

Domain ELECTRONICS, TELECOMMUNICATIONS AND INFORMATION TECHNOLOGIES ENGINEERING

Program Name AI AND SIGNAL PROCESSING FOR ELECTRONICS AND TELECOMM (IN ENGLISH)

Study Level RESEARCH MASTERS

CURRICULA

Valid for the Academic Year

2024-2025

COURSE CODE AND TITLE	Year I					Methods of Assessment	Nr.of Hours/Discipline				ECTS/Sem		Discipline	
	SEM 1 14 weeks		SEM 2 14 weeks				E C V	Total	C	Apl	Indiv. St.	1	2	cat
	C	S	L	P	Pr/Ce	C								
1.00 AI Fundamentals	2	0	1	0	0	Gr	100	28	14	58	4.0		DA	DI
2.00 Software for Signal / Image Processing and AI	1	0	2	0	0	Gr	100	14	28	58	4.0		DS	DI
3.00 Statistical Signal Processing	2	0	1	0	0	Gr	100	28	14	58	4.0		DA	DI
4.00 Mathematical Methods and Numerical Algorithms for Signal/Image Processing and Machine Learning	2	0	1	0	0	Gr	100	28	14	58	4.0		DA	DI
5.00 Ethics and Academic Integrity	1	0	0	0	0	Gr	50	14	0	36	2.0		DC	DI
6.10 Sparse Representations for Signal and Image Processing	1	0	1	0	0	Gr	100	14	14	72	4.0		DS	DO
6.20 AI Technologies for Mobile Applications	1	0	1	0	0	Gr	100	14	14	72	4.0		DS	DO
6.30 Virtual and Augmented Reality	1	0	1	0	0	Gr	100	14	14	72	4.0		DS	DO
6.40 Audio Signal Compression Techniques	1	0	1	0	0	Gr	100	14	14	72	4.0		DS	DO
7.00 Research / Practical Activity 1	0	0	0	0	13	Gr	200	0	182	18	8.0		DS	DI
8.00 Advanced Techniques for Image and Video Processing						Gr	100	28	14	58		4.0	DA	DI
9.10 Computer Vision						Gr	100	28	14	58		4.0	DS	DO
9.20 Speech Analysis, Synthesis and Recognition						Gr	100	28	14	58		4.0	DS	DO
10.00 Machine Learning						Gr	100	28	14	58		4.0	DS	DI
11.10 Reconfigurable Architectures for Signal / Image Processing and AI						Gr	100	28	14	58		4.0	DS	DO
11.20 Smart Sensor Networks and IoT						Gr	100	28	14	58		4.0	DS	DO
12.00 Research Project 1						Gr	100	0	28	72		4.0	DS	DI
13.00 Research / Practical Activity 2						Gr	250	0	196	54		10.0	DS	DI
TOTAL AN	9	0	6	0	13		1500	238	546	716	30.0	30.0		
			15.00			8	0	4	2	14	sem1	5	1	1
											sem2	4	1	1
201.00 Psychopedagogy of Adolescents, Youngs and Adults	2	1	0	0	0	Gr	125	28	14	83	5.0		DC	DFac
301.00 Volunteering 1	0	1	0	0	0	A/R	50	0	14	36	2.0		DC	DFac
202.00 Design and Management of Educational Programs						Gr	125	28	14	83		5.0	DC	DFac

Rector,
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	SEM 1 14 weeks		SEM 2 14 weeks				E	C	V	Total	C	Apl	Indiv. St.	1	2	cat	type					
	C	S	L	P	Pr/Ce	C												S	L	P	Pr/Ce	
203.10 Educational Communication						1	2	0	0	0	Gr					125	14	28	83	5.0	DC	DFac
203.20 Educational Research Methodology						1	2	0	0	0	Gr					125	14	28	83	5.0	DC	DFac
203.30 Modern Orientations in Evaluation Theory and Practice						1	2	0	0	0	Gr					125	14	28	83	5.0	DC	DFac
302.00 Volunteering 2						0	1	0	0	0			A/R			50	0	14	36	2.0	DC	DFac
TOTAL AN	2	2	0	0	0	3	4	0	0	0	sem1	1	0	1	475	70	84	321	7.0	12.0		
				4.00					7.00		sem2	2	0	1								

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	SEM 1		14 weeks			SEM 2		14 weeks			E	C	V	Total	C	Apl	Indiv. St.	1	2	cat	type	
	C	S	L	P	Pr/Ce	C	S	L	P	Pr/Ce												
14.00 AI-Based Cybersecurity	1	0	2	0	0									Gr	100	14	28	58	4.0		DA	DI
15.00 Bioinformatics	1	0	2	0	0									Gr	100	14	28	58	4.0		DS	DI
16.00 Neural Networks and Deep Learning	2	0	1	0	0									Gr	100	28	14	58	4.0		DS	DI
17.00 Data Mining	1	0	2	0	0									Gr	100	14	28	58	4.0		DS	DI
18.10 Coding and Compression for Images and Video Sequences	1	0	1	0	0									Gr	100	14	14	72	4.0		DA	DO
18.20 Traffic Prediction in Telecom Networks Using AI	1	0	1	0	0									Gr	100	14	14	72	4.0		DA	DO
18.30 Cognitive Communications	1	0	1	0	0									Gr	100	14	14	72	4.0		DA	DO
18.40 Natural Language Processing	1	0	1	0	0									Gr	100	14	14	72	4.0		DA	DO
19.00 Research / Practical Activity 3	0	0	0	0	14									Gr	250	0	196	54	10.0		DS	DI
20.00 Research / Practical Activity 4						0	0	0	0	14				Gr	250	0	196	54		10.0	DS	DI
21.00 Dissertation Project Work						0	0	0	9	0				Gr	250	0	126	124		10.0	DS	DI
22.00 Field Specific Research for the Master Thesis						0	0	0	0	5				Gr	250	0	70	180		10.0	DS	DI
23.00 Presentation of Dissertation						0	0	0	0	0				Gr	0	0	0	0		10.0	DS	DI
TOTAL AN	6	0	8	0	14	0	0	0	9	14	sem1	5	1	0	1500	84	700	716	30.0	30.0		
											sem2	0	3	0						+ 10		
100.00 Introduction to Quantum Information	2	0	2	0	0									Gr	75	28	28	19	3.0		DA	DFac
204.00 Didactics of the Field and Development in Didactics Specialties (High School and Post High School Education)	2	1	0	0	0									Gr	125	28	14	83	5.0		DC	DFac
205.10 School Organization Management	1	2	0	0	0									Gr	125	14	28	83	5.0		DC	DFac
205.20 Metacognitive Education	1	2	0	0	0									Gr	125	14	28	83	5.0		DC	DFac
205.30 Intercultural Education	1	2	0	0	0									Gr	125	14	28	83	5.0		DC	DFac
303.00 Volunteering 3	0	1	0	0	0									A/R	50	0	14	36	2.0		DC	DFac
206.00 Teaching Practice (in Secondary School and Tertiary Education)						0	0	0	0	3				Gr	125	0	42	83		5.0	DC	DFac

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207.00	Graduation exam - Level II		0	0	0	0	0	0	Gr	0	0	0	0	5.0	DC	DFac	
304.00	Volunteering 4		0	1	0	0	0	0	A/R	50	0	14	36	2.0	DC	DFac	
TOTAL AN		5	4	2	0	0	0	1	0	0	1	0	0	3			
					11.00					1.00	3	sem1	2	1	1		
												sem2	0	1	1		
												550	70	140	340	15.0	7.0
																	+ 5

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	C	S	L	P	Pr/Ce	Credite	Examene	Colocvii si verificari	Total evaluari	Nr.examene/tot.evaluari
Anul I	238	0	140	28	378	60	9	4	13	69 %
Anul II	84	0	112	126	462	60	5	4	9	56 %
TOTAL	322	0	252	154	840	120	14	8	22	64 %

NUMAR ORE TOTAL 1568

TOTAL ORE DIDACTICE 798

TOTAL ORE DISCIPLINE DE APROFUNDARE 238

TOTAL ORE DISCIPLINE DE SINTEZA 1316

TOTAL ORE DISCIPLINE COMPLEMENTARE - TIP DC 14 1.65 % din tot.activ.didactice oblig. max 20%

NUMAR DISCIPLINE COMPLEMENTARE - TIP DC 1

TOTAL ORE CURS 322

TOTAL ORE ACTIVITATI APLICATIVE 406

TOTAL ORE ACTIV.APLIC.FARA DISC.PARTIAL ASIST. 280

RAPORT CURS / ACTIV. PRACTICE 0.79 0.80-1.20

RAPORTAT LA ACTIV.APLIC.FARA DISC.PARTIAL ASIST. 1.15

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