

Course Unit Descriptor

Study Programme: Production Engineering			
Course Unit Title: Ecological Technologies and Systems			
Course Unit Code: P1501			
Name of Lecturer(s): Igor Budak, Borislav Savkovic, Boris Agarski			
Type and Level of Studies: Master level			
Course Status (compulsory/elective): compulsory			
Semester (winter/summer): Winter			
Language of instruction: English			
Mode of course unit delivery (face-to-face/distance learning): Face-to-face			
Number of ECTS Allocated: 6			
Prerequisites: None			
Course Aims: Acquiring fundamental knowledge in domain of environment protection in the field of production engineering.			
Learning Outcomes: Enabling students for recognition, prevention and repairing problems related to environment protection in the field of production engineering.			
Syllabus: Objective, purpose and organization of the subject. Systematic conflict between the environment and civilization needs, Problematic environmental areas of industrial production, Mechanical engineering and environment – mechanical plants, pollution of atmosphere, waste, noise and environment, ecologization of technologies. Methodology of evaluation of activity impact on environment, Environment Management System: purpose, origin, introduction, function, evaluation, Methodology of environmental evaluation and product marking, Multicriterial evaluation of environment load, Ecological technologies and future systems. Ecological technologies: reciclyng, obrada zrakom sunca, solar electricity. Renewable energy: solar energy, wind energy, biomass energy, hydrogen energy, energy y environment, geothermal energy, hydropower. energy storage			
Required Reading: Relevant literature in English TBD			
Weekly Contact Hours:	Lectures:	Practical work:	
Teaching Methods: Lectures are realized interactively through lectures, auditory, laboratory and computer practical classes. In lectures theoretical part is presented with characteristic examples for better understanding of subject content. In auditory practical classes, characteristical exercises are covererd. Acquired knowledge is practically applied in laboratory practical classes using available laboratory equipment. Apart from lectures and practical classes, consultations are held regularly			
Knowledge Assessment (maximum of 100 points):			
Pre-exam obligations	points	Final exam	points
Group Assignment		Examination Assignment	
Exercises			
Test			

Test			
The methods of knowledge assessment may differ; the table presents only some of the options: written exam, oral exam, project presentation, seminars, etc.			