



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).

4 credits	22.5 h + 22.5 h	Q1
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Teacher(s)	Saerens Marco ;
Language :	French
Place of the course	Louvain-la-Neuve
Prerequisites	<i>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.</i>
Main themes	<p>This course has the following objectives:</p> <ul style="list-style-type: none"> • Mastering the basic concepts of object-oriented programming languages. • Introduction to the Python programming language. • Solving practical problems by programming.
Aims	<p>At the end of this course, students should be able to:</p> <p>1 • Write a program in Java. • Analyze a problem and find a solution through programming. • Undertake a small project in Python.</p> <p>-----</p> <p><i>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".</i></p>
Evaluation methods	<p>Due to the COVID-19 crisis, the information in this section is particularly likely to change.</p> <p>Evaluation: A written exam will take place during the review session (either on-site or remotely, depending on the situation). Note that this review will focus on solving practical programming in Python (writing methods and classes). We are not asking that the student knows by heart the syntax of Python: the student will be allowed to use a quick reference guide (the one provided by the Professor) during the examination.</p>
Teaching methods	<p>Due to the COVID-19 crisis, the information in this section is particularly likely to change.</p> <p>Practice based on online exercices. Remedial actions are organized on site with the assistants.</p>
Content	<ul style="list-style-type: none"> • Contents of the course: Fundamentals 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 exercices with Python, some inspired by the book by Swinnen. Many online Python exercices are also available (Inginious online system). • Practical organization: These exercices 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	Aims
Minor in Statistics, Actuarial Sciences and Data Sciences	MINSTAT	4		
Bachelor : Business Engineering	INGE1BA	4	LINGE1121	
Approfondissement en statistique et sciences des données	APPSTAT	4		