UCLouvain

lingi2146

2020

Mobile and Embedded Computing

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).

5 credits	30.0 h + 15.0 h	Q2

Teacher(s)	Sadre Ramin ;
Language :	English
Place of the course	Louvain-la-Neuve
Main themes	• Cellular networks • Internet of things and sensor networks • Mobile and embedded applications
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 • INFO2.4-5 • INFO5.2-5 • INFO6.1, INFO6.3 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: 1 • SINF1.M1 • SINF2.4-5 • SINF5.2-5 • SINF6.1, SINF6.3 Students completing this course successfully will be able to • Explain how in mobile cellular and sensor networks operate • Describe the key problems that affect these environments and identify their impact on the mobile and embedded systems • Integrate and combine the above concepts in order to solve complex mobile computing problems. - - - - *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	**Due to the COVID-19 crisis, the information in this section is particularly likely to change.** Envisaged mode of evaluation: • Project (40% of the final mark) • Exam (60% of the final mark) 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. In case of doubt, the teacher reserves the right to test some students in an additional oral exam that complements or replaces the grade obtained in the project(s) and/or the written exam.
Teaching methods	**Due to the COVID-19 crisis, the information in this section is particularly likely to change.** The course consists of a series of lectures and accompagning 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.
Content	• Wireless sensor networks • Internet of Things • Programming embedded systems with network connection • Network protocols for resource-constrained devices • Introduction to mobile networks

Other infos	Background:
	• LSINF1252
	• LINGI1341 (or a similar basic networking course)
Faculty or entity in charge	INFO

Force majeure

Evaluation methods	Depending on the public health conditions during the exam period, the evaluation can take different forms:
	• 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)
	or
	• Group project (40% of the final mark) during the quadrimester and individual projet during the exam session (60% of the final mark)

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		🔍
Master [120] in Electrical Engineering	ELEC2M	5		🔍
Master [120] in Data Science Engineering	DATE2M	5		🔍
Master [120] in Data Science: Information Technology	DATI2M	5		🔍