UCLouvain

minfo1201

2023

Programming and Algorithms

5.00 credits	45.0 h + 20.0 h	Q2

Teacher(s)	Fouss François ;Saerens Marco (compensates Fouss François) ;
Language :	French
Place of the course	Mons
Prerequisites	*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	**Theoretical part** • Fundamental principles of algorithmics, structured programming, modularity and data structures common to the main programming languages; • Fundamental principles of object-oriented programming (classes and objects, encapsulation, inheritance, polymorphism, etc.). **Exercises in object-oriented language** • Formalise problems that can be solved by programming; • Programming solutions to these problems, applying the fundamental elements common to all programming languages as well as the fundamental elements of object-oriented programming.
Learning outcomes	**At the end of this learning unit, the student is able to :** Given the « competencies referential » linked to the LSM Bachelor in Management and Business Engineering, this course mainly develops the following competencies: • 2.1. Understand the basic concepts and theories in each of the fields of management and economics. • 2.2. Acquire a knowledge base in human science and law. 1 • 3.1. Understand and selectively use scientific texts and works in French and English. At the end of the class, the student will be able to: • formalize problems that can be solved with programming; • solve and program solutions to these problems.
Bibliography	• HARO C. (2015), Algorithmique: Raisonner pour concevoir (2th Edition), Editions ENI. • SWINNEN G. (2012), Apprendre à programmer avec Python 3 (http://inforef.be/swi/python.htm), Licence Creative Commons.
Faculty or entity in charge	CLSM

Programmes containing this learning unit (UE)

Program title	Acronym	Credits	Prerequisite	Learning outcomes
Bachelor : Business Engineering	INGM1BA	5	MQANT1109	🔍