



Algorithmic and data structures 1

الخوارزميات وهياكل البيانات 1

Domain: Mathematics and computer sciences

Branch: computer sciences

Presented by: Dr. Benazi Makhoulouf

Academic year: 2025/2026

Practical information



- **Subject Title:** Algorithmic and data structures 1
- **Teaching unit :** Fundamental (UEF12) **Semester :** 01
- **Coefficient :** 5 **Credits :** 7
- **Teaching hours:** 3 hrs of lectures, 1.5 hrs of tutorials, 3 hrs of practical work (lab session), and 3 hrs of personal work (self-study).
- **Evaluation method :** tutorials :20%, practical :20%, exam: 60%.
- **Teacher responsible for the Subject :** Benazi Makhoulouf
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- **Useful sites :** [Course:Algorithmic and Data Structure I | Moodle UMB](#)
- **Facebook:** جامعة محمد بوضياف المسيلة-قسم الإعلام الآلي

Objectives of Teaching:

To introduce the concepts of algorithms and data structures and enable the student to acquire the basic concepts of programming.

Prerequisite Knowledge:

Basic concepts in mathematics.

Course content

1. Chapter 1: Introduction + Historical Background
2. Chapter 2: Sequential Algorithm
 - Concept of language
 - Structure of an algorithm
 - Data: variables and constants, and Data Types
 - Basic operations
 - Basic instructions: Assignments and input/output
 - A simple algorithm
 - Flowcharts
 - Translation to C language
3. Chapter 3: Conditional Structures
4. Chapter 4: Loops
5. Chapter 5: Arrays and Strings
6. Chapter 6: Custom Data Types