

Course specifications for the curriculum

Study program		International economy and entrepreneurship		
Elective field (module)				
Type and level of study		Master vocational studies, second level of studies		
Course title		Industrial ecology		
Lecturer		PhD Lidija Stamenković		
Teacher/fellow-worker (practical class)		PhD Jovana A.Đžoljić		
Teacher/fellow-worker (other types of)				
Number of ECTS		9	Course status (mandatory/elective)	Elective
Pre-requirem	No requirements			
Course objectives	The objective of the course is to obtain knowledge of the importance of the industrial ecology concept. Students will gain knowledge of the possible ways for harmonization of industrial and economic development with the postulates of sustainable development, and the possible ways to implement certain regulations from the field of environmental protection within production processes, in view of reducing or eliminating the pressure on the environment resulting from different technological processes.			
Course outcomes	Upon completion of the course, students will obtain knowledge that will enable them to: see the importance of sustainability of products and production processes; define and analyse the life cycle of products; and master knowledge and skills that will allow them to assess the opportunities for improvement of production processes from the aspect of environmental protection, taking into consideration social and economic needs of society, as well as ecological and technical capacities for implementing different types of action plans.			
Course content				
Theoretical classes	Defining industrial ecology and the main principles of sustainable development. Industrial and economic development and their impact on the environment. Familiarization with the groups of industrial processes that have a negative impact on the environment as well as the types of pollutants that are emitted in such production processes. Definition and analysis of the life cycle of products and processes. Application and analysis of ecologically suitable tools in industrial processes. Industrial eco-design and eco-industrial parks. Analysis of the importance of application of industrial ecology from the aspect of conservation and protection of the environment, efficiency in the use of resources, and economic and industrial development.			
Practical classes (practical classes, other types of teaching, study)	Analysis of a case study in a selected industrial plant, assessment of the impact on the environment, study of trends in the development of economy, industry and environmental protection, and harmonization of legal regulations on the national and global level through interactive activities and defense of seminar papers.			
Literature				
1	Internal script from the lectures			
2	Branislav, A., Ivan, K. (2002.): Tehnološki procesi i životna sredina, Fakultet zaštite na radu, Niš			
3	Papers from relevant scientific journals in the field			
4	Graedel, T.E., Allenby B.R.,(2002): Industrial Ecology, 2nd Edition, Upper Saddle River, NJ: Prentice-Hall.			
No. of active weekly classes per semester/trimester/year				
Lectures	Practical class	OTT	Study research	Other classes
45	45			
Teaching methods	theory, discussions, seminar papers, consultations			
Grade (maximal no. of points 100)				
Pre-exam activities	points	Final exam	points	
activity in class	5	written test		
practical classes	5	oral exam	40	
prelim examinations	40			
seminars	10			