

SYLLABUS

Name of course : Programmation en C++

Domain: **Science and Technology** Field: **Automatique**

Speciality: **Automatique**

Semester: **5** Academic Year: **2025-2026**

Identification of the course

Title : **Programmation en C++**

Teaching unit: UEF 3.1.2

VHS: 22h30 (Course: 1h30) Credits: 2 Coefficient: 1

Total weekly hourly volume:

- Courses (number of hours per week) : 1h30
- TD (number of hours per week) : /
- TP (number of hours per week) : 1h30

Responsable de la matière d'enseignement

Name, First name, Rank: **Dr. Mohamed Ilyas RAHAL , MCB**

Office Location (Block, Office): **Department of Electronics, Office 18**

E-mail : dr.ilyas.rahal@gmail.com

Schedule and location of course: **Thursday : 14h00- 15h30 – Audit 3**

Course description

Teaching objectives: This course will allow students to familiarize themselves with programming languages, particularly the C++ language.

Recommended prior knowledge: Basics in mathematics, Fundamentals of algorithms, Numerical methods, Binary logic.

Course Content:

Chapter 1. Introduction to C++ Language (1 Week)

History, C++ Development Environment (object creation, compilation, debugging, execution, etc.).

Chapter 2. Basic Syntax in C++ (1 Week)

Instructions, Comments, Keywords and Reserved Words, Constants and Variables, Basic Data Types, Operators (unary, binary, precedence, etc.).

Chapter 3. Conditional Structures and Loops (2 Weeks)

If/else, Switch/case, For loop, While loop, Do/while loop.

Chapter 4. Input/Output (2 Weeks)

Output streams for display, Input streams (keyboard), String handling, Files.

Chapter 5. Pointers and Arrays (2 Weeks)

Pointers, References, Static Arrays, Arrays and Pointers, Dynamic Arrays, Multidimensional Arrays.

Chapter 6. Functions (2 Weeks)

Function prototype, Function definition, Function call, Passing arguments to a function, Function overloading, Files.

Chapter 7. Object-Oriented Programming in C++ (5 Weeks)

Introduction, Concept of Classes and Objects, Inheritance, Special Methods (constructors, destructors, etc.), Procedural or Structured Programming, Object-Oriented Programming.

Evaluation methods

Nature of the control	Weighting in %
End-of-semester exam	100%
Micro-quizzes	
TD	
TP	
Reports or on-site assessments for each session	
Group work	
Field trips	
Preparation and participation	
Other (Attendance/absence)	
Total	100%

Bibliographic references

1. Bjarne Stroustrup, Marie-Cécile Baland, Emmanuelle Burr, Christine Eberhardt, « Programmation:Principes et pratique avec C++ », Edition Pearson, 2012.
2. Jean-Cédric Chappelier, Florian Seydoux, « C++ par la pratique. Recueil d'exercices corrigés et aide-mémoire », PPUR Édition : 3e édition, 2012.
3. Jean-Michel Léry, Frédéric Jacquenot, » Algorithmique, applications aux langages C, C++ en Java », Edition Pearson, 2013
4. Frédéric DROUILLON, « Du C au C++ - De la programmation procédurale à l'objet », Eni; Édition : 2e édition, 2014
5. Claude Delannoy, « Programmer en langage C++ », Edition Eyrolles, 2000.
6. Kris Jamsa, Lars Klander, « C++ La bible du Programmeur », Edition Eyrolles, 2000
7. Bjarne Stroustrup, « Le Langage C++ », Édition Addison-Wesley, 2000.



N°	Student's First and Last Name	Signature
	ZEKRI SALAH	
	Hazouli Mohammed Amine	
	Djoudi Mustafa	
	Kerrouaj Achel	
	Bouhroueb Youssef	
	Yahyaoui Med Mamatz	
	Koum Ramly	
	Laculi Taki Eddine	
	Bouledroua Ala	
	ounissa Wada	
	Nouri Lotfi	
	Zorzi Djoumana Soudi	
	Baali Soundous	
	Cherait Serine Bayen	
	Boussetoun Boka Eddine	
	Boukhrouja Med Fochdi	
	Zakheche Luteh Ziad	
	DJEBBAR Abdessrahmane	
	Bouacume Nouhane	
	DJABBA Hlyes	
	Kermadi Anssama	
	BENSAKER Anis	
	Bendjouis Med Amine	
	Nechmah A'oub	
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