

DESCRIPTION OF A STUDY COURSE – SYLLABUS

Title of a course	Safety in hazardous material transportation				
Head of course	Erika Gržin, Lecturer				
Study programme	Professional undergraduate study Occupational Safety				
Status of a course	Obligatory				
Year of study	3.	Semester	V	ECTS credits	5
Teaching plan (L + E + S+ Pr)	2+2+0+0				
Goals of a course					
To acquaint students with the specificities of the transport of dangerous goods by individual branches of traffic, with special attention to the transport of dangerous goods in road and rail.					
Conditions for enrolling course					
No conditions					
Learning outcomes on a level of a study programme which includes course					
Outcome 1: Apply legal regulations in industry and process industry. Outcome 2: Determine safety factors in industry. Outcome 3: Validate protection measures in comparison to dangers occurring in working process. Outcome 4: Participate in teamwork and present professional contents in Croatian and foreign language in oral and written form.					
Expected learning outcomes on a level of a course					
1. Apply legislation when transporting hazardous substances 2. Determine the chemical and physical characteristics of hazardous substances from the aspect of health, environmental and fire protection. 3. Define safety precautions when handling hazardous substances 4. Determine the specificities of hazardous substances transportation by individual branches of transport 5. Describe the documentation accompanying the transport of hazardous substances					
Content of a course					
Regulations for hazardous material transportation. Acts. International regulations. Definition, classification and characteristics of hazardous material. Safety measures in hazardous material transportation according to different types and segments of transport services. Documentation needed in hazardous material transportation. Fire and explosion risk assessment.					
Teaching modes	<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 _____		
Comments					
Students' obligations					
Grading, evaluation and monitoring of students' work continuously during lectures and exams					
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	Test	Seminar work	Threshold	Max
Outcome 1		10%	15%	12,5%	25%
Outcome 2		10%	15%	12,5%	25%
Outcome 3	20%			10%	20%
Outcome 4	20%			10%	20%
Outcome 5	10%			5%	10%
Percentage of ECTS	2,5	1	1,5		
Total	50 %	20 %	30 %	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		25%	25%
Outcome 2		25%	25%
Outcome 3	20%		20%
Outcome 4	20%		20%
Outcome 5	10%		10%
Percentage of ECTS	2,5	2,5	
Total	50 %	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.

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

1. Šegović, M.; Alar, Ž.: Prijevoz opasnih tvari/03, ZIRS, Zagreb, 2004.
2. Zakon o prijevozu opasnih tvari (NN 79/07)
3. Materials posted on Moodle

Additional literature

1. Bukljaš Skočibušić, M.; Bukljaš, Z.: Zaštita u prometu, Fakultet prometnih znanosti, Zagreb, 2015.
2. Šegović, M.: Restruktuirani ADR 01/03 tablice opasnih tvari, Zavod za istraživanje i razvoj sigurnosti, Zagreb, 2003.

