

Универзитет у Источном Сарајеву Факултет за производњу и менаџмент Требиње

University In East Sarajevo Production And Management Faculty Trebinje



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# ACADEMIC STUDIES CURRICULUM

## INDUSTRIAL ENGINEERING IN ENERGETICS

## UNDERGRADUATE ACADEMIC STUDIES (240 ECTS)

Trebinje, June 2011.

### 1<sup>ST</sup> YEAR

Semester	Course status	No.	Courses	Classes L+E	ECTS points
I	С	1.	Sociology	2+0	2
	С	2.	English 1	2+2	5
	С	3.	Mathematics 1	3+2	6
	С	4.	Materials Science	3+2	6
	С	5.	Fundamentals of Information Technology	2+2	5
	С	6.	Projective Geometry and Technical Drawing	3+2	6
Total:			15+10	30	
	С	1.	Technical Physics	2+2	5
	С	2.	English 2	2+2	5
п	С	3.	Mathematics 2	3+2	6
Ш	С	4.	Mechanics 1 (Statics)	2+2	5
	С	5.	Electrical Engineering	2+2	4
	C	6.	Programming and Computer Tools	2+2	5
Total:				13+12	30

### 2<sup>nd</sup> YEAR

Semester	Course status	No.	Courses	Classes L+E	ECTS points
ш	C	1.	Mathematics 3	2+2	5
	С	2.	Fluid Mechanics	3+2	6
	С	3.	Machine Elements	3+2	6
	С	4.	Mechanics 2 (Kinematics)	3+2	6
	С	5.	Energy and Society	2+2	5
	С	6.	English 3	1+1	2
Total:			14 +11	30	
	С	1.	Thermodynamics	3+2	6
	С	2.	Mechanics 3 (Dynamics)	3+2	6
IV	С	3.	Energy Management in Industry	2+2	5
IV	С	4.	Materials Resistivity	3+2	6
	С	5.	Ecology and Alternative Energy Sources	2+2	5
	C	6.	English 4	1+1	2
Total:				14+11	30

Note:

C – compulsory course E – elective course

#### 3<sup>rd</sup> YEAR

Semester	Course status	No.	Courses	Classes L+E	ECTS points
v	С	1.	Heat and Mass Transfer	3+2	6
	C	2.	Power Engineering Plants and Equipment	2+2	5
	С	3.	Cooling Devices and Heat Pumps	2+2	6
	C	4.	Hydraulics and Pneumatics	3+2	6
	E	5.	Course from elective module 5.1.5	3+2	6
	С	6.	English 5	1+1	2
Total:			14+11	30	
VI	С	1.	Measuring in Power Engineering	3+2	6
	C	2.	Information Systems	3+2	6
	E	3.	Course from elective module 6.1.5	3+2	6
	E	4.	Course from elective module 6.2.4	2+2	5
	Е	5.	Course from elective module 6.3.4	2+2	5
	C	6.	English 6	1+1	2
			Total:	14+11	30

#### ELECTIVE MODULES

Module	Thermal power engineering	Hydropower engineering
5.1.5	Fossil Fuels Combustion	Pipelines and Pipe Fitting
6.1.5	Steam Generators	Turbo Machines
6.2.4	Steam Turbines	Piston Pumps
6.3.4	Mines and Equipment	Pumps and Fans

### 4<sup>th</sup> YEAR

Semester	Course status	No.	Courses	Classes L+E	ECTS points
	С	1.	Process Automation	2+2	5
	Е	2.	Course from elective module 7.1.5	3+2	6
VII	Е	3.	Course from elective module 7.2.4	2+2	5
V 11	С	4.	Market Research and Consumer Behaviour	2+2	5
	С	5.	Power Plant Maintenance	2+2	5
	Е	6.	Elective course 7.3.4	2+2	4
Total:			13+12	30	
	С	1.	Computer Integrated Systems in Power Engineering	2+2	4
	С	2.	Principles of Systemic Engineering	2+2	4
	С	3.	Organization of High-Level Business Systems in Power Engineering	2+2	4
V 111	С	4.	Energy Efficiency of Production Systems	2+2	4
	Е	5.	Course from elective module 8.1.4	2+2	4
	C	6.	Practice	2 wks	2
	C		FINAL PAPER		8
Total:				10+10	30

#### **ELECTIVE MODULES**

Module	Thermal power engineering	Hydropower engineering	
7.1.5	Cooling Towers	Air Energy Transformers	
7.2.4	Technical Preparation of Water and Cooling Systems	Hydraulic Power Reducers	
8.1.4	Thermal Power Engineering Systems Design	Hydropower Engineering Systems Design	

List of elective courses 7.3.4: Mechatronics; Fluid Transport by Pipes; Gas Turbines; Planning in Power Engineering; Heating and Air-conditioning; Drying Processes.

D E A N

/ Prof. dr Rade Ivanković /