

<b>Study program: Waste management</b>			
<b>Course title: Waste management sustainability</b>			
<b>Professor/assistant: Ph D Biljana Milutinovic</b>			
<b>Type of course:</b> compulsory			
<b>ECTS credits:</b> 6			
<b>Pre-requisites:</b> -			
<b>Aims of the course:</b> Prepare students to: <ul style="list-style-type: none"> <li>- learn methods sustainability assessment of the waste management system,</li> <li>- recognize the criteria for sustainability assessment of the waste management system from the economic, social, technical and environmental aspects,</li> <li>- learn concepts such as: costs, revenues, profitability of the waste management system,</li> </ul> understands the structure of costs and revenues of the waste management system			
<b>Learning outcomes:</b> Students are able to: <ul style="list-style-type: none"> <li>- apply methods for sustainability assessment of the waste management system,</li> <li>- select criteria for sustainability assessment of the waste management system,</li> <li>- perform the techno-economic analysis of the waste management system, as well as certain treatments</li> <li>- waste,</li> </ul> assess the sustainability of the waste management system from the economic, social, technical and aspects of the environment.			
<b>Syllabus</b> <i>Theoretical part</i> The concept of system sustainability. Technical, economic, social and environmental aspect of sustainability. Methods for the sustainability assessment of waste management system. Criteria for the sustainability assessment of waste management system. Economic criteria for sustainability assessment. Costs (direct and indirect costs, investment and operating costs) in the waste management system. Revenues in the waste management system. Cost-benefit of the waste management system. Techno-economic analysis of elements of the waste management system (collection, transport, treatment and disposal of waste) and the entire waste management system. <i>Practical part</i> Practice, Other forms of teaching, Study research work			
<b>Literature</b> <ol style="list-style-type: none"> <li>1. B. Milutinović, Sustainability of waste management (in Serbian), College of Applied Technical Sciences Niš, 2017</li> <li>2. M. Djukanovic, Environment and Sustainable Development (in Serbian), Elit, 1996</li> <li>3. M. Radaković, Renewable Energy Sources and Their Economic Evaluation (in Serbian), AGM Book, 2010.</li> <li>4. G. Tchobanoglous, F. Kreith, Handbook of Solid Waste Management - Second Edition, McGRAW-HILL, 2002</li> </ol>			
<b>Number of active classes</b>			<b>Other forms of teaching:</b>
Lectures: 3	Practical classes: 2	Research work:	
<b>Teaching methods</b> Combination interactive approach with practical problems solving.			
<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, grade 7 from 61-70 points, grade 8 from 71-80 points, grade 9 from 81-90 points, grade 10 from 91-100 points.			
<b>Pre-exam obligations</b>	<b>points</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>