Erasmus+

"Gheorghe Asachi" Technical University of Iasi

Faculty of Electrical Engineering

List of courses available for Erasmus incoming students

No.	Name of the course and main chapters	Code from the Study Plan	Field of study	Program of study	Professor (please mention the email address)	Level of study (UG/MSc)	Year of study	Semester (1/2)	No. of ECTS	Support materials for the course (please mention written materials / link address for online materials and also the language of these materials: EN/FR/DE/ES/PT/IT etc)	Individual or group meetings (Please mention Yes or No and the language used during these meetings: EN/FR/DE/ES/PT/IT etc)	Assessment (Please mention the language for the assessment: EN/FR/DE/ES/PT/IT etc
1	Electrical Equipment Main chapters: Thermal stresses of electrical equipment Electro-dynamic stresses of electrical equipment Electric arc (DC and AC) Electric contact resistance Fuses Circuit breakers Contactors Surge Arresters Switch disconnectors	IEE.304.DID.DI	Engineering and Management	Economic engineering in the electrical, electronic and energy fields	Alin Dragomir (alin.dragomir@tuiasi.ro)	UG	3	1	5	Books: Electrical Equipment 1, Electrical Equipment 2 (language Romanian) Course support power point presentation: Electrical Equipment (language English)	YES Language: EN	EN
6	Smart/Intelligent sensors (Quasidigital sensors, smart temperature and humidity sensors, smart presure sensors, electronic nose, artificial skin, Arduino, ESP32 and RaspberryPi)	Electrical Engineering	Electrical engineering		Marius Brinzila (marius-ciprian.brinzila@academic.tuiasi.ro)	UG	4	1		https://edu.tuiasi.ro/course/view.php?id=1974	Yes EN/PT	EN
7	Industrial process measurements (Resitive, capacitive, inductive, magnetic and optic sensors and application in industry, data acquisition using DAQB, cRIO, PLC LabVIEW)	Electrical Engineering	Electrical engineering		Marius Brinzila (marius-ciprian.brinzila@academic.tuiasi.ro)	UG	4	2		https://edu.tuiasi.ro/course/view.php?id=2623	Yes EN/PT	EN
8	Sensors and sensory systems (Resitive, capacitive, inductive, magnetic and optic sensors and application in industry, data acquisition using PLC)	Mecanical engineering	Mecanical engineering		Marius Brinzila (marius-ciprian.brinzila@academic.tuiasi.ro)	UG	3	2		https://edu.tuiasi.ro/course/view.php?id=1972	Yes EN/PT	EN
9	Measurements in electronics and telecommunications	EDID205	Electronic Engineering, Telecommunications and Information	Telecommunications Technologies and Systems	Cristian Zet czet@tuiasi.ro	UG	2020-2021	2	4	Moodle platform with user and password www.edu.tuiasi.ro	Yes, English	English

10	Electromagnetic Compatibility / Main chapters: • EMC fundamentals; • Coupling mechanisms and EMI reduction techniques; • EMC filters; • Electromagnetic shielding; • Electrostatic discharge, ESD; • Instruments for measurement and analysis of electromagnetic emissions; • RF transmission lines; • Emissions and immunity tests; • Bio-electromagnetic Compatibility.	0713 Electricity and energy	Electrical engineering		Eduard Lunca elunca@tuiasi.ro	UG	3	2		Written materials - RO and EN; http://www.demm.ee.tuiasi.ro/eduard-lunca/cem_en.html (EN)	Yes / EN	EN
11	Electromagnetic Compatibility / Main chapters: • EMC fundamentals; • Coupling mechanisms and EMI reduction techniques; • EMC filters; • Electromagnetic shielding of IT equipment; • Protection of IT equipment to electrostatic discharges; • Instruments for measurement and analysis of electromagnetic emissions; • RF transmission lines; • Emissions and immunity tests for IT equipment; • PCB design for EMC; • Modeling and simulation in EMC.	0713 Electricity and energy	Electrical engineering		Eduard Lunca elunca@tuiasi.ro	UG	4	1		Written materials - RO and EN; http://www.demm.ee.tuiasi.ro/eduard-lunca/cem_en.html (EN)	Yes / EN	EN
12	Information systems for monitoring electricity consumption / Main chapters: • Evolution of energy metering systems; • Power quality; • Hardware components of Energy Monitoring Information Systems (EMIS); • Software for EMIS; • Case studies of EMIS.	0713 Electricity and energy	Electrical engineering		Eduard Lunca elunca@tuiasi.ro	UG	4	2		Written materials - RO and EN; http://www.demm.ee.tuiasi.ro/eduard-lunca/simcee.html (RO)	Yes / EN	EN
13	Sensors and Transducers - Systems Sensor Technologies =Temperature Measurement - Pressure Measurement -----Flow Measurement -Level Measurement -Mass, Force and Torque Measurement -Vibration and Shocq Measurement -Rotational Motion Transducers	EH 100	Electrical engineering	Instrumentation and data acquisitions	Sarmasanu Constantin csarmas@tuiasi.ro	UG	III	2	3	Measurement and Instrumentation: Theory and Application Alan S. Morris Reza Langari https://www.sciencedirect.com/book/9780128008843/measurement-and-instrumentation EN	YES FR or EN	FR or EN
14	Fluid Mechanics. Contents: 1. Properties of Fluids; 2. Basic Concepts of Fluid Mechanics; 3. Pressure and Fluid Statics; 4. Kinematics of the Flow; 5. Ideal-fluid Flow ; 6. Laminar Flow; 7. Turbulent Flow; 8. Steady Flow in Pipes; 9. Unsteady Flow in Pipes.	EN.206.DID.DI.	Power Engineering	Energy Management/ Electrical Systems Engineering	Daniela Popescu. Email: daniela_popescu@tuiasi.ro.	UG	II	1	4	English. 1) Fox R., McDonald's A., Pritchard P., Introduction to Fluid Mechanics 8th Edition , John Wiley & Sons, U.S., 2011. http://ftp.demec.ufpr.br/disciplinas/TM240/Marchi/Bibliografia/Pritchard-Fox-McDonalds_2011_8ed_Fluid-Mechanics.pdf. 2) White F. M., Fluid Mechanics, Seven Edition, Mcgraw Hill series, 2011.3) Colin Caprani, Fluid Mechanics, https://www.colincaprani.com/files/notes/Fluid%20Mechanics.pdf. 4) Cengel, Y. A., Cimbala J., 2013, Fluid mechanics: Fundamentals and applications, The McGraw-Hill Companies.	Individual-English	English
15	Utizations of the Electrical Energy 1. Lighting (photometry, light sources, sizing elements) 2. Low voltage Lighting Installations (structure and materials, sizing elements, power factor improvement and electro-security) 3. Electrothermics (heating and welding installations)	EL.303.DID.DI	Electrical engineering	EPAE IAD SE	Dorin Lucache dorin.lucache@tuiasi.ro	UG	3	1	4	Course: http://www.euedia.tuiasi.ro/?page_id=1251&lang=ro RO Laboratory: http://www.euedia.tuiasi.ro/?page_id=1251&lang=ro RO	Yes (RO/EN)	RO/EN

16	Optimal utilization of the electrical Energy 1. Energy efficiency in electrothermics 2. Energy efficiency in lighting 3. Energy efficiency in electromecanic drives 4. Energy efficiency of the electric networks 5. Energy efficiency case studies in diferent industries 6. Audit and power balances	IEE.408.DS.DI	Engineering and management	IEDEEE	Dorin Lucache dorin.lucache@tuiasi.ro	UG	4	2	4	Laboratory: http://www.euedia.tuiasi.ro/?page_id=1251&lang=ro RO	Yes (RO/EN)	RO/EN
17	Numeric optimization techniques 1. Introduction to ptimization 2. Single-variable optimization 3. Unconstrained multivariable optimization 4. Constrained optimization techniques 5. Multi-criteria optimization 6. Nature-Inspired Search Methods	CECM.IA.201	Electrical engineering	CECM	Dorin Lucache dorin.lucache@tuiasi.ro	MSc	2	1	4	Electronic course support (RO)	Yes (RO/EN)	RO/EN
18	Electrical circuits theory II Polyphase networks. Three-phase network structures. Powers three-phase networks Multipole type circuits. Electric frequency filters. Long homogeneous lines. Transient regime.	Electrical Engineering			Sebastian Teodor Aradoaei email:arsete@tuiasi.ro	UG	2	2		http://www.eth.ieeia.tuiasi.ro/index.php/personal/sebastian-aradoaie/cursuri/	Yes/ EN	EN
19	Energy resources and conversion Chapters: 1. Energy - a global problem 2. Hydropower 3. Nuclear energy 4. Solar energy 5. Wind power 6. Electrochemical conversion 7. Hydrogen	EN.208.DID.DI	Power engineering	Power systems engineering	Dragos Machidon machidon.dragos@tuiasi.ro	UG	2	2	4	www.tti.ieeia.tuiasi.ro	Individual / EN	EN
20	Power Systems I and II	UTI.EH.ISE.404.DS.DI and UTI.EH.ISE.409.DS.DI	Power Engineering	Electrical Power Engineering	Mihai Gavrilas (mgavril@tuiasi.ro)	UG	IV	1 and 2	6 and 2	written materials, EN	Yes (EN)	EN
21	Systems with Artificial Intelligence	UTI.EH.IAIE.407.DS.DI	Electrical Engineering	Applied Informatics in Electrical Engineering	Mihai Gavrilas (mgavril@tuiasi.ro)	UG	IV	2	3	online materials, http://mihai-gavrilas.ieeia.tuiasi.ro/CIA/CIA.htm, EN	Yes (EN)	EN
22	Power System Stability and Control	MSE.IA.104	Power Engineering	Energy Systems Management	Mihai Gavrilas (mgavril@tuiasi.ro)	MSc	I	1	5	written materials, EN	Yes (EN)	EN
23	Energy Markets and Energy Policy	MSE.IA.203 or MEM.IA.203	Power Engineering	Energy Systems Management or Management, Energy, Environment	Mihai Gavrilas (mgavril@tuiasi.ro)	MSc	II	1	6	written materials, EN	Yes (EN)	EN
24	Computer Programming and Programming Languages 1 - general aspects of computing systems - how to use an IDE - main types of C language - I/O functions - operator precedence - if-else, switch () - for(), while() and do-while()	Computer Science, Electrical Engineering			Catalin Damian cdamian@tuiasi.ro, catalin.damian@academic.tuiasi.ro	UG	1	1		http://www.cdamian.tuiasi.ro/cppl / EN	Group Meetings, EN	short test with a practical problem to be solved in C Language AND/OR a project with main functionalities
25	Computer Programming and Programming Languages 2: - array types of C - struct data - working with data file I/O - functions - graphic lybrary (glut) - lists, trees	Computer Science, Electrical Engineering			Catalin Damian cdamian@tuiasi.ro, catalin.damian@academic.tuiasi.ro	UG	1	2		http://www.cdamian.tuiasi.ro/cppl / EN	Group Meetings, EN	short test with a practical problem to be solved in C Language AND/OR a project with main functionalities

26	Python Programming, general aspects	Computer Science			Catalin Damian cdamian@tuiasi.ro, catalin.damian@academic.tuiasi.ro	UG	3	1		http://www.cdamian.tuiasi.ro/python / EN	Group Meetings, EN	short test with a practical problem to be solved in C Language AND/OR a project with main
27	Modeling and simulation of the electromagnetic field applications 1. Vectorial calculus. 2. Introduction in modeling and simulation of the electromagnetic field applications. 3. Review of electromagnetic field theory. 4. Numerical methods for electromagnetic field modeling. 5. Finite difference method. 6. Finite difference method in time domain. 7. Finite element method. 8. Structure of a software package for electromagnetic field modeling.	Electrical Enginnering	Electrical Engineering	Applied Informatics in electrical engineering	Silviu Ursache	UG	3	1		Written materials (RO/EN)	YES (EN/RO)	EN/RO
28	Numerical methods	EN.202.DF.DI	Power Engineering	Power systems	Florina Scarlatache florina.scarlatache@academic.tuiasi.ro	UG	2	1	5	Written materials (RO/EN)	YES/ EN	EN
	Dean of the Faculty							**Erasmus+ Faculty Coordinator**				
	Prof. Marinel Temneanu							prof. Scarlatache Florina				