

Study program: Industrial engineering - Mechanical engineering			
Course title: Energy efficiency			
Professor/assistant: Šarenac Milovan, Rajković Dragan			
Type of course: Elective			
ECTS credits: 6			
Prerequisites: none			
Aims of the course: Students acquire knowledge related to the modern concept of energy efficiency. Students get familiar with the basic principles and key elements on which this concept is based, they master the methods of rational energy use and the choice of alternative and renewable energy sources.			
Learning outcomes: The student estimates energy consumption using various indicators. The student is familiar with engineering measures for rational energy use, acquisition and design of alternative forms of the energy systems within the business organization.			
Syllabus: <i>Theoretical part:</i> Rational energy consumption for heating. Managing electricity consumption in enterprises. System approach to rational energy consumption in heating processes. Increasing the efficiency of boiler plants. Efficiency of gas boilers. Measuring and management. <i>Practical part:</i> Term paper			
Literature: 1. Lambić, M., i dr., Energetska efikasnost, Srbija-Solar, Zrenjanin, 2004. 2. Janković, V., Knjiga o obnovljivim izvorima energije u Srbiji, OEBS Misija za Srbiju, Beograd, 2004. 3. Kozic, Đ., Bekvalac, V., Vasiljević, B., Priručnik za termodinamiku, MF Beograd, 1979.			
Total number of active classes: 60		Lectures: 30	Practical classes: 30
Teaching methods: Lectures, auditory exercises and practical work, term papers.			
Grading system (maximum 100 points) grading scale from 5 to 10: below 51 points grade 5, grade 6 from 51- 60 points, grade 7 from 61-70 points, grade 8 from 71-80 points, grade 9 from 81-90 points, grade 10 from 91- 100 points.			
Pre-exam obligations:	Points:	Final exam:	Points:
Activity during lectures	max 5	Oral exam	50
Practical training	max 5		
Written test(s)	max 20		
Term papers	max 20		
Minimum requirement for the final exam	30		