

University of Pavia

Study Course: ELECTRONIC ENGINEERING - 06416

Classe LM-29 Ingegneria elettronica

Regulations 2013/2014 - Course Regulations a.y. 2023/2024

Study Plan academic year 2023/2024

STUDENT NUMBER N. SURNAME- NAME

TRACK 01 - MICROELECTRONICS

1° Year - academic year 2023/2024

Learning Activity	CFU	N°	N° (ind.)	Compulsory	Scientific Area	Type of learning activity	Period
510810 - ADVANCED MATHEMATICAL AND NUMERICAL METHODS FOR ENGINEERS	9	1		X			
Teaching unit of Advanced mathematical and numerical methods for engineers							
504434 - ADVANCED MATHEMATICAL METHODS FOR ENGINEERS	3				MAT/05	Related/Supplementary	
504710 - NUMERICAL METHODS IN ENGINEERING SCIENCES	6				MAT/08	Related/Supplementary	
507294 - INTRODUCTION TO QUANTUM MECHANICS	3	2		X	FIS/03	Related/Supplementary	
504990 - INTEGRATED CIRCUIT DEVICES	9	3		X	ING-INF/01	Distinctive	
504435 - ANALOG INTEGRATED CIRCUITS	9	4		X	ING-INF/01	Distinctive	
504439 - RF MICROELECTRONICS	9	5		X	ING-INF/01	Distinctive	
505002 - ELECTRONIC INSTRUMENTATION AND TECHNOLOGIES	9	6		X	ING-INF/01	Distinctive	
504437 - MICROWAVES	9	7		X	ING-INF/02	Distinctive	
504440 - DIGITAL IC DESIGN	6	8		X	ING-INF/01	Distinctive	
TOT. 63 CFU							

2° Year - academic year 2024/2025

Learning Activity	CFU	N°	N° (ind.)	Compulsory	Scientific Area	Type of learning activity	Period
509352 - INTEGRATED POWER MANAGEMENT	6	9			ING-INF/01	Distinctive	
504444 - ANTENNAS	6	9			ING-INF/02	Distinctive	
505021 - ELECTRO-OPTICAL INSTRUMENTATION	6	9			ING-INF/01	Distinctive	
509685 - ANALOG-DIGITAL INTERFACE CIRCUITS	6	10		X	ING-INF/01	Related/Supplementary	
510150 - MICROSENSORS, INTEGRATED MICROSYSTEMS AND MEMS	6	11			ING-INF/01	Related/Supplementary	
509686 - STATISTICAL SIGNAL PROCESSING	6	11			ING-INF/03	Related/Supplementary	
FREE CHOICE FROM THE UNIVERSITY COURSE OFFER	12	12*				Optional	
509352 - INTEGRATED POWER MANAGEMENT	6	12*			ING-INF/01	Optional	
510152 - INTEGRATED PHOTONIC CIRCUITS	6	12*			FIS/03	Optional	
504998 - DIGITAL COMMUNICATIONS	6	12*			ING-INF/03	Optional	
505018 - SATELLITE DATA ANALYSIS	6	12*			ING-INF/03	Optional	

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505021 - ELECTRO-OPTICAL INSTRUMENTATION	6	12*			ING-INF/01	Optional	
504717 - INDUSTRIAL CONTROL	6	12*			ING-INF/04	Optional	
507288 - INTERNET AND MULTIMEDIA	6	12*			ING-INF/03	Optional	
510150 - MICROSENSORS, INTEGRATED MICROSYSTEMS AND MEMS	6	12*			ING-INF/01	Optional	
505006 - MICROWAVE MEASUREMENTS	6	12*			ING-INF/02	Optional	
504464 - ORGANIZATION THEORY AND DESIGN	6	12*			SECS-P/06	Optional	
504462 - PROCESS CONTROL	6	12*			ING-INF/04	Optional	
505000 - RADAR REMOTE SENSING	6	12*			ING-INF/02	Optional	
504463 - ROBOT CONTROL	6	12*			ING-INF/04	Optional	
505017 - SATELLITE AND SPACE SYSTEMS	6	12*			ING-INF/02	Optional	
505012 - LASER SAFETY	6	12*			FIS/03	Optional	
503188 - STRUMENTAZIONE BIOMEDICA LM	6	12*			ING-INF/06	Optional	
508744 - BIOELETTROMAGNETISMO APPLICATO	6	12*			ING-INF/02	Optional	
509037 - HARDWARE SOFTWARE CODESIGN	6	12*			ING-INF/05	Optional	
510443 - MACHINE LEARNING FOR EARTH OBSERVATION DATA PROCESSING AND FUSION**	3	12*			ING-INF/03	Optional	
510775 - INTRODUCTION TO QUANTUM TECHNOLOGIES	3	12*			FIS/03	Optional	
509536 - ITALIAN LANGUAGE FOR FOREIGN STUDENTS	3	13*			NN	Other	
505013 - ADVANCED TOPICS IN MICROWAVE TECHNOLOGIES	3	13*			ING-INF/02	Other	
501246 - ETICA AMBIENTALE	3	13*			SECS-P/13	Other	
509379 - INDUSTRIAL TOPICS IN MICROELECTRONICS AND PHOTONICS	3	13*			ING-INF/01	Other	
507220 - PLANNING, MANAGEMENT AND SUPPLY OF GOODS AND SERVICES	3	13*			ING-IND/35	Other	
503327 - MASTER THESIS	24			X	PROFIN_S	Final Exam	
TOT. 57 CFU							

*Choose a total of 12 CFU for choice n°12; choose 3 CFU for choice n°13. **Learning activities not included in the lecture schedule

TRACK 02 - PHOTONICS

1° Year - academic year 2023/2024

Learning Activity	CFU	N°	N° (ind.)	Compulsory	Scientific Area	Type of learning activity	Period
510810 - ADVANCED MATHEMATICAL AND NUMERICAL METHODS FOR ENGINEERS	9	1		X			
Teaching unit of Advanced mathematical and numerical methods for engineers							
504434 - ADVANCED MATHEMATICAL METHODS FOR ENGINEERS		3			MAT/05	Related/Supplementary	
504710 - NUMERICAL METHODS IN ENGINEERING SCIENCES		6			MAT/08	Related/Supplementary	
504992 - OPTOELECTRONIC DEVICES	9	2		X	ING-INF/01	Distinctive	
508745 - INTRODUCTION TO QUANTUM MECHANICS AND QUANTUM TECHNOLOGIES	6	3		X	FIS/03	Related/Supplementary	
504444 - ANTENNAS	6	4			ING-INF/02	Distinctive	
510150 - MICROSENSORS, INTEGRATED MICROSYSTEMS AND MEMS	6	4			ING-INF/01	Distinctive	

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504437 - MICROWAVES	9	5		X	ING-INF/02	Distinctive	
504994 - OPTICAL COMMUNICATIONS	9	6		X	ING-INF/01	Distinctive	
510153 - QUANTUM ELECTRONICS AND NONLINEAR OPTICS	9	7		X	FIS/03	Related/Supplementary	
504998 - DIGITAL COMMUNICATIONS	6	8		X	ING-INF/03	Related/Supplementary	
TOT. 63 CFU							

2° Year - academic year 2024/2025

Learning Activity	CFU	N°	N° (ind.)	Compulsory	Scientific Area	Type of learning activity	Period
505021 - ELECTRO-OPTICAL INSTRUMENTATION	6	9		X	ING-INF/01	Distinctive	
505015 - INDUSTRIAL LASER DESIGN	6	10		X	ING-INF/01	Distinctive	
510152 - INTEGRATED PHOTONIC CIRCUITS	6	11		X	FIS/03	Related/Supplementary	
FREE CHOICE FROM THE UNIVERSITY COURSE OFFER	12	12*				Optional	
504999 - ANTENNAS AND PROPAGATION	9	12*			ING-INF/02	Optional	
504717 - INDUSTRIAL CONTROL	6	12*			ING-INF/04	Optional	
507288 - INTERNET AND MULTIMEDIA	6	12*			ING-INF/03	Optional	
510150 - MICROSENSORS, INTEGRATED MICROSYSTEMS AND MEMS	6	12*			ING-INF/01	Optional	
505006 - MICROWAVE MEASUREMENTS	6	12*			ING-INF/02	Optional	
502987 - OPTOELETTRONICA BIOMEDICA	6	12*			ING-INF/01	Optional	
504464 - ORGANIZATION THEORY AND DESIGN	6	12*			SECS-P/06	Optional	
504462 - PROCESS CONTROL	6	12*			ING-INF/04	Optional	
505018 - SATELLITE DATA ANALYSIS	6	12*			ING-INF/03	Optional	
505000 - RADAR REMOTE SENSING	6	12*			ING-INF/02	Optional	
504463 - ROBOT CONTROL	6	12*			ING-INF/04	Optional	
505017 - SATELLITE AND SPACE SYSTEMS	6	12*			ING-INF/02	Optional	
505012 - LASER SAFETY	6	12*			FIS/03	Optional	
503188 - STRUMENTAZIONE BIOMEDICA LM	6	12*			ING-INF/06	Optional	
509685 - ANALOG-DIGITAL INTERFACE CIRCUITS	6	12*			ING-INF/01	Optional	
508744 - BIOELETTRONICA APPLICATO	6	12*			ING-INF/02	Optional	
510154 - RETRIEVAL OF BIOPHYSICAL PARAMETERS FROM OPTICAL AND RADAR DATA	3	12*			ING-INF/03	Optional	
510155 - HYPERSPECTRAL DATA PROCESSING	3	12*			ING-INF/03	Optional	
510156 - SAR DIFFERENTIAL INTERFEROMETRY AND TOMOGRAPHY	3	12*			ING-INF/03	Optional	
510443 - MACHINE LEARNING FOR EARTH OBSERVATION DATA PROCESSING AND FUSION**	3	12*			ING-INF/03	Optional	
509536 - ITALIAN LANGUAGE FOR FOREIGN STUDENTS	3	13*			NN	Other	
505013 - ADVANCED TOPICS IN MICROWAVE TECHNOLOGIES	3	13*			ING-INF/02	Other	
509379 - INDUSTRIAL TOPICS IN MICROELECTRONICS AND PHOTONICS	3	13*			ING-INF/01	Other	

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501246 - ETICA AMBIENTALE	3	13*			SECS-P/13	Other	
507220 - PLANNING, MANAGEMENT AND SUPPLY OF GOODS AND SERVICES	3	13*			ING-IND/35	Other	
503327 - MASTER THESIS	24			X	PROFIN_S	Final Exam	
TOT. 57 CFU							

*Choose a total of 12 CFU for choice n°12; choose 3 CFU for choice n°13. **Learning activities not included in the lecture schedule

TRACK 03 - SPACE COMMUNICATION AND SENSING

1° Year - academic year 2023/2024

Learning Activity	CFU	N°	N° (ind.)	Compulsory	Scientific Area	Type of learning activity	Period
510810 - ADVANCED MATHEMATICAL AND NUMERICAL METHODS FOR ENGINEERS	9	1		X			
Teaching unit of Advanced mathematical and numerical methods for engineers							
504434 - ADVANCED MATHEMATICAL METHODS FOR ENGINEERS	3				MAT/05	Related/Supplementary	
504710 - NUMERICAL METHODS IN ENGINEERING SCIENCES	6				MAT/08	Related/Supplementary	
505018 - SATELLITE DATA ANALYSIS	9	2		X	ING-INF/03	Related/Supplementary	
510158 - MACHINE LEARNING AND CLOUD COMPUTING ON SATELLITE DATA	6	3			ING-INF/03	Related/Supplementary	
Teaching Unit of MACHINE LEARNING AND CLOUD COMPUTING ON SATELLITE DATA							
510159 - MACHINE LEARNING FOR EARTH OBSERVATION	3				ING-INF/03	Related/Supplementary	
510160 - EARTH ENGINE FOR EO DATA PROCESSING	3				ING-INF/03	Related/Supplementary	
508745 - INTRODUCTION TO QUANTUM MECHANICS AND QUANTUM TECHNOLOGIES	6	3			FIS/03	Related/Supplementary	
504999 - ANTENNAS AND PROPAGATION	9	4		X	ING-INF/02	Distinctive	
504437 - MICROWAVES	9	5		X	ING-INF/02	Distinctive	
504994 - OPTICAL COMMUNICATIONS	9	6			ING-INF/01	Distinctive	
504439 - RF MICROELECTRONICS	9	6			ING-INF/01	Distinctive	
505000 - RADAR REMOTE SENSING	6	7		X	ING-INF/02	Distinctive	
504998 - DIGITAL COMMUNICATIONS	6	8		X	ING-INF/03	Related/Supplementary	
TOT. 63 CFU							

2° Year - academic year 2024/2025

Learning Activity	CFU	N°	N° (ind.)	Compulsory	Scientific Area	Type of learning activity	Period
505021 - ELECTRO-OPTICAL INSTRUMENTATION	6	9			ING-INF/01	Distinctive	
505017 - SATELLITE AND SPACE SYSTEMS	6	9			ING-INF/02	Distinctive	
505006 - MICROWAVE MEASUREMENTS	6	10		X	ING-INF/02	Distinctive	
509686 - STATISTICAL SIGNAL PROCESSING	6	11		X	ING-INF/03	Related/Supplementary	

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FREE CHOICE FROM THE UNIVERSITY COURSE OFFER	12	12*				Optional	
505021 - ELECTRO-OPTICAL INSTRUMENTATION	6	12*			ING-INF/01	Optional	
504717 - INDUSTRIAL CONTROL	6	12*			ING-INF/04	Optional	
507288 - INTERNET AND MULTIMEDIA	6	12*			ING-INF/03	Optional	
510150 - MICROSENSORS, INTEGRATED MICROSYSTEMS AND MEMS	6	12*			ING-INF/01	Optional	
504464 - ORGANIZATION THEORY AND DESIGN	6	12*			SECS-P/06	Optional	
504462 - PROCESS CONTROL	6	12*			ING-INF/04	Optional	
504463 - ROBOT CONTROL	6	12*			ING-INF/04	Optional	
505017 - SATELLITE AND SPACE SYSTEMS	6	12*			ING-INF/02	Optional	
508745 - INTRODUCTION TO QUANTUM MECHANICS AND QUANTUM TECHNOLOGIES	6	12*			FIS/03	Optional	
505012 - LASER SAFETY	6	12*			FIS/03	Optional	
503188 - STRUMENTAZIONE BIOMEDICA LM	6	12*			ING-INF/06	Optional	
508744 - BIOELETTROMAGNETISMO APPLICATO	6	12*			ING-INF/02	Optional	
510159 - MACHINE LEARNING FOR EARTH OBSERVATION	3	12*			ING-INF/03	Optional	
510160 - EARTH ENGINE FOR EO DATA PROCESSING	3	12*			ING-INF/03	Optional	
510161 - REMOTE SENSING FOR WATER APPLICATIONS**	3	12*			ING-INF/03	Optional	
510162 - REMOTE SENSING FOR WILDFIRE APPLICATIONS**	3	12*			ING-INF/03	Optional	
510154 - RETRIEVAL OF BIOPHYSICAL PARAMETERS FROM OPTICAL AND RADAR DATA**	3	12*			ING-INF/03	Optional	
510155 - HYPERSPECTRAL DATA PROCESSING**	3	12*			ING-INF/03	Optional	
510156 - SAR DIFFERENTIAL INTERFEROMETRY AND TOMOGRAPHY**	3	12*			ING-INF/03	Optional	
510163 - PROCESSING OF MULTI-FREQUENCY SAR IMAGES**	3	12*			ING-INF/03	Optional	
510443 - MACHINE LEARNING FOR EARTH OBSERVATION DATA PROCESSING AND FUSION**	3	12*			ING-INF/03	Optional	
509536 - ITALIAN LANGUAGE FOR FOREIGN STUDENTS	3	13*			NN	Other	
505013 - ADVANCED TOPICS IN MICROWAVE TECHNOLOGIES	3	13*			ING-INF/02	Other	
509379 - INDUSTRIAL TOPICS IN MICROELECTRONICS AND PHOTONICS	3	13*			ING-INF/01	Other	
501246 - ETICA AMBIENTALE	3	13*			SECS-P/13	Other	
507220 - PLANNING, MANAGEMENT AND SUPPLY OF GOODS AND SERVICES	3	13*			ING-IND/35	Other	
503327 - MASTER THESIS	24			X	PROFIN_S	Final Exam	
TOT. 57 CFU							

*Choose a total of 12 CFU for choice n°12; choose 3 CFU for choice n°13. **Learning activities not included in the lecture schedule

[For the semester assigned to each training activity, refer to the timetable published on the Faculty website](#)

[For more information please refer to the course catalogue](#)

Date

Signature

The study plan is not to be modified. Students can apply for an exception but they have to submit a valid motive. When a student submit a change which is not proposed in a standard study plan, the study plan becomes an individual study plan. In order to do so, draw a line on the subject you wish to change, add the new subject in the orange boxes at the end of the study plan. Insert the progressive number assigned to the subject you wish to change. Please note that a revenue stamp of 16€ is due to apply for an individual study plan. This new plan will have to be approved by the committee designated by the competent Teaching Council.