



MASTER COURSE IN MECHATRONICS ENGINEERING - A.A. 2024/25

A1 Curriculum Mechanics

FIRST YEAR											
FIRST SEMESTER											
Esse3 code	N°	Courses	SSD	CFU	B	C	D	E	F	Duration (hours)	Notes
146032	1	Digital signal processing for mechatronics	ING-INF/07	6		6				60	
146031	2	Mechanical design for mechatronics	ING-IND/14	9	9					90	
146029	3a	Mechatronic systems simulation - Mod. 1 Computational methods	MAT/08	6		6				60	
146030	4a	Precision engineering - Mod. 1 Design of precision systems	ING-IND/12	6	6					60	
		SAFETY COURSES									(1)
				Tot.	27	15	12	0	0	0	
SECOND SEMESTER											
Esse3 code	N°	Courses	SSD	CFU	B	C	D	E	F	Duration (hours)	Notes
140500	5	Automatic control	ING-INF/04	9		9				90	
140417	6	Mechanical vibrations	ING-IND/13	6	6					60	
146029	3b	Mechatronic systems simulation - Mod. 2 Modeling	ING-IND/13	9	9					90	
146030	4b	Precision engineering - Mod. 2 Digital manufacturing	ING-IND/16	6	6					60	
		Other activities		3					3		(2)
				Tot.	33	21	9	0	0	3	
				Tot. 1st year	60	36	21	0	0	3	

PROFESSOR
Macii David
Rustighi Emiliano
Bertolazzi Enrico
Bosetti Paolo

PROFESSOR
Zaccarian Luca
Bortoluzzi Daniele
Biral Francesco
Bosetti Paolo

SECOND YEAR											
FIRST SEMESTER											
Esse3 code	N°	Courses	SSD	CFU	B	C	D	E	F	Duration (hours)	Notes
146033	7	Intelligent distributed systems	ING-INF/07	9		9				90	
146034	8	Advanced mechanical systems	ING-IND/13	6	6					60	
140440	9	Industrial robotics	ING-IND/13	6	6					60	
	12a	Elective course		6			6			60	(3)
				Tot.	27	12	9	6	0	0	
SECOND SEMESTER											
Esse3 code	N°	Courses	SSD	CFU	B	C	D	E	F	Duration (hours)	Notes
146035	10	Dynamics of vehicles	ING-IND/13	6	6					60	
140431	11	Modeling and design with finite elements	ING-IND/14	6	6					60	
	12b	Elective course		6			6			60	(3)
140458		Final project		15				15			
				Tot.	33	12	0	6	15	0	
				Tot. 2nd year	60	24	9	12	15	0	
				TOTAL CFU	120	60	30	12	15	3	

PROFESSOR
Fontanelli Daniele
Moretti Giacomo
Bortoluzzi Daniele

PROFESSOR
Biral Francesco
Benedetti Matteo

ELECTIVE COURSES											
FIRST SEMESTER											
Esse3 code	N°	Courses	SSD	CFU	B	C	D	E	F	Duration (hours)	Notes
145783		Advanced Formula SAE	ING-IND/12	6			6				
140426		Functionals and smart materials	ING-IND/22	6			6			60	
146196		Renewable energy conversion systems	ING-IND/13	6			6			60	
SECOND SEMESTER											
Esse3 code	N°	Courses	SSD	CFU	B	C	D	E	F	Duration (hours)	Notes
145475		Design methods for industrial engineering	ING-IND/15	6			6			60	offered by LM 53
145959		Introduction to robotics	ING-INF/04	6			6			48	offered by DISI
146197		Microelectronics devices, sensors and MEMS	ING-INF/01	6			6			60	
140473		Quality and innovation engineering	ING-INF/07	6			6			60	offered by LM 31

PROFESSOR
Bosetti Paolo
Lutterotti Luca
Moretti Giacomo

PROFESSOR
Cristofolini Ilaria
Saveriano Matteo
Dalla Betta Gian-Franco
Petri Dario

NOTES:

- (1) = All students must have the certifications of:
- the **general training course "Sicurezza formazione generale"**, or similar course;
 - the **specific training course - medium risk "Sicurezza in laboratorio- UniTrento"**, or similar course;
 - For any further information about safety training, please visit the website: <https://infostudenti.unitn.it/en/safety-training-for-students>
- (2) = The curriculum is considered complete with a total of 3CFU - type F. The credits have to be obtained during the master with the following regulation: <https://www.dii.unitn.it/en/121/other-activities-type-f-credits>.
- (3) = Different elective modules - not included in the Manifesto - have to be approved by the Teaching board of the Department.