



MASTER COURSE IN MECHATRONICS ENGINEERING - A.A. 2023/24

A1 Curriculum Mechanics

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

PROFESSOR
Bertolazzi Enrico
Bosetti Paolo
Rustighi Emiliano
Macii David

PROFESSOR
Biral Francesco
Bosetti Paolo
Zaccarian Luca
Bortoluzzi Daniele

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)
		<i>Tot.</i>		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			
		<i>Tot.</i>		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:

- 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.unin.it/en/safety-training-for-students>
- 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.unin.it/en/121/other-activities-type-f-credits>.
- Different elective modules - not included in the Manifesto - have to be approved by the Teaching board of the Department.