

Master in Branch Electrical engineering

Speciality Industrial Electrotechnics

Brief

The ever-growing needs and the strong demand from industrial companies in our country, for skills in the field of electrical engineering, particularly in low voltage and high currents, have motivated us to offer a master's training program. Depending on the material and human resources available within our establishment. This course entitled: "Industrial electrotechnics" is spread over 4 semesters. Its objective is to provide theoretical and practical instruction in the field of electrical power supplies, electrical machines and their control.

Field	Branch	Speciality
Sciences and Technologies	Electrical engineering	Industrial Electrotechnics

First Semester

Teaching unit	Study Subjects	Credit	Coefficient	C	TD	TP	Volume (hour)
Fundamental Unit Credits: 10 Coefficients: 5	Transmission networks and distribution of electrical energy	4	2	1h30	1h30		45h00
	Deep power electronics	4	2	1h30	1h30		45h00
	μ -processors and μ -controllers	2	1	1h30			22h30
Fundamental Unit Credits: 8 Coefficients: 4	Deep Electric machine	4	2	1h30	1h30		45h00
	Applied numerical methods and optimization	4	2	1h30	1h30		45h00
Methodological unit Credits: 9 Coefficients: 5	TP:- μ -processors and μ -controllers	1	1			1h00	15h00
	TP: -Transmission networks and distribution of electrical energy	2	1			1h30	22h30
	TP :- deep power electronics	2	1			1h30	22h30
	TP:- Applied numerical methods and optimization	2	1			1h30	22h30
	TP:- Deep electric machine	2	1			1h30	22h30
Discovery unit	Course at choice	1	1	1h30			22h30

Credits: 2 Coefficients: 2	Course at choice	1	1	1h30			22h30
Transversale Unit	Technical English and terminology	1	1	1h30			22h30
Total First semester		30	17	12h00	6h00	7h00	375h00

Second Semester

Teaching unit	Study Subjects	Credit	Coefficient	C	TD	TP	Volume (hour)
Fundamental Unit Credits: 10 Coefficients: 5	Industrial electricity	4	2	1h30	1h30		45h00
	Sampled enslaved systems and Digital Regulation	4	2	1h30	1h30		45h00
	Industrial Automation Technology	2	1	1h30			22h30
Fundamental Unit Credits: 8 Coefficients: 4	Modeling and Identification of electrical systems	4	2	1h30	1h30		45h00
	Electric training	4	2	1h30	1h30		45h00
Methodological unit Credits: 9 Coefficients: 5	TP:- Sampled enslaved systems and Regulation Digital	2	1			1h30	15h00
	TP:- Industrial electricity/TP Modeling and Identification of electrical systems	2	1			1h30	22h30
	TP :- Electric training	2	1			1h30	22h30
	Techniques of the High Voltage	3	2	1h30		1h00	22h30
Discovery unit Credits: 2 Coefficients: 2	Course at choice	1	1	1h30			22h30
	Course at choice	1	1	1h30			22h30
Transversale Unit Credits: 1 Coefficients: 1	Ethics, deontology and intellectual property	1	1	1h30			22h30
Total Second Semester		30	17	13h30	6h00	5h30	375h00

Third Semester

Teaching unit	Study Subjects	Credit	Coefficient	C	TD	TP	Volume (hour)
Fundamental Unit Credits: 10 Coefficients: 5	Transitory regimes of electrical systems	6	3	3h00	1h30		67h30
	Control of electrical systems	4	2	1h30	1h30		45h00
Fundamental Unit Credits: 8 Coefficients: 4	Fault diagnosis in electrical installations	2	1	1h30			22h30
	Power Quality and Compatibility electromagnetic	4	2	1h30	1h30		45h00
	Artificial intelligence techniques	2	1	1h30			22h30
Methodological unit Credits: 9 Coefficients: 5	TP Artificial intelligence techniques	2	1			1h30	22h30
	TP Control of electrical systems	2	1			1h30	22h30
	Sizing of industrial systems	5	3	1h30	1h30	1h00	60h00
Discovery unit Credits: 2 Coefficients: 2	Course at choice	1	1	1h30			22h30
	Course at choice	1	1	1h30			22h30
Transversale Unit Credits: 1 Coefficients: 1	Documentary research and Dissertation de sign	1	1	1h30			22h30
Total Third semester		30	17	15h00	6h00	4h00	375h00

Fourth Semester

Internship in a company sanctioned by a thesis and a defense.

	VHS	Coeff	Crédits
Personal Work	550	09	18
Internship in a company	100	04	06
Seminars	50	02	03
Other (Supervision)	50	02	03
Total Fourth semester	750	17	30