UCLouvain

linfo2146

2021

Mobile and Embedded Computing

5.00 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
Learning outcomes	**At the end of this learning unit, the student is able to :** 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.
Evaluation methods	Mode of evaluation for the June session: • Group project (40% of the final mark) • Exam (60% of the final mark) If the student fails to obtain at least 50% of the total points in the June session, the student can repeat only the failed part(s) (exam and/or project) in the August session. However, in that case the project has to be done alone and a new topic might be assigned.
Teaching methods	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
Inline resources	Moodle and/or Teams
Other infos	Background: • LINFO1252 (basic knowledge in C and computer systems) • LINGI1341 (or a similar basic networking course)
Faculty or entity in charge	INFO

Programmes containing this learning unit (UE)

Program title	Acronym	Credits	Prerequisite	Learning outcomes
Master [120] in Data Science Engineering	DATE2M	5		
Master [120] in Electrical Engineering	ELEC2M	5		
Master [120] in Computer Science and Engineering	INFO2M	5		
Master [120] in Data Science: Information Technology	DATI2M	5		
Master [120] in Computer Science	SINF2M	5		