

Semester 1 **1**

Unit Teaching	Subjects	Credits	Coefficient	Weekly Hours			Semester Hours (15 weeks)	Additional Consultation Work (15 weeks)	Assessment Method	
	Title			Lectures/Tutorials					Continuous Assessment	Examination
Fundamental Teaching Unit Code: UEF 1.1.1 Credits: 10 Coefficients: 5	Multivariable Linear Systems	6	3	3h00	1h30		67h30	82h30	40%	60%
	Signal Processing	4	2	1h30	1h30		45h00	55h00	40%	60%
Fundamental Teaching Unit Code: UEF 1.1.2 Credits: 8 Coefficients: 4	Converter-Machine Association	4	2	1h30	1h30		45h00	55h00	40%	60%
	Optimization	4	2	1h30	1h30		45h00	55h00	40%	60%
Methodological Course Code: UEM 1.1 Credits: 9 Coefficients: 5	Industrial Communication Networks and Protocols	3	2	1h30		1h00	37h30	37h30	40%	60%
	Multivariable Linear Systems Practical Work	2	1			1h30	22h30	27h30	100%	
	Signal Processing Practical Work / Optimization Practical Work	2	1			1h30	22h30	27h30	100%	
	Converter-Machine Association Practical Work	2	1			1h30	22h30	27h30	100%	
Discovery Course Code: UED 1.1 Credits: 2 Weights: 2	Optional Subject	1	1	1h30			22h30	2h30		100%
	Optional Subject	1	1	1h30			22h30	2h30		100%
Cross-Curricular Course Code: UET 1.1 Credits: 1 Weights: 1	Technical English and Terminology	1	1	1h30			22h30	2h30		100%
Total Semester 1		30	17	13h30	6h00	5h30	375h00	375h00		

Semester 2

Teaching Unit	Subjects	Credits	Coefficient	Weekly Hours			Semester Hours (15 weeks)	Additional Consultation Work (15 weeks)	Assessment Method	
	Title			Lectures	Tutorials	Practicals			Continuous Assessment	Examination
Fundamental Teaching Unit Code: UEF 1.2.1 Credits: 10 Coefficients : 5	Nonlinear Systems	6	3	3h00	1h30		67h30	82h30	40%	60%
	Embedded Systems and Real-Time Systems	4	2	1h30	1h30		45h00	55h00	40%	60%
Fundamental Teaching Unit Code: UEF 1.2.2 Credits: 8 Weights: 4	Advanced PLC Programming	4	2	1h30	1h30		45h00	55h00	40%	60%
	Applied Electronics	4	2	1h30	1h30		45h00	55h00	40%	60%
Methodological Course Code: UEM 1.2 Credits: 9 Weights: 5	Object-Oriented Design	3	2	1h30		1h00	37h30	37h30	40%	60%
	Nonlinear Systems Practical Work	2	1			1h30	22h30	27h30	100%	
	Embedded Systems and Real-Time Systems Practical Work	2	1			1h30	22h30	27h30	100%	
	Advanced PLC Programming Practical Work/Applied Electronics Practical Work	2	1			1h30	22h30	27h30	100%	
Discovery Course Code : UED 1.2 Credits: 2 Weights: 2	Elective Subject	1	1	1h30			22h30	2h30		100%
	Elective Subject	1	1	1h30			22h30	2h30		100%
Cross-Curricular Course Code: UET 1.2 Credits: 1 Weights: 1	Compliance with Ethics and Integrity Standards and Rules	1	1	1h30			22h30	2h30		100%
Total Semester 2		30	17	13h30	6h00	5h30	375h00	375h00		

Teaching Unit	Subjects	Credits	Coefficient	Weekly Hours			Semester Hours (15 weeks)	Additional Consultation Work (15 weeks)	Assessment Method	
	Title			Lectures	Tutorials	Practicals			Continuous Assessment	Examination
Fundamental Teaching Unit Unit Code: UEF 2.1.1 Credits: 10 Coefficients : 5	Advanced Control	6	3	3h00	1h30		67h30	82h30	40%	60%
	Control of Manipulation Robots	4	2	1h30	1h30		45h00	55h00	40%	60%
Fundamental Teaching Unit Code : UEF 2.1.2 Credits: 8 Weights: 4	Discrete Event Systems	4	2	1h30	1h30		45h00	55h00	40%	60%
	FPGA and VHDL Programming	4	2	1h30	1h30		45h00	55h00	40%	60%
Methodological Course Code: UEM 2.1 Credits: 9 Weights: 5	Industrial Supervision	3	2	1h30		1h00	37h30	37h30	40%	60%
	Advanced Control Lab	2	1			1h30	22h30	27h30	100%	
	Handling Robot Control Lab	2	1			1h30	22h30	27h30	100%	
	FPGA and VHDL Programming Lab	2	1			1h30	22h30	27h30	100%	
Discovery Course Code: UED 2.1 Credits: 2 Weights: 2	Elective Subject	1	1	1h30			22h30	02h30		100%
	Elective Subject	1	1	1h30			22h30	02h30		100%
Transversal Teaching Unit Unit Code: UET 2.1 Credits: 1 Weights: 1	Documentary Research and Dissertation Design	1	1	1h30			22h30	02h30		100%
Total Semester 3		30	17	13h30	6h00	5h30	375h00	375h00		

Discovery Course (S1, S2, and S3)

- 1- Virtual Instrumentation
- 2- Image Processing and Vision
- 3- Smart Sensors
- 4- Artificial Intelligence
- 5- Smart Vision
- 6- Robotics (Mobile Robotics, Humanoid Robotics, Service Robotics, Environmental Robotics, etc.)
- 7- Computer-Aided Design (CAD)
- 8- Electric Vehicles
- 9- Hydraulics and Pneumatics
- 10-Web Programming
- 11-Operational Safety
- 12-Maintenance Management
- 13-Telecommunications Applications
- 14-Biotechnology
- 15-Biomedical Technologies

Semester 4

Internship in a company or research laboratory leading to a dissertation and a defense