

CODUL SI DENUMIREA DISCIPLINEI	Anul : I										Forma de verificare	Nr.ore/disciplina				Credite/sem		Disciplina				
	SEM 1 14 sapt					SEM 2 14 sapt						E	C	V	Total	C	Apl	St. ind	1	2	cat	tip
	C	S	L	P	Pr/Ce	C	S	L	P	Pr/Ce												
1.00 Transformarea digitala sustenabila	1	0	2	0	0						Nota	100	14	28	58	4.0		DA	DI			
2.00 Lanturi furnizor digitale	1	0	1	0	0						Nota	100	14	14	72	4.0		DA	DI			
3.00 Roboti autonomi mobili	1	0	1	0	0						Nota	75	14	14	47	3.0		DS	DI			
4.00 Invatarea automata si analitica datelor in productia industriala	2	0	0	2	0						Nota	125	28	28	69	5.0		DS	DI			
5.10 Proiectarea gemenilor digitali	1	0	2	0	0						Nota	100	14	28	58	4.0		DS	DO			
5.20 Domotica pentru spatii industriale	1	0	2	0	0						Nota	100	14	28	58	4.0		DS	DO			
6.00 Practica profesionala I	0	0	0	0	14						Nota	250	0	196	54	10.0		DS	DI			
7.00 Productia agila si supla						2	0	1	0	0	Nota	100	28	14	58	4.0		DA	DI			
8.00 Tehnologii de printare 3D						1	0	0	1	0	Nota	100	14	14	72	4.0		DA	DI			
9.00 Proiectarea generativa si optimizarea topologica						2	0	0	2	0	Nota	125	28	28	69	5.0		DS	DI			
10.00 Realitatea virtuala in sisteme de productie						1	0	1	0	0	Nota	75	14	14	47	3.0		DS	DI			
11.10 Sisteme de scanare 3D						2	0	1	0	0	Nota	100	28	14	58	4.0		DA	DO			
11.20 Sisteme inteligente pentru metrologia industriala						2	0	1	0	0	Nota	100	28	14	58	4.0		DA	DO			
12.00 Practica profesionala II						0	0	0	0	14	Nota	250	0	196	54	10.0		DS	DI			
TOTAL AN	6	0	6	2	14	8	0	3	3	14	sem1 4 1 1 sem2 3 2 1	1500	196	588	716	30.0	30.0					
201.00 Psihopedagogia adolescentilor, tinerilor si adultilor	2	1	0	0	0						Nota	125	28	14	83	5.0		DC	DFac			
301.00 Voluntariat 1	0	1	0	0	0						A/R	50	0	14	36	2.0		DC	DFac			
202.00 Proiectarea si managementul programelor educationale						2	1	0	0	0	Nota	125	28	14	83	5.0		DC	DFac			
203.10 Comunicare educationala						1	2	0	0	0	Nota	125	14	28	83	5.0		DC	DFac			
203.20 Metodologia cercetarii educationale						1	2	0	0	0	Nota	125	14	28	83	5.0		DC	DFac			
203.30 Orientari moderne in teoria si practica evaluarii						1	2	0	0	0	Nota	125	14	28	83	5.0		DC	DFac			
302.00 Voluntariat 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 sem2 2 0 1	475	70	84	321	7.0	12.0					

 Rector,
 Prof. Dr. Ing. Vasile Topa
 Decan,
 Prof. dr. ing. dr. ec. Stelian Brad

 Director departament,
 Prof. dr. ing. Calin Ghe. Dan Neamtu

 Responsabil specializare/program studii,
 Prof. dr. ing. Stelian Brad

 Exemplar unic
 Originalul se afla la PRORECTORATUL DIDACTIC
 Data: 10.04.2025 VAR.0
 Semnatura:

UNIVERSITATEA TEHNICA CLUJ-NAPOCA

FACULTATE FACULTATEA DE INGINERIE INDUSTRIALA, ROBOTICA SI MANAGEMENTUL PRODUCTIEI

DOMENIU MECATRONICA SI ROBOTICA

SPECIALIZARE INTELIGENTA ARTIFICIALA IN PRODUCTIA INDUSTRIALA (LIMBA ENGLEZA)

Nivel de studii MASTER (PROFESIONAL)

PLAN DE INVATAMANT PENTRU PROMOTIA CARE INCEPE CU ANUL UNIVERSITAR 2024-2025

Listat la : 16/04/2024

Anexa nr. 11 la

fișta nr. 161 din

23.05.2024 Pag. 2

CODUL SI DENUMIREA DISCIPLINEI	Anul : II										Forma de verificare			Nr.ore/disciplina				Credite/sem		Disciplina	
	SEM 1 14 sept					SEM 2 14 sept					E	C	V	Total	C	Apl	St. ind	1	2	cat	tip
	C	S	L	P	Pr/Ce	C	S	L	P	Pr/Ce											
13.00 Sisteme robotice colaborative	1	0	2	0	0						Nota			100	14	28	58	4.0		DS	DI
14.00 Robotica cognitiva si sociala	2	0	1	0	0						Nota			100	28	14	58	4.0		DS	DI
15.00 Securitatea retelelor industriale	2	0	1	0	0						Nota			100	28	14	58	4.0		DS	DI
16.00 Etica si integritate academica	1	0	0	0	0						Nota			50	14	0	36	2.0		DC	DI
17.10 Realitatea augmentata in sistemele de productie	2	0	1	0	0						Nota			100	28	14	58	4.0		DS	DO
17.20 Simularea proceselor de productie	2	0	1	0	0						Nota			100	28	14	58	4.0		DS	DO
18.10 Baze de cunostinte in proiectare	1	0	0	1	0						Nota			100	14	14	72	4.0		DA	DO
18.20 Design industrial	1	0	0	1	0						Nota			100	14	14	72	4.0		DA	DO
19.00 Practica profesionala III	0	0	0	0	13						Nota			200	0	182	18	8.0		DA	DI
20.00 Practica profesionala IV						0	0	0	0	14			Nota	250	0	196	54		10.0	DA	DI
21.00 Practica pentru elaborarea lucrarii de disertatie ~						0	0	0	0	7			Nota	250	0	98	152		10.0	DS	DI
22.00 Elaborare disertatie						0	0	0	7	0			Nota	250	0	98	152		10.0	DS	DI
23.00 Sustinere lucrare de disertatie						0	0	0	0	0	Nota			0	0	0	0		10.0	DS	DI
TOTAL AN	9	0	5	1	13	0	0	0	7	14	sem1	4	2	1500	126	658	716	30.0	30.0		
				15.00					14.00		sem2	0	0	3					+ 10		
204.00 Didactica domeniului si dezvoltari in didactica specializarii (invatamant liceal, postliceal, dupa caz)	2	1	0	0	0						Nota			125	28	14	83	5.0		DC	DFac
205.10 Managementul organizatiei scolare	1	2	0	0	0						Nota			125	14	28	83	5.0		DC	DFac
205.20 Educatie metacognitiva	1	2	0	0	0						Nota			125	14	28	83	5.0		DC	DFac
205.30 Educatie interculturala	1	2	0	0	0						Nota			125	14	28	83	5.0		DC	DFac
303.00 Voluntariat 3	0	1	0	0	0						A/R			50	0	14	36	2.0		DC	DFac
206.00 Practica pedagogica de specialitate in invatamantul preuniversitar (invatamant liceal, postliceal, dupa caz)						0	0	0	0	3	Nota			125	0	42	83		5.0	DC	DFac
207.00 Examen de absolvire: nivelul II						0	0	0	0	0	Nota			125	0	0	125		5.0	DC	DFac
304.00 Voluntariat 4						0	1	0	0	0			A/R	50	0	14	36		2.0	DC	DFac

Rector,
Prof.Dr.Ing.Vasile TopaDeci
Prof. dr. ing. Corina Julieta BirleanuDirector departament,
Prof. dr. ing. Calin Ghe. Dan NeamtuResponsabil
Prof.dr.ing. Stelian Preda

EXEMPLAR UNIC
Original se afla la PRORECTORATUL DIDACTIC
Data: 13.05.2024 - YARU
Semnatura: _____

UNIVERSITATEA TEHNICA CLUJ-NAPOCA

FACULTATE FACULTATEA DE INGINERIE INDUSTRIALA, ROBOTICA SI MANAGEMENTUL PRODUCTIEI

Listat la : 16/04/2024

DOMENIU MECATRONICA SI ROBOTICA

SPECIALIZARE INTELIGENTA ARTIFICIALA IN PRODUCTIA INDUSTRIALA (LIMBA ENGLEZA)

Nivel de studii MASTER (PROFESIONAL)

PLAN DE INVATAMANT PENTRU PROMOTIA CARE INCEPE CU ANUL UNIVERSITAR 2024-2025

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TOTAL AN	3	4	0	0	0	0	1	0	0	3	sem1	2	0	1	600	42	112	446	12.0	7.0	
				7.00					1.00		sem2	0	1	1						+ 5	

EXEMPLAR UNIC

Originalul se află la PRORECTORATUL DIDACTIC

Data: 13.05.2024 - PARO

Semnătura: _____

Rector,
Prof.Dr.Ing.Vasile Topa

Decan,
Prof. dr. ing. Corina Julieta Birleanu

Director departament,
Prof. dr. ing. Călin Ghe. Dan Neamtu

Responsabil specializare/program studii,
Prof.dr.ing. Stelian Brad

Domain MECHATRONICS AND ROBOTICS

Program Name ARTIFICIAL INTELLIGENCE IN INDUSTRIAL PRODUCTION (IN ENGLISH LANGUAGE)

Study Level PROFFSSIONAL MASTERS

CURRICULA

Valid for the Academic Year 2025-2026

12
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29.05.2025
data Pag 1

COURSE CODE AND TITLE	Year I										Methods of Assessment				Nr. of Hours/Discipline				ECTS/Sem		Discipline	
	SEM 1 14 weeks					SEM 2 14 weeks																
	C	S	L	P	Pr/Ce	C	S	L	P	Pr/Ce	E	C	V		Total	C	Apl	Indiv. St.	1	2	cat	type
1.00 Green and Digital Transformation	1	0	2	0	0						Gr				100	14	28	58	4.0		DA	DI
2.00 Digitalization of Supply Chains	1	0	1	0	0						Gr				100	14	14	72	4.0		DA	DI
3.00 Autonomous Mobile Robots	1	0	1	0	0						Gr				75	14	14	47	3.0		DS	DI
4.00 Machine Learning and Data Analytics in Industrial Production	2	0	0	2	0						Gr				125	28	28	69	5.0		DS	DI
5.10 Design of Digital Twins	1	0	2	0	0						Gr				100	14	28	58	4.0		DS	DO
5.20 Domatics for Industrial Facilities	1	0	2	0	0						Gr				100	14	28	58	4.0		DS	DO
6.00 Professional Practical Work I	0	0	0	0	14								Gr		250	0	196	54	10.0		DS	DI
7.00 Lean and Agile Production						2	0	1	0	0	Gr				100	28	14	58		4.0	DA	DI
8.00 3D Printing Technologies						1	0	0	1	0	Gr				100	14	14	72		4.0	DA	DI
9.00 Generative Design and Topological Optimization						2	0	0	2	0	Gr				125	28	28	69		5.0	DS	DI
10.00 Virtual Reality in Production Systems						1	0	1	0	0	Gr				75	14	14	47		3.0	DS	DI
11.10 3D Scanning Systems						2	0	1	0	0	Gr				100	28	14	58		4.0	DA	DO
11.20 Intelligent Systems for Industrial Metrology						2	0	1	0	0	Gr				100	28	14	58		4.0	DA	DO
12.00 Professional Practical Work II						0	0	0	0	14			Gr		250	0	196	54		10.0	DS	DI
TOTAL AN	6	0	6	2	14	8	0	3	3	14	sem1	4	1	1	1500	196	588	716	30.0	30.0		
											sem2	3	2	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						2	1	0	0	0	Gr				125	28	14	83		5.0	DC	DFac
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 Trends in Assesement 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

Rector,
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Dean,
Prof. dr. ing. dr. ec. Stelian Brad

Department Director,
Prof. dr. ing. Galin Ghe. Dan Neamtu

Study Program Responsible,
Prof. dr. ing. Stelian Brad

EXEMPLAR UNIC

Originalul se află la PROCTORATUL DIDACTIC

Data: 10.04.2025 VAR. 0

semnătura: _____

Domain MECHATRONICS AND ROBOTICS
Program Name ARTIFICIAL INTELLIGENCE IN INDUSTRIAL PRODUCTION (IN ENGLISH LANGUAGE)
Study Level PROFSSIONAL MASTERS

CURRICULA Valid for the Academic Year 2025-2026

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							

EXEMPLAR UNIC
Originalul se află la PRORECTORATUL DIDACTIC
Data: 10.04.2025 VAR. 0
Semnătura: _____

Rector,
Prof. dr. Ing. Vasile Topa

Dean,
Prof. dr. ing. dr. ec. Stelian Brad

Department Director,
Prof. dr. ing. Calin Ghe. Dan Neamtu

Study Program Responsible,
Prof. dr. ing. Stelian Brad

TECHNICAL UNIVERSITY of CLUJ-NAPOCA
FACULTY OF INDUSTRIAL ENGINEERING, ROBOTICS AND PRODUCTION MANAGEMENT

Domain MECHATRONICS AND ROBOTICS

Program Name ARTIFICIAL INTELLIGENCE IN INDUSTRIAL PRODUCTION (IN ENGLISH LANGUAGE)

Study Level PROFSSIONAL MASTERS

CURRICULA

Valid for the Academic Year 2024-2025

Listat la : 05/03/2024
Anexa nr. la
Sedinta nr. din
data 23.05.2024 pag. 2

COURSE CODE AND TITLE	Year II										Methods of Assessment				Total 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	type	
	C	S	L	P	Pr/Ce	C	S	L	P	Pr/Ce												
13.00 Collaborative Robotic Systems	1	0	2	0	0						Gr			100	14	28	58	4.0		DS	DI	
14.00 Cognitive and Social Robotics	2	0	1	0	0						Gr			100	28	14	58	4.0		DS	DI	
15.00 Security of Industrial Networks	2	0	1	0	0						Gr			100	28	14	58	4.0		DS	DI	
16.00 Ethics and Academic Integrity	1	0	0	0	0						Gr			50	14	0	36	2.0		DC	DI	
17.10 Augmented Reality in Production Systems	2	0	1	0	0						Gr			100	28	14	58	4.0		DS	DO	
17.20 Simulation of Industrial Processes	2	0	1	0	0						Gr			100	28	14	58	4.0		DS	DO	
18.10 Knowledge Databases in Design	1	0	0	1	0						Gr			100	14	14	72	4.0		DA	DO	
18.20 Industrial Design	1	0	0	1	0						Gr			100	14	14	72	4.0		DA	DO	
19.00 Professional practical Work III	0	0	0	0	13						Gr			200	0	182	18	8.0		DA	DI	
20.00 Professional practical Work IV						0	0	0	0	14				250	0	196	54		10.0	DA	DI	
21.00 Practice for the Elaboration of the Dissertation						0	0	0	0	7				250	0	98	152		10.0	DS	DI	
22.00 Master Thesis Elaboration						0	0	0	7	0				250	0	98	152		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	9	0	5	1	13	0	0	0	7	14	sem1	4	2	1	1500	126	658	716	30.0	30.0		
				15.00					14.00		sem2	0	0	3						+ 10		

EXEMPLAR UNIC

Originalul es afila la PRORECTORATUL DIDACTIC

Data: 13.05.2025 - ARD

Semnatura: _____

Rector,
Prof.Dr.Ing.Vasile Topa

Dean,
Prof. dr. ing. Corina Julieta Birleanu

Department Director,
Prof. dr. ing. Calin Ghe. Dan Neamtu

Study Program Responsible,
Prof.dr.ing. Stelian Brad