

Facultatea Mechanical Engineering
 Domeniul de licență: Mechatronics and robotics
 Programul de studii univ. de masterat: **ROBOTIC SYSTEMS WITH ARTIFICIAL INTELLIGENCE**
 Forma de învățământ: **cu frecvență**
 Durata studiilor: **2 ani**

Domeniul fundamental de ierarhizare (DFI): Engineering Science
 Ramura de știință (RSI): Mechanical, mechatronics and robotical engineering
 Domeniul de ierarhizare (DII): MECATRONICS AND ROBOTICS
 Domeniul de studii universitare de masterat (DSU_M): MECATRONICS AND ROBOTICS

Code DFI.Code RSI.Code DII.Code DSU_M
 20.70.30.10

CURRICULUM
Academic year 2014 - 2015
YEAR I

	SEMESTER 1										SEMESTER 2									
1.	Advanced robotic systems										Structural analysis in robotics									
	Code	8	E	28	0	14	14	DCA	131		Code	8	E	28	0	14	14	DCA	131	
2.	3D Modelling (ProEng) *										CAD/CAM/CAE systems (CATIA)									
	Code	8	E	14	0	0	28	DA	131		Code	8	E	14	0	14	28	DA	131	
3.	Independent optional discipline 1										Independent optional discipline 3									
	Code	7	E	28	0	14	0	DCA	131		Code	7	E	28	0	14	0	DCA	131	
4.	Independent optional discipline 2										Independent optional discipline 4									
	Code	7	E	28	0	0	28	DA	131		Code	7	E	28	0	14	0	DCA	131	
5.																				
6.	Optional Discipline 1 Optimization algorithms in Mathematica										Optional Discipline 2 Digital Control Systems									
	Code	7	E	28	0	28	0	DC-F	130		Code	7	E	28	0	14	0	DC-F	130	
7.																				
8.																				
9.																				
total / semester	hours:	196			VPI:			524			hours:	196			VPI:			524		
	credits:	30			evaluări:			5			credits:	30			evaluări:			5		
total / week	hours:	14			98	0	28	70		hours:	14			98	0	56	42			
	of which:	7	0	2	5	(c, s, l, p)				of which:	7	0	4	3	(c, s, l, p)					

Legenda

Nume disciplina									
Cod	nc	FE	c	s	l	p	CF	VPI	

Cod = cod disciplina
nc = nr.credite transferabile
FE = forma de evaluare
FE ∈ {E, D, C, P-E, P-D}
E=examen
D=evaluare distribuita
c=nr.ore curs/semestru
s=nr.ore seminar

l=nr.ore laborator
p=nr.ore proiect
CF=categorie formativa careia ii apartine disciplina
CF ∈ {DA, DCA, DS}
DA - disciplina de aprofundare
DCA - disciplina de cunoastere avansata
DS - disciplina de sinteza
VPI = volum de ore necesar pregatirii individuale pentru un semestru de 14 sapt. plus 4 sapt. de sesiune

Exem

Exemplu									
Roboti de constructie avansata									
Code	8	E	28	0	14	14	DCA	130	

(*) - discipline optionale activate in anul universitar 2014 / 2015

CURRICULUM
Academic year 2014 - 2015
YEAR II

	SEMESTER 3										SEMESTER 4										
1.	Automation and robotized manufacturing lines *										Research activities 7 weeks x 14 hours										
	Code	8	E	28	0	28	0	DS	131										98	DS	262
2.	Motion planning of the mobile robots										Elaboration of the master thesis 7 weeks x 14 hours										
	Code	8	E	28	0	14	0	DS	131	Code	30	E							98	DS	262
3.	Independent optional discipline 5																				
	Code	7	E	14	0	14	14	DS	131												
4.	Independent optional discipline 6																				
	Code	7	E	28	0	28	0	DS	131												
5.																					
6.	Optional Discipline 2 Dynamic analysis of the mechatronic systems																				
	Code	7	E	28	0	28	0	DC-F	130												
7.																					
8.																					
9.																					
total / semester	hours:	196			VPI:	524			hours:	196			VPI:	524							
	credits:	30			evaluări:	5			credits:	30			evaluări:	2							
total / week	hours:	14	98	0	84	14			hours:	14											
	of which:	7	0	6	1	(c, s, l, p)			of which:	0	0	0	14	(c, s, l, p)							

INDEPENDENT OPTIONAL DISCIPLINES
YEAR I

	SEMESTER 1										SEMESTER 2									
Ind. Opt. Disc. 1 / 3	Data bases and expert systems										Sensorial integrability									
	Cod	7	E	28	0	14	0	DCA			Cod	7	E	28	0	14	0	DCA		
Ind. Opt. Disc. 2 / 4	Artificial intelligence in robotics										Optical sensors and image analysis									
	Cod	7	E	28	0	14	0	DCA			Cod	7	E	28	0	14	0	DCA		
Ind. Opt. Disc. 2 / 4	Research methods										Calibration of robots and electromechanical maintenance									
	Cod	7	E	14	0	0	28	DA			Cod	7	E	28	0	14	0	DCA		
Ind. Opt. Disc. 2 / 4	Project management										Computer aidedd management of the robotized manufacturing systems									
	Cod	7	E	14	0	0	28	DA			Cod	7	E	28	0	14	0	DCA		
Ind. Opt. Disc. 2 / 4	Advanced mathematics in robotics										Testing the mobile robots									
	Cod	7	E	14	0	0	28	DA			Cod	7	E	28	0	14	0	DCA		
Ind. Opt. Disc. 2 / 4	Statistical techniques in robotics										Neuronal networks									
	Cod	7	E	14	0	0	28	DA			Cod	7	E	28	0	14	0	DCA		

YEAR II

	SEMESTER 3										SEMESTER 4									
Ind. Opt. Disc. 5	Human-Machine interface																			
	Cod	7	E	14	0	14	14	DS												
Ind. Opt. Disc. 6	Programming of the industrial robots																			
	Cod	7	E	14	0	14	14	DS												
Ind. Opt. Disc. 6	Service robotics																			
	Cod	7	E	28	0	28	0	DS												
Ind. Opt. Disc. 6	Walking robots																			
	Cod	7	E	28	0	28	0	DS												
Ind. Opt. Disc. 6	Numerical control of the manufacturing systems																			
	Cod	7	E	28	0	28	0	DS												
Ind. Opt. Disc. 6	Domestic robots																			
	Cod	7	E	28	0	28	0	DS												

RECTOR,
Prof.univ.dr.Ing.Viorel-Aurel ȘERBAN

