UCLouvain

lsinc1252

2022

Informaticals Systems

5.00 credits	30.0 h + 30.0 h	Q1

This learning unit is not open to incoming exchange students!

Teacher(s)	Riviere Etienne ;
Language :	French
Place of the course	Charleroi
Prerequisites	This course assumes that the student already masters the programming skills in C language targeted by LEPL1503 and the algorithmic notions covered by the LEPL1402. *The prerequisite(s) for this Teaching Unit (Unité d'enseignement – UE) for the programmes/courses that offer this Teaching Unit are specified at the end of this sheet.*
Main themes	• Levels of abstraction in computer systems • Processor architectures • Machine language, assembly language and C language • Roles and functions of operating systems • Using the features of an operating system in applications • Processes and threads: concepts, problems and solutions • Multi-processor systems
Learning outcomes	**At the end of this learning unit, the student is able to :** Given the learning outcomes of the "Bachelor in Engineering" program, this course contributes to the development, acquisition and evaluation of the following learning outcomes: • AA1.1, AA1.2 • AA2.4-7 • AA4.1, AA4.4 Given the learning outcomes of the "Bachelor in Computer Science" program, this course contributes to the development, acquisition and evaluation of the following learning outcomes: • S1.I4 • S2.2-4 • S5.2, S5.5 Students who have successfully completed this course will be able to • explain which functions are fulfilled by the different levels of the hierarchy ranging from the physical machine to the level on which the applications are based • explain the main architectures of operating systems and processors, as well as the main devices and techniques used to realize them • use and effectively implement the various services and functions offered by processors and operating systems

Evaluation methods	January: - participation in mandatory activities (10%) - continuous evaluation, mini projects (30%) - exam (60%) September: - participation in mandatory activities -- maintained from January session, cannot be redone (10%) - personal exercises and project (30%) - exam (60%) Formative activities may become certificative and cover a part to all of the weight of the exam if the circumstances impose it. The professor may ask for an additional oral exam to the exam, including but not limited to the following circumstances: technical issues, suspicion of irregularities. The exam may use all or a subset of the following evaluation modalities. The respective proportion of points for each part is announced at the beginning of the exam: • open questions on the course content • open problems requiring an application of skills and knowledge acquired during the course • multiple-choice and multiple-answer questions under the principle of the "standard-setting". An incorrect answer to one of the questions cannot lead to a negative grade, and the exam part as a whole cannot grant negative points. However, a minimum threshold (announced in the exam) of correct answers is necessary before effectively acquiring points for this exam part.
Teaching methods	- lectures; - online exercises and self-training using the Inginious platform; - exercices and work sessions with tutors. Some of these activities may be organized online.
Content	The course presents the organization and the use of computer systems, and the principles and implementation of operating systems.
Inline resources	A link to the online syllabus is available on the Moodle page of the course.
Faculty or entity in charge	SINC

Programmes containing this learning unit (UE)

Program title	Acronym	Credits	Prerequisite	Learning outcomes
Bachelor in Computer Science	SINC1BA	5		🔍