Course Unit Descriptor

Study Programme: Production Engineering			
Course Unit Title: Nonconventional Procedures in Processing			
Course Unit Code: P305			
Name of Lecturer(s): Gostimirović Marin			
Type and Level of Studies: Bachelor level			
Course Status (compulsory/elective): compulsory			
Semester (winter/summer): Winter/Summer			
Language of instruction: English			
Mode of course unit delivery (face-to-face/distance learning): Face-to-face			
Number of ECTS Allocated: 5			
Prerequisites: None			
Course Aims: Acquiring knowledge in the field of non-conventional processing and justification of their application, especially in processing hard-tomachine materials and objects of complex geometry.			
Learning Outcomes: Acquired knowledge should enable proper choice of type of non-conventional process for specific production problem. For selected type of processing with acquired knowledge one is able to properly design product manufacturing technology, choice of optimal processing parameters and possibility of construction non-conventional manufacturing systems			
Syllabus: Importance, division, application and and mutual characteristic of non-conventional processes. Justification of application of nonconventional processes. Abrasive jet machining. Abrasive mechanical processes. Water jet machining. Abrasive water jet machining. Ultrasound machining. Electrical discharge machining. Laser beam machining. Electron beam machining. Ion beam machining. Plasma arc machining. Chemical machining. Electrochemical machining. Abrasive electrochemical machining. Intensification of conventional and unconventional processes. Combined non-conventional processes. Combined conventional and non-conventional processes.			
Required Reading: Relevant literature in English TBD			
Weekly Contact Hours:	**Lectures:**	**Practical work:**	
Teaching Methods: Lectures are realized interactively through lectures and laboratory practical classes. In lectures theoretical part is presented with characteristic examples for better understanding of subject content. Acquired knowledge is practically applied in laboratory practical classes using available laboratory equipment. Apart from lectures and practical classes, consultations are held regularly. Final grade is formed on basis of lectures and practically classes presence, tests and oral exam.			
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.			