

# ENGINEERING IN TELECOMMUNICATION TECHNOLOGY AND SERVICES DEGREE

International accreditation EUR-ACE



## ACADEMIC YEAR 2020/2021

Studies	Engineering in Telecommunication Technology and Services Degree
Centre	Technical College Campus de Cantoblanco 28049 – Madrid Phone: 91 497 22 23/ 22 26  <a href="#">Web Page</a>
Knowledge Branch	Engineering and Architecture
ECTS Credits	240

ECTS CREDITS	
Basic training (FB)	72
Compulsory (OB)	114
Optional (OP)	42
External practical (PE)	-
End-of-degree Project (TFG)	12
<b>Total</b>	<b>240</b>

### FIRST YEAR

Code	Subject	Credits	Type	Semester
<u>18462</u>	MATHEMATICAL ANALYSIS I	6	FB	1
<u>18463</u>	LINEAR ALGEBRA	6	FB	1
<u>18464</u>	PROGRAMMING I	6	FB	1
<u>18465</u>	INTRODUCTION TO PHISICS	6	FB	1
<u>18469</u>	CIRCUIT ANALYSIS	6	FB	1

Code	Subject	Credits	Type	Semester
<u>18466</u>	INTRODUCTION TO ENGINEERING MANAGEMENT	6	FB	2
<u>18467</u>	MATEMATICAL ANALYSIS II	6	FB	2
<u>18468</u>	PROGRAMMING II	6	FB	2
<u>18470</u>	ELECTRONIC DEVICE TECHNOLOGY	6	FB	2
<u>18471</u>	DIGITAL ELECTRONIC CIRCUITS	6	OB	2

## SECOND YEAR

Code	Subject	Credits	Type	Semester
<u>18472</u>	STATISTICS	6	FB	1
<u>18474</u>	LINEAR SYSTEMS	6	FB	1
<u>18476</u>	NETWORK ARCHITECTURE I	6	OB	1
<u>18478</u>	ANALOGUE CIRCUITS AND POWER ELECTRONICS	6	OB	1
<u>18479</u>	INTRODUCTION TO MICROPROCESSORS	6	OB	1
<u>18473</u>	FUNDAMENTALS OF COMPUTER SYSTEMS	6	FB	2
<u>18475</u>	FUNDAMENTALS OF TRANSMISSION AND WAVE PROPAGATION	6	OB	2
<u>18477</u>	NETWORK ARCHITECTURE II	6	OB	2
<u>18480</u>	FILTER DESIGN	6	OB	2
<u>18481</u>	COMMUNICATION THEORY	6	OB	2

## THIRD YEAR

Code	Subject	Credits	Type	Semester
<u>18482</u>	DIGITAL SIGNAL PROCESSING	6	OB	1
<u>18483</u>	SPECIALIZED INTEGRATED DEVICES (1)	6	OB/OP	1
<u>18484</u>	CONTROL SYSTEMS (1)	6	OB/OP	1
<u>18487</u>	VIDEO AND AUDIO SYSTEMS AND SERVICES (2)	6	OB/OP	1
<u>18488</u>	ACUSTIC ENGINEERING (2)	6	OB/OP	1
<u>18485</u>	DIGITAL ELECTRONIC SYSTEMS (1)	6	OB/OP	2
<u>18486</u>	COMMUNICATION ELECTRONICS (1)	6	OB/OP	2
<u>18489</u>	MULTIMEDIA PROCESSING (2)	6	OB/OP	2
<u>18490</u>	VIDEO TECHNOLOGY (2)	6	OB/OP	2
	ELECTIVE COURSES	30	OP	

(1) These subjects must be registered by the students that have chosen "Electronic Systems".

(2) These subjects must be registered by the students that have chosen "Sound and Image".

The subjects from the not chosen route can be registered as optional.

## FOURTH YEAR

Code	Subject	Credits	Type	Semester
<u>18501</u>	END-OF-DEGREE PROJECT	12	TFG	Annual
<u>18491</u>	TELECOMMUNICATION PROJECTS AND SYSTEMS	6	OB	1
<u>18493</u>	INSTRUMENTATION AND MEASUREMENT (1)	6	OB/OP	1
<u>18494</u>	ELECTRONIC SYSTEMS TECHNOLOGY (1)	6	OB/OP	1

Code	Subject	Credits	Type	Semester
<u>18497</u>	AUDIO TECHNOLOGY (2)	6	OB/OP	1
<u>18498</u>	VISUAL SIGNAL PROCESSING (2)	6	OB/OP	1
<u>18492</u>	ENGINEERING AND SOCIETY	6	OB	2
<u>18495</u>	ANTENNAS AND ELECTROMAGNETIC COMPATIBILITY (1)	6	OB/OP	2
<u>18496</u>	ARITHMETICS FOR SIGNAL PROCESSING (1)	6	OB/OP	2
<u>18499</u>	SPEECH AND AUDIO SIGNAL PROCESSING (2)	6	OB/OP	2
<u>18500</u>	DIGITAL TELEVISION (2)	6	OB/OP	2
	ELECTIVE COURSES	12	OP	

(1) These subjects must be registered by the students that have chosen “Electronic Systems”.

(2) These subjects must be registered by the students that have chosen “Sound and Image”.

The subjects from the not chosen route can be registered as optional.

### OPTIONAL SUBJECTS

#### Optional subjects from Design and Implementation of Communications Electronic Systems route, complementary to “Electronic Systems”

Code	Subject	Credits	Type	Semester
<u>18502</u>	TRANSMISSION MEDIA	6	OP	1
<u>18489</u>	MULTIMEDIA PROCESSING	6	OP	2
<u>18504</u>	MULTIMEDIA NETWORKS	6	OP	2

#### Optional subjects from Audio and Video Processing and Communications route, complementary to “Sound and Image”

Code	Subject	Credits	Type	Semester
<u>18483</u>	SPECIALIZED INTEGRATED DEVICES	6	OP	1
<u>18502</u>	TRANSMISSION MEDIA	6	OP	1
<u>18496</u>	ARITHMETICS FOR SIGNAL PROCESSING	6	OP	2
<u>18503</u>	AUDIO AND VIDEO TRANSMISSION SYSTEMS	6	OP	2
<u>18504</u>	MULTIMEDIA NETWORKS	6	OP	2

### COMMON TO ALL ROUTES

Code	Subject	Credits	Type	Semester
<u>18505</u>	DISTRIBUTED SYSTEMS	6	OP	1
<u>18508</u>	DATABASE	6	OP	1
<u>18506</u>	OBJECT ORIENTED PROGRAMMING	6	OP	2
<u>18510</u>	ECONOMY AND BUSINESS	6	OP	2

### OPTIONAL SUBJECTS NOT OFFERED IN 2020-2021

Code	Subject	Credits	Type	Semester
18507	OPERATING SYSTEMS	6	OP	
18509	MATHEMATIC METHODS FOR ENGINEERS	6	OP	