

## UNDERGRADUATE DEGREE PROGRAMME IN ELECTRONICS AND COMMUNICATIONS ENGINEERING (CODE 59EC)

**ACADEMIC YEAR 2019-2020**

### FIRST YEAR

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

### SECOND YEAR

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

### THIRD YEAR

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

### FORTH YEAR

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

(\*) 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 <sup>st</sup>	4 <sup>th</sup>	595010044	PRODUCT ENGINEERING	4.5	--	D510
			4 <sup>th</sup>	595010048	HARDWARE FOR INTERNET OF THINGS (IoT)	4.5	028	D230
			4 <sup>th</sup>	595010049	PROGRAMMING IN LABVIEW	4.5	--	D230
		2 <sup>nd</sup>	3 <sup>st</sup>	595010041	INDUSTRIAL AUTOMATION	4.5	--	D230
			3 <sup>st</sup>	595010047	EMBEDDED SYSTEMS DESIGN USING RASPBERRY PI	4.5	--	D230
			4 <sup>th</sup>	595010042	PHOTOVOLTAIC ENGINEERING	4.5	--	D510
			4 <sup>th</sup>	595010046	POWER ELECTRONICS	4.5	--	D230
B	SC	1 <sup>st</sup>		595020327	WAVE TRANSMISSION AND PROPAGATION	6	019	D250
				595020328	COMMUNICATIONS ELECTRONICS I	6	20322/023	D250
		2 <sup>nd</sup>		595020322	ANALOG ELECTRONICS	6	009/015	D250
				595020331	COMMUNICATIONS ELECTRONICS II	6	20328	D250
	SO	1 <sup>st</sup>		595020126	AUDIO ENGINEERING I	4.5	20122	D250
				595020128	IMAGE AND VIDEO TECHNOLOGIES	6	20122	D250
		2 <sup>nd</sup>		595020122	SOUND AND IMAGES FUNDAMENTALS	6	--	D250
				595020131	AUDIO ENGINEERING II	6	20126/20122	D250
	TL	1 <sup>st</sup>		595020228	TRANSMISSION SYSTEMS	6	022	D230
				595020234	MOBILE COMMUNICATIONS NETWORKS	6	016/020	D230
		2 <sup>nd</sup>		595020222	ADVANCED APPLICATION PROGRAMMING	6	005/011	D230
				595020231	NETWORKS AND SERVICES SECURITY	6	011/016/020	D230
C		1 <sup>st</sup>		595030060	RENEWABLE ENERGY	3	--	D510
				595030061	SMART HOME	3	016	D230
				595030062	TELECOMMUNICATION COMMON INFRASTRUCTURES	3	--	D250
				595030071	INTRODUCTION TO PROFESSIONAL AND ACADEMIC COMMUNICATION II	3	30063	D240
		2 <sup>nd</sup>		595030063	INTRODUCTION TO PROFESSIONAL AND ACADEMIC COMMUNICATION I	3	--	D240
				595030070	MANAGEMENT OF TECHNOLOGICAL INNOVATION	3	--	D230
				595030072	DISCRETE MATHEMATICS	3	--	D540
				595030073	DYNAMICAL SYSTEMS	3	002/003/010	D540
				595030074	CIS TO DEFENCE	3	--	D250
PE		1 <sup>st</sup> and 2 <sup>nd</sup>		595030075	P1 INTERNSHIP CREDITS	3	*	
				595030076	P2 INTERNSHIP CREDITS	4.5	*	
				595030077	P3 INTERNSHIP CREDITS	6	*	
				595030078	P4 INTERNSHIP CREDITS	9	*	
				595030079	P5 INTERNSHIP CREDITS	12	*	

## 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.