

### DESCRIPTION OF A STUDY COURSE – SYLLABUS

<b>Title of a course</b>	Waste management				
<b>Head of course</b>	PhD Melita Zec Vojinović, Senior Lecturer				
<b>Study programme</b>	Specialist professional graduate study Occupational Safety				
<b>Status of a course</b>	Obligatory				
<b>Year of study</b>	1.	<b>Semester</b>	II	<b>ECTS credits</b>	6
<b>Teaching plan (L + E + S+ Pr)</b>	2+1+1+0				
<b>Goals of a course</b>					
Acquire knowledge of the basics of managing different types of waste from different industries and industries. Introduce students to the effects of waste management on man and the environment. Target students to a sustainable waste management system with the most important waste prevention measures in place.					
<b>Conditions for enrolling course</b>					
No conditions					
<b>Learning outcomes on a level of a study programme which includes course</b>					
Outcome 1: Plan preventive measures in occupational safety. Outcome 4: Design security systems in different work environments with a particular focus on goods and people traffic, health care, hospitality and tourism. Outcome 10: Recommend safety measures in crisis situations. Outcome 12: Critically evaluate the characteristics of pollutants and their influence in the environment. Outcome 15: Manage work in the occupational safety system.					
<b>Expected learning outcomes on a level of a course</b>					
1. Link sustainable waste management regulations and differentiate approaches to waste management 2. Identify the sources of generation and type of waste 3. Predict the impact of waste and waste treatment on humans and the environment 4. Recommend waste recovery and disposal procedures 5. Evaluate different types of waste treatment with respect to the waste type					
<b>Content of a course</b>					
Introduction to the problem of waste: Definition, waste matter, waste. Historical overview of the quantity, types and methods of waste disposal. Strategic guidelines and goals of waste management. Waste disposal: Dumping of waste: advantages and disadvantages, dangers to the environment and measures for reducing harmful effects. Mechanical biological treatment: types of procedure, basic concepts, advantages and disadvantages. Waste incineration: advantages and disadvantages, dangers to the environment and measures for reducing harmful effects. The recycling of waste matter, composting of biodegradable waste: advantages and disadvantages					
<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	Presentation	Home assignment	Threshold	Max
Outcome 1	15%				7,5 %	15 %
Outcome 2			15%		7,5 %	15 %
Outcome 3		20%			10 %	20 %
Outcome 4			12,5 %	12,5 %	12,5 %	25 %
Outcome 5		25%			12,5 %	25 %
Percentage of ECTS	1	2,5	1,5	1	3	6
Total	15%	45 %	27,5 %	12,5 %	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	15%		15 %
Outcome 2	12 %	3 %	15 %
Outcome 3	16 %	4 %	20 %
Outcome 4	25 %		25 %
Outcome 5	25 %		25 %
Percentage of ECTS	5	1	6
Total	80 %	20 %	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. Prelec: Inženjerstvo zaštite okoliša – skripta s TFRI
2. S. Kalambura, T. Krička, D. Kalambura: Gospodarenje otpadom; Veleučilište Velika Gorica, 2011.
3. T. Sofilić, I. Brnardić, Gospodarenje otpadom, Metalurški fakultet, Zagreb, 2013.
4. RH Legislativa vezana uz otpad
5. additional materials - on the course web

**Additional literature**

1. Runko Luttenberger: Gospodarenje vodom i otpadom
2. Lovrić, D., Gospodarenje otpadom, skripta, Visoka ŠZS, Zagreb.
3. G. Tchobanoglous: Handbook of Solid waste management



