Universiteti Europian i Tiranës
maiora premunt / gjëra të mëdha na presin

MASTER OF SCIENCE "INDUSTRIAL ENGINEERING"

LEARNING OUTCOMES

At the end of this study programme, graduates will be able to:

- Carry out studies and research on areas related to industrial engineering.
- Design, analyse and make decisions about heating – ventilation – conditioning systems that are widely used in the industry.
- Analyse and make decisions about the wide range of materials used in the industry.
- Analyse the impact industrial processes or cycles have on the environment.

PROFILE: MECHANICAL ENGINEERING

- Design the mechanical systems that are used in the industry.
- Calculate and analyse mechanical systems based on the results of calculations.
- Analyse and make decisions on various mechanical works.

PROFILE: TRANSPORT ENGINEERING

- Analyse and make decisions about the transport system problems.
- Analyse the dynamics and aerodynamics of transport means.

PROFILE: ENERGETICAL ENGINEERING

- Analyse opportunities for exploitation of various energy sources and impact on the environment.
- Calculate the necessary energetical indicators of buildings and judge on their energy efficiency.
- Calculate the main indicators of reliability for energy systems, analyse these values and make decisions based on these values.

CURRICULUM

MASTER OF SCIENCE "INDUSTRIAL ENGINEERING" 120 ECTS				
No.	**Year**	**Term**	**Course Name**	**ECTS**
GENERAL KNOWLEDGE AND METHODOLOGICAL PREPARATION				
A - GENERAL COURSES/ 10% / 12 ECTS				
1	I	1	Advanced Research Methods	**6**
2	II	1	Operational Research	**6**
				12
PREPARATION FOR THE SCIENTIFIC DISCIPLINE				
B - SPECIALIZATION COURSES/ 50% /60 ECTS				
1	I	1	Energetics: Energy Resources, Storage and Transportation	**6**
2	I	1	Turbomachines	**6**

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MASTER OF SCIENCE "INDUSTRIAL ENGINEERING" 120 ECTS				
No.	**Year**	**Term**	**Course Name**	**ECTS**
3	I	1	Advanced Applications of Technical Physics	**6**
9	I	1	Materials for Industries	**6**
4	I	2	Thermotechnical Plants for Heating and Cooling	**6**
5	I	2	Integrated and Innovative Systems for Industrial Production	**6**
6	I	2	Computational Fluid Dynamics	**6**
8	I	2	Machine Construction	**6**
7	II	1	Biotechnology	**6**
10	II	1	Industrial Robotic Equipment and Systems	**6**
				60
SUB-DISCIPLINE AND ELECTIVE COURSES				
C - INTERDISCIPLINARY AND INTEGRATIVE COURSES/ 12-20%/ 18 ECTS				
	PROFILE:		**ENERGY ENGINEERING**	
1	I	2	Science and Technology of Electrical and Energy Materials	**6**
2	II	1	Energy Efficiency	**6**
3	II	2	Innovative Energy Systems and Environmental Protection	**6**
	PROFILE:		**MECHANICAL ENGINEERING**	
1	I	2	Dynamics of Mechanical systems	**6**
2	II	1	Vibration Mechanics	**6**
3	II	2	Mechatronics	**6**
	PROFILE:		**TRANSPORT ENGINEERING**	
1	I	2	Road, Railway, Sea and Air Transport Systems	**6**
2	II	1	Dynamics and Aerodynamics of Means of Transport	**6**
2	II	2	Vehicle Mechanics	**6**
				18
D - ADDITIONAL COURSES / 10% / 12 ECTS				
1	II	2	Internship	**12**
E - FINAL OBLIGATIONS / 10%-15% / 12-18 ECTS				
1	II	1-2	Diploma Thesis	**18**
			TOTAL	**120**