

## UNDERGRADUATE DEGREE PROGRAMME IN TELECOMMUNICATIONS SYSTEMS ENGINEERING (CODE 59SC)

### ACADEMIC YEAR 2019-2020

#### FIRST YEAR

CODE	COURSES	ECTS	TYPE	SEMESTER	DEPARTMENT CODE
595000301	LINEAR ALGEBRA	6	Elem	1 <sup>st</sup>	D540
595000303	CIRCUITS ANALYSIS I	6	Elem	1 <sup>st</sup>	D250
595000302	CALCULUS I	6	Elem	1 <sup>st</sup>	D540
595000305	INTRODUCTION TO TELECOMMUNICATIONS	3	Comp	1 <sup>st</sup>	D250
595000304	PROGRAMMING I	6	Elem	1 <sup>st</sup>	D230
595000300	INTRODUCTORY WORKSHOP ON ENGINEERING	3	Comp	1 <sup>st</sup>	D250
595000307	CIRCUITS ANALYSIS II	6	Elem	1 <sup>st</sup> and 2 <sup>nd</sup>	D250
595000309	CALCULUS II	6	Elem	1 <sup>st</sup> and 2 <sup>nd</sup>	D540
595000306	PROFESSIONAL COMMUNICATION SKILLS	3	Comp	2 <sup>nd</sup>	D240
595000308	ELECTRONICS I	6	Elem	1 <sup>st</sup> and 2 <sup>nd</sup>	D230
595000310	PROGRAMMING II	6	Elem	1 <sup>st</sup> and 2 <sup>nd</sup>	D230
595000311	SEARCH TECHNIQUES AND INFORMATION SYSTEMS	3	Comp	2 <sup>nd</sup>	D230

#### SECOND YEAR

CODE	COURSES	ECTS	TYPE	SEMESTER	DEPARTMENT CODE
595000312	ELECTROMAGNETISM AND WAVES	6	Elem	1 <sup>st</sup> and 2 <sup>nd</sup>	D510
595000314	ELECTRONICS II	6	Comp	1 <sup>st</sup> and 2 <sup>nd</sup>	D230
595000313	STATISTICS AND STOCHASTIC PROCESSES	6	Elem	1 <sup>st</sup> and 2 <sup>nd</sup>	D540
595000315	TELECOMMUNICATIONS NETWORKS AND SERVICES	6	Comp	1 <sup>st</sup> and 2 <sup>nd</sup>	D230
595000316	SIGNALS AND SYSTEMS	6	Comp	1 <sup>st</sup> and 2 <sup>nd</sup>	D250
595000317	SCIENCE. TECHNOLOGY AND SOCIETY	3	Comp	1 <sup>st</sup> and 2 <sup>nd</sup>	D230
595000322	ANALOG ELECTRONICS	6	Comp	2 <sup>nd</sup>	D250
595000320	MICROPROCESSORS	6	Comp	1 <sup>st</sup> and 2 <sup>nd</sup>	D230
595000324	DIGITAL SIGNAL PROCESSING	4.5	Comp	1 <sup>st</sup> and 2 <sup>nd</sup>	D250
595000318	WAVE PROPAGATION	4.5	Comp	1 <sup>st</sup> and 2 <sup>nd</sup>	D510
595000321	COMMUNICATION THEORY	6	Comp	1 <sup>st</sup> and 2 <sup>nd</sup>	D250

### THIRD YEAR

CODE	COURSES	ECTS	TYPE	SEMESTER	DEPARTMENT CODE
595000323	ECONOMICS AND BUSINESS MANAGEMENT	4.5	Comp	1 <sup>st</sup>	D400
595000328	COMMUNICATIONS ELECTRONICS I	6	Comp	1 <sup>st</sup>	D250
595000326	SIGNAL PROCESSING IN COMMUNICATIONS	4.5	Comp	1 <sup>st</sup>	D250
595000319	AUDIOVISUAL SYSTEMS	4.5	Comp	1 <sup>st</sup>	D250
595000325	OPERATING SYSTEMS	4.5	Comp	1 <sup>st</sup>	D230
595000327	WAVE TRANSMISSION AND PROPAGATION	6	Comp	1 <sup>st</sup>	D250
595000331	COMMUNICATIONS ELECTRONICS II	6	Comp	2 <sup>nd</sup>	D250
595000329	COMPUTER NETWORKS	4.5	Comp	2 <sup>nd</sup>	D230
595000332	TELECOMMUNICATION SYSTEMS	4.5	Comp	2 <sup>nd</sup>	D250
595000330	HIGH FREQUENCY TECHNOLOGIES	6	Comp	2 <sup>nd</sup>	D250
	ELECTIVE COURSES/INTERNSHIP CREDITS	9	Elec		

### FORTH YEAR

CODE	COURSES	ECTS	TYPE	SEMESTER	DEPARTMENT CODE
595000333	ENGLISH FOR PROFESSIONAL AND ACADEMIC COMMUNICATION (*)	6	Comp	1 <sup>st</sup> and 2 <sup>nd</sup>	D240
595000334	RADIOCOMMUNICATION SYSTEMS	6	Comp	1 <sup>st</sup>	D250
595000335	ANTENNAS AND ELECTROMAGNETIC COMPATIBILITY	4.5	Comp	1 <sup>st</sup>	D250
	ELECTIVE COURSES/INTERNSHIP CREDITS	13.5	Elec	1 <sup>st</sup>	
595000336	PROJECT MANAGEMENT	4.5	Comp	2 <sup>nd</sup>	D400
595000337	MICROELECTRONIC DESIGN	4.5	Comp	2 <sup>nd</sup>	D230
595000340	FINAL DEGREE PROJECT*	12	Comp	1 <sup>st</sup> and 2 <sup>nd</sup>	ALL
	ELECTIVE COURSES/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	SC	1 <sup>st</sup>	4 <sup>th</sup>	595010341	COMMUNICATION SYSTEM ARCHITECTURE	4.5	--	D250
			4 <sup>th</sup>	595010342	MOBILE COMMUNICATION	4.5	332/334	D250
		2 <sup>nd</sup>	3 <sup>th</sup>	595010347	GLOBAL NAVIGATION SATELLITE SYSTEMS	4.5	321	D250
			3 <sup>th</sup>	595010349	BIOMEDICAL DIGITAL SIGNAL PROCESSING	4.5	313/324	D250
			4 <sup>th</sup>	595010345	RADAR TECHNOLOGY	4.5	--	D250
			4 <sup>th</sup>	595010348	HIGH FREQUENCY MICROELECTRONIC DESIGN	4.5	--	D250
B	EC	1 <sup>st</sup>		595023027	DIGITAL DESIGN I	4.5	314	D230
				595023028	MICROPROCESSOR-BASED SYSTEMS	6	320	D230
		2 <sup>nd</sup>		595023023	ANALOG ELECTRONICS I	6	308	D230
				595023033	PRODUCTION TECHNOLOGIES OF ELECTRONICS SYSTEMS	4.5	--	D510
	SO	1 <sup>st</sup>		595023126	AUDIO ENGINEERING I	4.5	23122	D250
				595023128	IMAGE AND VIDEO TECHNOLOGIES	6	23122	D250
		2 <sup>nd</sup>		595023122	SOUND AND IMAGES FUNDAMENTALS	6	--	D250
				595023131	AUDIO ENGINEERING II	6	23126/23122	D250
	TL	1 <sup>st</sup>		595023228	TRANSMISSION SYSTEMS	6	321	D230
				595023234	MOBILE COMMUNICATIONS NETWORKS	6	315/329	D230
		2 <sup>nd</sup>		595023222	ADVANCED APPLICATION PROGRAMMING	6	304/310	D230
				595023231	NETWORKS AND SERVICES SECURITY	6	310/315/329	D230
C	-	1 <sup>st</sup>		595030360	RENEWABLE ENERGY	3	--	D510
				595030361	SMART HOME	3	315	D230
				595030362	TELECOMMUNICATION COMMON INFRASTRUCTURES	3	--	D250
				595030371	INTRODUCTION TO PROFESSIONAL AND ACADEMIC COMMUNICATION II	3	30363	D240
		2 <sup>nd</sup>		595030363	INTRODUCTION TO PROFESSIONAL AND ACADEMIC COMMUNICATION I	3	--	D240
				595030370	MANAGEMENT OF TECHNOLOGICAL INNOVATION	3	--	D230
				595030372	DISCRETE MATHEMATICS	3	--	D540
				595030373	DYNAMICAL SYSTEMS	3	301/302/309	D540
	595030374	CIS TO DEFENCE	3	--	D250			
PE		1 <sup>st</sup> and 2 <sup>nd</sup>		595030375	P1 INTERNSHIP CREDITS	3	*	
				595030376	P2 INTERNSHIP CREDITS	4.5	*	
				595030377	P3 INTERNSHIP CREDITS	6	*	
				595030378	P4 INTERNSHIP CREDITS	9	*	
				595030379	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.