Course Unit Descriptor

Study Programme: Environmental Engineering And Occupational Safety Engineering

Course Unit Title: Risk assessment in the field of occupational safety

Course Unit Code: ZR420

Name of Lecturer(s): Petrović Maja, Mihajlović Ivana

Type and Level of Studies: bachelor

Course Status (compulsory/elective): compulsory

Semester (winter/ summer): summer

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:.

-Acquiring knowledge to identify the risks in different technical and technological systems. -Acquiring knowledge on basic risk assessment methodologies and risk management in the working environment. -Acquiring knowledge to identify hazards and injuries in the workplace.

Introducing students to the risk assessments techniques in relation to the identified hazards for the purpose of the Risk Assessment Act. -Introducing students to the methodologies for identifying and evaluating risks in relation to the requirements of the standard SRPS ISO 45001: 2018.

Learning Outcomes:

After completing the course and passing the exam, students will be able to: Identify risks in the field of occupational safety within different technical and technological systems; -Apply the appropriate methodology for risk assessment in the working environment; Identify hazards and injuries in the workplace; -Realize the risk assessment in relation to the identified hazards for the Risk Assessment Act; -Identify and evaluate risks in relation to the requirements of the standard SRPS ISO 45001: 2018.

Syllabus.

Risk – terms and definitions. Risk management. Advantages and limitations of risk management. Approaches to risk management at international and national level. Basic requirements of the ISO 31000 standard. Basic requirements of the ISO 45001 standard regarding risk identification and evaluation. Risk management stages. Hazard Analysis and Operability. FMEA analysis. Analysis of the failure tree. Analysis of the event tree. Methods of estimation of human reliability. Accident analysis methods. Methods of risk assessment in relation to hazards. Methods for assessing the risks to the management system for safety and health at work. Guidelines for risk assessment for the Risk Assessment Act. Identification of hazards in the workplace and the work environment. Case studies.

Required Reading:

Relevant literature in English, tbd

Weekly Contact Hours: 2	**Lectures: 2**	**Practical work: 0**

Teaching Methods:

Lectures. Computer exercises. Consultations. In order to collect pre-examination points during the semester, students are obliged to attend regular lectures and computer exercises and pass two tests. After successfully completing the pre-examination obligations, students are entitled to take the exam. The examination consists of a written and mandatory oral part. During the semester students can pass the written part of the exam through two colloquiums. If the student does not pass the written part of the exam through the form of a colloquium, the student enters the written part of the exam which covers the material of the entire semester. The overall assessment of the exam is formed by summing the number of points won from pre-examination, colloquium (or written exam) and oral part of the exam.

Knowledge Assessment (maximum of 100 points):

Pre-exam obligations	points	**Final exam**	points
Attendance			
Computer exercises			

Tests (4x)			