

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			First Semester
Teaching unit of Advanced mathematical and numerical methods for engineers							
504434 - ADVANCED MATHEMATICAL METHODS FOR ENGINEERS	3				MAT/05	Related/Supplementary	First Semester
504710 - NUMERICAL METHODS IN ENGINEERING SCIENCES	6				MAT/08	Related/Supplementary	First Semester
507294 - INTRODUCTION TO QUANTUM MECHANICS	3	2		X	FIS/03	Related/Supplementary	First Semester
504990 - INTEGRATED CIRCUIT DEVICES	9	3		X	ING-INF/01	Distinctive	First Semester
504435 - ANALOG INTEGRATED CIRCUITS	9	4		X	ING-INF/01	Distinctive	First Semester
504439 - RF MICROELECTRONICS	9	5		X	ING-INF/01	Distinctive	Second Semester
505002 - ELECTRONIC INSTRUMENTATION AND TECHNOLOGIES	9	6		X	ING-INF/01	Distinctive	Second Semester
504437 - MICROWAVES	9	7		X	ING-INF/02	Distinctive	Second Semester
504440 - DIGITAL IC DESIGN	6	8		X	ING-INF/01	Distinctive	Second Semester
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	First Semester
504444 - ANTENNAS	6	9			ING-INF/02	Distinctive	First Semester
505021 - ELECTRO-OPTICAL INSTRUMENTATION	6	9			ING-INF/01	Distinctive	First Semester
509685 - ANALOG-DIGITAL INTERFACE CIRCUITS	6	10		X	ING-INF/01	Related/Supplementary	First Semester
510150 - MICROSENSORS, INTEGRATED MICROSYSTEMS AND MEMS	6	11			ING-INF/01	Related/Supplementary	First Semester
509686 - STATISTICAL SIGNAL PROCESSING	6	11			ING-INF/03	Related/Supplementary	First Semester
FREE CHOICE FROM THE UNIVERSITY COURSE OFFER	12	12*				Optional	
509352 - INTEGRATED POWER MANAGEMENT	6	12*			ING-INF/01	Optional	First Semester
510152 - INTEGRATED PHOTONIC CIRCUITS	6	12*			FIS/03	Optional	First Semester
504998 - DIGITAL COMMUNICATIONS	6	12*			ING-INF/03	Optional	Second Semester
505018 - SATELLITE DATA ANALYSIS	6	12*			ING-INF/03	Optional	First Semester

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505021 - ELECTRO-OPTICAL INSTRUMENTATION	6	12*			ING-INF/01	Optional	First Semester
504717 - INDUSTRIAL CONTROL	6	12*			ING-INF/04	Optional	Second Semester
507288 - INTERNET AND MULTIMEDIA	6	12*			ING-INF/03	Optional	First Semester
510150 - MICROSENSORS, INTEGRATED MICROSYSTEMS AND MEMS	6	12*			ING-INF/01	Optional	First Semester
505006 - MICROWAVE MEASUREMENTS	6	12*			ING-INF/02	Optional	First Semester
504464 - ORGANIZATION THEORY AND DESIGN	6	12*			SECS-P/06	Optional	Second Semester
504462 - PROCESS CONTROL	6	12*			ING-INF/04	Optional	First Semester
505000 - RADAR REMOTE SENSING	6	12*			ING-INF/02	Optional	Second Semester
504463 - ROBOT CONTROL	6	12*			ING-INF/04	Optional	Second Semester
505017 - SATELLITE AND SPACE SYSTEMS	6	12*			ING-INF/02	Optional	First Semester
505012 - LASER SAFETY	6	12*			FIS/03	Optional	First Semester
503188 - STRUMENTAZIONE BIOMEDICA LM	6	12*			ING-INF/06	Optional	First Semester
508744 - BIOELETTROMAGNETISMO APPLICATO	6	12 *			ING-INF/02	Optional	Secondo Semestre
509037 - HARDWARE SOFTWARE CODESIGN	6	12 *			ING-INF/05	Optional	First Semester
510443 - MACHINE LEARNING FOR EARTH OBSERVATION DATA PROCESSING AND FUSION**	3	12*			ING-INF/03	Optional	Second Semester
510775 - INTRODUCTION TO QUANTUM TECHNOLOGIES	3	12*			FIS/03	Optional	First Semester
509536 - ITALIAN LANGUAGE FOR FOREIGN STUDENTS	3	13*			NN	Other	First Semester
505013 - ADVANCED TOPICS IN MICROWAVE TECHNOLOGIES	3	13*			ING-INF/02	Other	All Year
501246 - ETICA AMBIENTALE	3	13*			SECS-P/13	Other	Second Semester
509379 - INDUSTRIAL TOPICS IN MICROELECTRONICS AND PHOTONICS	3	13*			ING-INF/01	Other	All Year
507220 - PLANNING, MANAGEMENT AND SUPPLY OF GOODS AND SERVICES	3	13*			ING-IND/35	Other	Second Semester
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			First Semester
Teaching unit of Advanced mathematical and numerical methods for engineers							
504434 - ADVANCED MATHEMATICAL METHODS FOR ENGINEERS		3			MAT/05	Related/Supplementary	First Semester
504710 - NUMERICAL METHODS IN ENGINEERING SCIENCES		6			MAT/08	Related/Supplementary	First Semester
504992 - OPTOELECTRONIC DEVICES	9	2		X	ING-INF/01	Distinctive	First Semester
508745 - INTRODUCTION TO QUANTUM MECHANICS AND QUANTUM TECHNOLOGIES	6	3		X	FIS/03	Related/Supplementary	First Semester
504444 - ANTENNAS	6	4			ING-INF/02	Distinctive	First Semester
510150 - MICROSENSORS, INTEGRATED MICROSYSTEMS AND MEMS	6	4			ING-INF/01	Distinctive	First Semester

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504437 - MICROWAVES	9	5		X	ING-INF/02	Distinctive	Second Semester
504994 - OPTICAL COMMUNICATIONS	9	6		X	ING-INF/01	Distinctive	Second Semester
510153 - QUANTUM ELECTRONICS AND NONLINEAR OPTICS	9	7		X	FIS/03	Related/Supplementary	Second Semester
504998 - DIGITAL COMMUNICATIONS	6	8		X	ING-INF/03	Related/Supplementary	Second Semester
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	First Semester
505015 - INDUSTRIAL LASER DESIGN	6	10		X	ING-INF/01	Distinctive	First Semester
510152 - INTEGRATED PHOTONIC CIRCUITS	6	11		X	FIS/03	Related/Supplementary	First Semester
FREE CHOICE FROM THE UNIVERSITY COURSE OFFER	12	12*				Optional	
504999 - ANTENNAS AND PROPAGATION	9	12*			ING-INF/02	Optional	First Semester
504717 - INDUSTRIAL CONTROL	6	12*			ING-INF/04	Optional	Second Semester
507288 - INTERNET AND MULTIMEDIA	6	12*			ING-INF/03	Optional	First Semester
510150 - MICROSENSORS, INTEGRATED MICROSYSTEMS AND MEMS	6	12*			ING-INF/01	Optional	First Semester
505006 - MICROWAVE MEASUREMENTS	6	12*			ING-INF/02	Optional	First Semester
502987 - OPTOELETTRONICA BIOMEDICA	6	12*			ING-INF/01	Optional	Second Semester
504464 - ORGANIZATION THEORY AND DESIGN	6	12*			SECS-P/06	Optional	Second Semester
504462 - PROCESS CONTROL	6	12*			ING-INF/04	Optional	First Semester
505018 - SATELLITE DATA ANALYSIS	6	12*			ING-INF/03	Optional	First Semester
505000 - RADAR REMOTE SENSING	6	12*			ING-INF/02	Optional	Second Semester
504463 - ROBOT CONTROL	6	12*			ING-INF/04	Optional	Second Semester
505017 - SATELLITE AND SPACE SYSTEMS	6	12*			ING-INF/02	Optional	First Semester
505012 - LASER SAFETY	6	12*			FIS/03	Optional	First Semester
503188 - STRUMENTAZIONE BIOMEDICA LM	6	12*			ING-INF/06	Optional	First Semester
509685 - ANALOG-DIGITAL INTERFACE CIRCUITS	6	12*			ING-INF/01	Optional	First Semester
508744 - BIOELETTRONICA APPLICATO	6	12*			ING-INF/02	Optional	Secondo Semestre
510154 - RETRIEVAL OF BIOPHYSICAL PARAMETERS FROM OPTICAL AND RADAR DATA	3	12*			ING-INF/03	Optional	Second Semester
510155 - HYPERSPECTRAL DATA PROCESSING	3	12*			ING-INF/03	Optional	Second Semester
510156 - SAR DIFFERENTIAL INTERFEROMETRY AND TOMOGRAPHY	3	12*			ING-INF/03	Optional	Second Semester
510443 - MACHINE LEARNING FOR EARTH OBSERVATION DATA PROCESSING AND FUSION**	3	12*			ING-INF/03	Optional	Second Semester
509536 - ITALIAN LANGUAGE FOR FOREIGN STUDENTS	3	13*			NN	Other	First Semester
505013 - ADVANCED TOPICS IN MICROWAVE TECHNOLOGIES	3	13*			ING-INF/02	Other	All Year
509379 - INDUSTRIAL TOPICS IN MICROELECTRONICS AND PHOTONICS	3	13*			ING-INF/01	Other	All Year
501246 - ETICA AMBIENTALE	3	13*			SECS-P/13	Other	Second Semester

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507220 - PLANNING, MANAGEMENT AND SUPPLY OF GOODS AND SERVICES	3	13*			ING-IND/35	Other	Second Semester
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			First Semester
Teaching unit of Advanced mathematical and numerical methods for engineers							
504434 - ADVANCED MATHEMATICAL METHODS FOR ENGINEERS	3				MAT/05	Related/Supplementary	First Semester
504710 - NUMERICAL METHODS IN ENGINEERING SCIENCES	6				MAT/08	Related/Supplementary	First Semester
505018 - SATELLITE DATA ANALYSIS	9	2		X	ING-INF/03	Related/Supplementary	First Semester
510158 - MACHINE LEARNING AND CLOUD COMPUTING ON SATELLITE DATA	6	3			ING-INF/03	Related/Supplementary	Second Semester
Teaching Unit of MACHINE LEARNING AND CLOUD COMPUTING ON SATELLITE DATA							
510159 - MACHINE LEARNING FOR EARTH OBSERVATION	3				ING-INF/03	Related/Supplementary	Second Semester
510160 - EARTH ENGINE FOR EO DATA PROCESSING	3				ING-INF/03	Related/Supplementary	Second Semester
508745 - INTRODUCTION TO QUANTUM MECHANICS AND QUANTUM TECHNOLOGIES	6	3			FIS/03	Related/Supplementary	First Semester
504999 - ANTENNAS AND PROPAGATION	9	4		X	ING-INF/02	Distinctive	First Semester
504437 - MICROWAVES	9	5		X	ING-INF/02	Distinctive	Second Semester
504994 - OPTICAL COMMUNICATIONS	9	6			ING-INF/01	Distinctive	Second Semester
504439 - RF MICROELECTRONICS	9	6			ING-INF/01	Distinctive	Second Semester
505000 - RADAR REMOTE SENSING	6	7		X	ING-INF/02	Distinctive	Second Semester
504998 - DIGITAL COMMUNICATIONS	6	8		X	ING-INF/03	Related/Supplementary	Second Semester
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	First Semester
505017 - SATELLITE AND SPACE SYSTEMS	6	9			ING-INF/02	Distinctive	First Semester
505006 - MICROWAVE MEASUREMENTS	6	10		X	ING-INF/02	Distinctive	First Semester
509686 - STATISTICAL SIGNAL PROCESSING	6	11		X	ING-INF/03	Related/Supplementary	First Semester
FREE CHOICE FROM THE UNIVERSITY COURSE OFFER	12	12*				Optional	

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

[The semester assigned to each learning activity may change. Refer to the time schedule published in the faculty website for confirmation](#)

[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.