



**MASTER'S DEGREE IN MECHANICAL ENGINEERING
DEGREE PROGRAMME 2024/2025**

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

1st year

Sem	Teaching course	SSD*	TAF*	Credits	h
1	Manufacturing Systems	ING-IND/16	B	6	60
1	Mechanics of Materials	ING-IND/14	B	6	60
1	Integrated Course: Industrial Systems - Module: Industrial Production Systems Management	ING-IND/17	B	6	60
2	- Module: Industrial Production Systems Design	ING-IND/17	B	6	60
2	Mechatronics	ING-IND/13	B	9	90

2nd year

Sem	Teaching course	SSD*	TAF*	Credits	h
1	Industrial Energy Technologies	ING-IND/09	B	9	90
2	Design of Fluid Machinery	ING-IND/08	B	9	90

Additional credits to be acquired

Sem	Activity	SSD*	TAF*	Credits	h
	3 courses from tab 1		B	18	
	2 courses from tab 2		C	12	
	Elective activities ¹		D	12	
	Laboratories or internship		F	9	
	English Language Test ²		F	3	
	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
- (2) The credits of European language level can be acquired:
 - passing the English language test at B2 European level (CEFR) at Centro Linguistico d'Ateneo,
 - showing appropriate certification of B2 European level (CEFR) knowledge.



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

Sem	Teaching course	SSD*	TAF*	Credits	h
1st year					
1	Finite Elements Analysis	ING-IND/14	B	6	60
2	Industrial Robotics	ING-IND/13	B	6	60
2	Maintenance Management for Industrial Systems	ING-IND/17	B	6	60
2	Mechanics of Composite Materials	ING-IND/14	B	6	60
2	Renewable Energy Technologies	ING-IND/09	B	6	60
2nd year					
1	Industrial Quality Management	ING-IND/16	B	6	60
1	Management of Energy Processes	ING-IND/09	B	6	60
1	Experimental Mechanics	ING-IND/14	B	6	60
1	Computational Modeling of Fluid Systems	ING-IND/08	B	6	60
2	Environmental Impact Energy Systems	ING-IND/09	B	6	60
2	Experimentation in Fluid Machines	ING-IND/08	B	6	60

Tab 2. Courses TAF C (2 from the list)

Sem	Teaching course	SSD*	TAF*	Credits	h
1st year					
1	Automatic Control Systems	ING-INF/04	C	6	60
1	Numerical Calculus	MAT/08	C	6	60
2	Thermal Hvac Systems	ING-IND/11	C	6	60
2	Economic and Management Engineering	ING-IND/35	C	6	60
2nd year					
1	Business Organization	SECS-P/10	C	6	36
1	Project Management	SECS-P/08	C	6	36
1	Electrical Machines and Drives	ING-IND/32	C	6	60
2	Advanced Theory of Structures	ICAR/08	C	6	60

Other optional activities:

Sem	Laboratory	SSD*	TAF*	Credits	h
1	Modeling and Simulation of Energy Systems	ING-IND/09	F	3	30
2	Introduction to Structural Dynamics	ING-IND/14	F	3	30
2	Nondestructive Testing	ING-IND/14	F	3	30
2	Mechanical Design Project	ICAR/08	F	3	30

***Abbreviations**

SSD	Scientific Disciplinary Sector
TAF	Type of Educational Activity