



**BACHELOR'S DEGREE IN
ELECTRICAL ENERGY ENGINEERING FOR SUSTAINABLE DEVELOPMENT
DEGREE PROGRAMME 2024/2025**

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

1st year

Sem	Teaching course	SSD*	TAF*	Credits	h
1	Mathematical Analysis 1	MAT/05	A	9	90
1	Chemistry	CHIM/07	A	6	60
1	Physics 1	FIS/01	A	8	80
2	Integrated Course: Fundamentals of Digital Technologies - Module: Fundamentals of Computer Science	ING-INF/05	A	6	60
2	- Module: Communication Networks	ING-INF/03	C	6	60
2	Geometry and Algebra	MAT/03	A	7	70
2	Physics 2	FIS/01	A	7	70

2nd year

Sem	Teaching course	SSD*	TAF*	Credits	h
1	Mathematical Analysis 2	MAT/05	A	8	80
1-2	Fundamentals on Automatic Control	ING-INF/04	B	9	90
1-2	Electrotechnics	ING-IND/31	B	12	120
1	Integrated Course: Fundamentals of Energy Sustainability - Module: Applied Thermodynamics	ING-IND/11	B	6	60
2	- Module: Principles of Sustainable Mobility	ICAR/05	C	5	50
2	Integrated Course: IoT Platforms - Module: Hardware Platforms for IoT	ING-INF/01	C	3	30
2	- Module: Data Processing and Transmission	ING-INF/03	C	3	30
2	Measurements and Instrumentation	ING-INF/07	B	6	60
1	<i>Choose between:</i> Machine learning and data mining	ING-INF/05	C	6	60
1	Microcontroller-Based Systems	ING-INF/01	C	6	60
2	Materials Technology	ING-IND/22	C	6	60



3rd year

Sem	Teaching course	SSD*	TAF*	Credits	h
1	Power Electronics	ING-IND/32	B	6	60
1	Measurements on Power Systems	ING-INF/07	B	6	60
1	Integrated Course: Smart Power Systems for Energy Transition				
1	- Module: Fundamentals of Electric Power Systems	ING-IND/33	B	5	50
1	- Module: Smart Grid For Electric Power Distribution	ING-IND/33	B	5	50
1	Sustainable Energy Technologies and Systems	ING-IND/09	B	9	90
1	Integrated Course: Conversion Devices for Sustainable Energy				
1	- Module: Electrical Machines	ING-IND/32	B	5	50
2	- Module: Electrical Drives	ING-IND/32	B	5	50
2	Integrated Course: Sustainable Energy Development				
2	- Module: Energy: Markets and Regulation	ING-IND/33	B	5	50
2	- Module: Energy carrier and storage systems	ING-IND/32	B	5	50

Additional credits to be acquired

Sem	Activity	SSD*	TAF*	Credits	h
	English Language Test ¹		E	3	
	Elective activities ²		D	12	
	Other activities		F	2	
	Final Exam		E	5	

TOTAL CREDITS 180

- 1) The credits of European language level can be acquired:
 - passing the English language test at B1 European level (CEFR) at Centro Linguistico d'Ateneo,
 - showing appropriate certification of B1 European level (CEFR) knowledge.
- (2) The elective activities must be consistent with the personal educational plan and they need approval by the Degree Programme Board.

***Abbreviations**

SSD	Scientific Disciplinary Sector
TAF	Type of Educational Activity