DOUBLE B.ENG. DIPLOMA IN DATA ENGINEERING AND SYSTEMS AND TELEMATICS ENGINEERING
(CODE 59DT)

ACADEMIC YEAR 2024-2025

FIRST YEAR

CODE	COURSES	ECTS	TYPE	SEMESTER	DEPARTMENT CODE
595400201	LINEAR ALGEBRA	6	Elem	1st	D540
595400203	CIRCUITS ANALYSIS I	6	Elem	1st	D250
595400202	CALCULUS I	6	Elem	1st	D540
595400205	INTRODUCTION TO TELECOMMUNICATIONS	3	Comp	1st	D230
595400204	PROGRAMMING I	6	Elem	1st	D230
595400200	INTRODUCTORY WORKSHOP ON ENGINEERING	3	Comp	1st	D250
595400505	INTRODUCTION TO DATA ENGINEERING	3	Comp	1st	D250
595400207	CIRCUITS ANALYSIS II	6	Elem	2nd	D250
595400209	CALCULUS II	6	Elem	2nd	D540
595400206	PROFESSIONAL COMMUNICATION SKILLS	3	Comp	2nd	D240
595400208	ELECTRONICS I	6	Elem	2nd	D230
595400210	PROGRAMMING II	6	Elem	2nd	D230
595400211	SEARCH TECHNIQUES AND INFORMATION SYSTEMS	3	Comp	2nd	D510
595400508	OPTIMIZATION	6	Elem	2nd	D540

SECOND YEAR

CODE	COURSES	ECTS	TYPE	SEMESTER	DEPARTMENT CODE
595400212	ELECTROMAGNETISM AND WAVES	6	Elem	3rd	D510
595400214	ELECTRONICS II	6	Comp	3rd	D230
595400215	TELECOMMUNICATIONS NETWORKS AND SERVICES	6	Comp	3rd	D230
595400216	SIGNALS AND SYSTEMS	6	Comp	3rd	D250
595400503	PROGRAMMING	6	Elem	3rd	D230
595400513	PROBABILITY AND RANDOM SIGNALS	6	Elem	3rd	D540
595400217	SCIENCE, TECHNOLOGY AND SOCIETY	3	Comp	4th	D230
595400220	MICROPROCESSORS	6	Comp	4th	D230
595400222	ADVANCED APPLICATION PROGRAMMING	6	Comp	4th	D230
595400218	WAVE PROPAGATION	4,5	Comp	4th	D510
595400219	COMPUTER NETWORKS	4,5	Comp	4th	D230
595400506	RELATIONAL DATABASES AND STRUCTURED DATA	6	Comp	4th	D230
595400507	MATHEMATICAL MODELS AND DISCRETE MATHEMATICS	6	Elem	4th	D540

THIRD YEAR

CODE	COURSES	ECTS	TYPE	SEMESTER	DEPARTMENT CODE
595400226	MODELLING LANGUAGES	4,5	Comp	5th	D230
595400227	SIGNALLING AND SWITCHING	6	Comp	5th	D230
595400225	OPERATING SYSTEMS	4,5	Comp	5th	D230
595400511	NON-RELATIONAL AND DISTRIBUTED DATABASES	6	Comp	5th	D230
595400526	DATA ENGINEERING CAREER DEVELOPMENT	3	Comp	5th	D400
595000516	FUNDAMENTALS OF BUSINESS MANAGEMENT	6	Elem	5th	D400
595400514	BIG DATA PROGRAMMING	6	Comp	5th	D230
595400224	DIGITAL SIGNAL PROCESSING	4,5	Comp	6th	D250
595400232	INFORMATION PROCESSING IN TELEMATIC APPLICATIONS	4,5	Comp	6th	D230
595400230	ADVANCED NETWORKS AND SERVICES	6	Comp	6th	D230
595400221	COMMUNICATION THEORY	6	Comp	6th	D250
595400517	STATISTICAL INFERENCE AND TIME SERIES	6	Elem	6th	D250
595400519	INFORMATION THEORY	6	Comp	6th	D250
595400520	COMMUNICATION SYSTEMS FOR DATA ENGINEERING	3	Comp	6th	D250

FOURTH YEAR

CODE	COURSES	ECTS	TYPE	SEMESTER	DEPARTMENT CODE
595400229	AUDIOVISUAL SYSTEMS	4,5	Comp	7th	D250
595400228	TRANSMISSION SYSTEMS	6	Comp	7th	D230
595400235	COMMUNICATIONS SOFTWARE	4.5	Comp	7th	D230
595400522	SIGNAL ANALYSIS	6	Comp	7th	D250
595400523	MACHINE LEARNING	6	Comp	7th	D230
595400525	CLOUD COMPUTING	6	Comp	7th	D230
595400527	ENTREPRENEURSHIP AND BUSINESS MODELS	3	Comp	7th	D400
595400518	SENSOR NETWORKS	6	Obl	8th	D230
595400528	DATA AND VISUAL ANALYTICS	6	Obl	8th	D230/D250
595400529	DATA MARKET SECTOR APPLICATIONS	6	Obl	8th	D230
595400530	CLOUD BIG DATA ENGINEERING	6	Obl	8th	D230
595400531	DATA AND SIGNAL ADVANCED PROCESSING	6	Obl	8th	D250
595400532	DECISION-MAKING SUPPORT TECHNOLOGIES	6	Obl	8th	D400

FIFTH YEAR

CODE	COURSES	ECTS	TYPE	SEMESTER	DEPARTMENT CODE
595400233	ENGLISH FOR PROFESSIONAL AND ACADEMIC COMMUNICATION (*)	6	Comp	9th	D240
595400234	MOBILE COMMUNICATIONS NETWORKS	6	Comp	9th	D230
	ELECTIVE SUBJECTS/INTERNSHIP CREDITS	6	Elec	9th	
595400524	BIG DATA PROCESSING ARCHITECTURES	6	Comp	9th	D230
595400533	DATA AND SYSTEMS ENGINEERING PROJECTS	9	Comp	9th	D230
595400536	ETHICAL AND LEGAL FRAMEWORK	3	Comp	9th	D250
595400231	NETWORKS AND SERVICES SECURITY	6	Comp	10th	D230
595400535	PROJECT MANAGEMENT	6	Comp	10th	D400
595400599	FINAL DEGREE PROJECT	12	Comp		ALL
595400240	FINAL DEGREE PROJECT	12	Obl		ALL

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

TYPE OF COURSES:
- *"Elem"* – Elementary.
- *"Comp"* – Compulsory.
- *"Elec"* – Elective.

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.

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.

Double BEng diploma 59DT recognitions

TIT	YEAR	SEM	RECOGNIZED SUBJECTS	ECTS	TYPE	CODE	TIT	YEAR	SEM	SUBJECTS TAKEN	ECTS	POND.	TYPE	CODE
59ID	1	1	ALGEBRA	6	Elem	595000500	59TL	1	1	LINEAR ALGEBRA	6	1	Elem	595400201
59ID	1	1	CALCULUS	6	Elem	595000501	59TL	1	1	CALCULUS I	6	0,5	Elem	595400202
							59TL	1	2	CALCULUS II	6	0,5	Elem	595400209
59ID	4	7	CYBERSECURITY AND DATA PROTECTION	6	Comp	595000534	59TL	5	10	NETWORKS AND SERVICES SECURITY	6	1	Comp	595400231
59ID	1	1	DEVELOPMENT OF PROFESSIONAL SKILLS	3	Elem	595000504	59TL	1	2	PROFESSIONAL COMMUNICATION SKILLS	3	0,5	Comp	595400206
							59TL	2	4	SCIENCE. TECHNOLOGY AND SOCIETY	3	0,5	Comp	595400217
59ID	2	3	ENGLISH FOR PROFESSIONAL AND ACADEMIC COMMUNICATIONS	6	Comp	595000512	59TL	5	9	ENGLISH FOR PROFESSIONAL AND ACADEMIC COMMUNICATION	6	1	Comp	595400233
59ID	1	1	FUNDAMENTALS OF DATA PROCESSING	6	Elem	595000502	59TL	2	3	ELECTRONICS II	6	0,4	Comp	595400214
							59TL	2	4	MICROPROCESSORS	6	0,4	Comp	595400220
							59TL	3	5	OPERATING SYSTEMS	4,5	0,2	Comp	595400025
59ID	2	3	COMMUNICATION NETWORKS AND SERVICES	6	OBL	595000515	59TL	2	3	TELECOMMUNICATIONS NETWORKS AND SERVICES	6	0,25	Comp	595400215
							59TL	2	4	COMPUTER NETWORKS	4,5	0,25	Comp	595400219
							59TL	3	5	SIGNALLING AND SWITCHING	6	0,25	Comp	595400227
							59TL	3	6	ADVANCED NETWORKS AND SERVICES	6	0,25	Comp	595400230
59ID	1	2	SIGNALS AND SYSTEMS	6	Elem	595000509	59TL	2	3	SIGNALS AND SYSTEMS	6	0,8	Comp	595400216
							59TL	3	6	DIGITAL SIGNAL PROCESSING	4,5	0,2	Comp	595400224
59ID	1	2	DATA ACQUISITION SYSTEMS	6	Elem	595000510	59TL	1	1	CIRCUITS ANALYSIS I	6	0,25	Elem	595400203
							59TL	1	2	ELECTRONICS I	6	0,25	Elem	595400208
							59TL	2	4	MICROPROCESSORS	6	0,5	Comp	595400220
59ID	2	4	WEB TECHNOLOGIES	3	Elem	595000521	59TL	2	4	ADVANCED APPLICATION PROGRAMMING	6	0,5	Comp	595400222
							59TL	4	7	COMMUNICATIONS SOFTWARE	4,5	0,5	Comp	595400235
59TL	4	8	ADVANCED TELEMATIC APPLICATIONS	4,5	Comp	595000237	59ID	4	7	CLOUD COMPUTING	6	1	Comp	595400525
59TL	3	5	ECONOMICS AND BUSINESS MANAGEMENT	4,5	Comp	595000223	59ID	3	5	FUNDAMENTALS OF BUSINESS MANAGEMENT	6	1	Elem	595400516
59TL	2	3	STATISTICS AND STOCHASTIC PROCESSES	6	Elem	595000213	59ID	2	3	PROBABILITY AND RANDOM SIGNALS	6	0,7	Elem	595400513
							59ID	3	6	STATISTICAL INFERENCE AND TIME SERIES	6	0,3	Elem	595400517
59TL	4	8	PROJECT MANAGEMENT	4,5	Comp	595000236	59ID	5	10	PROJECT MANAGEMENT	6	1	Comp	595400535
59ID			ELECTIVE SUBJECTS	18	OPT		59TL	1	1	INTRODUCTION TO TELECOMMUNICATIONS	3		Comp	595400205
							59TL	1	1	PROGRAMMING I	6		Elem	595400204
							59TL	1	2	PROGRAMMING II	6		Elem	595400210
							59TL	3	5	MODELLING LANGUAGES	4,5		Comp	595400226
							59TL	3	6	INFORMATION PROCESSING IN TELEMATIC APPLICATIONS	4,5		Comp	595400232
59TL			ELECTIVE SUBJECTS	25,5	OPT		59ID	3	5	BIG DATA PROGRAMMING	6		Comp	595400514
							59ID	3	6	INFORMATION THEORY	6		Comp	595400519
							59ID	4	8	SENSOR NETWORKS	6		Comp	595400518
							59ID	4	8	CLOUD BIG DATA ENGINEERING	6		Comp	595400530
							59ID	5	9	ETHICAL AND LEGAL FRAMEWORK	3		Comp	595400536