



**UNIVERSITÀ
DI TRENTO**

Department of
Industrial Engineering

STUDENTS ENROLLED FROM
A.A. 2026/2027

MASTER COURSE IN INTELLIGENT MECHATRONICS ENGINEERING - A.A. 2026/27

FIRST YEAR											
FIRST SEMESTER											
Esse3 code	N°	Courses	SSD	SSD 2024	CFU	B	C	D	E	F	Notes
	1	Digital manufacturing	ING-IND/16	IIND-04/A	6	6					
	2a	AI and Embedded systems - Mod. 1 Embedded systems	ING-INF/01	IINF-01/A	9		9				
	3a	Mechatronic Systems Analysis - Mod. 1 Dynamics and vibration of mechatronic systems	ING-IND/13	IIND-02/A	6	6					
pacchetto	4	Digital signal processing for mechatronics	ING-INF/07	IMIS-01/B	6		6				
		Numerical Optimization and Optimal Control for Dynamical Systems	MAT/08	MATH-05/A							
<i>Tot. 1° sem</i>					27	12	15				
SECOND SEMESTER											
Esse3 code	N°	Courses	SSD	SSD 2024	CFU	B	C	D	E	F	Notes
	5	Automatic control	ING-INF/04	IINF-04/A	6	6					
	2b	AI and Embedded systems - Mod 2. AI for mechatronics	ING-IND/13	IIND-02/A	6	6					
	3b	Mechatronic systems Analysis - Mod. 2 Modeling and simulation of mechatronic systems	ING-IND/13	IIND-02/A	6	6					
	6	Mechanical design for mechatronics	ING-IND/14	IIND-03/A	9	9					
pacchetto	7	Design of precision systems	ING-IND/12	IMIS-01/A	6	6					
		Design methods for industrial engineering	ING-IND/15	IIND-03/B							
<i>Tot. 2° sem</i>					33	33	0	0	0	0	
Tot. 1st year					60	45	15	0	0	0	0



MASTER COURSE IN INTELLIGENT MECHATRONICS ENGINEERING - A.A. 2026/27

B1 Curriculum Mechanics

FIRST YEAR											
FIRST SEMESTER											
Esse3 code	N°	Courses	SSD	SSD 2024	CFU	B	C	D	E	F	Notes
	1	Digital manufacturing	ING-IND/16	IIND-04/A	6	6					
	2a	AI and Embedded systems - Mod. 1 Embedded systems	ING-INF/01	IINF-01/A	9		9				
	3a	Mechatronic Systems Analysis - Mod. 1 Dynamics and vibration of mechatronic systems	ING-IND/13	IIND-02/A	6	6					
pacchetto	4	Digital signal processing for mechatronics	ING-INF/07	IMIS-01/B	6		6				
		Numerical Optimization and Optimal Control for Dynamical Systems	MAT/08	MATH-05/A							
					<i>Tot. 1° sem</i>	27	12	15			
SECOND SEMESTER											
Esse3 code	N°	Courses	SSD	SSD 2024	CFU	B	C	D	E	F	Notes
	5	Automatic control	ING-INF/04	IINF-04/A	6	6					
	2b	AI and Embedded systems - Mod 2. AI for mechatronics	ING-IND/13	IIND-02/A	6	6					
	3b	Mechatronic systems Analysis - Mod. 2 Modeling and simulation of mechatronic systems	ING-IND/13	IIND-02/A	6	6					
	6	Mechanical design for mechatronics	ING-IND/14	IIND-03/A	9	9					
pacchetto	7	Design of precision systems	ING-IND/12	IMIS-01/A	6	6					
		Design methods for industrial engineering	ING-IND/15	IIND-03/B							
					<i>Tot. 2° sem</i>	33	33	0	0	0	0
					Tot. 1st year	60	45	15	0	0	0

SECOND YEAR - INACTIVE A.A.2026/27											
FIRST SEMESTER											
Esse3 code	N°	Courses	SSD	SSD 2024	CFU	B	C	D	E	F	Notes
pacchetto	8, 9, 10, 11	Advanced mechanical systems	ING-IND/13	IIND-02/A	24						
		Modeling and design with finite elements	ING-IND/14	IIND-03/A							
		Space mechanisms and space systems engineering	ING-IND/13	IIND-02/A							
		Vehicle dynamics	ING-IND/13	IIND-02/A							
		Renewable energy conversion systems	ING-IND/13	IIND-02/A							
		Functional and smart materials	ING-IND/22	IMAT-01/A							
					<i>Tot. 1° sem</i>	24	0	0	0	0	0
SECOND SEMESTER											
Esse3 code	N°	Courses	SSD	SSD 2024	CFU	B	C	D	E	F	Notes
	12a	Elective course			6			6			
	12b	Elective course			6			6			
		Internship/other activities			6					6	
		Final project			18				18		
					<i>Tot. 2° sem</i>	36	0	0	12	18	6
					Tot. 2nd year	60	0	0	12	18	6
					TOTAL CFU	120					



MASTER COURSE IN INTELLIGENT MECHATRONICS ENGINEERING - A.A. 2026/27

B2 Curriculum robotics and intelligent vehicles

FIRST YEAR											
FIRST SEMESTER											
Esse3 code	N°	Courses	SSD	SSD	CFU	B	C	D	E	F	Notes
	1	Digital manufacturing	ING-IND/16	IIND-04/A	6	6					
	2a	AI and Embedded systems - Mod. 1 Embedded systems	ING-INF/01	IINF-01/A	9		9				
	3a	Mechatronic Systems Analysis - Mod. 1 Dynamics and vibration of mechatronic systems	ING-IND/13	IIND-02/A	6	6					
pacchetto	4	Digital signal processing for mechatronics	ING-INF/07	IMIS-01/B	6		6				
		Numerical Optimization and Optimal Control for Dynamical Systems	MAT/08	MATH-05/A							
<i>Tot. 1° sem</i>					27	12	15				
SECOND SEMESTER											
Esse3 code	N°	Courses	SSD	SSD	CFU	B	C	D	E	F	Notes
	5	Automatic control	ING-INF/04	IINF-04/A	6	6					
	2b	AI and Embedded systems - Mod 2. AI for mechatronics	ING-IND/13	IIND-02/A	6	6					
	3b	Mechatronic systems Analysis - Mod. 2 Modeling and simulation of mechatronic systems	ING-IND/13	IIND-02/A	6	6					
	6	Mechanical design for mechatronics	ING-IND/14	IIND-03/A	9	9					
pacchetto	7	Design of precision systems	ING-IND/12	IMIS-01/A	6	6					
		Design methods for industrial engineering	ING-IND/15	IIND-03/B							
<i>Tot. 2° sem</i>					33	33	0	0	0	0	
Tot. 1st year					60	45	15	0	0	0	0

SECOND YEAR - INACTIVE A.A.2026/27											
FIRST SEMESTER											
Esse3 code	N°	Courses	SSD	SSD	CFU	B	C	D	E	F	Notes
pacchetto	8, 9, 10, 11	Distributed robotics and perception	ING-INF/07	IMIS-01/B	24						
		Smart Sensing for robotics and augmented reality	ING-IND/12	IMIS-01/A							
		Dynamic robot control	ING-INF/04	IINF-04/A							
		Learning and optimization for robot control	ING-INF/04	IINF-04/A							
		Vehicle dynamics	ING-IND/13	IIND-02/A							
		Intelligent vehicles and autonomous driving	ING-IND/13	IIND-02/A							
<i>Tot. 1° sem</i>					24	0	0	0	0	0	
SECOND SEMESTER											
Esse3 code	N°	Courses	SSD	CFU	B	C	D	E	F	Notes	
	12a	Elective course		6			6				
	12b	Elective course		6			6				
		Internship/other activities		6					6		
		Final project		18					18		
<i>Tot. 2° sem</i>					36	0	0	12	18	6	
Tot. 2nd year					60	0	0	12	18	6	

TOTAL CFU	120				
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MASTER COURSE IN INTELLIGENT MECHATRONICS ENGINEERING - A.A. 2026/27

B3 Curriculum space systems and instruments

FIRST YEAR											
FIRST SEMESTER											
Esse3 code	N°	Courses	SSD	SSD	CFU	B	C	D	E	F	Notes
	1	Digital manufacturing	ING-IND/16	IIND-04/A	6	6					
	2a	AI and Embedded systems - Mod. 1 Embedded systems	ING-INF/01	IINF-01/A	9		9				
	3a	Mechatronic Systems Analysis - Mod. 1 Dynamics and vibration of mechatronic systems	ING-IND/13	IIND-02/A	6	6					
pacchetto	4	Digital signal processing for mechatronics	ING-INF/07	IMIS-01/B	6		6				
		Numerical Optimization and Optimal Control for Dynamical Systems	MAT/08	MATH-05/A							
<i>Tot. 1° sem</i>					27	12	15				
SECOND SEMESTER											
Esse3 code	N°	Courses	SSD	SSD	CFU	B	C	D	E	F	Notes
	5	Automatic control	ING-INF/04	IINF-04/A	6	6					
	2b	AI and Embedded systems - Mod 2. AI for mechatronics	ING-IND/13	IIND-02/A	6	6					
	3b	Mechatronic systems Analysis - Mod. 2 Modeling and simulation of mechatronic systems	ING-IND/13	IIND-02/A	6	6					
	6	Mechanical design for mechatronics	ING-IND/14	IIND-03/A	9	9					
pacchetto	7	Design of precision systems	ING-IND/12	IMIS-01/A	6	6					
		Design methods for industrial engineering	ING-IND/15	IIND-03/B							
<i>Tot. 2° sem</i>					33	33	0	0	0	0	
Tot. 1st year					60	45	15	0	0	0	0

SECOND YEAR - INACTIVE A.A.2026/27											
FIRST SEMESTER											
Esse3 code	N°	Courses	SSD	SSD	CFU	B	C	D	E	F	Notes
pacchetto	8, 9, 10, 11	Remote sensing systems and image analysis	ING-INF/03	IINF-03/A	24						
		Spacecraft sensors and instrumentation	ING-INF/01	IINF-01/A							
		Scientific mission design	FIS/01	PHYS-03/A							
		Space structures and advanced applications	ING-IND/04	IIND-01/D							
		AI and on-board computing design	ING-INF/05	IINF-05/A							
		Space mechanisms and space systems engineering	ING-IND/13	IIND-02/A							
<i>Tot. 1° sem</i>					24	0	0	0	0	0	
SECOND SEMESTER											
Esse3 code	N°	Courses	SSD	SSD	CFU	B	C	D	E	F	Notes
	12a	Elective course			6			6			
	12b	Elective course			6			6			
		Internship/other activities			6					6	
		Final project			18				18		
<i>Tot. 2° sem</i>					36	0	0	12	18	6	
Tot. 2nd year					60	0	0	12	18	6	
TOTAL CFU					120						



MASTER COURSE IN INTELLIGENT MECHATRONICS ENGINEERING - A.A. 2026-27

B4 Curriculum electronics and smart energy systems

FIRST YEAR												
FIRST SEMESTER												
Esse3 code	N°	Courses	SSD	SSD 2024	CFU	B	C	D	E	F	Notes	
	1	Digital manufacturing	ING-IND/16	IIND-04/A	6	6						
	2a	AI and Embedded systems - Mod. 1 Embedded systems	ING-INF/01	IINF-01/A	9		9					
	3a	Mechatronic Systems Analysis - Mod. 1 Dynamics and vibration of mechatronic systems	ING-IND/13	IIND-02/A	6	6						
pacchetto	4	Digital signal processing for mechatronics	ING-INF/07	IMIS-01/B	6		6					
		Numerical Optimization and Optimal Control for Dynamical Systems	MAT/08	MATH-05/A								
<i>Tot. 1° sem</i>					27	12	15					
SECOND SEMESTER												
Esse3 code	N°	Courses	SSD	SSD 2024	CFU	B	C	D	E	F	Notes	
	5	Automatic control	ING-INF/04	IINF-04/A	6	6						
	2b	AI and Embedded systems - Mod 2. AI for mechatronics	ING-IND/13	IIND-02/A	6	6						
	3b	Mechatronic systems Analysis - Mod. 2 Modeling and simulation of mechatronic systems	ING-IND/13	IIND-02/A	6	6						
	6	Mechanical design for mechatronics	ING-IND/14	IIND-03/A	9	9						
pacchetto	7	Design of precision systems	ING-IND/12	IMIS-01/A	6	6						
		Design methods for industrial engineering	ING-IND/15	IIND-03/B								
<i>Tot. 2° sem</i>					33	33	0	0	0	0		
Tot. 1st year					60	45	15	0	0	0	0	

SECOND YEAR - INACTIVE A.A.2026/27											
FIRST SEMESTER											
Esse3 code	N°	Courses	SSD	SSD 2024	CFU	B	C	D	E	F	Notes
pacchetto	8, 9, 10, 11	Laboratory of internet of things	ING-INF/01	IINF-01/A	24						
		Micro-electronic devices, sensors and MEMS	ING-INF/01	IINF-01/A							
		Electronics and instrumentation for power systems	ING-INF/07	IMIS-01/B							
		Smart Grids for Renewable Energy Integration	ING-IND/32	IIND-08/A							
		Spacecraft sensors and instrumentation	ING-INF/01	IINF-01/A							
		Renewable energy conversion systems	ING-IND/13	IIND-02/A							
<i>Tot. 1° sem</i>					24	0	0	0	0	0	
SECOND SEMESTER											
Esse3 code	N°	Courses	SSD	SSD 2024	CFU	B	C	D	E	F	Notes
	12a	Elective course			6			6			
	12b	Elective course			6			6			
		Internship/other activities			6					6	
		Final project			18				18		
<i>Tot. 2° sem</i>					36	0	0	12	18	6	
Tot. 2nd year					60	0	0	12	18	6	
TOTAL CFU					120						