DOUBLE DIPLOMA ON COMMUNICATIONS ELECTRONIC ENGINEERING (B.ENG) AND TELEMATICS ENGINEERING (B.ENG.)
(CODE 59ET)

ACADEMIC YEAR 2026-2027

FIRST YEAR

CODE	COURSES	ECTS	TYPE	SEMESTER	DEPARTMENT CODE
595300001	LINEAR ALGEBRA	6	Elem	1st	D540
595300003	CIRCUITS ANALYSIS I	6	Elem	1st	D250
595300002	CALCULUS I	6	Elem	1st	D540
595300005	INTRODUCTION TO TELECOMMUNICATIONS	3	Comp	1st	D250
595300004	PROGRAMMING I	6	Elem	1st	D230
595300000	INTRODUCTORY WORKSHOP ON ENGINEERING	3	Comp	1st	D250
595300007	CIRCUITS ANALYSIS II	6	Elem	2nd	D250
595300009	CALCULUS II	6	Elem	2nd	D540
595300006	PROFESSIONAL COMMUNICATION SKILLS	3	Comp	2nd	D240
595300008	ELECTRONICS I	6	Elem	1st and 2nd	D230
595300010	PROGRAMMING II	6	Elem	1st and 2nd	D230
595300011	SEARCH TECHNIQUES AND INFORMATION SYSTEMS	3	Comp	2nd	D230

SECOND YEAR

CODE	COURSES	ECTS	TYPE	SEMESTER	DEPARTMENT CODE
595300012	ELECTROMAGNETISM AND WAVES	6	Elem	1st and 2nd	D510
595300014	ELECTRONICS II	6	Comp	1st and 2nd	D230
595300013	STATISTICS AND STOCHASTIC PROCESSES	6	Elem	1st	D540
595300015	TELECOMMUNICATIONS NETWORKS AND SERVICES	6	Comp	1st	D230
595300016	SIGNALS AND SYSTEMS	6	Comp	1st and 2nd	D250
595300017	SCIENCE, TECHNOLOGY AND SOCIETY	3	Comp	2nd	D230
595300020	MICROPROCESSORS	6	Comp	1st and 2nd	D230
595300023	ANALOG ELECTRONICS I	6	Comp	2nd	D230
595300018	WAVE PROPAGATION	4.5	Comp	1st and 2nd	D510
595300222	ADVANCED APPLICATION PROGRAMMING	6	Comp	2nd	D230
595300019	COMPUTER NETWORKS	4.5	Comp	2nd	D230

THIRD YEAR

CODE	COURSES	ECTS	TYPE	SEMESTER	DEPARTMENT CODE
595300027	DIGITAL DESIGN I	4.5	Comp	1st	D230
595300024	ECONOMICS AND BUSINESS MANAGEMENT	4.5	Comp	1st	D400
595300025	DIGITAL SIGNAL PROCESSING	4.5	Comp	1st and 2nd	D250
595300227	SIGNALLING AND SWITCHING	6	Comp	1st	D230
595300228	TRANSMISSION SYSTEMS	6	Comp	1st	D230
595300026	OPERATING SYSTEMS	4.5	Comp	1st	D230
595300032	ANALOG ELECTRONICS II	6	Comp	2nd	D230
595300232	INFORMATION PROCESSING IN TELEMATIC APPLICATIONS	4.5	Comp	2nd	D230
595300231	ADVANCED NETWORKS AND SERVICES	6	Comp	2nd	D230
595300021	COMMUNICATION THEORY	6	Comp	2nd	D250
595300033	PRODUCTION TECHNOLOGIES OF ELECTRONICS SYSTEMS	4.5	Comp	2nd	0910
	ELECTIVE SUBJECTS/INTERNSHIP CREDITS	3	Elec	2º	

FOURTH YEAR

CODE	COURSES	ECTS	TYPE	SEMESTER	DEPARTMENT CODE
595300226	MODELLING LANGUAGES	4.5	Comp	1st	D230
595300035	ELECTRONIC INSTRUMENTATION	6	Comp	1st	D230
595300030	AUDIOVISUAL SYSTEMS	4.5	Comp	1st	D250
595300028	MICROPROCESSOR-BASED SYSTEMS	6	Comp	1st	D230
595300036	ELECTRONIC POWER SYSTEMS	4.5	Comp	1st	D230
595300235	COMMUNICATIONS SOFTWARE	4.5	Comp	1st	D230
595300031	DIGITAL DESIGN II	6	Comp	2nd	D230
595300037	PROJECT MANAGEMENT	4.5	Comp	2nd	D400
595300038	ELECTRONIC SYSTEMS ENGINEERING	4.5	Comp	2nd	D230
595300230	NETWORKS AND SERVICES SECURITY	6	Comp	2nd	D230
595300237	ADVANCED TELEMATIC APPLICATIONS	4.5	Comp	2nd	D230
	ELECTIVE SUBJECTS/INTERNSHIP CREDITS	4.5	Elec	1º	

FIFTH YEAR

CÓDIGO	ASIGNATURAS	ECTS	TIPO	PERIODO	COD. DPTO.
595300034	ENGLISH FOR PROFESSIONAL AND ACADEMIC COMMUNICATION (*)	6	Comp	1st and 2nd	D240
595300029	CONTROL SYSTEMS	6	Comp	1st	D230
595300234	MOBILE COMMUNICATIONS NETWORKS	6	Comp	1st	D230
	ELECTIVE SUBJECTS/INTERNSHIP CREDITS	12	Elec	1º	
595300040	FINAL DEGREE PROJECT (**)	12	Comp	1st and 2nd	ALL
595300240	FINAL DEGREE PROJECT (**)	12	Comp	1st and 2nd	ALL
	ELECTIVE SUBJECTS/INTERNSHIP CREDITS	6	Elec	2º	

(*) A B2 English certificate is required for the enrolment.

TYPE OF COURSES:

- *"Elem"* – Elementary.
- *"Comp"* – Compulsory.
- *"Elec"* – Elective.

ELECTIVE COURSES

TYPE	SPEC	SEMESTER	CODE	COURSES	ECTS	REQUIREMENTS	DEPT. CODE
A	EC	1st	595040044	PRODUCT ENGINEERING	4.5	--	D510
			595040048	HARDWARE FOR INTERNET OF THINGS (IoT)	4.5		D510
			595040049	PROGRAMMING IN LABVIEW	4.5	--	D510/D230
			595040050	SYSTEMVERILOG FOR DESIGN AND VERIFICATION	3	015/021 031	D230
	TL		595040503	MULTI-PARADIGM PROGRAMMING FOR DATA SYSTEMS	6	--	D230
	EC	2nd	595040041	INDUSTRIAL AUTOMATION	4.5	--	D230
			595040047	EMBEDDED SYSTEMS DESIGN WITH RASPBERRY PI	4.5	--	D230
			595040050	FUNDAMENTALS OF ENERGY HARVESTING	4.5		D230
			595040042	PHOTOVOLTAIC ENGINEERING	4.5	--	D510
	TL		595010242	NETWORK AND SYSTEM ADMINISTRATION	4.5	--	D230
			595040254	EMERGING ICT FOR SUSTAINABILITY			D230
			595040518	SENSOR NETWORKS	6	--	D230
	ID	2nd	595040506	RELATIONAL DATABASES AND STRUCTURED DATA	6	--	D230
			595040507	MATHEMATICAL MODELS AND DISCRETE MATHEMATICS	6	--	D540
			595040508	OPTIMIZATION	6	--	D540
B	SC	1st	595024327	WAVE TRANSMISSION AND PROPAGATION	6	--	D250
			595024328	COMMUNICATIONS ELECTRONICS I	6	--	D250
		2nd	595024322	ANALOG ELECTRONICS	6	--	D250
			595024331	COMMUNICATIONS ELECTRONICS II	6	20328	D250
	SO	1st	595024126	AUDIO ENGINEERING I	4,5	20122	D250
			595024128	IMAGE AND VIDEO TECHNOLOGIES	6	20122	D250
		2nd	595024122	SOUND AND IMAGES FUNDAMENTALS	6	--	D250
			595024131	AUDIO ENGINEERING II	6	20122	D250
C		1st / 2nd	595040064	AIMING AT B2 IN ENGLISH	3	--	D240
			595040067	INTERNATIONAL PROJECT	3	--	D250
		1st	595040341	COMMUNICATION SYSTEM ARCHITECTURE	4.5	--	D250
			595040066	INTRODUCTION TO MACHINE LEARNING	3	--	D230
			595040060	RENEWABLE ENERGY	3	--	D510
		2nd	595330074	CIS TO DEFENCE	3	--	D250
			595040537	INTRODUCTION TO QUANTUM COMPUTING	4,5	--	D540
			595040063	THIN WEB CLIENT PROGRAMMING	6	--	D230
			595040065	WOMEN IN SCIENCE AND TECHNOLOGY	3	--	D510

TYPE	SEMESTER	CODE	COURSES	ECTS
PE	1º y 2º	595330075	P1 INTERNSHIP CREDITS	3
		595040090	P1B INTERNSHIP CREDITS	3
		595040093	P1C INTERNSHIP CREDITS	3
		595330076	P2 INTERNSHIP CREDITS	4.5
		595040091	P2B INTERNSHIP CREDITS	4.5
		595040094	P2C INTERNSHIP CREDITS	4.5
		595330077	P3 INTERNSHIP CREDITS	6
		595040092	P3B INTERNSHIP CREDITS	6
		595330078	P4 INTERNSHIP CREDITS	9
		595330079	P5 INTERNSHIP CREDITS	12
		595330087	P6 INTERNSHIP CREDITS	15

ELECTIVE COURSES

- Each student must pass at least 25.5 elective ECTS to complete the double degree.

TYPES OF ELECTIVE COURSES

Each academic year, the School Board will establish the range of optional courses.

A **Type -** Elective courses to strengthen the specialty.
B **Type -** Elective courses to strengthen other specialties.
C **Type -** Elective courses for the four degrees.
PE **-** Internship credits.

ADMISSION REQUIREMENTS FOR ELECTIVE COURSES

To enroll on an elective course, every student must have taken or passed the course(s) shown in the **REQUIREMENTS** box.

SPEC.:
EC: Electronics for Communications.
SC: Telecommunications Systems.
SO: Image and Sound.
TL: Telematics.

DEPARTMENT CODES
D230: Telematics and Electronic Engineering.
D240: Linguistics Applied to Science and Technology.
D250: Audiovisual and Communications Engineering
D400: Organization Engineering, Business Management and Statistics.
D510: Physical Electronics, Electrical Engineering and Applied Physics.
D540: Mathematics Applied to Information and Communication Technologies.