



**University of Mining and Geology  
"St. Ivan Rilski"**

**THE FACULTY OF GEO-EXPLORATION**

## **Curriculum**

VOCATIONAL FIELD

**4.4. EARTH SCIENCES**

COURSE OF STUDIES

**ECOLOGY AND ENVIRONMENTAL PROTECTION**

**MASTER'S DEGREE**

VOCATIONAL QUALIFICATION

**MASTER ECOLOGIST**

FORM OF STUDY

**FULL-TIME**

DURATION OF STUDY

**A YEAR AND A HALF (THREE SEMESTERS)**

Adopted at a session of the Academic Council of the University of Mining and Geology "St. Ivan Rilski"

HEAD OF DEPARTMENT OF *ENGINEERING*  
*GEOECOLOGY* :

(Assoc. Prof. An. Angelov, Ph.D.)

DEAN:

(Assoc. Prof. B. Valchev, Ph.D.)

Sofia, 2021

**CURRICULUM**  
**EDUCATIONAL QUALIFICATION DEGREE "MASTER"**  
**SPECIALTY "ECOLOGY AND ENVIRONMENTAL PROTECTION"**  
**PROFESSIONAL FIELD 4.4 "EARTH SCIENCES"**

FORM OF TRAINING: REGULAR

DURATION OF STUDY: 1.5 YEARS

Duration of the semester: 15 weeks

Year	Semester	№	Discipline code	Full name of the course (course projects, internships)	Form of control	Weekly hours		Hours by type of exercise			Classroom employment	Credits	
						L	E	SE	LE	PE			
First	First	1	172127	Environmental chemistry	E	2	3	15	30		75	5	
		2	172128	Systems for regulation of purification processes	E	2	2	15	15		60	5	
		3	172129	Reactor technology in geoecology	E	3	3	30	15		90	5	
		4	132149	Ecological mineralogy	E	2	2	15	15		60	5	
		5	172135	Atmosphere and environment	E	2	2	15	15		60	5	
		6		<b>Elective course from:</b>	E	2	2	15	15		60	5	
		142216	Geophysical methods in ecology										
		172231	Radioecology										
	<b>Total for the first semester</b>					<b>6</b>	<b>13</b>	<b>14</b>	<b>105</b>	<b>105</b>	<b>0</b>	<b>405</b>	<b>30</b>
	Second	7	172132	Purification of contaminated soils	E	2	3	45			75	6	
		8	172130	Industrial wastewater treatment	E	2	3	30	15		75	6	
		9	172136	Management of damaged terrains and landscapes from mining activities	E	2	2	15	15		60	4	
		10	172133	Selective systems for hazardous waste processing	E	2	2	15	15		60	4	
		11	122144	Geoecological modeling in GIS	CS	1	3	45			60	4	
		12		<b>Elective course from:</b>	E	2	3	15	30		75	6	
		172258	Biosensors and bioindicators										
		112240	Geology, prospecting and exploration of oil and gas fields										
	<b>Total for the second semester</b>					<b>5+1</b>	<b>11</b>	<b>16</b>	<b>165</b>	<b>75</b>	<b>0</b>	<b>405</b>	<b>30</b>
<b>Total for the first year</b>					<b>11+1</b>	<b>24</b>	<b>30</b>	<b>270</b>	<b>180</b>	<b>0</b>	<b>810</b>	<b>60</b>	
Second	Third			Undergraduate internship and defense of Diploma Thesis	15 days x 6 hours					90	15		
<b>Total for the second year</b>											90	15	
<b>TOTAL FOR THE ENTIRE TRAINING COURSE</b>					<b>11+1</b>	<b>24</b>	<b>30</b>	<b>270</b>	<b>180</b>	<b>0</b>	<b>900</b>	<b>75</b>	

Signs: E -exam, CS- current assessment, L - lectures, LE - laboratory exercises, SE- seminar exercises, PE - practical exercises

Parameters of the learning process:

Total hours for the training course: **900**

Classroom employment: **900**

Lectures: **450**

Exercises: **450**

- seminar **270**

- laboratory **180**

Extracurricular activities (study practices): -

Number of exams for the training course: 11

Number of current ratings: 1