

MECHANICAL ENGINEERING DEGREE PROGRAM

Class of Industrial Engineering Degrees L-9

PROGRAMMED TEACHING Academic Year 2025 – 2026

Course or Training Activity	Module	Credits	SSD	TAF (*)	Propaedeuticities
Year I - Semester I					
Mathematical Analysis I		9	MAT/05 (MATH-03/A)	A	
Geometry and Algebra		6	MAT/03 (MATH-02/B)	A	
Industrial Technical Drawings		6	ING-IND/15 (IIND-03/B)	B	
English Language		3		E	
Year I - Semester II					
Mathematical Analysis II		9	MAT/05 (MATH-03/A)	A	Mathematical Analysis I
General Physics I		9	FIS/01	A	
Elements of Computer Sciences		6	ING-INF/05 (IINF-05/A)	A	
Chemistry		6	CHIM/07 (CHEM-06/A)	A	
Year II - Semester I					
General Physics II		6	FIS/01	A	General Physics I
Mathematical Physics		9	MAT/07 (MATH-04/A)	C	Mathematical Analysis I Geometry and Algebra
Electrotechnics (+)		6	ING-IND/31 (IET-01/A)	B	
<i>Complements of Electrotechnics (+) (^)</i>		0-6	ING-IND/31 (IET-01/A)	C	Electrotechnics
At the student's choice (**)		0-12		D	
Further training activities (***)		0-3		F	
Year II - Semester II					
Construction Science		9	ICAR/08 (CEAR-06/A)	C	Mathematical Analysis II Mathematical Physics
Technical Physics		12	ING-IND/10 (IIND-07/A)	B	Mathematical Analysis I General Physics I
Mechanical Technology		12	ING-IND/16 (IIND-04/A)	B	
At the student's choice (**)		0-12		D	
Further training activities (***)		0-3		F	

Year III - Semester I					
Mechanics Applied to Machines		12	ING-IND/13 (IIND-02/A)	B	Mathematical Analysis II Mathematical Physics Industrial Technical Drawings
Machines		12	ING-IND/08 (IIND-06/A)	B	Technical Physics
<i>Fluid Dynamics</i> (^)		0-6	ING-IND/06 (IIND-01/F)	C	General Physics I Mathematical Physics
<i>Materials</i> (^)		0-6	ING-IND/22 (IMAT-01/A)	C	Chemistry
At the student's choice (**)		0-12		D	
Further training activities (***)		0-3		F	
Year III - Semester II					
Mechanical Plants		9	ING-IND/17 (IIND-05/A)	B	
Construction of Machines		9	ING-IND/14 (IIND-03/A)	B	Construction Science
Computer Aided Design		6	ING-IND/15 (IIND-03/B)	B	Elements of Computer Sciences Industrial Technical Drawings
At the student's choice (**)		0-12		D	
Further training activities (***)		0-3		F	
Final Examination		3		E	

Notes:

(*) Legend of the types of training activities (TAF) pursuant to Ministerial Decree 270/04

Types of Training Activities (TAF)	A	B	C	D	E	F	G
	Basic	Characterising	Related or Supplementary	At the student's choice	Final examination and language knowledge	Further training activities	Internships and training placements
ref. D.M. 270/04	Art. 10 paragraph 1, a)	Art. 10 paragraph 1, b)	Art. 10 paragraph 5, a)	Art. 10 paragraph 5, b)	Art. 10 paragraph 5, c)	Art. 10 paragraph 5, d)	Art. 10 paragraph 5, e)

(^) The student is required to select at least one course from *Complements of Electrotechnics*, *Fluid Dynamics*, and *Materials*.

(+) The courses in *Electrotechnics* and *Complements of Electrotechnics* are offered in the first and second half of the first semester of the second year, respectively.

(**) The selection of elective (students' autonomous choice) courses is usually made by submitting the Study Plan in the first semester of the second year. All the exams listed in the table below can be taken without the need to present a Study Plan. However, students may select courses other than those listed in the table by submitting an individual Study Plan, subject to prior approval by the CCD. The year/semester in which these courses are offered depends on the year/semester in which the chosen course is offered in the student's degree program. The following table shows both the elective courses specifically offered for the Mechanical Engineering program, with the indication of the year/semester of delivery (the schedules of these courses are coordinated by the Mechanical Engineering program to avoid overlap with other mandatory courses), and elective courses suggested for autonomous selection available in other degree programs.

(***) The verification of Further Training Activities is certified by the CCD Coordinator based on the attendance certificate issued for successful participation in seminar cycles or other educational activities by the responsible professors, or for attending specific courses organized by the University to provide students with additional language

skills, IT and online abilities, interpersonal skills, or other skills useful for entering the workforce. These activities may involve the issuance of digital certifications through open badges or Team Working initiatives such as the ATA formula.

Suggested Courses for Elective Selection (Students' Autonomous Choice)

Course Title	Credits	SSD	Year / Semester	Code	Reference CdS
<i>Complements of Electrotechnics</i>	6	ING-IND/31 (IIET-01/A)	II/I	24712	Mechanical Engineering
<i>Fluid Dynamics</i>	6	ING-IND/06 (IIND-01/F)	II/I	00181	Mechanical Engineering
<i>Materials</i>	6	ING-IND/22 (IMAT-01/A)	II/I	00201	Mechanical Engineering
Computer Applications for Industrial engineering	6	ING-INF/05 (IINF-05/A)	III/II	U2456	Mechanical Engineering
Laboratory of Measurements	6	ING-IND/12 (IMIS-01/A)	III/II	00759	Mechanical Engineering
Fundamental of Law for Engineering	9	IUS/01 (GIUR-01/A)	-/II	17116	Management Engineering
Metallurgy	6	ING-IND21 (IIND-03/C)	-/I	U5467	Materials Engineering
Mathematical Methods for Engineering	9	MAT/05 (MATH-03/A)	-/I	00225	Naval Engineering
Structural Modeling	9	ICAR/08 (CEAR-06/A)	-/II	19220	Structural and Geotechnical Engineering
Models and Methods of Operational Research	6	MAT/09 (MATH-06/A)	-/I	U2335	Automation and Robotics Engineering
Probability and Statistics	6	SECS-S/02 (STAT-01/B)	-/I	09173	Civil Engineering
Design for Additive Manufacturing	6	ING-IND/15 (IIND-03/B)	-/II	U2531	Naval Engineering
Operational Research	9	MAT/09 (MATH-06/A)	-/II	00147	Management Engineering for Logistics and Production
Statistics for Technology	6	SECS-S/02 (STAT-01/B)	-/II	U4937	Mechanical Engineering for Design and Production
English II (*)	3			U1038	CLA

Notes:

(*) In the elective selection (students' autonomous choice), it is also possible to choose the exam of **ENGLISH II**, worth 3 CFU. No course is provided for this exam. The credits are earned through procedures defined by the University Language Center (CLA). The 3 credits (CFU) do not receive a grade, only a pass/fail status (aptitude).