

Study program: Bachelor academic studies: Ecological Economics (BASEE)				
Type and level of studies: Bachelor academic studies, I level				
Subject name: Waste Resource Management			Subject code	6E1URO
Professor: dr Suncica Vjestica, assistant professor				
Subject status: Mandatory				
Number od ECTS: 5				
Condition: none				
Subject goal Introducing students to origin and forms of municipal and other waste, as well as methods and systems of treatment while minimizing costs and maximizing efficiency. Of particular importance is understanding the problem of effective depositing management and benefit of active recycling and waste minimization.				
Subject outcome Understanding the importance of municipal and other types of waste as well as dangers that bring and develop the ability to manage municipal and other types of waste from local to regional level in accordance with established National Waste Management Strategy and EU directives.				
Subject content <i>Theoretical classes</i> The origin of solid waste. Classification of waste materials. Defining parameters of solid waste. Storage, collection and transportation of municipal and other types of waste. Treatment and recycling of solid waste. Materials and possible recycling methods. Recycling of cullet. Recycling of plastic waste. Recycling paper. Recycling of waste tires. Disposal of solid waste. Previous methods of waste disposal. Development of disposal methods. Basic characteristics of individual methods. The position of municipal waste in our country. <i>Practical classes</i> Determination of parameters to define solid waste. Getting to know the morphological composition of municipal solid waste. Visiting municipal sanitary landfill and the so-called "wild dumps".				
Literature-Basic: <ol style="list-style-type: none"> 1. Frank, K., (2002), Handbook of solid waste management. e-knyga. New York: McGraw-Hill:. 2002 2. Milena Panić, Upravljanje opasnim otpadom, Geografski Institut „Jovan Cvijić“ i SANUS, Beograd 2010. 3. Direktiva Saveta Evropske Unije 91/156/EEC kojom se menja i dopunjuje Direktiva 75/442/EEC o otpadu. 4. Marina R. Ilić, Saša R. Miletić: <i>Osnovi upravljanja otpadom</i>, Institut za ispitivanje materijala, Beograd, 1998 5. Nebojša Jovičić, Upravljanje čvrstim otpadom, Univerzitet u Kragujevcu, Kragujevac, 2004. 6. Šimon A. Djarmati: Menadžment otpada, Fakultet za primenjenu ekologiju Futura, Beograd, 2008. 7. Marković Nikola, Upravljanje komunalnim vrstama otpada, Tehnički fakultet, Bor 2007. Additional literature: <ol style="list-style-type: none"> 1. Modak P. (2011). Synergizing Resource Efficiency with Informal Sector towards Sustainable Waste Management, Building Partnerships for Moving Towards Zero Waste, A Side Event for CSD19 held on 12 May 2011, Tokyo 2. BiPRO (2013); Support to member states in improving waste management based on assessment of member states' performance 070307/2011/606502/SER/C2. Final report to the European Commission, Beratungsgesellschaft für integrierte Problemlösungen (BiPRO) 3. Christensen T. (2011); Solid waste technology & management., Willey & Sons, United Kingdom 4. World Bank (2011) Solid Waste Management in Bulgaria, Croatia, Poland, and Romania. A cross-country analysis of sector challenges towards EU harmonization, Report No. 60078-ECA, World Bank, Washington DC, USA 5. Zurbrügg C. (2013): Assessment methods for waste management decision-support in developing countries, Ph.D. Thesis - Università degli Studi di Brescia, Facoltà di Ingegneria, Dipartimento di Ingegneria Civile, Architettura, Territorio, Ambiente e Matematica. 				
Number of active teaching classes				Other classes:
Lectures: 2 (30)	Practice: 1,5 (23)	Other class forms:	Study research paper:	
Teaching methods: Theoretical and practical classes, consultations, one colloquium, written exam. Visiting one of the municipal landfills and getting to know the problem of storage as well as taking necessary samples to determine the morphological composition...				
Knowledge evaluation (maximum number of points is 100)				
Pre-exam obligations	points	Final exam		
Activity in class	10	Written exam 20		
Practical classes	30	Oral exam 20		
colloquiums	20			