UCLouvain

linge1225
2021

Programming in Economics and Management

4.00 credits	22.5 h + 22.5 h	Q1

Teacher(s)	Saerens Marco ;
Language :	French
Place of the course	Louvain-la-Neuve
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	This course has the following objectives: • Mastering the basic concepts of object-oriented programming languages. • Introduction to the Python programming language. • Solving practical problems by programming.

Learning outcomes	**At the end of this learning unit, the student is able to :**
	
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	1 • Write a program in Java.
	  • Analyze a problem and find a solution through programming.
	  • Undertake a small project in Python.

Evaluation methods	Evaluation: • If possible, and thus depending on the situation, an optional written test will take place on site around week 9. The result of this test will count for 4 to 6 points on 20 (the precise value will be communicated to the students during the beginning of the semester)) for the final grade of the january review period only. If the test cannot be organized or if the student did not pass the test, only the written exam of January will be taken into account for the final grade. Note that the test mark cannot be reported to the August exams session; in August, the final grade will be based on the written exam only. • A written exam will take place during the review session (either on-site or remotely, depending on the situation). This exam will focus on solving practical programming problems in Python (writing methods and classes). Note that we are not asking that the student knows by heart the syntax of Python: students will be allowed to use a quick reference guide (the one provided by the Professor) during the examination. The exam will be 14 to 16 points on 20 worth in January and 20 on 20 on August (the test is not taken into account during the August review period).
Teaching methods	Practice based on online exercices. Remedial actions are organized on site with the assistants, if possible. Otherwize they will be online.
Content	• Contents of the course: Fudamentals of programming in Python. In particular, basic concepts of programming languages, used in object-oriented programming, illustrated on the Python language (objects, variables, expressions, control structures, data types (arrays, lists, etc), methods, etc). The focus will be on the construction of programs based on practical problems to be solved. Only a synthesis of the theoretical concepts will be presented; we therefore ask the students to read and already understand the covered topics before each course. • Contents of the practical sessions: Practical sessions (tutorials and exercises, two hours each week), based on the theoretical content, will be organized on-line all along the period. During these sessions, the students are asked to solve exercises with Python on the Inginious online system, some inspired by the book by Swinnen. Many other online Python exercices are also available. Questions & answers sessions will also be organized on site if possible. • Practical organization: These exercises are on-line. Students should have read (and understood) the corresponding material before in order to solve the problems.
Inline resources	The different resources are available on Moodle (slides, synthesis slides, In particular, the book "Apprendre à programmer avec Python 3" of Swinnen will be used as reference book.
Faculty or entity in charge	ESPO

Programmes containing this learning unit (UE)				
Program title	Acronym	Credits	Prerequisite	Learning outcomes
Bachelor : Business Engineering	INGE1BA	4	LINGE1121	🔍
Approfondissement en statistique et sciences des données	APPSTAT	4		🔍
Minor in Statistics, Actuarial Sciences and Data Sciences	MINSTAT	4		🔍