UCLouvain

lepl1401

2024

Informatics 1

5.00 credits	30.0 h + 30.0 h	Q1

Teacher(s)	. SOMEBODY ;Mens Kim ;Nijssen Siegfried ;Pecheur Charles ;
Language :	French
Place of the course	Louvain-la-Neuve
Main themes	• Basic concepts of object-oriented programming • The Java programming language • Problem analysis; specification and implementation of solutions • Linear data structures, including dynamic implementations.
Learning outcomes	**At the end of this learning unit, the student is able to :** Contribution of the course to the program objectives Regarding the learning outcomes of the program of Bachelor in Engineering, this course contributes to the development and the acquisition of the following learning outcomes: • LO 1.1, 1.2 • LO 2.4, 2.5 • LO 3.1 • AA 4.2, 4.3, 4.4 **More specifically, at the end of the course, the student will be able to:** 1 - Apply the concepts, laws, reasoning to a disciplinary problem of framed complexity. - Describe appropriate modeling and calculation tools to solve a framed disciplinary problem. - Model a problem and design one or more technical solutions that meet the specifications. - Implement and test a solution in the form of a model, a prototype and/or a digital model. - Commit collectively to a work plan, a timetable (and roles to play). - Communicate in graphic and schematic form; interpret a diagram, present the results of work, structure information. - Read, analyze and use technical documents (standards, plans, specifications, specifications, ...). - Write summary written documents taking into account the requirements of the missions (projects and problems). - Demonstrate a good understanding of the concepts and methodology of object-oriented programming. - Use wisely the elements of an object-oriented language such as Python.

Teaching methods	The chosen teaching method relies on active student participation, through a mixture of : • course lectures, • partical exercice sessions with tutors, • programming exercices on the INGInious platform. Even though preference will be given to face-to-face teaching sessions, depending on the health situation and the number of students enrolled, other forms of teaching and evaluation (online, co-modal or hybrid) may be considered.
Content	• Programs, source code and program execution • Identifiers, variables, values, types, assignment • Expressions, statements • Conditional structures and loops