

# “GHEORGHE ASACHI” TECHNICAL UNIVERSITY OF IAȘI

FACULTY OF ELECTRICAL ENGINEERING

Domain: Electrical Engineering

Specialization: **Instrumentation and Data Acquisition**

Graduate title: Engineer, bachelor

Length of studies: 4 years

Form of education: with frequency

## CURRICULUM

### 1st YEAR

Crt. no	Course title	Course code UTI.EH...	Conditionnings	1st semester						2nd semester									
				Hours/week/ discipline						V	K	Hours/week/ discipline						V	K
				C	S	L	P	SI			C	S	L	P	SI				
DI	101	Mathematical Analysis	EH1.101.DF.DI		2	2			3	E	5								
	102	Linear Algebra, Analitic and Differential Geometry	EH1.102.DF.DI		2	2			3	E	5								
	103	Physics	EH1.103.DF.DI		3	1	1		3	E	6								
	104	Computer assisted Graphics I	EH1.104.DF.DI		1		1		1	C	3								
	105	Applied Informatics I	EH1.105.DF.DI		1		2	1	2	E	5								
	106	Computer Programming and Programming Languages I	EH1.106.DF.DI		1		2		2	C	4								
	107	Differential Equations and Operational Calculus	EH1.107.DF.DI	C1, C2								2	2			2	E	5	
	108	Computer Programming and Programming Languages II	EH1.108.DF.DI	C3								2	2		2	E	5		
	109	Computer assisted Graphics II	EH1.109.DF.DI	C4								2	2		2	VP	4		
	110	Electromagnetic Fields Theory	EH1.110.DID.DI									2	1	1		3	E	5	
	111	Physics – Elements of Newtonian Mechanics	EH1.111.DF.DI									2	1			1	E	3	
	112	Hydraulic and Pneumatic Drives	EH1.112.DID.DI									2	1		1	C	3		
	113	Mechanical Engineering	EH1.113.DID.DI									2		1	1	C	2		
	114	Modern Languages	EH1.114.DC.DI			1			1	C	1		1		1	C	1		
	115	Physical Training	EH1.115.DC.DI				1						1			AR	2		
DO	116	Intellectual Work Technique	EH1.116.1.DC.DO			1				VP	1								
		Professional Communication	EH1.116.2.DC.DO																
DL	117	Modern Languages	EH1.117.DC.DL			1				C	1		1			C	1		
	118	Physical Training	EH1.118.DC.DL				1			AR	1								
	119	Ensemble Sports	EH1.119.DC.DL										1			AR	1		
	120	Personal Development	EH1.120.DC.DL		1	1					C	2							
	121	Mathematics	EH1.121.DF.DL			1					C	1							
Total hours per week, total tests number per semester and total credits per semester, for DI and DO					10	7	7	1	15	4E 4C	30	14	5	7	1	13	4E 3C	30	

Conditionnings	Previous compulsory discipline	
	Title	Code
C1	Mathematical Analysis	UTI.EH.EH1.101.DF.DI
C2	Linear Algebra, Analytical and Differential Geometry	UTI.EH.EH1.102.DF.DI
C3	Computer Programming and Programming Languages I	UTI.EH.EH1.106.DF.DI
C4	Computer assisted Graphics I	UTI.EH.EH1.104.DF.DI

**DEAN,**

*Prof.univ.dr.ing. Marinel Temneanu*

**RECTOR,**

*Prof.univ.dr.ing. Dan Cașcaval*

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## CURRICULUM

### 2nd YEAR

Crt. no	Course title	Course code UTI.EH...	Conditionnings	1st semester						2nd semester										
				Hours/week/ discipline						V	K	Hours/week/ discipline						V	K	
				C	S	L	P	SI			C	S	L	P	SI					
DI	201	Electronics	EL.201.DID.DI		2		2		2	C	4									
	202	Electrical Circuits Theory I	EL.202.DID.DI		2	1	1		2	E	5									
	203	Electrotechnical Materials	EL.203.DID.DI		2		3		2	E	6									
	204	Numerical Analysis	EL.204.DF.DI	C1	2		1		2	E	3									
	205	Quality and Reliability	EL.205.DID.DI		2		1		1	C	3									
	206	Systems Theory	EL.206.DID.DI	C2	3		2		2	E	6									
	207	Web Technologies	EL.207.DS.DI	C1	2		1		2	C	3									
	208	Electrical Circuits Theory II	EL.208.DID.DI	C3									2	1	1		3	E	4	
	209	Electrical Measurements I	EL.209.DID.DI										2		3		3	E	5	
	210	Electrical Machines I	EL.210.DID.DI	C3									2		3		3	C	5	
	211	Electrical Apparatus	EL.211.DID.DI										2		2		3	E	4	
	212	Static Converters I	EL.212.DID.DI										2		2		2	E	4	
	213	Physical Training	EL.213.DC.DI				1								1			A/R	1	
	214	Practice, 3 weeks. x 40 h/week=120 h	EL.214.DID.DI															C	4	
DO	215	General Economics and Marketing	EL.215.1.DC.DO									2	1			1	C	3		
		Marketing Strategies	EL.215.2.DC.DO																	
DL	216	Computing and Programming Methods in Electrotechnics I	EL.216.DC.DL				2			C	2									
	217	Computing and Programming Methods in Electrotechnics II	EL.217.DC.DL										2				C	2		
	218	Modern Languages	EL.218.DC.DL			1				C	1		1				C	1		
	219	European Civilization and Institutions	EL.219.DC.DL		1					C	1									
	220	Special Mathematics	220.DF.DL		1		1			C	2									
Total hours per week, total tests number per semester and total credits per semester, for DI and DO					15	1	12		13	4E 2C	30	12	2	12		15	4E 3C	30		
					<b>28</b>				<b>13</b>			<b>26</b>				<b>15</b>				

Conditionnings	Previous compulsory discipline	
	Title	Code
C1	Mathematical Analysis	UTI.EH.EH1.101.DF.DI
C2	Computer Programming and Programming Languages I	UTI.EH.EH1.106.DF.DI
C3	Electrical Circuits Theory I	UTI.EH.EL.203.DID.DI

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## CURRICULUM

### 3rd YEAR

Crt. no	Course title	Course code UTI.EH...	Conditionings	1st semester						2nd semester								
				Hours/week/ discipline						Hours/week/ discipline								
				C	S	L	P	SI	V	K	C	S	L	P	SI	V	K	
<b>DI</b>	301	Electrical Measurements II	EL.301.DID.DI	C1	2	2	1	3	E	6								
	302	Electrical Machines II	EL.302.DID.DI	C2	2	2	1	2	E	5								
	303	Use of Electrical Energy	EL.303.DID.DI		2	2		2	C	4								
	304	Digital Circuits	IAD.304.DS.DI		2	2	1	3	E	6								
	305	Metrology and Testing Techniques	IAD.305.DS.DI	C1							3	1	2	E	4			
	306	Electrical Drives I	EL.306.DID.DI								2	2	2	E	4			
	307	Electromagnetic Compability	EL.307.DID.DI								2	2	2	E	4			
	308	Electronic Technology	IAD.308.DS.DI								2	1	2	VP	3			
	309	Particular Electrical Machines	EL.309.DS.DI	C3							2	2	2	C	4			
	310	Integrated Analogic Circuits	IAD.310.DS.DI		2	1		2	C	3								
313	Practice, 3 weeks x 40 h/week=120 h	EL.313.DID.DI													C	4		
<b>DO</b>	311	Measuring Amplifiers and Converters	IAD.313.1.DS.DO		2	2	1	2	E	6								
		Data Acquisition and Processing Systems	IAD.313.2.DS.DO															
	312	Sensors and Transducers	EL.312.1.DID.DO								2	1	2	E	3			
		Interfacing Elements and Remote Controls	EL.312.2.DID.DO															
314	Low Voltage Electrical Installations	EL.314.1.DS.DO								2	2	2	C	4				
	Electrical Installations Design	EL.314.2.DS.DO																
<b>DL</b>	315	Teaching in Electrical Engineering	EL.315.DC.DL		2	1		2	C	3								
	316	Multimedia in Education	EL.316.DC.DL		1	2		2	C	3								
	317	Design and Development of Teaching Aids	IAD.317.DC.DL								1	2		1	C	3		
Total hours per week, total tests number per semester and total credits per semester, for DI and DO					12	0	11	4	13	4E 2 C	30	15	0	11	0	14	4E 3 C	30

Conditionnings	Previous compulsory discipline	
	Title	Code
C1	Electrical Measurements I	UTI.EH.EL.209.DID.DI
C2	Electrical Machines I	UTI.EH.EL.210.DID.DI
C3	Electrical machines II	UTI.EH.EL.302.DID.DI

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## CURRICULUM

### 4th YEAR

Crt. no	Course title	Course code UTI.EH...	Conditionnings	1st semester						2nd semester										
				Hours/week/ discipline					V	K	Hours/week/ discipline					V	K			
				C	S	L	P	SI			C	S	L	P	SI					
DI	401	Measurement Systems Programming I	IAD.401.DS.DI		2	1		2	C	4										
	402	Microprocessors Based Systems I	IAD.402.DID.DI		2	2		2	E	5										
	403	Smart Sensors	IAD.403.DS.DI		2	2		2	E	5										
	404	Measurements in Industrial Processes II	IAD.404.DS.DI	C1	2	2		2	E	4										
	405	Board Instrumentation	IAD.405.DS.DI		2	1		2	C	4										
	406	Industrial Management	EL.406.DID.DI		2	1		1	C	3										
	407	Regulation Technics and Automatic Control	IAD.407.DS.DI								2	2		1	C	4				
	408	Microprocessors Based Systems II	IAD.408.DID.DI	C2							2	1	1	2	E	4				
	409	Digital Signal Processing	IAD.409.DS.DI								2	1		1	E	3				
	410	Diploma Project Preparation	IAD.410.DS.DI										6	6	C	6				
	411	Practice for Diploma Project Drafting, 3 weeks x 40 h/week = 120 h*	IAD.411.DS.DI												C	4				
416	Diploma project defend**	IAD.416.DS.DI												E	10					
DO	412	Noises and Interferences in Instrumentation	IAD.412.1.DS.DO	C3	3	2		3	E	5										
		Electromagnetic Protection of Instrumentation	IAD.412.2.DS.DO																	
	413	Measurement Systems Programming II	IAD.413.1.DS.DO										2	2		2	C	4		
		Visual C++ Programmimg	IAD.413.2.DS.DO																	
414	Measurements in Ecology and Biomedicine	IAD.414.1.DIS.D O									3	2		2	E	5				
	Modeling and Analysis of Biological Systems	IAD.414.2.DS.DO																		
DL	415	Quality Management	IAD.415.DC.DL		2	2		2	C	3										
Total hours per week, total tests number per semester and total credits per semester, for DI and DO					17	0	9	0	14	<sup>4</sup> E 3 C	30	12	0	6	8	14	<sup>3</sup> E 4 C	30		
					26			14				26			14					

\*It is accomplished at the diploma co-ordinator, who makes also the evaluation.

\*\*The 10 credits are granted only after succesful defend of the diplomaproject.

Conditionnings	Previous compulsory discipline	
	Title	Code
C1	Measurements in Industrial Processes I	UTI.EH.IAD.311.DID.DI
C2	Microprocessors Based Systems I	UTI.EH.IAD.402.DS.DI
C3	Electromagnetic Compatibility	UTI.EH.EL.308.DID.DI

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