

BACHELOR ENGINEERING PROGRAM IN DATA ENGINEERING AND SYSTEMS (CODE 59ID)

ACADEMIC YEAR 2024-2025

FIRST YEAR

CODE	COURSES	ECTS	TYPE	SEMESTER	DEPARTMENT CODE
595000500	ALGEBRA	6	Elem	1 st	D540
595000501	CALCULUS	6	Elem	1 st	D540
595000502	FUNDAMENTALS OF DATA PROCESSING	6	Elem	1 st	D230
595000503	PROGRAMMING	6	Elem	1 st	D230
595000504	DEVELOPMENT OF PROFESSIONAL SKILLS	3	Comp	1 st	D250/D240
595000505	INTRODUCTION TO DATA ENGINEERING	3	Comp	1 st	D510/D230/240
595000506	RELATIONAL DATABASES AND STRUCTURED DATA	6	Comp	2 nd	D230
595000507	MATHEMATICAL MODELS AND DISCRETE MATHEMATICS	6	Elem	2 nd	D540
595000508	OPTIMIZATION	6	Elem	2 nd	D540
595000509	SIGNALS AND SYSTEMS	6	Elem	2 nd	D250
595000510	DATA ACQUISITION SYSTEMS	6	Comp	2 nd	D230

SECOND YEAR

CODE	COURSES	ECTS	TYPE	SEMESTER	DEPARTMENT CODE
595000511	NON-RELATIONAL AND DISTRIBUTED DATABASES	6	Comp	3 rd	D230
595000512	ENGLISH FOR PROFESSIONAL AND ACADEMIC COMMUNICATIONS	6	Comp	3 rd	D240
595000513	PROBABILITY AND RANDOM SIGNALS	6	Elem	3 rd	D540
595000514	BIG DATA PROGRAMMING	6	Comp	3 rd	D230
595000515	COMMUNICATION NETWORKS AND SERVICES	6	Comp	3 rd	D230
595000516	FUNDAMENTALS OF BUSINESS MANAGEMENT	6	Elem	4 th	D400
595000517	STATISTICAL INFERENCE AND TIME SERIES	6	Elem	4 th	D540
595000518	SENSOR NETWORKS	6	Comp	4 th	D230
595000519	INFORMATION THEORY	6	Comp	4 th	D230
595000520	COMMUNICATION SYSTEMS FOR DATA ENGINEERING	3	Comp	4 th	D230
595000521	WEB TECHNOLOGIES	3	Comp	4 th	D230

THIRD YEAR

CODE	COURSES	ECTS	TYPE	SEMESTER	DEPARTMENT CODE
595000522	SIGNAL ANALYSIS	6	Comp	5 th	D250
595000523	MACHINE LEARNING	6	Comp	5 th	D230
595000524	BIG DATA PROCESSING ARCHITECTURES	6	Comp	5 th	D230
595000525	CLOUD COMPUTING	6	Comp	5 th	D230
595000526	DATA ENGINEERING CAREER DEVELOPMENT	3	Comp	5 th	D400
595000527	ENTREPRENEURSHIP AND BUSINESS MODELS	3	Comp	5 th	D400
595000528	DATA AND VISUAL ANALYTICS	6	Comp	6 th	D250
595000529	DATA MARKET SECTOR APPLICATIONS	6	Comp	6 th	D230
595000530	CLOUD BIG DATA ENGINEERING	6	Comp	6 th	D230
595000531	DATA AND SIGNAL ADVANCED PROCESSING	6	Comp	6 th	D250
595000532	DECISION-MAKING SUPPORT TECHNOLOGIES	6	Comp	6 th	D510

FOURTH YEAR

CODE	COURSES	ECTS	TYPE	SEMESTER	DEPARTMENT CODE
595000533	DATA AND SYSTEMS ENGINEERING PROJECTS	9	Comp	7 th	D250
595000534	CYBERSECURITY AND DATA PROTECTION	6	Comp	7 th	D230
595000535	PROJECT MANAGEMENT	6	Comp	7 th	D400
595000536	ETHICAL AND LEGAL FRAMEWORK	3	Comp	7 th	D510
	ELECTIVE SUBJECTS/INTERNSHIP CREDITS	6	Elec	7 th	
	ELECTIVE SUBJECTS/INTERNSHIP CREDITS	18	Elec	8 th	
595000599	FINAL DEGREE PROJECT	12		8 th	ALL

ELECTIVE COURSES

Each student must pass at least 24 elective ECTS to complete the degree.

TYPE OF COURSES:

"Elem" – Elementary.

"Comp" – Compulsory.

"Elec" – Elective.

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.