

Python and Algorithm and programming II



ECTS
4 crédits



Hourly volume
54h

Introducing

Objectives

This course has a two objectives :

a/ to understand the concepts of exception, protection by encapsulation, packaging and genericity, in order to design robust and reusable programs;

b/ to know how to realize abstract data types (stacks, queues, lists, trees, heaps) with dynamic data structures (using pointers) and to design the associated algorithms (search/ insert/ delete/ update, filtering)

At the end of this course, the student should be able to design dynamic data structures and implement them through new Ada packages or by instantiation of generic packages. This course prepares students for O.O. (object-oriented) design and programming.

This course also provides an introduction to the Python language.

Practical info

Location(s)

 Toulouse

Necessary prerequisites

Basic level in algorithmics and imperative programming in Ada : control structures in sequential algorithms (if-then-else, loops for/while/repeat-until) top-down design, subprograms and parameter passing.