

University of Oum El Bouaghi

Faculty of Exact Sciences, Natural and Life Sciences

Department of Mathematics and Computer Science

Program name: Bachelor's degree in Computer Systems

- **Level:** Bachelor
- **Domain:** Mathematics and Computer Science
- **Field:** Computer Science
- **Specialty:** Computer Systems

1. Program Description:

The Bachelor of Computer Systems is a 3-year program which provides students with solid academic training and essential knowledge and skills to analyze, evaluate and develop solutions related to informatics systems. The degree program aims to create specialists with advanced experience in the management of computer systems.

2. Entry Requirements

- Secondary (high) school diploma or equivalent certificate.

3. Program Units and modules

- Semester 1

Teaching units	Coeff	Credits	Evaluation Mode	
			Continues	Exam
Fundamental Teaching Unit1	7	11		
Analysis 1	4	6	40%	60%
Algebra 1	3	5	40%	60%
Fundamental Teaching Unit2	7	11		
Algorithms & data structures 1	4	6	40%	60%
Machine structure	3	5	40%	60%
Methodology Teaching Unit	2	4		
Scientific terminology and written expression	1	2	-	100%
Foreign language 1	1	2	-	100%
Discovery Teaching Unit	2	4		
Physics 1 (point mechanics)	2	4	40%	60%

- Semester 2

Teaching units	Coeff	Credits	Evaluation Mode	
			Continues	Exam
Fundamental Teaching Unit1	6	10		
Analysis 2	4	6	40%	60%
Algebra 2	2	4	40%	60%
Fundamental Teaching Unit2	6	10		
Algorithms & data structures 2	4	6	40%	60%
Machine structure 2	2	4	40%	60%
Methodology Teaching Unit	4	7		
Introduction to probability and descriptive statistics	2	3	40%	60%
Information and communications technology	1	2	-	100%
programming tools for mathematics	1	2	40%	60%
Transversal Teaching Unit	2	3		
Physics 2 (general Electricity)	2	3	40%	60%

● Semester 3

Teaching units	Coeff	Credits	Evaluation Mode	
			Continues	Exam
Fundamental Teaching Unit1	6	11		
Computers architectures	3	5	40%	60%
Algorithms & data structures 3	3	6	40%	60%
Fundamental Teaching Unit2	5	9		
Information systems	3	5	40%	60%
Graph theory	2	4	40%	60%
Methodology Teaching Unit	4	8		
Numerical methods	2	4	40%	60%
Mathematical logic	2	4	40%	60%
Transversal Teaching Unit	1	2		
Foreign language 2	1	2	-	100%

● Semester 4

Teaching units	Coeff	Credits	Evaluation Mode	
			Continues	Exam
Fundamental Teaching Unit1	5	10		
Language theory	2	5	40%	60%
Operating system 1	3	5	40%	60%
Fundamental Teaching Unit2	6	10		
Databases	3	5	40%	60%
Networks	3	5	40%	60%
Methodology Teaching Unit	4	8		
Object-oriented programming	2	4	40%	60%
Web application development	2	4	40%	60%
Transversal Teaching Unit	1	2		
Foreign language3	1	2	-	100%

● Semester 5

Teaching units	Coeff	Credits	Evaluation Mode	
			Continues	Exam
Fundamental Teaching Unit1	6	10		
Operating system 2	3	5	40%	60%
Compilation	3	5	40%	60%
Fundamental Teaching Unit2	6	10		
Software engineering	3	5	40%	60%
Human machine interface	3	5	40%	60%
Methodology Teaching Unit	4	8		
Linear Programming	2	4	40%	60%
Probability and Statistics	2	4	40%	60%
Transversal Teaching Unit	1	2		
Digital economy and strategic foresight	1	2	100%	-

● Semester 6

Teaching units	Coeff	Credits	Evaluation Mode	
			Continues	Exam
Fundamental Teaching Unit1	6	10		
Mobile Apps	3	5	40%	60%
IT security	3	5	40%	60%
Fundamental Teaching Unit2	6	10		
Artificial intelligence	3	5	40%	60%
Semi-structured data	3	5	40%	60%
Methodology Teaching Unit	4	8		
Project	3	6	-	100%
Scientific Writing	1	2	100%	-
Transversal Teaching Unit	1	2		
Create and develop a startup	1	2	100%	-