

Domeniul Inginerie Electronică, Telecomunicații și
Tehnologii Informaționale

Programul de studii Tehnologii și sisteme de telecomunicații (în limba engleză) (TSTen)

1st year - 1st Semester

26

Nr. crt.	Subject	Code	ECTS	Hours/Week					Weeks	Total hours / sem.			Individual study	Grading type
				1st Semester						Cour	Appli	Total		
				C	S	L	P	LP						
MANDATORY Subjects														
1	Mathematical Analysis 1	04 F 01 O 001	4	3	1				14	42	14	56	48	E
2	Algebra and Geometry	04 F 01 O 002	5	3	1				14	42	14	56	74	E
3	Physics 1	04 F 01 O 003	5	3	1	1			14	42	28	70	60	E
4	Computers Programming	04 F 01 O 004	4	2		2			14	28	28	56	48	E
5	Fundamentals of Electrical Engineering 1	04 D 01 O 005	5	3	2				14	42	28	70	60	E
6	Chemistry	04 F 01 O 006	3	2		1			14	28	14	42	36	V
7	Foreign Language 1	04 C 01 O 007	2		2				14	0	28	28	24	A/R
8	Physical Education and Sport 1	04 C 01 O 008	2		2				14	0	28	28	24	A/R
Statistics hours (mandatory and optional)														
ECTS, No. Hours/week/subj.			30	16	9	4	0	0	14	224	182	406	374	E / V
No. Hours/week/semester				29										
ELECTIVE COURSES														
1	Psihologia educației	04 C 01 L 028	5	2	2				14	28	28	56	74	E

1st year - 2nd Semester

Nr. crt.	Subject	Code	ECTS	Hours/Week					Weeks	Total hours / sem.			Individual study	Grading type
				2nd Semester						Cour	Appli	Total		
				C	S	L	P	LP						
MANDATORY Subjects														
1	Mathematical Analysis 2	04 F 02 O 009	5	3	2				14	42	28	70	60	E
2	Physics 2	04 F 02 O 010	4	3		1			14	42	14	56	48	E
3	Algorithms and Data Structures	04 D 02 O 011	4	2		1.5			14	28	21	49	55	V
4	Fundamentals of Electrical Engineering 2	04 D 02 O 012	5	3	1				14	42	14	56	74	E
5	Measurements in Electronics and Telecommunications	04 D 02 O 013	4	2		1.5			14	28	21	49	55	E
6	Special Mathematics	04 F 02 O 030	4	3	1				14	42	14	56	48	E
OPTIONAL Subjects														
1	Software pentru birotică (lb. rom.)	04 F 02 A 016	2	1		1			14	14	14	28	24	V
	Grafică inginerescă și desen tehnic (lb. rom.)	04 F 02 A 017												
	Modelare și design 3D (lb. rom.)	04 F 02 A 030												
	Practical Implementation of Electronic Schemes - Getting Started (lb. eng.)	04 F 02 A 015												

2	Filozofie (lb. rom.)	04 C 02 A 018	2	2					14	28	0	28	24	A/R
	Sociologie (lb. rom.)	04 C 02 A 019												
	Psihologie (lb. rom.)	04 C 02 A 020												
	Comunicare (lb. rom.)	04 C 02 A 021												
	Cultură și civilizație europeană (lb. rom.)	04 C 02 A 022												
	Instituții politice și administrative europene (lb. rom.)	04 C 02 A 023												
	European Integration (lb. eng.)	04 C 02 A 024												
Statistics hours (mandatory and optional)														E / V
ECTS, No. Hours/week/subj.			30	19	4	5	0	0	14	266	126	392	388	5 / 3
No. Hours/week/semester				28										
ELECTIVE COURSES														
1	Servicii Internet	04 D 02 L 025	2	1		1			14	14	14	28	24	V
2	Limba străină 2	04 C 02 L 026	2		2				14	0	28	28	24	V
3	Educație fizică și sport 2	04 C 02 L 027	2		2				14	0	28	28	24	V
4	Pedagogie 1	04 C 02 L 029	5	2	2				14	28	28	56	74	E

2nd year - 1st Semester

Nr. crt.	Subject	Code	ECTS	Hours/Week					Weeks	Total hours / sem.			Individual study	Grading type
				1st Semester						Cour	Appli	Total		
				C	S	L	P	LP						
MANDATORY Subjects														
1	Signals and Systems	04 D 03 O 010	6	3	2	1.5			14	42	49	91	65	E
2	Electronic Materials	04 D 03 O 002	5	3		1.5			14	42	21	63	67	E
3	Electronic Devices	04 D 03 O 003	6	3	2	1			14	42	42	84	72	E
4	Passive Components and Circuits	04 D 03 O 020	4	2		1.5			14	28	21	49	55	E
5	Object Oriented Programming	04 D 03 O 005	3	2		1			14	28	14	42	36	E
6	Project - Signals and programming	04 D 03 O 027	1				1		14	0	14	14	12	V
OPTIONAL Subjects														
1	Macroeconomie (lb. rom.)	04 C 03 A 017	2	2					14	28	0	28	24	V
	Microeconomie (lb. rom.)	04 C 03 A 018												
	Elements of Law and Business Legislation (lb. eng.)	04 C 03 A 019												
2	Metode numerice (lb. rom.)	04 F 03 A 012	3	1		1			14	14	14	28	50	V
	Ingenieria sistemelor cu inteligență artificială (lb. rom.)	04 F 03 A 034												
	CAD Techniques for Electronic Modules Design (lb. eng.)	04 F 03 A 016												
Statistics hours (mandatory and optional)														E / V
ECTS, No. Hours/week/subj.			30	16	4	7.5	1	0	14	224	175	399	381	5 / 3
No. Hours/week/semester				28.5										
ELECTIVE COURSES														
1	Foreign Language 3	04 C 03 L 021	2		2				14	0	28	28	24	V
2	Physical Education and Sport 3	04 C 03 L 022	2		2				14	0	28	28	24	V
3	Pedagogie II	04 C 03 L 025	5	2	2				14	28	28	56	74	E

2nd year - 2nd Semester

Nr. crt.	Subject	Code	ECTS	Hours/Week					Weeks	Total hours / sem.			Individual study	Grading type
				2nd Semester						Cour	Appli	Total		
				C	S	L	P	LP						
MANDATORY Subjects														
1	Basic Electronic Circuits	04 D 04 O 007	5	3	2				14	42	28	70	60	E
2	Digital Integrated Circuits	04 D 04 O 008	4	3		2			14	42	28	70	34	E
3	Microprocessor Architecture	04 D 04 O 009	5	3		1			14	42	14	56	74	E
4	Circuits Analysis and Synthesis	04 D 04 O 028	6	3	2	1.5			14	42	49	91	65	E
5	Electronic Circuits - Laboratory	04 D 04 O 013	2			1.5			14	0	21	21	31	V
6	Physical Education and Sport 4	04 C 04 O 024	2		2				14	0	28	28	24	A/R
OPTIONAL Subjects														
1	Electronic Components Models for SPICE (lb. eng.)	04 D 04 A 015	3	1		1			14	14	14	28	50	V
	Tehnologii de interconectare în electronică (lb. rom.)	04 D 04 A 032												
	Programare pe platformă Android (lb. rom.)	04 D 04 A 033												
2	Management	04 C 04 A 030	3	2		1			14	28	14	42	36	V
	Marketing	04 C 04 A 031												
Statistics hours (mandatory and optional)														
ECTS, No. Hours/week/subj.			30	15	6	8	0	0	14	210	196	406	374	E / V
No. Hours/week/semester			29											
ELECTIVE COURSES														
1	Foreign Language 4	04 C 04 L 023	2		2				14	0	28	28	24	V
2	Didactica specialității	04 C 04 L 026	5	2	2				14	28	28	56	74	E

3rd year - 1st Semester

Nr. crt.	Subject	Code	ECTS	Hours/Week					Weeks	Total hours / sem.			Individual study	Grading type
				1st Semester						Cour	Appli	Total		
				C	S	L	P	LP						
MANDATORY Subjects														
1	Information Transmission Theory	04 D 05 O 001	5	3	1	1			14	42	28	70	60	E
2	Microwaves	04 D 05 O 102	5	3	1	1			14	42	28	70	60	E
3	Analogic Integrated Circuits	04 D 05 O 003	5	3	1	1			14	42	28	70	60	E
4	Electronic Measuring Instruments	04 D 05 O 004	5	3		1.5			14	42	21	63	67	E
5	Microcontrollers	04 D 05 O 005	4	2		1			14	28	14	42	62	V
6	Project 1 - Electronic Devices and Circuits	04 D 05 O 007	3				1		14	0	14	14	64	V
OPTIONAL Subjects														
1	Automatic Control in Electronics and Telecommunications (lb.	04 D 05 A 520	3	2		1			14	28	14	42	36	V
	Electromagnetic Compatibility (lb. română)	04 D 05 A 021												
	Fundamentals of Optoelectronics (lb. romana)	04 D 05 A 022												
	Audio Engineering (lb română)	04 D 05 A 026												
	Fundamentals of Information Science (lb. engleză)	04 D 05 A 523												
	Programming of Interfaces for Databases (lb. română)	04 D 05 A 024												

Statistics hours (mandatory and optional)														E / V											
ECTS, No. Hours/week/subj.														30	16	3	6.5	1	0	14	224	147	371	409	4 / 3
No. Hours/week/semester														26.5											
ELECTIVE COURSES																									
1	Dezvoltarea aplicațiilor Android inovatoare	04 D 05 L 028	3	1		1	1		14	14	28	42	36	V											
2	Educație fizică și sport 5	04 C 05 L 029	2		2				14	0	28	28	24	V											
3	Instruire asistată de calculator	04 C 05 L 025	2	1	1				14	14	14	28	24	V											
4	Practică pedagogică în învățământul preuniversitar obligatoriu	04 C 05 L 026	3					3	14	0	42	42	36	V											
									14	0	0	0	0												

3rd year - 2nd Semester

Nr. crt.	Subject	Code	ECTS	Hours/Week					Weeks	Total hours / sem.			Individual study	Grading type											
				1st Semester						Cour	Appli	Total													
				C	S	L	P	LP																	
MANDATORY Subjects																									
1	Decision and Estimation in Information Processing	04 D 06 O 008	5	3	1	1			14	42	28	70	60	E											
2	Digital Signal Processing	04 D 06 O 510	5	3	1	1	1		14	42	42	84	46	E											
3	Analog and Digital Communications	04 S 06 O 611	3	3	1				14	42	14	56	22	E											
4	Network Architectures and Internet	04 D 06 O 612	3	2		1			14	28	14	42	36	E											
5	Microwaves Circuits	04 S 06 O 613	3	2	1	1			14	28	28	56	22	E											
6	Practical Activity (3rd year)	04 D 06 O 509	6					30	12	0	360	360	0	A/R											
OPTIONAL Subjects																									
1	Project 2 Programmable Electronics	04 D 06 A 525	2				1		14	0	14	14	38	V											
2	Television (lb. eng.)	04 S 06 A 511	3	2		1			14	28	14	42	36	V											
	Network and Services Security (lb română)	04 S 06 A 227																							
	Basics of Operating Sistemems and Virtualization (lb. română)	04 S 06 A 228																							
	Fundamentals of Cryptology (lb română)	04 S 06 A 229																							
Statistics hours (mandatory and optional)																									
ECTS, No. Hours/week/subj.															30	15	4	5	2	14	210	514	724	260	5 / 3
No. Hours/week/semester															26										
ELECTIVE COURSES																									
1	Educație fizică și sport 6	04 C 05 L 032	2		2				14	0	28	28	24	V											
2	Managementul clasei de elevi	04 C 06 L 024	3	1	1				14	14	14	28	50	E											
3	Practică pedagogică în învățământul preuniversitar obligatoriu	04 C 06 L 022	2					3	12	0	36	36	16	V											
4	Examen de absolvire: nivelul I	04 C 06 L 023	5						2	0	0	0	130	E											

4th Year - 1st Semester

Nr. crt.	Subject	Code	ECTS	Hours/Week					Weeks	Total hours / sem.			Individual study	Grading type
				1st Semester						Cour	Appli	Total		
				C	S	L	P	LP						
MANDATORY Subjects														
1	Data Communications	04 S 07 O 601	5	3	1				14	42	14	56	74	E
2	Communications Networks	04 S 07 O 602	4	2		1.5			14	28	21	49	55	E
3	Radio Communications Systems and Equipments	04 S 07 O 604	4	2		1.5			14	28	21	49	55	E
4	Antennas and Propagation	04 S 07 O 605	3	2		1			14	28	14	42	36	E
5	Databases	04 D 07 O 508	3	2		1			14	28	14	42	36	V
6	Analog and Digital Communications - Laboratory	04 S 07 O 606	2			2			14	0	28	28	24	V
7	Project 3	04 S 07 O 607	2				1		14	0	14	14	38	V
OPTIONAL Subjects														
1	Radar (lb. română)	04 S 07 A 220	3	2		1			14	28	14	42	36	V
	Transmission Media (lb. română)	04 S 07 A 221												
	Fundamentals of Cryptology 2	04 S 07 A 222												
2	Procesoare de semnal în comunicații (lb. romana)	04 S 07 A 203	4	2		1.5			14	28	21	49	55	V
	Fundamentals of Image Processing and Computer Vision (lb.	04 S 07 A 612												
Statistics hours (mandatory and optional)														
ECTS, No. Hours/week/subj.			30	15	1	9.5	1	0	14	182	147	329	373	E / V
No. Hours/week/semester			26.5											
ELECTIVE COURSES														
1	Electronică auto	04 S 07 L 117	3	2		1			14	28	14	42	36	V
2	Practical Activity S7	04 S 07 L 120	2					30	2	0	60	60	0	A/R

4th Year - 2nd Semester

Nr. crt.	Subject	Code	ECTS	Hours/Week					Weeks	Total hours / sem.			Individual study	Grading type
				1st Semester						Cour	Appli	Total		
				C	S	L	P	LP						
MANDATORY Subjects														
1	Mobile Communications	04 S 08 O 611	6	2	0.5	1.5			14	28	28	56	100	V
2	Multimedia Coding - Techniques and Applications	04 S 08 O 612	4	2		1.5			14	28	21	49	55	V
OPTIONAL Subjects														
1	Multiple Access Techniques (lb. română)	04 S 08 A 223	3	2		1			14	28	14	42	36	V
	Optical Communications (lb. română)	04 S 08 A 224												
	Traffic Engineering (lb. română)	04 S 08 A 225												
2	Quality and Reliability (lb. română)	04 S 08 A 001	3	1		1			14	14	14	28	50	V
	Management și reglem. în comunicații și electronică (lb. eng.)	04 S 08 A 614												
3	Tehnici și sisteme de transmisiuni multiplex (lb. romana)	04 S 08 A 210	4	2		1.5			14	28	21	49	55	V
	Machine Learning Fundamentals (lb. engleza)	04 S 08 A 613												

	Proiect LICENȚĂ													
1	Practical Activity for Diploma Project	04 S 08 O 003	5					4	14	0	56	56	0	A/R
2	Diploma Project Preparation Activities	04 S 08 O 002	5					30	2	0	60	60	0	A/R
	Statistics hours (mandatory and optional)													E / V
	ECTS, No. Hours/week/subj.		30	9	0.5	6.5	0	4	14	126	98	224	296	0 / 7
	No. Hours/week/semester			20										
	ELECTIVE COURSES													
1									14	0	0	0	0	

Forma verificare
E / V
32 / 31

Centralizator plan	C.s.t.	Nr. Total ore/sapt.					Nr. sapt	Total ore			Studiu indiv. total ore	Pondere %
		C	S	L	P	LP		Curs	Aplic	Total		
Discipline IMPUSE	200	99	32	40	4	64	14	1386	1113	2499	2701	83.6%
Discipline OPTIONALE	40	22	0	12	1	0	14	308	182	490	550	16.4%
	240	213.5								2989	3251	
Discipline FACULTATIVE	59	14	24	3	1	36	14	196	896	1092	442	20.0%

Centralizator plan	C.s.t.	Nr. Total ore/sapt.					Pondere %
		C	S	L	P	LP	
Discipline fundamentale (DF)	39	24	6	7	0	0	17.3%
Discipline de domeniu (DD)	122	62	16	27	4	0	51.1%
Discipline de specialitate (DS)	66	29	3.5	17	1	4	25.5%
Discipline complementare (DC)	13	6	6	1	0	0	6.1%
	240	213.5					100%