

BACHELOR ENGINEERING PROGRAM IN ELECTRONICS AND COMMUNICATIONS ENGINEERING (CODE 59EC)

ACADEMIC YEAR 2023/2024

FIRST YEAR

CODE	COURSES	ECTS	TYPE	SEMESTER	DEPARTMENT CODE
595000002	LINEAR ALGEBRA	6	Elem	1 st	D540
595000004	CIRCUITS ANALYSIS I	6	Elem	1 st	D250
595000003	CALCULUS I	6	Elem	1 st	D540
595000006	INTRODUCTION TO TELECOMMUNICATIONS	3	Comp	1 st	D250
595000005	PROGRAMMING I	6	Elem	1 st	D230
595000001	INTRODUCTORY WORKSHOP ON ENGINEERING	3	Comp	1 st	D250
595000008	CIRCUITS ANALYSIS II	6	Elem	2 nd	D250
595000010	CALCULUS II	6	Elem	2 nd	D540
595000007	PROFESSIONAL COMMUNICATION SKILLS	3	Comp	2 nd	D240
595000009	ELECTRONICS I	6	Elem	1 st and 2 nd	D230
595000011	PROGRAMMING II	6	Elem	1 st and 2 nd	D230
595000012	SEARCH TECHNIQUES AND INFORMATION SYSTEMS	3	Comp	2 nd	D230

SECOND YEAR

CODE	COURSES	ECTS	TYPE	SEMESTER	DEPARTMENT CODE
595000013	ELECTROMAGNETISM AND WAVES	6	Elem	1 st and 2 nd	D510
595000015	ELECTRONICS II	6	Comp	1 st and 2 nd	D230
595000014	STATISTICS AND STOCHASTIC PROCESSES	6	Elem	1 st and 2 nd	D540
595000016	TELECOMMUNICATIONS NETWORKS AND SERVICES	6	Comp	1 st	D230
595000017	SIGNALS AND SYSTEMS	6	Comp	1 st and 2 nd	D250
595000018	SCIENCE, TECHNOLOGY AND SOCIETY	3	Comp	1 st and 2 nd	D230
595000023	ANALOG ELECTRONICS I	6	Comp	2 nd	D230
595000021	MICROPROCESSORS	6	Comp	1 st and 2 nd	D230
595000025	DIGITAL SIGNAL PROCESSING	4.5	Comp	1 st and 2 nd	D250
595000019	WAVE PROPAGATION	4.5	Comp	1 st and 2 nd	D510
595000022	COMMUNICATION THEORY	6	Comp	1 st and 2 nd	D250

THIRD YEAR

CODE	COURSES	ECTS	TYPE	SEMESTER	DEPARTMENT CODE
595000027	DIGITAL DESIGN I	4.5	Comp	1 st	D230
595000024	ECONOMICS AND BUSINESS MANAGEMENT	4.5	Comp	1 st	D400
595000030	AUDIOVISUAL SYSTEMS	4.5	Comp	1 st	D250
595000028	MICROPROCESSOR-BASED SYSTEMS	6	Comp	1 st	D230
595000029	CONTROL SYSTEMS	6	Comp	1 st	D230
595000026	OPERATING SYSTEMS	4.5	Comp	1 st	D230
595000031	DIGITAL DESIGN II	6	Comp	2 nd	D230
595000032	ANALOG ELECTRONICS II	6	Comp	2 nd	D230
595000020	COMPUTER NETWORKS	4.5	Comp	2 nd	D230
595000033	PRODUCTION TECHNOLOGIES OF ELECTRONICS SYSTEMS	4.5	Comp	2 nd	0910
	ELECTIVE SUBJECTS/INTERNSHIP CREDITS	9	Elec	2 nd	

FORTH YEAR

CODE	COURSES	ECTS	TYPE	SEMESTER	DEPARTMENT CODE
595000034	ENGLISH FOR PROFESSIONAL AND ACADEMIC COMMUNICATION (*)	6	Comp	1 st and 2 nd	D240
595000035	ELECTRONIC INSTRUMENTATION	6	Comp	1 st	D230
595000036	ELECTRONIC POWER SYSTEMS	4.5	Comp	1 st	D230
	ELECTIVE SUBJECTS/INTERNSHIP CREDITS	13.5	Elec	1 st	
595000037	PROJECT MANAGEMENT	4.5	Comp	2 nd	D400
595000038	ELECTRONIC SYSTEMS ENGINEERING	4.5	Comp	2 nd	D230
595000040	FINAL DEGREE PROJECT *	12	Comp	1 st and 2 nd	ALL
	ELECTIVE SUBJECTS/INTERNSHIP CREDITS	9	Elec	2 nd	

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

TYPE OF COURSES:

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

ELECTIVE COURSES

TYPE	SPEC	SEMESTER	YEAR	CODE	COURSES	ECTS	REQUIREMENTS	DEPT. CODE
A	EC	1 st	4 th	595010044	PRODUCT ENGINEERING	4.5	--	D510
			4 th	595040048	HARDWARE FOR INTERNET OF THINGS (IoT)	4.5	028	D230
			4 th	595040049	PROGRAMMING IN LABVIEW	4.5	--	D510/ D230
		2 nd	3 st	595040041	INDUSTRIAL AUTOMATION	4.5	--	D230
			3 st	595040047	EMBEDDED SYSTEMS DESIGN USING RASPBERRY PI	4.5	--	D230
			4 th	595040042	PHOTOVOLTAIC ENGINEERING	4.5	--	D510/ D230
			4 th	595040050	FUNDAMENTALS OF ENERGY HARVESTING	4.5	--	D230
B	SC	1 st		595024327	WAVE TRANSMISSION AND PROPAGATION	6	--	D250
				595024328	COMMUNICATIONS ELECTRONICS I	6	--	D250
		2 nd		595024322	ANALOG ELECTRONICS	6	--	D250
				595024331	COMMUNICATIONS ELECTRONICS II	6	24328	D250
	SO	1 st		595024126	AUDIO ENGINEERING I	4.5	240122	D250
				595024128	IMAGE AND VIDEO TECHNOLOGIES	6	24122	D250
		2 nd		595024122	SOUND AND IMAGES FUNDAMENTALS	6	--	D250
				595024131	AUDIO ENGINEERING II	6	24122	D250
	TL	1 st		595024228	TRANSMISSION SYSTEMS	6	--	D230
				595024234	MOBILE COMMUNICATIONS NETWORKS	6	--	D230
		2 nd		595024222	ADVANCED APPLICATION PROGRAMMING	6	--	D230
				595024231	NETWORKS AND SERVICES SECURITY	6	--	D230
C		1 st /2 nd		595040064	AIMING AT B2 IN ENGLISH	3	--	D240
		1 st		595040341	COMMUNICATION SYSTEM ARCHITECTURE	4.5	--	D250
				595040066	INTRODUCTION TO MACHINE LEARNING	3	--	D230
				595040253	MULTI-PARADIGM PROGRAMMING FOR ICT	4.5	--	D230
				595040060	RENEWABLE ENERGY	3	--	D510
				595040061	SMART HOME	3	--	D230
				595040062	TELECOMUNNICATION COMMON INFRASTRUCTURES	3	--	D250
		2 nd		595040074	CIS TO DEFENCE	3	--	D250
				595040072	DISCRETE MATHEMATICS	3	--	D540
				595040073	DYNAMICAL SYSTEMS	3	--	D540
				595040254	EMERGING ICT FOR SUSTAINABILITY	4.5	--	D230
				595040537	INTRODUCTION TO QUANTUM COMPUTING	4,5	--	D540
				595040070	MANAGEMENT OF TECHNOLOGICAL INNOVATION	3	--	D230
				595040065	WOMEN IN SCIENCE AND TECHNOLOGY	3	--	D510

TIPO	PERIODO	CÓDIGO	ASIGNATURAS	ECTS
PE	1º y 2º	595030075	P1 PRÁCTICAS EXTERNAS	3
		595040090	P1B PRÁCTICAS EXTERNAS	3
		595030076	P2 PRÁCTICAS EXTERNAS	4,5
		595040091	P2B PRACTICAS EXTERNAS	4.5
		595030077	P3 PRÁCTICAS EXTERNAS	6
		595040092	P3B PRACTICAS EXTERNAS	6
		595030078	P4 PRÁCTICAS EXTERNAS	9
		595030079	P5 PRÁCTICAS EXTERNAS	12
		595030087	P6 PRÁCTICAS EXTERNAS	15

ELECTIVE COURSES

- Each student must pass at least 31.5 elective ECTS to complete the 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.