

University of Oum El Bouaghi

Faculty of Exact Sciences, Natural and Life Sciences

Department of Mathematics and Computer Science

Program name: Master's degree in Artificial Vision (AV)

- **Level:** Master
- **Domain:** Mathematics and Computer Science
- **Field:** Computer Science
- **Specialty:** Artificial Vision (AV)

1. Program Description:

Artificial vision is a key component of many applications of artificial intelligence. This includes things like image recognition, language translation, and speech synthesis. Artificial vision is also key in developing neural networks, which are an essential part of deep learning applications. Artificial vision is much more than visual data discovery. The program underlined in a major allows students to gain basic and advanced concepts in image processing, pattern recognition, medical imaging and robotic vision.

2. Entry Requirements

- Bachelor's degree or equivalent certificate

3. Program Units and modules

● Semester 1

Teaching units	Coeff	Credits	Evaluation Mode	
			Continues	Exam
Fundamental Teaching Unit1	9	18		
Digital Imaging	3	6	40%	60%
Geometric modeling	3	6	40%	60%
Artificial Intelligence Tools	3	6	40%	60%
Fundamental Teaching Unit2	5	9		
Statistical data processing	3	5	40%	60%
Cybersecurity	2	4	30%	70%
Methodology Teaching Unit	2	2		
English	1	2	-	100%
Discovery Teaching Unit	1	1		
Communication	1	1	-	100%

● Semester 2

Teaching units	Coeff	Credits	Evaluation Mode	
			Continues	Exam
Fundamental Teaching Unit1	9	18		
Infographics	3	6	40%	60%
Introduction to Computer Vision	3	6	40%	60%
Image synthesis	3	6	40%	60%
Fundamental Teaching Unit2	5	9		
Parallel processing of information	3	5	40%	60%
System modeling and simulation	2	4	30%	70%
Methodology Teaching Unit	2	2		
English	1	2	-	100%
Discovery Teaching Unit	1	1		
Legislation	1	1	-	100%

● Semester 3

Teaching units	Coeff	Credits	Evaluation Mode	
			Continues	Exam
Fundamental Teaching Unit1	9	18		
Pattern recognition	3	6	40%	60%
Motion detection and estimation	3	6	40%	60%
Augmented reality	3	6	40%	60%
Fundamental Teaching Unit2	5	9		
Imaging of the living	3	5	40%	60%
Industrial imaging	2	4	30%	70%
Methodology Teaching Unit	2	2		
English	1	2	-	100%
Discovery Teaching Unit	1	1		
Entrepreneurship and project management	1	1	-	100%