

NAME OF THE COURSE		SOLID WASTE MANAGEMENT				
Code		Year of study	2., III. i IV. semestar			
Course teacher	Jure Margeta, PhD, Full professor, tenure	Credits (ECTS)	4.0			
Associate teachers		Type of instruction (number of hours)	L	S	E	F
			30		15	
Status of the course	elective	Percentage of application of e-learning	/			
COURSE DESCRIPTION						
Course objectives	The goal of the course is to educate students how to plan the treatment and disposal of municipal solid waste.					
Course enrolment requirements and entry competences required for the course	Undergraduate qualification (6th level of EQF or CROQF).					
Learning outcomes expected at the level of the course (4 to 10 learning outcomes)	<p>The student will:</p> <ul style="list-style-type: none"> - describe and interpret the solid waste management of urban areas. - analyze and calculate the basic substance balance in the system. - describe, interpret and evaluate the economic, environmental and social features of solid waste management. - define the basic plan of system for management of solid waste disposal - describe and interpret the integrated system for management of the liquid waste of urban areas and sludge from WWTP (wastewater treatment plant) management. - analyze and calculate the basic wastewater urban water system balance. - describe, interpret and calculate the basic procedures of wastewater treatment - develop a conceptual design of WWTP. - describe, interpret and evaluate the economic, environmental and social impacts of the system for management of wastewater and sludge. 					
Course content broken down in detail by weekly class schedule (syllabus)	<p>INTRODUCTION: Solid waste, solid waste generation, quantities, strategies and methodology, functional elements, solid waste management system, solid waste management planning.</p> <p>GENERATION OF SOLID WASTE: Sources, composition, generation rates.</p> <p>ONSITE HANDLING, STORAGE, AND PROCESSING: Impacts, onsite handling, onsite storage, onsite processing, discussion topics and problems.</p> <p>COLLECTION OF SOLID WASTE. Collection services, collection systems, equipment, analysis, routes analyses and optimization, discussion topics and problems.</p> <p>TRANSFER AND TRANSPORT basic of transfer and transports needs, transfer stations, transport means and methods, location of transfer station, optimization of transfer and transport system, discussion topics and problems.</p> <p>PROCESSING TECHNIQUES AND EQUIPMENT: purpose of processing, mechanical volume reduction, chemical volume reduction, mechanical size reduction, component separation, drying and dewatering, discussion topics and problems.</p> <p>RECOVERY OF RESOURCES, CONVERSION PRODUCTS AND ENERGY:</p>					

	<p>material processing and recovery systems, recovery of chemical conversion products, recovery of biological conversion products, material and energy recovery systems, discussion topics and problems.</p> <p>DISPOSAL OF SOLID WASTE AND RESIDUAL MATTER: site selection, landfill methods and operations, reactions occurring at site, gas and leachate management, design of landfill, discussion topics and problems.</p> <p>HAZARDUS WASTE MANAGEMENT</p>					
Format of instruction	<input checked="" type="checkbox"/> lectures <input type="checkbox"/> seminars and workshops <input checked="" type="checkbox"/> exercises <input type="checkbox"/> <i>on line</i> in entirety <input type="checkbox"/> partial e-learning <input checked="" type="checkbox"/> field work			<input type="checkbox"/> independent assignments <input type="checkbox"/> multimedia <input type="checkbox"/> laboratory <input type="checkbox"/> work with mentor		
Student responsibilities	Preparation of an assignment.					
Screening student work (<i>name the proportion of ECTS credits for each activity so that the total number of ECTS credits is equal to the ECTS value of the course</i>)	Class attendance	1.0	Research		Practical training	
	Experimental work		Report			
	Essay		Seminar essay			
	Tests		Oral exam	0.5		
	Written exam	1.0	Project	1.5		
Grading and evaluating student work in class and at the final exam	<p>The student may choose between following options:</p> <p>- continous assessment and assessment of the assignment or - final exam and assessment of the assignment.</p>					
Required literature (available in the library and via other media)	Title			Number of copies in the library	Availability via other media	
	J. Margeta: Kruti otpad, Građevinski fakultet, Split, 2013.;					
	George Tchobanoglous, H. Theisen, R. Eliassen: Solid waste: engineering principles and management issues, McGraw Hill, 1978.					
Optional literature (at the time of submission of study programme proposal)						
Quality assurance methods that ensure the acquisition of exit competences	<p>Quality assurance will be performed at three levels:</p> <p>(1) University level, through questionnaires; (2) Faculty level by Quality Control Committee; (3) Lecturer's level.</p>					

Other (as the proposer wishes to add)	
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