

DESCRIPTION OF A STUDY COURSE – SYLLABUS

Title of a course	Chemical and biological noxiousness				
Head of course	PhD Željko Sesar, College Professor				
Study programme	Professional undergraduate study Occupational Safety				
Status of a course	Obligatory				
Year of study	2.	Semester	III	ECTS credits	5
Teaching plan (L + E + S+ Pr)	3+1+0+0				
Goals of a course					
To acquaint students with basic chemical and biological hazards and their impact on human health and the possibility of applying preventive measures.					
Conditions for enrolling course					
No conditions					
Learning outcomes on a level of a study programme which includes course					
Outcome 7: Evaluate dangers, damage and effort. Outcome 12: Recommend solutions in the field of occupational security and safety in technological processes. Outcome 16: Identify safety factors in the service industries. Outcome 17: Apply legislation from the field of occupational safety for service activities. Outcome 18: Identify dangerous goods in goods traffic.					
Expected learning outcomes on a level of a course					
1. Define basic chemical and biological noxiousness. 2. Analyse the basic differences between chemical and biological noxiousness. 3. Compare health consequences between chemical and biological noxiousness. 4. Substantiate the needs for preventive measures. 5. Use manuals with information on chemical and biological noxiousness characteristics.					
Content of a course					
Chemical hazards: noxious and toxic chemical substances; entry, absorption, bio-transformation and effects on human organism; excretion; cumulative effects. Chemical hazards in working environment; toxicants, mutagens, cancer genes, theratogenes. Occupational diseases caused by chemical substances; poisonings by metals, diseases caused by aerosols, poisonings by gasses and vapours, poisonings by pesticides; irritative and allergic dermatoses. Prevention of exposure to chemical hazards. Biological hazards: microorganisms and parasites, mechanism of pathogen affection. Natural process, symptoms and results of infectious diseases. Spread of infectious diseases; epidemiological chain; carrier state; anthroponozoonoses; disease vectors, contagious diseases. Resistance to infectious diseases; immunity. Occupational bacterial, viral, micotic and parasitic diseases. Occupational dermatoses caused by biological hazards. Prevention of exposure to biological hazards.					
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 I	Pre-exam 2	Seminar work	Threshold	Max
Outcome 1	20 %			10 %	20 %
Outcome 2	20 %			10 %	20 %
Outcome 3		10 %	5 %	7,5 %	15 %
Outcome 4		15 %	5 %	10 %	20 %
Outcome 5		15 %	10 %	17,5 %	35 %
Percentage of ECTS	2	2	1		
Total	40 %	40 %	20 %	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	20 %		20 %
Outcome 2		20 %	20 %
Outcome 3		15 %	15 %
Outcome 4		20 %	20 %
Outcome 5		35 %	35 %
Percentage of ECTS	1	4	
Total	20 %	80 %	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. Volner, Z.: Opća medicinska mikrobiologija s epidemiologijom i imunologijom
2. Mihaljević, F. i suradnici: Specijalna klinička infektologija

Additional literature

