

Dunarea de Jos University of Galati

Faculty of Automatics, Computers, Electrical and Electronic Engineering

Domain of study	Level (BA/MA)	Study programme	Year of study (I, II)	Semester (1, 2, 3, 4)	Course title	Credit units
Electrical engineering	MA	Energy efficiency and renewable sources (UEERS)	I	1	Integrated systems of electromechanical conversion	4
					Energy management and energy efficiency	5
					Renewable Energy Sources	4
					Practice and / or scientific research activity - 1	9
					Optional 1.1	4
					Optional 1.2	4
					Optional 1.1 - 1.2 – 1 semester (choose one discipline from each package)	
					Package A	
					1. Rational use of energy in shipping	
					2. Rational distribution of electrical energy	
					3. Rational use of energy in the steel industry	
					Package B	
					1. Customer relationship management	
				2. Environmental management		
				2	Eco-design of energy conversion systems	5
					Practice and / or scientific research activity - 2	9
					Optional 2.1	4
					Optional 2.2	4
					Optional 2.3	4
					Optional 2.4	4
					Optional 2.1 – 2.4 - 2 semester (choose one discipline from each package)	
					Package A	
					1. Electrical installations and marine drives	
2. Modeling and simulation of power stations						
3. Installations in the steel industry						
Package B						
1. Marine Electrical Automation						
2. Protection and automation in electrical networks						
3. Drives and automation in steel						
Package C						

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					1. Energy audit		
					2. Sources of pollution and combat pollution		
					Package D		
					1. Electrical equipment standardization and legalization		
					2. Power quality and EMC		
Electrical engineering	MA	Energy efficiency and renewable sources (UEERS)	II	3	Energy Conversion Systems	4	
					Project Management	4	
					Ethics and academic integrity	4	
					Design and implementation control structures for converter-machine systems	4	
					Practice and / or scientific research activity - 3	6	
					Optional 3.1	4	
					Optional 3.2	4	
					Optional 3.1 – 3.2 - 2 semester (choose one discipline from each package)		
					Package A		
					1. Wind turbines and minihidro		
				2. Hydrogen and fuel cells			
				3. Intelligent power supply systems of buildings			
				Package B			
				1. Cogeneration and trigeneration systems			
				2. Solar and photovoltaic systems			
3. Energy efficiency of buildings							
			4	Scientific research activity	15		
				Elaboration of dissertation thesis (master thesis)	15		
Electrical engineering	MA	Power electronics and advanced conversion systems (PEACS)	I	1	Advanced control techniques	6	
					Renewable Energy Sources	5	
					Integrated systems of electromechanical conversion	5	
					Energy management and energy efficiency	6	
				Practice and / or scientific research activity - 1	8		
				2	Modeling and simulation of power electronic systems	5	
Signal processors and microcontrollers	4						

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					Real-time models for the electromechanical conversion	5
					Design principles of electrical and electronic power equipment	4
					Numerical control of static converters	4
					Practice and / or scientific research activity - 2	8
Electrical engineering	MA	Power electronics and advanced conversion systems (PEACS)	II	3	Advanced power electronics applications	4
					Design and implementation control structures for converter-machine systems	4
					Energy Conversion Systems	4
					Project Management	4
					Ethics and academic integrity	4
					Practice and / or scientific research activity - 3	6
					Optional 3.1	4
				Optional 3.1 - 3 semester (choose one discipline of 3)		
				1. Principles regarding structure of converter-machine systems		
				2. Design and implementation control structures for converter-network systems		
				3. Visual control of systems		
				4	Scientific research activity	15
					Elaboration of dissertation thesis (master thesis)	15
Systems engineering	MA	Advanced automatic control informatics systems (AACIS)	I	1	Data monitoring and diagnostics	5
					Adaptive systems	5
					Intelligent automatic control informatics systems	5
					Ethics and academic integrity	5
					Design research in advanced automatic control	4
					Research and design practice 1	6
				2	Advanced optimization informatics systems	5
					Advanced automatic control informatics systems for robots	5
					Robust techniques advanced automatic control	5
					Designing user interfaces in advanced automatic control	5
					Design research in advanced automatic control	4
					Research and design practice 2	6

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Systems engineering	MA	Advanced automatic control informatics systems (AACIS)	II	3	Advanced programming in distributed automatic control systems	5
					Computer techniques in the automatic control of hybrid systems	5
					Structures, architectures and programming of real-time advanced automatic control	5
					Advanced automatic control systems in biotechnological processes	5
					Design research in advanced automatic control	4
					Research and design practice 3	6
				4	Research and design practice 4	15
				Development dissertation	15	