

PLAN DE ÎNVĂȚĂMÂNT

Programul de studii - Licență:

Tehnologii și Sisteme de Telecomunicații, în limba engleză

Domeniul fundamental (DFI):

Științe Inginerești

Ramura de știință (RSI):

Inginerie Electrică, Electronică și Telecomunicații

Domeniul de licență (DL):

Inginerie Electronică, Telecomunicații și Tehnologii Informaționale

Durata studiilor / Numărul de credite:

4 ani / 240 credite

Forma de învățământ:

IF - Învățământ cu frecvență

RECTOR,
Conf.univ.dr.ing. Florin DRĂGAN

DECAN,
Prof.univ.dr.ing. Dan LASCU

Misiunea programului de studii:

The didactic mission

- a) Training of highly qualified engineers in the field of Electronics and Telecommunications and Information Technologies, exhibiting in-depth knowledge regarding electronic circuit design, optical and mobile telecommunication systems, use of telecommunications software, technologies and multimedia production
- b) Training of graduates who have skills and abilities to design, develop, implement and maintain electronic telecommunications systems and equipment, voice, video and multimedia services, databases and telecommunications software applications.

The scientific research mission

- a) Involving the education staff and the students in fundamental, exploratory and applied research in the field of Electronics and Telecommunications, in order to develop knowledge in accordance to the needs of the academic community and economic environment;
- c) Producing graduates who are able to be involved in research activities and to improve their knowledge through master's and doctoral studies, by training them to carry out research topics and projects, under the coordination of the departments involved in the study programme.

Obiectivele programului de studii:

- a. Competitive training of graduates with solid knowledge in the field of electronics, telecommunications and information technologies in general, with emphasis in telecommunications technologies and systems - optical and mobile telecommunications circuits, specialized telecommunications software, technologies and multimedia production.
- b. training graduates in terms of scientific research, technological development and practica design.

Competențele programului de studii:

Competențe profesionale:

- 1. Use of fundamentals in terms of devices, circuits, systems, instrumentation and electronics technology.
- 2. Application of basic methods for signal acquisition and processing.
- 3. Application of knowledge, concepts and basic methods related to computer system architecture, microprocessors, microcontrolers, programming languages and techniques.
- 4. Design, implementation and service operation of data, voice, video multimedia, based on understanding and applying fundamental concepts in communications and information transmission.
- 5. Selection, installation, configuration and operation of fixed and mobile equipment and equipping the site with common telecommunication networks.
- 6. Solving technological problems in fields of applied electronics.

Competențe transversale:

- 1. Methodical analysis of field-related problems aimed at identifying acknowledged solutions, thus ensuring the accomplishment of professional tasks.
- 2. Definition of activity stages and their distribution to subordinates in terms of responsibilities, providing effective exchange of information and interpersonal communication.
- 3. Adaptation to new technologies, professional and personal development through continuous training, using printed documentation sources, specialized software and electronic resources in Romanian and at least one foreign language.

Finalități:

Absolvenții programului de studii universitare de licență vor accesa următoarele ocupații posibile conform Clasificării Ocupațiilor din România ISCO-08:

215228 - asistent de cercetare în comunicații

215226 - cercetator în comunicații

215227 - inainer de cercetare în comunicatii

252302 - administrator de rețea de telefonie VOIP

215310 - inginer proiectant comunicații

215204 - inginer electronist transporturi, telecomunicații

251208 - inginer în realizarea, întreținerea și dezvoltarea aplicațiilor web

252301 - administrator de rețea de calculatoare

2153 - inginer în domeniul telecomunicațiilor (ESCO)

Domeniul fundamental (DFI): Științe Ingineresti
 Ramura de știință (RSI): Inginerie Electrică, Electronică și Telecomunicații
 Domeniul de licență (DL): Inginerie Electronică, Telecomunicații și Tehnologii Informaționale
 Programul de studii - Licență: Tehnologii și Sisteme de Telecomunicații, în limba engleză

Cod DFI	CodRSI	CodDL	Cod S	ciclul	c1c2c3	a1a2
20	20	100	10	L	234	22

PLAN DE ÎNVĂȚĂMÂNT
Pentru seria de studenți 2022-2026

	ANUL I (2022-2023)						ANUL II (2023-2024)																																			
	SEMESTRUL 1			SEMESTRUL 2			SEMESTRUL 3			SEMESTRUL 4																																
1	Calculus 1						Calculus 2						Electronic Circuits Fundamentals						Analog Integrated Circuits																							
	L234.22.01.F1	4	E	28	28	0	0	0	0	DF	44	L234.22.02.F1	4	E	28	28	0	0	0	DF	44	L234.22.03.D1	4	E	28	0	28	0	0	0	DD	44	L234.22.04.D1	5	E	28	14	14	0	0	0	DD
2	Algebra and Geometry						Special Mathematics						Fundamentals of Electrical Engineering						General Economics																							
	L234.22.01.F2	4	E	28	28	0	0	0	0	DF	44	L234.22.02.F2	4	D	28	14	14	0	0	DF	44	L234.22.03.D2	4	D	28	14	0	0	0	0	DD	58	L234.22.04.C2	3	D	28	14	0	0	0	0	DC
3	Computer Aided Design						Electronic Components, Technology and Materials						Signals and Systems						Network and Internet Architectures																							
	L234.22.01.F3	3	E	28	0	14	0	0	DF	33	L234.22.02.D3	4	E	28	14	14	0	0	DD	44	L234.22.03.D3	4	E	28	14	14	0	0	0	DD	44	L234.22.04.D3	4	E	28	0	28	0	0	0	DD	44
4	Physics						Electrical Circuits						Digital Integrated Circuits						Programming Language 3																							
	L234.22.01.F4	5	E	42	14	14	0	0	DF	55	L234.22.02.D4	4	E	28	0	28	0	0	DD	44	L234.22.03.D4	4	E	28	0	28	0	0	0	DD	44	L234.22.04.F4	4	D	28	0	28	0	0	0	DF	44
5	Introduction to Computer Programming						Electronic Devices						CAD Techniques in Electronic Modules Manufacturing						Digital Signal Processing																							
	L234.22.01.F5	4	D	28	0	28	0	0	DF	44	L234.22.02.D5	5	E	28	0	28	0	0	DD	69	L234.22.03.D5	4	D	28	0	28	0	0	0	DD	44	L234.22.04.D5	5	E	28	0	28	0	0	0	DD	69
6	Experimental Data Processing						Applied Computer Programming						Measurements in Electronics and Telecommunications						Microcontrollers																							
	L234.22.01.F6	3	D	14	0	14	0	0	DF	47	L234.22.02.F6	4	D	28	0	28	0	0	DF	44	L234.22.03.D6	4	E	28	14	14	0	0	0	DD	44	L234.22.04.D6	5	E	28	0	28	0	0	0	DD	69
7	Culture and Civilization						Second Language						Programming Languages 2						Electronic Circuits Project																							
	L234.22.01.C7	2	D	14	14	0	0	0	DC	22	L234.22.02.C7	3	D	0	28	0	0	0	DC	47	L234.22.03.F7	4	D	28	0	28	0	0	0	DF	44	L234.22.04.D7	2	P-D	0	0	0	28	0	0	DD	22
8	Second Language						Sport						Sports 3						Sports 4																							
	L234.22.01.C8	3	D	0	28	0	0	0	DC	47	L234.22.02.C8	2	D	0	14	0	0	0	DC	36	L234.22.03.C8	2	D	0	14	0	0	0	0	DC	36	L234.22.04.C8	2	D	0	14	0	0	0	0	DC	36
9	Sport																																									
	L234.22.01.C9	2	D	0	14	0	0	0	DC	36																																
10																																										
11																																										
total sem.	ore didactice: 378		VPI: 372		ore: 378		VPI: 372		ore: 392		VPI: 358		ore: 364		VPI: 386																											
	credite: 30		evaluări: 4E,5D,0C		credite: 30		evaluări: 4E,4D,0C		credite: 30		evaluări: 4E,4D,0C		credite: 30		evaluări: 4E,4D,0C																											
total săpt.	ore didactice: 27,0		ore: 27		ore: 27		din care: 12,0 7,0 8,0 0,0 (c, s, l, p)		ore: 28		din care: 14,0 4,0 10,0 0,0 (c, s, l, p)		ore: 26		din care: 12,0 3,0 9,0 2,0 (c, s, l, p)																											
	din care: 13,0 9,0 5,0 0,0 (c, s, l, p)		din care: 12,0 7,0 8,0 0,0 (c, s, l, p)		din care: 14,0 4,0 10,0 0,0 (c, s, l, p)		din care: 12,0 3,0 9,0 2,0 (c, s, l, p)																																			

Observatii:

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Pentru seria de studenți 2022-2026

ANUL III (2024-2025)													ANUL IV (2025-2026)																										
SEMESTRUL 5						SEMESTRUL 6						SEMESTRUL 7						SEMESTRUL 8																					
1	Management and Marketing						FPGA-Based Programmable Systems						Electronic Equipment Testing for Telecommunications						Optional Topic 6 Set 6L8 (2 disciplines out of 3)																				
	L234.22.05.C1	3	D	28	28	0	0	0	DC	19	L234.22.06.S1	3	D	28	0	14	14	0	DS	19	L234.22.07.S1	5	E	28	0	28	0	0	DS	69	L234.22.08.S1-ij	5	E	21	0	21	0	0	DS
2	Electronic Instrumentation for Measurements						Power Electronics						Software Development						Optional Topic 7 Set 6L8 (2 discipline out of 3)																				
	L234.22.05.D2	4	E	28	0	28	0	0	DD	44	L234.22.06.D2	3	E	28	0	14	14	0	DD	19	L234.22.07.S2	4	D	28	0	14	14	0	DS	44	L234.22.08.S2-ij	5	E	21	0	21	0	0	DS
3	Radio Communications						Optional Topic 1 Set 1L6 (1 discipline out of 2)						Optional Topic 2 Set 2L7 (2L7.1 or 2L7.2)						Software Project																				
	L234.22.05.D3	4	D	28	0	28	0	0	DD	44	L234.22.06.D3-ij	3	E	28	0	28	0	0	DD	19	L234.22.07.S3-ij	5	E	28	0	28	0	0	DS	69	L234.22.08.S3	3	P-D	0	0	0	28	0	DS
4	Virtual Instrumentation						Embedded Systems						Optional Topic 3 Set 3L7 (3L7.1 or 3L7.2)						Electronic Packaging																				
	L234.22.05.S4	3	E	28	0	14	14	0	DS	19	L234.22.06.S4	4	E	28	0	28	0	0	DS	44	L234.22.07.S4-ij	2	P-D	0	0	0	28	0	DS	22	L234.22.08.S4	5	E	21	0	21	0	0	DS
5	Information Transmission Theory						Digital Telephony						Optional Topic 4 Set 4L7 (4L7.1 or 4L7.2)						Optional Topic 8 Set 8L8 (1 disciplina aut of 2)																				
	L234.22.05.D5	3	D	28	14	14	0	0	DD	19	L234.22.06.S5	3	E	28	0	28	0	0	DS	19	L234.22.07.S5-ij	5	E	28	0	28	0	0	DS	69	L234.22.08.S5-ij	4	E	21	0	21	0	0	DS
6	Data Communications						Audio and Video Systems						Optional Topic 5 Set 5L7 (5L7.1 or 5L7.2)						Practical Training 3 - Activities related to diploma project																				
	L234.22.05.S6	4	E	28	0	28	0	0	DS	44	L234.22.06.D6	4	D	28	0	28	0	0	DD	44	L234.22.07.S6-ij	5	D	28	0	14	14	0	DS	69	L234.22.08.S6	4	D	0	0	0	0	60	DS
7	Microwaves						Engineering Ethics and Communication						Integrated Digital Networks						Diploma Project Elaboration																				
	L234.22.05.D7	4	E	42	0	14	0	0	DD	44	L234.22.06.C7	2	D	14	14	0	0	0	DC	22	L234.22.07.S7	4	E	28	0	28	0	0	DS	44	L234.22.08.S7	4	D	0	0	0	170	0	DS
8	Practical Training 1 - Domain						Development Project												Examen de diplomă - Diploma Exam*																				
	L234.22.05.D8	5	C	0	0	0	0	100	DD	25	L234.22.06.D8	3	P-D	0	0	0	28	0	DD	47																			
9							Practical Training 2 - Specialisation																																
											L234.22.06.S9	5	C	0	0	0	0	100	DS	25																			
10																																							
11																																							
total/sem.	ore:	392			VPI:	258			ore:	392			VPI:	258			ore:	364			VPI:	386			ore:	366			VPI:	394									
	credite:	30			evaluări:	4E,3D,1C			credite:	30			evaluări:	4E,4D,1C			credite:	30			evaluări:	4E,3D,0C			credite:	30+10**			evaluări:	5E,3D,0C									
total/săpt.	ore:	28							ore:	28							ore:	26							ore:	26													
	din care:	15,0	3,0	9,0	1,0	(c, s, l, p)	din care:	13,0	1,0	10,0	4,0	(c, s, l, p)	din care:	12,0	0,0	10,0	4,0	(c, s, l, p)	din care:	6,0	0,0	6,0	14,1	(c, s, l, p)															

* constă din: a. verificarea cunoștințelor fundamentale și de specialitate; b. susținerea lucrării de licență/diplomă.

** Credite suplimentare alocate Examenului de diplomă

Observatii:

Legenda												
Nume disciplina												
Cod	nc	FE	e	s	l	p	Pr	CF	VPI			
Cod = cod disciplina nc = nr.credite transferabile FE = forma de evaluare (E, D, C, P-E, P-D) E=examen, D=evaluare distribuită, C=colocviu P - E - proiect autonom cu examinare ca si in cazul disciplinelor cu examen P - D - proiect autonom cu examinare c=nr.ore curs l=nr.ore laborator s=nr.ore seminar p=nr.ore proiect												
Pr - volum de ore necesar activitatilor partial asistate / practica CF=categorie formativa careia ii apartine disciplina CF ∈ (DC, DD, DF, DS) DC - disciplina complementara DD - disciplina in domeniu DF - disciplina fundamentala DS - disciplina de specialitate VPI = volum de ore necesar pregatirii individuale												
Exemplu												
Calculus 1												
Cod	4	E	28	28	0	0	0	0	DF	44		

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DISCIPLINE OPZIONALE
Pentru seria de studenți 2022-2026

	ANUL III (2024-2025)										ANUL IV (2025-2026)																									
	SEMESTRUL 5					SEMESTRUL 6					SEMESTRUL 7					SEMESTRUL 8																				
01						Optional Topic 1L6.1 - Electromagnetic compatibility					Optional Topic 2L7.1 - VHDL					Optional Topic 6,7L8.1 - Digital Radio Communications																				
						L234.22.06.D3-01	3	E	28	0	28	0	0	DD	19	L234.22.07.S3-01	4	E	28	0	28	0	0	DS	44	L234.22.08.S1-01	3	E	21	0	21	0	0	DS	33	
02						Optional Topic 1L6.2 - Communications Protocols					Optional Topic 3L7.1 - VHDL Project					Optional Topic 6,7L8.2 - Medical Electronics																				
						L234.22.06.D3-02	3	E	28	0	28	0	0	DD	19	L234.22.07.S3-02	3	P-D	0	0	0	28	0	0	DS	47	L234.22.08.S1-02	3	E	21	0	21	0	0	DS	33
03											Optional Topic 2L7.2 - Digital Signals Processors					Optional Topic 6,7L8.3 - Digital Image Processing																				
											L234.22.07.S3-03	4	E	28	0	28	0	0	DS	44	L234.22.08.S1-03	3	E	21	0	21	0	0	DS	33						
04											Optional Topic 3L7.2 - Digital Signals Processors Project					Optional Topic 8L8.1 Systems Modelling and Simulation																				
											L234.22.07.S3-04	3	P-D	0	0	0	28	0	DS	47	L234.22.08.S1-04	3	E	21	0	21	0	0	DS	33						
05											Optional Topic 4L7.1 - Microelectronics					Optional Topic 8L8.2 Design for Boundary Scan																				
											L234.22.07.S3-05	5	E	28	0	28	0	0	DS	69	L234.22.08.S1-05	3	E	21	0	21	0	0	DS	33						
06											Optional Topic 4L7.2 - Machine Learning																									
											L234.22.07.S3-06	5	E	28	0	14	14	0	DS	69																
07											Optional Topic 5L7.1 - Wireless Communications/Mobile Communications																									
											L234.22.07.S3-07	5	D	28	0	14	14	0	DS	69																
08											Optional Topic 5L7.2 - Optical Communications																									
											L234.22.07.S3-08	5	D	28	0	14	14	0	DS	69																
09																																				
10																																				
11																																				
12																																				
13																																				

Nota: Din fiecare dintre grupurile de Discipline opționale se activează un număr de discipline în funcție de opțiunile studenților, de numărul studenților și de acoperirea financiară.

Observatii: (*) - discipline opționale activate în anul univ. 2020-2021

DISCIPLINE OPZIONALE
 Pentru seria de studenți 2022-2026

	ANUL III (2024-2025)				ANUL IV (2025-2026)			
	SEMESTRUL 5	SEMESTRUL 6	SEMESTRUL 7	SEMESTRUL 8	SEMESTRUL 5	SEMESTRUL 6	SEMESTRUL 7	SEMESTRUL 8
14								
15								
16								
17								
18								
19								
20								
21								
22								
23								
24								
25								
26								

Nota: Din fiecare dintre grupurile de **Discipline opționale** se activează un număr de discipline în funcție de opțiunile studenților, de numărul studenților și de acoperirea financiară.

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