

# Algorithmique 1

## Lecturers

Olivier MARKOWITCH (Coordinator), Bernard FORTZ and Dimitrios PAPADIMITRIOU

## Course mnemonic

INFO-F103

## ECTS credits

10 credits

## Language(s) of instruction

French

## Course period

Second term

## Course content

(1) data structure: definitions and implementations of lists, stacks, queues, trees, heap, ... as abstract data types. (2) programming methods: recursivity, quicksort, heapsort, backtracking, introduction to dynamic programming, ...

## Objectives (and/or specific learning outcomes)

algorithmic approach of data structure and abstract data types

## Pre-requisites and co-requisites

### Courses having this one as pre-requisit

INFO-F203 | Algorithmique 2 | 5 crédits and INFO-H303 | Bases de données | 5 crédits

### Course having this one as co-requisit

INFO-F202 | Langages de programmation 2 | 5 crédits

## Teaching method and learning activities

Theoretical and practical lessons, individual works

## References, bibliography and recommended reading

(1) Course book ; (2) Bradley Miller, David Ranum, "Problem solving with algorithms and data structures using Python", Franklin, Beedle & Associates ; (3) Thomas Cormen, Charles Leiserson et Ronald Rivest, Introduction à l'algorithmique : Cours et exercices corrigés, Dunod

## Other information

### Contact(s)

Olivier Markowitch Campus de la Plaine Bâtiment NO Local 2N8.115A

## Evaluation method(s)

Other

### Evaluation method(s) (additional information)

Written examination. Attendance at tutorials and personal work is a necessary criterion for success.

### Determination of the mark (including the weighting of partial marks)

Projets, interrogation, and other works done during this course during the academic year count for 1/5 of the final evaluation, the examination counts for 4/5 of the final evaluation.

### Main language(s) of evaluation

French

## Programmes

### Programmes proposing this course at the faculty of Sciences

BA-INFO | Bachelor in Computer science | unit 1 and BA-MATH | Bachelor in Mathematics | unit 2