

### DESCRIPTION OF A STUDY COURSE – SYLLABUS

<b>Title of a course</b>	Protection from explosions				
<b>Head of course</b>	Kruno Kaurić, Lecturer				
<b>Study programme</b>	Professional undergraduate study Occupational Safety				
<b>Status of a course</b>	Obligatory				
<b>Year of study</b>	3.	<b>Semester</b>	V	<b>ECTS credits</b>	5
<b>Teaching plan (L + E + S+ Pr)</b>	2+2+0+0				
<b>Goals of a course</b>					
To acquaint students with the conditions of formation of explosive mixture and the possibilities of protection and methods of prevention from explosion.					
<b>Conditions for enrolling course</b>					
No conditions					
<b>Learning outcomes on a level of a study programme which includes course</b>					
<p>Outcome 3: Assess risk and recommend protective measures.</p> <p>Outcome 4: Evaluate protective measures with respect to danger encountered in the work process.</p> <p>Outcome 7: Evaluate dangers, damage and effort.</p> <p>Outcome 5: Recommend measures to eliminate or reduce danger, damage and effort.</p> <p>Outcome 16: Identify safety factors in the field of fire protection and explosion protection.</p> <p>Outcome 17: Apply legislation from the field of occupational safety and explosion protection.</p>					
<b>Expected learning outcomes on a level of a course</b>					
<ol style="list-style-type: none"> <li>1. Assess the opportunities and conditions for the formation of an explosive mixture.</li> <li>2. Describe the procedures for preventing an explosion occurring due to possible emergence of an explosive atmosphere.</li> <li>3. Suggest the design of electrical devices and other possible sources of ignition in areas with a potential for the emergence of an explosive atmosphere.</li> <li>4. Select tools and appliances in areas where there is a possibility of emergence of an explosive atmosphere.</li> <li>5. Apply legislation and technical regulations regarding premises with an explosive atmosphere or the possibility of its emergence.</li> </ol>					
<b>Content of a course</b>					
Area at risk of explosions. Concepts, volume and characteristics of gasses, steam, haze and thin fibres that in certain conditions create a risk area. Limits of explosiveness, physical and chemical grounds for explosions. Causes of detonation. Classification of risk areas and risk assessment. Assessing the risk of an area. Hazardous areas. Risk elaboration. Methods and ways of creating plants, electric systems and devices for areas exposed to hazard of explosive materials. Primary and secondary protection. Basic requirements for electric systems, devices and installations designed for risk areas. Maintenance and repairation. Legislative regulation. Organization of safety measures.					
<b>Teaching modes</b>	<input checked="" type="checkbox"/> lectures <input type="checkbox"/> auditory exercises <input checked="" type="checkbox"/> seminars and workshops <input type="checkbox"/> distance learning <input type="checkbox"/> field classes		<input checked="" type="checkbox"/> individual assignments <input type="checkbox"/> multimedia and network <input type="checkbox"/> laboratory <input type="checkbox"/> supervisor's work <input type="checkbox"/> other _____		
<b>Comments</b>					
<b>Students' obligations</b>					
<b>Grading, evaluation and monitoring of students' work continuously during lectures and exams</b>					

Grading is based upon evaluation of course's learning outcomes' adoption. Grading is performed continuously during lectures and/or during exam, in compliance with the provisions of Regulation on the assessment of students.

**Continuous check-up:**

Outcomes	Pre-exam I	Pre-exam 2	Seminar work	Threshold	Max
Outcome 1	5			2,5 %	5 %
Outcome 2	15		10	12,5 %	25 %
Outcome 3	15		5	10 %	20 %
Outcome 4		20	5	12,5 %	25 %
Outcome 5		20	5	12,5 %	25 %
Percentage of ECTS	2	2	1		
Total	35	40	25	50 %	100 %

A student has passed the exam if he has acquired a percentage of credits for each learning outcome higher or equal to defined threshold.

**Exam term:**

Outcomes	Written exam	Oral exam	Max
Outcome 1	5 %		5 %
Outcome 2		25 %	25 %
Outcome 3		20 %	20 %
Outcome 4		25 %	25 %
Outcome 5		25 %	25 %
Percentage of ECTS	0,5	4,5	
Total	5 %	95 %	100 %

A student has passed the exam if he has acquired a percentage of credits for each learning outcome higher or equal to defined threshold.

**Grading:**

A student has passed the exam if he has acquired at least 50% of anticipated credits of a specific learning outcome. If a student has passed learning outcomes of all courses, the accomplished credits (percentages) of all passed learning outcomes are being added, while the final grade is defined upon following table:

Range of credits (percentages)	Numerical grade	ECTS grade
90,00 – 100,00	Excellent (5)	A
75,00 – 89,99	Very good (4)	B
60,00 – 74,99	Good (3)	C
50,00 – 59,99	Sufficient (2)	D
0,00 – 49,99	Insufficient (1)	F

**Obligatory literature**

Materials from lectures

**Additional literature**



