ALGORITHMES ET STRUCTURES DE DONNÉES

ALGORITHMS AND DATA STRUCTURES

Lecturers: Romain VUILLEMOT

| Lecturers : 8.0 | TC : 17.0 | PW : 0.0 | Autonomy : 5.0 | Study : 0.0 | Project : 0.0 | Language : FR

Objectives

The objective of this course is to introduce the fundamentals of algorithms and data structures, necessary for students who intend to become engineers. Students will be introduced to the analysis of problems, the design and implementation of algorithms but also to their applications in the industry, through lectures, practical sessions and a business opening. practical work sessions and a business opening. The concepts covered will be implemented in the Python language.

Keywords : algorithmic, data structures, problem solving, algorithm implementation, complexity complexity

Programme

- Data structures.
- Introduction to complexity.
- Sorting algorithms.
- Graph algorithms.
- General paradigms and examples: divide and conquer, dynamic programming, gluttonous algorithms algorithms, heuristics.

Learning outcomes

Independent study

Objectifs : Understand and assimilate the course concepts implemented in the TDs.

Méhodes :

Core texts

T. H. Cormen, C. E. Leiserson, R. L. Rive, *INTRODUCTION TO ALGORITHMS*, The MIT Press and McGraw-Hill Book Company, 2001., 2009

Assessment