

<b>Study program: Waste management</b>			
<b>Course title: The energy potential of the waste</b>			
<b>Professor/assistant: PhD Biljan Milutinovic</b>			
<b>Type of course:</b> compulsory			
<b>ECTS credits:</b> 6			
<b>Pre-requisites:</b> -			
<b>Aims of the course:</b> Preparing the student to: - grasp the basis of the problematic receipts energy from the waste; - adopts new technology for obtaining energy from waste; - recognizes the advantages and disadvantages of the method of obtaining energy from waste in relation to the waste composition, - recognized the problem in the process of receipt energy from the waste; - a method for improving the process of receiving energy from waste.			
<b>Learning outcomes:</b> A student is able to - reason process energy recovery from waste; - proposed a method for obtaining energy from waste in dependences of the type of waste, - participates in designing plants for receiving energy from waste; - Propose a measure for the improvement of the process and facilities for receiving energy from waste; - send and receive a statutory regulation from the area of energy receipts from waste, - Proposed solutions for the removal of an animal to a middle emission from treatment facilities to receive energy from waste.			
<b>Syllabus</b> <u>Theoretical part</u> Exploitation of energy potential different types of waste. Method for recovering waste energy. Thermal waste is waste energy recovery. Outside incineration: burnt-out facilities for grilles, constructions with rotary wipes, burning facilities in a fluidized bed. Gasification drops off. Pyrolysis. Plasma processes. Foundations of the process of burning, Burning of solid and liquid waste, Buildings for receiving energy from landfill gas, Auxiliary processes and equipment for burning waste. Legislation from the area of energy receipts from waste. <u>Practical part</u> Exercise, Other forms of instruction, Study research as well, emission from treatment facilities receiving energy from waste.			
<b>Literature</b> 1. M.Radaković, <i>Biodizel; biogas; biomasa</i> , AGM knjiga, 2009. 2. M. Bogner, <i>Projektovanje termotehničkih i procesnih sistema</i> , ETA, 2007. 3. W.R. Nieesen, <i>Combustion and incineration processes – Application in environmental engineering, Fourth edition</i> , Taylor&Francis group, 2010			
<b>Number of active classes</b>			Other forms of teaching:
Lectures: 2	Practical classes: 2	Research work:	
<b>Teaching methods</b> Auditorium exercise. Consultation. Examination is made of two colloquiums and seminars. Assessment is formed on the basis of homework lectures and exercises, points with colloquiums, points on the seminar and success in the final exam.			
<b>Grading system</b> (maximum 100 points), <b>grading scale</b> from 5 to 10: below 51 points grade 5, grade 6 from 51-60 points, grade7 from 61-70 points, grade8 from 71-80 points, grade 9 from 81-90 points, grade 10 from 91-100 points.			
<b>Pre-exam obligations</b>	<b>poi nts</b>	<b>Final exam</b>	<b>points</b>
activity during theoretical lectures	<b>10</b>	written exam	<b>30</b>
practical training		oral exam	
colloquium(s)/seminar papers	<b>40+20</b>		
<b>Sum</b>	<b>70</b>	<b>Sum</b>	<b>30</b>