

Study Programme: Environmental Engineering And Occupational Safety Engineering			
Course Unit Title: Occupational safety in metallurgy and during thermochemical treatment of metals			
Course Unit Code: ZRI42A			
Name of Lecturer(s): Dramićanin Miroslav, Kovačević Lazar, Škorić Branko, Rajnović Dragan			
Type and Level of Studies: bachelor			
Course Status (compulsory/elective): elective			
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: 4			
Prerequisites: none			
Course Aims: The objective of the course is to introduce the student to the fundamentals of metallurgy and thermochemical treatment of metals with emphasis on occupational health and safety.			
Learning Outcomes: Upon successful completion of this course, the student will be able to: name and describe basic casting and thermochemical processes; name health and safety hazards and foundries and heat treating facilities; select personal protective equipment;			
Syllabus. Process of obtaining steel and its impact on the living environment. Processes in the secondary metallurgy and their impact on the living environment. Criteria for the risk assessment of employee health endangerment in metallurgy systems and during thermochemical processing. Introduction to the group of chemical classified as polluting substance in the air of the living environment. Polluting substances, such as ozone, sulfur dioxide, oxides of nitrogen, carbon monoxide, zinc, cyanide, fine substances of the diameter less than 2.5 microns and meteorological circumstance are especially elaborated. Data enables for the program development of concentration reduction of the studied harmful substances from the source of pollution and efficient removal of pollutants from the living environment.			
Required Reading: Relevant literature in English, tbd			
Weekly Contact Hours: 2	Lectures: 2	Practical work: 2	
Teaching Methods: Teaching is held interactively as lectures and laboratory practice. During lectures, the theoretical part of the teaching content is presented and supplemented by characteristic practical examples for better understanding. During lectures, discussion between students is frequently initiated in order to increase motivation, expand student understanding, broaden student perspectives and clarify potential ambiguities. During laboratory practice, the obtained knowledge is practically applied on the available laboratory equipment. Apart from lectures and practice, consultations are held regularly.			
Knowledge Assessment (maximum of 100 points):			
Pre-exam obligations	points	Final exam	points
Attendance			
Computer exercises			
Tests (4x)			

