



## MASTER'S DEGREE IN ENERGETIC ENGINEERING

### DEGREE PROGRAMME 2016/2017

Course contents are available at this [link](#)

#### 1<sup>st</sup> year

Sem	Teaching course	SSD*	TAF*	Credits	h
1	Applied Electromagnetism in Electrical and Energy Engineering	ING-IND/31	C	6	60
1	Integrated Course: Energetics and Thermal Hvac Systems				
1	- Module: Thermal Hvac Systems	ING-IND/11	B	6	60
2	- Module: Energetics	ING-IND/11	B	6	60
2	Nuclear Reactor Physics	FIS/04	C	6	60
2	Exploration Geophysics	GEO/11	C	6	60
1 - 2	3 courses from tab 1		C	18	180

#### 2<sup>nd</sup> year

Sem	Teaching course	SSD*	TAF*	Credits	h
1	Integrated Course: Electrical Energy Management and Electrical Vehicles	ING-IND/32	B	10	100
1	Power Systems Generation and Economics	ING-IND/33	B	9	90
1	Integrated Course: Renewable and Industrial Energy Technologies				
1	- Module: Industrial Energy Technologies	ING-IND/09	B	6	60
2	- Module: Renewable Energy Technologies	ING-IND/09	B	6	60
2	EMC and Power Electronic Energy Conversion	ING-IND/32	B	6	60

#### Additional credits to be acquired

Sem	Activity	SSD*	TAF*	Credits	h
	Laboratories or internship		F	8	
	Elective activities <sup>1</sup>		D	12	
	Final Examination		E	15	

**TOTAL CREDITS 120**

(1) The elective activities must be consistent with the personal educational plan and they need approval by the Degree Programme Board.



Tab 1. Courses TAF C (3 from the list)

Sem	Teaching course	SSD*	TAF*	Credits	h
1	Automatic Control Systems	ING-INF/04	C	6	60
1	Thermal Plant Control	ING-INF/04	C	6	60
1	Steam Generating Units	ING-IND/09	C	6	60
1	Innovative Architectures and Applications in the Internet	ING-INF/03	C	6	60
1	Fluid Machinery and Energy Systems	ING-IND/09	C	6	60
2	Combustion and Heat Transfer	ING-IND/09	C	6	60
2	Internet	ING-INF/03	C	6	60
2	Electrical Machines	ING-IND/32	C	6	60
2	Transportation Planning	ICAR/05	C	6	60
2	Environmental Conscious Energy and Chemical Processes	ING-IND/25	C	6	60
2	Electric Drives and Propulsion Systems	ING-IND/32	C	6	60
2	Fundamentals of Electric Power Distribution and Smart Grids	ING-IND/33	C	6	60

**Other optional activities**

Sem	Laboratory	SSD*	TAF*	Credits	h
	Modeling and Simulation of Energy Systems*	ING-IND/09	F	3	30
	Electric Drives Lab**	ING-IND/32	F	3	30
	Electric Drives for Electric Propulsion Lab**	ING-IND/32	F	3	30
	Electrical Energy Management systems Lab**	ING-IND/32	F	2	20
	Smart Grid Lab**	ING-IND/33	F	2	20
	Traffic Simulation Model Laboratory	ICAR/05	F	2	20
	Project Management	SECS-P/08	F	4	36
	Simulation of Dynamical Systems with Matlab-Simulink	ING-INF/04	F	3	30

\* available only in a.y. 2016/17; \*\* available from a.y. 2017/18

**\*Abbreviations**

SSD	Scientific Disciplinary Sector
TAF	Type of Educational Activity