



الجمهورية الجزائرية الديمقراطية الشعبية People's Democratic Republic of Algeria

وزارة التعليم العالي والبحث العلمي

Ministry of Higher Education and Scientific Research

اللجنة الأكاديمية الوطنية لميدان العلوم والتكنولوجيا

National Academic Committee for the Field of Science and Technology



ACADEMIC MASTER'S **DEGREE PROGRAM**

UPDATED
2022

Domain	Field	Specialization
<i>Science and Technologie</i>	<i>Electronics</i>	<i>Embedded Systems Electronics</i>

Semester Course Organisation Sheets
for the Specialisation

Semester One:

Teaching Units	Course	Credits	Coefficient	Lecture Hours/Week			Hours /Semester (15 Weeks)	Supplementary Consultation Hours (15 weeks)	Evaluation Method	
	Title			Lecture	Tutorial	Lab			Continuous Assessment (%)	Exam (%)
Fundamental Unit Code: UEF 1.1.1 Credits: 10 Coefficient: 5"	Microcontroller-Based Systems	6	3	3h00	1h30		67h30	82h30	40%	60%
	Advanced Digital Electronics using FPGA and VHDL	4	2	1h30	1h30		45h00	55h00	40%	60%
Fundamental Unit Code: UEF 1.1.2 Credits: 8 Coefficient: 4	Advanced Signal Processing	4	2	1h30	1h30		45h00	55h00	40%	60%
	Digital Control Systems	4	2	1h30	1h30		45h00	55h00	40%	60%
Methodological Unit Code: UEM 1.1 Credits: 9 Coefficient: 5	Lab : Microcontroller-Based Systems	2	1			1h30	22h30	27h30	100%	
	Lab: Advanced Digital Electronics using FPGA and VHDL	2	1			1h30	22h30	27h30	100%	
	Lab : Advanced Signal Processing	2	1			1h30	22h30	27h30	100%	
	C++ Programming for Embedded System	3	2	1h30		1h00	45h00	37h50	40%	60%
Exploratory Unit Code: UED 1.1 Credits: 2 Coefficient: 2	Optional Subject 1	1	1	1h30			22h30	02h30		100%
	Optional Subject 2	1	1	1h30			22h30	02h30		100%
Transversal Unit Code: UET 1.1 Credits: 1 Coefficient: 1	Technical English and Terminology	1	1	1h30			22h30	02h30		100%
Total for Semester 1		30	17	13h30	6h00	5h30	375h00	375h00		

Second Semester :

Teaching Units	Course	Credits	Coefficient	Lecture Hours/Week			Hours /Semester (15 Weeks)	Supplementary Consultation Hours (15 weeks)	Evaluation Method	
	Title			Lecture	Tutorial	Lab			Continuous Assessment (%)	Exam (%)
Fundamental Unit Code: UEF 1.2.1 Credits: 8 Coefficient: 4	Digital Signal Processors (DSP)	4	2	1h30	1h30		45h00	67h30	40%	60%
	AI for Embedded Systems	4	2	1h30	1h30		45h00	55h00	40%	60%
Fundamental Unit Code: UEF 1.2.2 Credits: 10 Coefficient: 5	Processor Architecture for Embedded Systems	6	3	3h00	1h30		67h30	55h00	40%	60%
	Industrial Programmable Logic Controllers (PLCs)	4	2	1h30	1h30		45h00	55h00	40%	60%
Methodological Unit Code: UEM 1.2 Credits: 9 Coefficient: 5	Lab : Digital Signal Processors	2	1			1h30	22h30	27h30	100%	
	Lab: Processor Architecture for Embedded Systems	2	1			1h30	22h30	27h30	100%	
	Lab: AI for Embedded Systems / Industrial Programmable Logic Controllers (PLCs)	2	1			1h30	22h30	27h30	100%	
	Embedded Systems Programming with Python/ Java	3	2	1h30		1h00	37h50	37h50	40%	60%
Exploratory Unit Code: UED 1.2 Credits: 2 Coefficients : 2	Optional Subject 3	1	1	1h30			22h30	02h30		100%
	Optional Subject 4	1	1	1h30			22h30	02h30		100%
Transversal Unit Code: UET 1.2 Credits: 1 Coefficient: 1	Respect for Standards, Ethics, and Integrity	1	1	1h30			22h30	02h30		100%
Total for Semester 2		30	17	13h30	6h00	5h30	375h00	375h00		

Third Semester:

Teaching Units	Course	Credits	Coefficient	Lecture Hours/Week			Hours /Semester (15 Weeks)	Supplementary Consultation Hours (15 weeks)	Evaluation Method	
	Title			Lecture	Tutorial	Lab			Continuous Assessment (%)	Exam (%)
Fundamental Unit Code: UEF 2.1.1 Credits: 10 Coefficient: 5	Computer Vision System	4	2	1h30	1h30		45h00	67h30	40%	60%
	Real-Time Systems	6	3	3h00	1h30		67h30	82h00	40%	60%
Fundamental Unit Code: UEF 2.1.2 Credits: 8 Coefficient: 4	Embedded Systems	4	2	1h30	1h30		45h00	55h00	40%	60%
	Industrial Networking and Communication Systems	4	2	1h30	1h30		45h00	55h00	40%	60%
Methodological Unit Code: UEM 2.1 Credits: 9 Coefficient: 5	Lab: Embedded Systems / Real-Time Systems	2	1			1h30	22h30	27h30	100%	
	Lab: Industrial Networking and Communication Systems	2	1			1h30	22h30	27h30	100%	
	Lab: Computer Vision System	2	1			1h30	22h30	27h30	100%	
	Projects Design and Implementation	3	2	1h30		1h00	37h50	37h50	40%	60%
Exploratory Unit Code: UED 2.1 Credits: 2 Coefficient: 2	Optional Subject 5	1	1	1h30			22h30	02h30		100%
	Optional Subject 6	1	1	1h30			22h30	02h30		100%
Transversal Unit Code: UET 2.1 Credits: 1 Coefficient: 1	Literature Review and Thesis Design	1	1	1h30			22h30	02h30		100%
Total for Semester 3		30	17	13h30	6h00	5h30	375h00	375h00		

