TOR VERGATA
UNIVERSITÀ DEGLI STUDI DI ROMA

Department of Electronic Engineering

Master of Science in Mechatronics Engineering

CHOOSE YOUR BLOCK: A☐ B☐ C1☐ C2☐ D☐ E☐

Study Plan in Mechatronics Engineering

A.Y. 2026-27

FAMILY NAME

First Name

Your Bachelor's degree

STUDENT ID

e-mail

◯ 1st year ◯ 2nd year

Year of enrollment

MANDATORY SUBJECTS for ALL BLOCKS 78 cfu										
Y	**s**	**SUBJECTS**	**CFU**	**SSD2024**	**BLOCK**	**A**	**B**	**C**	**D**	**E**
1	I	INTEGRATED SENSORS	9	IINF-01/A	ALL	9	9	9	9	9
1	II	NANOTECHNOLOGY	6	IINF-01/A	ALL	6	6	6	6	6
1	II	VLSI CIRCUIT AND SYSTEM DESIGN	9	IINF-01/A	ALL	9	9	9	9	9
2	I	CONTROL OF MECHANICAL SYSTEMS	9	IINF-04/A	ALL	9	9	9	9	9
2	I	ELECTRONICS OF IOT AND EMBEDDED SYSTEMS	12	IINF-01/A	ALL	12	12	12	12	12
2	I	ROBOT MECHANICS	9	IIND-02/A	ALL	9	9	9	9	9
2	II	COMPUTER VISION	6	IMIS-01/B	ALL	6	6	6	6	6
2	II	POWER ELECTRONICS AND ELECTRICAL DRIVES	9	IINF-01/A	ALL	9	9	9	9	9
2	II	POWERTRAIN TECHNOLOGIES FOR FUTURE MOBILITY	9	IIND-06/A	ALL	9	9	9	9	9
		+ one BLOCK			**CFU**	78				
BLOCK A - MECHANICS AND DIGITAL TRANSITION 24 cfu						**A**				
1	I	DIGITAL MODELING OF ENERGY CONVERSION	6	IIND-06/A	A-B	☐				
1	I	MECHANICS OF SYSTEMS FOR SIMULATIONS	6	IIND-02/A	A-B	☐				
1	II	MECHANICS OF MATERIALS AND STRUCTURES	6	CEAR-05/A	A-E	☐				
2	II	MACHINE DESIGN	6	IIND-03/A	A	☐				
BLOCK B - ELECTRONICS AND DIGITAL TRANSITION 24cfu							**B**			
1	I	DIGITAL ELECTRONICS	6	IINF-01/A	B		☐			
1	I	DIGITAL MODELING OF ENERGY CONVERSION	6	IIND-06/A	A-B		☐			
1	I	MECHANICS OF SYSTEMS FOR SIMULATIONS	6	IIND-02/A	A-B		☐			
		opt B – One of the following 2 subjects:								
1	II	Analogue Electronics*	**6+3**	IINF-01/A	B		◯			
1	II	Electronic Interfaces	6	IINF-01/A	B-C1-C2-E		◯			
BLOCK C1 - MECHATRONICS SYSTEMS AND ICT - Learning and Communication 24 cfu								**C1**		
1	I	**INNOVATIVE MATERIALS WITH LABORATORY**	6	IIND/03C	C1-E			☐		
		opt C1.a – One of the following 3 subjects:								
1	I	Opt C1.a choose one	6	IINF-03/A	C1			6		
1					C1			☐		
1					C1			6		
		opt C1.b – One of the following 5 subjects:								
Opt C1.b choose one				IINF-03/A	C1-C2			6		
					C1-C2			9		
				IINF-01/A	B-C1-C2-E			6		
				IINF-01/A	C1			6		
				IINF-04/A	C1			6		
2	II	**CONTROL OF ELECTRICAL MOTORS AND VEHICLES**	6	IINF-04/A	C1-C2-E			☐		

Date of submission dd/mm/yyyy

Date of Approval

Student's signature

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BLOCK C2 - MECHATRONICS SYSTEMS AND ICT - Interconnected Electric Vehicle Engineering 24 cfu								C2			
1	II	**INTEGRATED SOLUTIONS FOR SUSTAINABLE MOBILITY AND ENERGY PRODUCTION**	6	IIND-06/A	C2			☐			
		opt C2.a – One of the following 3 subjects:									
Opt C2.a choose one				ING-INF/01	C2			☐			
			6	ING-INF/02	C2						
				ING-INF/03	C2						
		opt C2.b – One of the following 4 subjects:									
1	II	Opt C2.b choose one		ING-INF/03	C1-C2			☐ 6*			
1	II			ING-INF/03	C1-C2						
1	II			ING-IND/32	C2						
1	II			ING-INF/01	B-C1-C2-E						
2	II	**CONTROL OF ELECTRICAL MOTORS AND VEHICLES**	6	IINF-04/A	C1-C2-E			☐			
BLOCK D - Computational Methods 24 cfu									D		
1	I	MATHEMATICAL METHODS FOR PHYSICS	8	PHYS-05/A	D				☐		
1	I	NUMERICAL METHODS FOR ASTROPHYSICS	6	PHYS-02/A	D				☐		
2	I	LABORATORY – CALCULUS	4	IINF-01/A	D				☐		
		opt D – One of the following 2 subjects:									
2	II	Machine Learning Methods for Physics	6		D				◯		
2	II	Quantum Computing	6		D				◯		
BLOCK E - ELECTROMECHANICS 24 cfu											E
1	I	**INNOVATIVE MATERIALS WITH LABORATORY**	6	IIND-03/C	C1-E						☐
		opt E.a - One of the following 2 subjects:									
1	II	Electronic Interfaces	6	IINF-01/A	B-C1-C2-E						◯
1	I	Characterization of nano-engineering systems NEW	6	PHYS-03/A	E						◯
		opt E.b - One of the following 2 subjects:									
1	II	**Mathematics of Feedback Control (ex FCS)**	6	IINF-04/A	E						◯
2	II	Control of Electrical Motors and Vehicles	6	IINF-04/A	C1-C2-E						◯
		opt E.c - One of the following subjects (6 or 2+2+2):									
1	I	NMR of nano-systems NEW	2		E						◯
1	I	Nanoscale Structural Transformations and Kinetics NEW	2	IIND-03/C	E						◯
1	I	Nano-engineering seminar+ project 3 NEW	2	CHEM-06/A	E						◯
1	II	Mechanics of Materials and Structures	6	CEAR-05/A	A-E						◯
					CFU	**24**	**24**	**24**	**24**	**24**	
		****opt B Analogue Electronics 9 cfu***					**3**				
		****opt C1.b - C2.b Digital Signal Processing 9 cfu***						**3**			
1-2	I	**FORMATIVE ACTIVITIES/INTERNSHIP**	6		ALL	6					
2		**FINAL EXAM**	12		ALL	12					
		TOTAL CREDITS				**120 or *123**					

Date of submission

Date of Approval

Student's signature

School Office (*Simona Ranieri*)

The Coordinator (*Prof. C.M. Verrelli*)

Reserved to the Management office