
		UNIVERSITY OF EAST SARAJEVO					
		Faculty of Technology Zvornik					
		Study program: <i>Chemical Engineering and Technology</i>					
		CYCLE I		YEAR IV			
Course title		ENERGY EFFICIENCY IN INDUSTRIAL PROCESSES					
Department		Department for Process Engineering-Faculty of Technology Zvornik					
Course code		Course status		Semester		ECTS	
		Elective		VII		3	
Teacher		Mitar Perusic, PhD, full professor					
Teaching assistant		Dusko Kostic, MSc, teaching assistant					
Teaching workload/Number of hours (weekly)			Individual work (hours per semester)			Student's work coefficient, S ₀	
Lectures	Auditory exercises	Laboratory Exercises	Lectures	Auditory exercises	Laboratory Exercises	S ₀	
2	1	0	30	15	0	1,00	
2*15 + 1*15 + 0*15 =45 h			2*15 + 1*15 + 0*15 =45 h				
Total course workload (hours per semester, teacher + student): 45+ 45 = 90							
Learning outcomes		After finishing the course, students will be able to: <ol style="list-style-type: none"> find and use literature data on processes, energy and energy efficiency; demonstrate and utilize the knowledge of the concept and forms of energy; understand the importance of energy efficiency and efficiency of process devices; plan energy needs; demonstrate and utilize the knowledge of the role and importance of regulators in the field of energy production and consumption. 					
Prerequisites		None.					
Teaching methods		Lectures, class exercises and individual work					
Syllabus outline per week		<ol style="list-style-type: none"> Introduction. Basic terms of the process. Technological processes. Energy consumption, the notion of energy efficiency and technological development. Energy classification. Energy balances. Primary energy sources. Energy technologies. Power (energy) accumulation. Mid-term test/Colloquium 1. Renewable energy sources. Energy consumption indicators. Evaluating rational use of energy and investment. Energy-efficient processing devices. Planning for energy needs. Regulations in the field of energy production and use. Managing energy systems. Mid-term test/Colloquium 2. 					
Obligatory literature							
Author/s		Title, publisher		Year	Page		
D. S. Marković		Process and energy efficiency, Singidunum, Belgrade, first edition		2010	1-515		
Additional reading							
Author/s		Title, publisher		Year	Page		
M. Lambić, D. Tolmač, D. Stojićević, V. Mijić		Energy efficiency, AGM Book, Belgrade		2004	1-232		
D. Y. Goswami, F. Kreith		Energy Efficiency and Renewable Energy Handbook, Second Edition, CRC Press		2015	1-690		
S. Fawkes, K. Oung, D. Thorpe		Best Practices and Case Studies for Industrial Energy Efficiency Improvement, Copenhagen Centre on Energy Efficiency		2016	1-150		
Obligations, assessment		Type of student evaluation				Grade points	Percentage

methods and grading system	Pre-exam obligation		
	Attendance	6	6 %
	Mid-term test I	25	25 %
	Mid-term test II	25	25 %
	Seminar paper	14	14 %
	Final exam		
	Final exam	30	30 %
TOTAL		100	100 %
Web page	www.tfzv.ues.rs.ba		
Date	2023		