or other reasons, modifications to the evaluation plan can happen, for example replacing the written exam by an oral exam or a second project.</p>

Teaching methods	<b>Due to the COVID-19 crisis, the information in this section is particularly likely to change.</b> The course consists of a series of lectures and accompanying exercises and project(s). The teaching method can change depending on the circumstances and the number of participating students or for other reasons. Face-to-face classes as well as remote teaching or a mix of the two methods are possible.
Inline resources	Moodle
Bibliography	<ul style="list-style-type: none"> <li>• Publications (scientific papers and public websites)</li> <li>• MoodleUCL</li> </ul>
Other infos	Background : <ul style="list-style-type: none"> <li>• basic computer architecture and operating systems concepts (LSINF1252)</li> <li>• computer networks organisation and protocols LINGI1341</li> </ul>
Faculty or entity in charge	INFO

### Force majeure

Evaluation methods	<p>Depending on the public health conditions during the exam period, the evaluation can take different forms:</p> <ul style="list-style-type: none"> <li>• Group project (40% of the final mark) during the quadrimester and a written (face-to-face) exam during the exam session (60% of the final mark)</li> </ul> <p>or</p> <ul style="list-style-type: none"> <li>• Group project (40% of the final mark) during the quadrimester and individual projet during the exam session (60% of the final mark)</li> </ul>
--------------------	---

Programmes containing this learning unit (UE)				
Program title	Acronym	Credits	Prerequisite	Aims
Master [120] in Computer Science and Engineering	INFO2M	6		
Master [120] in Computer Science	SINF2M	6		
Master [120] in Data Science Engineering	DATE2M	6		
Master [120] in Data Science: Information Technology	DATI2M	6		
Master [60] in Computer Science	SINF2M1	6		