

## PLAN DE ÎNVĂȚĂMÂNT

Programul de studii univ. de master:

AUTOMOTIVE EMBEDDED SOFTWARE (SISTEME ÎNCORPORATE PENTRU DOMENIUL AUTO)

Tipul de masterat:

de cercetare

Domeniul fundamental (DFI):

ENGINEERING SCIENCES (ȘTIINȚE INGINEREȘTI)

Ramura de știință (RSI):

SYSTEMS ENGINEERING, COMPUTERS AND INFORMATION TECHNOLOGY (INGINERIA SISTEMELOR, CALCULATOARE ȘI TEHNOLOGIA INFORMATIEI)

Domeniul de licență (DL):

SYSTEMS ENGINEERING (INGINERIA SISTEMELOR)

Durata studiilor / Numărul de credite:

2 ani / 120 credite

Forma de învățământ:

IF - Invatamant cu frecventa

Domeniul de studii universitare de master (DSU\_M):

SYSTEMS ENGINEERING (INGINERIA SISTEMELOR)

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

DECAN,  
Prof.univ.dr.ing. Marius-George MARCU

**Misiunea programului de studii:**

**Obiectivele programului de studii:**

**Competențele programului de studii:**

**Competențe profesionale:**

1. Problem definition, solution identification and project management of embedded systems.
2. Application of testing and diagnosis models and of quality engineering principles to software applications implemented on embedded systems.
3. Development of hardware and software applications for automotive systems using up-to-date informatics technologies.
4. Innovating solving of core problems in inter-disciplinary co-operation and team-working.

**Competențe transversale:**

- CT1. Carry out principles of ethics, professional values and responsible execution for professional tasks related to research abilities under autonomous decision making based on fair judgment and self-evaluation.
- CT2. Completing activities and executing roles that are intrinsic to team-work on different hierarchical levels, proving leadership and entrepreneurship skills, promoting dialogue, cooperation, positive attitudes, respect to others, promoting diversity, multiculturalism and self-improvement.
- CT3 Correct self-evaluation for continuous professional improvement to enter the work market, adapt to its needs and self-development for efficient use of language and knowledge in information technology and communication.

**Finalități:**

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

Domeniul de licență:  
Programul de studii univ. de master de cercetare:

SYSTEMS ENGINEERING (INGINERIA SISTEMELOR)  
AUTOMOTIVE EMBEDDED SOFTWARE (SISTEME ÎNCORPORATE PENTRU DOMENIUL AUTO)

Forma de învățământ:  
Durata studiilor:

IF - Învățământ cu frecvență  
2 ani

Domeniul fundamental (DFI):  
Ramura de știință (RSI):

ENGINEERING SCIENCES (ȘTIINȚE INGINEREȘTI)  
SYSTEMS ENGINEERING, COMPUTERS AND INFORMATION TECHNOLOGY (INGINERIA SISTEMELOR, CALCULATOARE ȘI TEHNOLOGIA INFO)  
SYSTEMS ENGINEERING (INGINERIA SISTEMELOR)

Domeniul de studii universitare de master (DSU\_M):

Cod DFI	Cod RSI	Cod DSU_M
20	60	20

ciclul	c1c2c3	a1a2
M	024	21

**PLAN DE ÎNVĂȚĂMÂNT**  
**An universitar 2021-2022**  
**ANUL I**

	SEMESTRUL 1										SEMESTRUL 2										
1	Embedded Systems I										Embedded Systems II										
	M024.21.01.A1	6	E	28	0	14	14		DA	94	M024.21.02.V1	6	E	42	0	28	0		DCAV	80	
2	Software Project Management										Communications Skills										
	M024.21.01.S2	5	E	28	0	0	14		DS	83	M024.21.02.S2	4	E	0	28	0	0		DS	72	
3	Software Engineering I										Embedded Systems Testing										
	M024.21.01.A3	5	E	28	0	14	0		DA	83	M024.21.02.S3	5	E	21	0	21	0		DS	83	
4	Networks for Embedded Systems										Dynamic Systems and Stability in Automotive Control										
	M024.21.01.V4	6	E	28	0	28	0		DCAV	94	M024.21.02.V4	6	E	28	0	14	14		DCAV	94	
5	Research Activity 1										Academic Ethics and Integrity										
	M024.21.01.V5	8	D	0	0	0	0	168	DCAV	32	M024.21.02.C5	2	D	14	7	0	0		DC	29	
6											Research Activity 2										
											M024.21.02.V6	7	D	0	0	0	0	147	DCAV	28	
7																					
8																					
9																					
total / sem.	VAi:	196			VPI:	386					VAi:	217			VPI:	386					
	VA (VAi+VAp):	364			VCA (VA+VPI):	750					VA (VAi+VAp):	364			VCA (VA+VPI):	750					
	credite:	30			evaluări:	4E, 1D, 0C					credite:	30			evaluări:	4E, 2D, 0C					
total / săpt.	VAi:	14.0			VPI:	27.6					VAi:	15.5			VPI:	27.6					
	VA (VAi+VAp):	26.0			VCA (VA+VPI):	53.6					VA (VAi+VAp):	26.0			VCA (VA+VPI):	53.6					
	din care:					8.0	0.0	4.0	2.0	12.0	(c, s, l, p, VAp)	din care:					7.5	2.5	4.5	1.0	10.5

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ANUL II

	SEMESTRUL 3										SEMESTRUL 4									
1	Independent optional course 1 Fault detection and diagnosis // Multi-agent systems // Optimization in Machine Learning										Research/Applied activities									
	M024.21.03.S1-ij	5	E	28	0	21	0		DS	76	M024.21.04.V1	15	D	0	0	0	0	168	DCAV	207
2	Independent optional course 2 Control of electrical drives // Actuators in automotive systems // High Performance Computing										Preparation of dissertation thesis									
	M024.21.03.A2-ij	5	E	28	0	21	0		DA	76	M024.21.04.V2	15	D	0	0	0	0	196	DCAV	179
3	Independent optional course 3 Embedded Systems Security // Software Engineering II										Defending dissertation thesis									
	M024.21.03.A3-ij	6	E	28	0	0	21		DA	101	M024.21.04.S3	10	E						DS	
4	Independent optional course 4 Java Technologies // Embedded Software Testing																			
	M024.21.03.V4-ij	6	E	28	0	0	21		DCAV	101										
5	Research Activity 3																			
	M024.21.03.V5	8	D	0	0	0	0	168	DCAV	32										
6																				
7																				
8																				
9																				
total / sem.	VAi:	196	VPI:	386	VAi:	0	VPI:	386			VAi:	364	VPI:	750						
	VA (VAi+VAp):	364	VCA (VA+VPI):	750	VA (VAi+VAp):	364	VCA (VA+VPI):	750			VA (VAi+VAp):	364	VCA (VA+VPI):	750						
	credite:	30	evaluări:	4E,1D,0C	credite:	40	evaluări:	1E,2D,0C			credite:	40	evaluări:	1E,2D,0C						
total / săpt.	VAi:	14.0	VPI:	27.6	VAi:	0.0	VPI:	27.6			VAi:	26.0	VPI:	53.6						
	VA (VAi+VAp):	26.0	VCA (VA+VPI):	53.6	VA (VAi+VAp):	26.0	VCA (VA+VPI):	53.6			VA (VAi+VAp):	26.0	VCA (VA+VPI):	53.6						
	din care:		8.0	0.0	3.0	3.0	12.0	(c, s, l, p, VAp)			din care:		0.0	0.0	0.0	0.0	26.0	(c, s, l, p, VAp)		

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DISCIPLINE OPTIONALE  
An universitar 2021-2022

ANUL I

	SEMESTRUL 1	SEMESTRUL 2
01		
02		
03		
04		
05		
06		
07		
08		
09		
10		

