



SVEUČILIŠTE U ZAGREBU  
METALURŠKI FAKULTET

UNIVERSITY OF ZAGREB  
FACULTY OF METALLURGY

## UNDERGRADUATE STUDY PROGRAM OCCUPATIONAL SAFETY, HEALTH AND ENVIRONMENT



SVEUČILIŠTE U ZAGREBU  
METALURŠKI FAKULTET

UNIVERSITY OF ZAGREB  
FACULTY OF METALLURGY

### I. YEAR

#### I. semester

Course	Hours per week			ECTS
	L	S	E	
Mathematics 1	2	0	3	5
Physics	2	0	3	5
Chemistry	2	1	2	5
Introduction to safety	2	1	0	4
Introduction to ecology	2	0	0	4
Work psychology	2	0	2	4
English language 1	1	0	1	2
Physical training 1	0	0	2	1
	<b>28</b>			<b>30</b>

L – lectures, S – seminars, E -exercises

#### II. semester

Course	Hours per week			ECTS
	L	S	E	
Mathematics 2	2	0	3	5
Fundamentals of electrical engineering	2	1	1	5
Engineering drawing and computer graphics	2	0	2	5
The basics of law and occupational safety legislation	2	1	0	4
Toxicology	2	0	1	4
Chemical and biological hazards	2	1	0	4
English language 2	1	0	1	2
Physical training 2	0	0	2	1
	<b>26</b>			<b>30</b>

### II. YEAR

#### III. semester

Course	Hours per week			ECTS
	L	S	E	
Computer assisted data processing	2	0	2	4

Environment and workplace protection techniques	2	2	0	4
Safety management systems	2	0	2	4
Hazards and risks in work environment	2	0	1	4
Health and safety at work principles	2	1	0	4
Testing and certification	2	2	0	4
Materials science	2	1	1	5
Physical training 3	0	0	2	1
	<b>28</b>			<b>30</b>

#### IV. semester

Course	Hours per week			ECTS
	L	S	E	
Physical damages	2	0	1	4
Machines and devices with increased dangers	2	1	1	5
Ergonomics and safety	2	0	1	4
Energy systems	2	0	2	4
Fundamentals of combustion and extinction processes	2	0	2	4
Personal protective equipment and rescue equipment	2	1	1	4
Hazardous substances in the environment	2	1	1	4
Physical training 4	0	0	2	1
	<b>28</b>			<b>30</b>

### III. YEAR

#### V. semester

Course	Hours per week			ECTS
	L	S	E	
Pollution and protection of soil	2	1	0	4
Air pollution and protection	2	1	0	4
Water pollution and protection	2	1	0	4
Introduction to entrepreneurship	2	1	0	3
Emergency planning and response	2	0	1	3
Fire safety of buildings	2	0	1	4
Professional diseases and human health	2	0	2	4
Sustainable waste management	2	1	1	4
	<b>26</b>			<b>30</b>

#### VI. semester

Course	Hours per week			ECTS
	L	S	E	
Technical and business safety	2	1	1	4
Business communication and andragogy	2	1	0	3

Risk assessment	3	1	1	5
Student practice*	-	-	-	4
Bachelor thesis	0	5	0	5
<b>ELECTIVE COURSES (three to be chosen)</b>				
The best available techniques in environment protection of industrial and other installations	2	1	0	3
Radiation protection	2	0	1	3
Public health	2	1	0	3
Health and safety in food production	2	1	0	3
Safety in construction	2	0	1	3
Active measures of fire protection	2	0	1	3
Sustainability of foundry processes	2	1	0	3
Low-emission combustion	2	0	1	3
	<b>26</b>			<b>30</b>

\* Student practice – 21 working days or 168 hours