

Study Programme: Environmental Engineering And Occupational Safety Engineering			
Course Unit Title: Fire protection in industrial facilities			
Course Unit Code: ZRI44A			
Name of Lecturer(s): Čepić Zoran			
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 aim of the course is to enable students to acquire theoretical and practical knowledge of fires and explosions in industrial facilities, as well as fire protection equipment.			
Learning Outcomes: Students should use the acquired knowledge in further training and education, as well as in solving practical engineering problems from the field of fire protection in industrial facilities.			
Syllabus. Basic terms and definitions of uncontrolled and explosive combustion; Conditions of occurrence of fires and explosions; Types and Classification of fire and explosion; Fire and explosion parameters (thermal effect, temperature, pressure, combustion products). Industrial complex and its elements; Classification of industrial buildings depending on architectural characteristics and purposes; Constructions of industrial buildings and construction materials; Technical installations, communications and internal transport in industrial buildings. Fire analysis of technological processes occurring in industrial facilities; Technological processes in which flammable gas, vapor, liquid or dust are generated; Hazards and fire protection measures characteristic technological processes in industry (energy, mechanical, electro, chemical, petrochemical, food, textile, wood, ... industry). Protection against fire and explosions in industrial buildings; Conditions and means for fire extinguishing; Water, foam, powder, carbon dioxide, halons, new chemicals (physical and chemical properties, mechanism of action, advantages and disadvantages, possibilities and method of application); Stable and mobile fire extinguishing systems and equipment (types, purposes, working principle, specificity).			
Required Reading: Relevant literature in English, tbd			
Weekly Contact Hours: 2	Lectures: 2	Practical work: 2	
Teaching Methods: Lectures, exercises, seminar papers, consultations, industrial visit.			
Knowledge Assessment (maximum of 100 points):			
Pre-exam obligations	points	Final exam	points
Attendance			
Computer exercises			
Tests (4x)			

