

Domeniul Inginerie Electronică, Telecomunicații și  
Tehnologii Informaționale

Programul de studii Electronică Aplicată (în limba engleză) (ELAen)

1st year - 1st Semester

26

Nr. crt.	Subject	Code	ECTS	Hours/Week					Weeks	Total hours / sem.			Individual study	Grading type	
				1st Semester						Cours	Applic	Total			
				C	S	L	P	LP							
<b>MANDATORY Subjects</b>															
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	
<b>Statistics hours (mandatory and optional)</b>															
ECTS, No. Hours/week/subj.			30	16	9	4	0	0	14	224	182	406	374	E / V	
No. Hours/week/semester				29											
<b>FACULTATIVE SUBJECTS L1</b>															
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						Cours	Applic	Total		
				C	S	L	P	LP						
<b>MANDATORY Subjects</b>														
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
<b>OPTIONAL Subjects</b>														
1	Software pentru birotică (lb. rom.)	04 F 02 A 016	2	1		1			14	14	14	28	24	V
	Grafică inginerască 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												
<b>Statistics hours (mandatory and optional)</b>														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										
<b>ELECTIVE COURSES</b>														
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						C	S	L			P	LP	Cours	Applic	Total
				C	S	L	P	LP											
<b>MANDATORY Subjects</b>																			
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					
<b>OPTIONAL Subjects</b>																			
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																	
<b>Statistics hours (mandatory and optional)</b>														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															
<b>ELECTIVE COURSES</b>																			
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						Cours	Applic	Total		
				C	S	L	P	LP						
<b>MANDATORY Subjects</b>														
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
<b>OPTIONAL Subjects</b>														
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												
<b>Statistics hours (mandatory and optional)</b>														
ECTS, No. Hours/week/subj.			30	15	6	8	0	0	14	210	196	406	374	E / V
No. Hours/week/semester			29											
<b>ELECTIVE COURSES</b>														
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						Cours	Applic	Total		
				C	S	L	P	LP						
<b>MANDATORY Subjects</b>														
1	Information Transmission Theory	04 D 05 O 501	5	3	1	1			14	42	28	70	60	E
2	Microwaves	04 D 05 O 502	5	3	1	1			14	42	28	70	60	E
3	Analogic Integrated Circuits	04 D 05 O 503	5	3	1	1			14	42	28	70	60	E
4	Electronic Measuring Instruments	04 D 05 O 504	5	3		1.5			14	42	21	63	67	E
5	Microcontrollers	04 D 05 O 505	4	2		1			14	28	14	42	62	V
6	Project 1 - Electronic Devices and Circuits	04 D 05 O 507	3				1		14	0	14	14	64	V
<b>OPTIONAL Subjects</b>														
1	Automatic Control in Electronics and Telecommunications (lb. rom.)	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												

	<b>Statistics hours (mandatory and optional)</b>														E / V
	ECTS, No. Hours/week/subj.		<b>30</b>	<b>16</b>	<b>3</b>	<b>6.5</b>	<b>1</b>	<b>0</b>	14	224	147	371	409	<b>4 / 3</b>	
	No. Hours/week/semester		<b>26.5</b>												
	<b>ELECTIVE COURSES</b>														
1	Dezvoltarea aplicațiilor Android inovatoare	04 D 05 L 028	<b>3</b>	1		1	1		14	14	28	42	36	V	
2	Educație fizică și sport 5	04 C 05 L 029	<b>2</b>		2				14	0	28	28	24	V	
3	Instruire asistată de calculator	04 C 05 L 025	<b>2</b>	1	1				14	14	14	28	24	V	
4	Practică pedagogică în învățământul preuniversitar obligatoriu (1)	04 C 05 L 026	<b>3</b>					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
				2nd Semester						Cours	Applic	Total		
				C	S	L	P	LP						
	<b>MANDATORY Subjects</b>													
1	Decision and Estimation in Information Processing	04 D 06 O 008	<b>5</b>	3	1	1			14	42	28	70	60	E
2	Digital Signal Processing	04 D 06 O 510	<b>4</b>	3		2			14	42	28	70	34	E
3	Television	04 D 06 O 511	<b>3</b>	2		1			14	28	14	42	36	V
4	Fundamentals of Data Acquisition Systems	04 D 06 O 512	<b>3</b>	2		1			14	28	14	42	36	E
5	Neural Networks and Fuzzy Systems	04 S 06 O 513	<b>2</b>	2		1			14	28	14	42	10	E
6	Industrial Electronics and Informatics	04 S 06 O 514	<b>2</b>	2		1			14	28	14	42	10	E
7	Programming Technologies for Internet	04 D 06 O 515	<b>3</b>	2		1			14	28	14	42	36	V
8	Practical Activity (3rd year)	04 D 06 O 509	<b>6</b>					30	12	0	360	360	0	A/R
	<b>OPTIONAL Subjects</b>													
1	Project 2 - Programmable Electronics	04 D 06 O 525	<b>2</b>				1		14	0	14	14	38	V
	<b>Statistics hours (mandatory and optional)</b>													E / V
	ECTS, No. Hours/week/subj.		<b>30</b>	<b>16</b>	<b>1</b>	<b>8</b>	<b>1</b>		14	224	500	724	260	<b>5 / 4</b>
	No. Hours/week/semester		<b>26</b>											
	<b>ELECTIVE COURSES</b>													
1	Educație fizică și sport 6	04 C 05 L 032	<b>2</b>		2				14	0	28	28	24	V
2	Managementul clasei de elevi	04 C 06 L 024	<b>3</b>	1	1				14	14	14	28	50	E
3	Practică pedagogică în învățământul preuniversitar obligatoriu (2)	04 C 06 L 022	<b>2</b>					3	12	0	36	36	16	V
4	Examen de absolvire: nivelul I	04 C 06 L 023	<b>5</b>						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						C	S	L			P	LP	Cours	Applic	Total
				C	S	L	P	LP											
<b>MANDATORY Subjects</b>																			
1	Computer Architectures	04 S 07 O 502	4	2		2			14	28	28	56	48	E					
2	Programable Electronic Systems	04 S 07 O 503	5	2		1			14	28	14	42	88	E					
3	Medical Imaging	04 S 07 O 504	4	2		2			14	28	28	56	48	E					
4	Medical Electronics and Informatics	04 S 07 O 505	4	2		2			14	28	28	56	48	E					
5	Power Electronic Processors	04 S 07 O 506	4	2		1			14	28	14	42	62	E					
6	3D Graphics	04 S 07 O 509	4	2		1.5			14	28	21	49	55	V					
7	Databases	04 D 07 O 508	3	2		1			14	28	14	42	36	V					
<b>OPTIONAL Subjects</b>																			
1	Project 3	04 S 07 O 507	2				1		14	0	14	14	38	V					
<b>Statistics hours (mandatory and optional)</b>																			
ECTS, No. Hours/week/subj.			30	14	0	11	1	0	14	196	161	357	423	E / V					
No. Hours/week/semester				25.5															
<b>ELECTIVE COURSES</b>																			
1	Automotive electronics	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					
				2nd Semester						C	S	L			P	LP	Cours	Applic	Total
				C	S	L	P	LP											
<b>MANDATORY Subjects</b>																			
1	Robotics	04 S 08 O 511	4	2		1			14	28	14	42	62	V					
2	Automatic Testing of Equipments and Processes	04 S 08 O 512	3	2		1			14	28	14	42	36	V					
3	Reconfigurable Computing Systems	04 S 08 O 513	3	2		1			14	28	14	42	36	V					
4	Computer Aided Analysis of Power Electronic Circuits	04 S 08 O 514	4	2		2			14	28	28	56	48	V					
5	Hybrid Mobile Communications Systems	04 S 08 O 515	3	2		1			14	28	14	42	36	V					
<b>OPTIONAL Subjects</b>																			
1	Quality and Reliability (lb. română)	04 S 08 A 001	3	1		1			14	14	14	28	50	V					
	Management and Legislation in Telecom and Electronics (lb. eng)	04 S 08 A 614																	
<b>Proiect LICENȚĂ</b>																			
1	Activities for Diploma Project Preparation	04 S 08 O 003	5					4	14	0	56	56	0	A/R					
2	Practice for Diploma Project	04 S 08 O 002	5					30	2	0	60	60	0	A/R					
<b>Statistics hours (mandatory and optional)</b>																			
ECTS, No. Hours/week/subj.			30	11	0	7	0	4	14	154	98	252	268	E / V					
No. Hours/week/semester				22															
<b>ELECTIVE COURSES</b>																			
1	Peripherals equipments	04 S 08 L 518	3	2		1			14	28	14	42	36	V					



<b>Forma verificare</b>
E / V
33 / 31

Centralizator plan	C.s.t.	Nr. Total ore/sapt.					Nr. sapt	Total ore			Studiu indiv. total	Pondere %	
		C	S	L	P	LP		Curs	Aplic	Total			
<b>Discipline OBLIGATORII</b>	215	111	27	51	2	64	14	1554	1169	2723	2867	90.7%	
<b>Discipline OPTIONALE</b>	25	12	0	6	2	0	14	168	112	280	370	9.3%	
	240	214.5									3003	3237	
<b>Discipline FACULTATIVE</b>	62	16	24	4	1	36	14	224	406	630	982	21.4%	

Centralizator plan	C.s.t.	Nr. Total ore/sapt.					Pondere %
		C	S	L	P	LP	
<b>Discipline fundamentale (DF)</b>	39	24	6	7	0	0	17.2%
<b>Discipline de domeniu (DD)</b>	127	66	15	30	3	0	53.1%
<b>Discipline de specialitate (DS)</b>	61	27	0	19	1	4	23.5%
<b>Discipline complementare (DC)</b>	13	6	6	1	0	0	6.1%
	240	214.5					100%