



**UNIVERSITY OF MINING AND GEOLOGY "ST. IVAN RILSKI"
SOFIA**

FACULTY OF GEOLOGY AND EXPLORATION

CURRICULUM

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| VOCATIONAL FIELD: | 5.8 EXPLORATION, MINING, AND PROCESSING OF MINERALS |
| COURSE OF STUDY | ECONOMY OF FOSSIL FUELS |
| EDUCATIONAL AND QUALIFICATION DEGREE | MASTER |
| PROFFESIONAL QUALIFICATION | ENGINEER – GEOLOGICAL EXPLORATION |
| FORM OF STUDY: | FULL-TIME |
| <i>DURATION OF STUDY</i> | 1.5 YEARS |

Accepted on meeting of AC of UMG "St. Iv. Rilski".
Protocol №10/06.07.2021 г.

HEAD OF DEPARTMENT "GEOLOGY AND EXPLORATION OF
MINERAL RESOURCES":

(Assoc. Prof. Dr. K. Popov)

DEAN:

(Assoc. Prof. Dr. B. Valchev)

Sofia, 2021

CURRICULUM

EDUCATIONAL AND QUALIFICATION DEGREE: "MASTER"

COURSE OF STUDY: "ECONOMY OF FOSSIL FUELS", Vocational field: Petroleum Geology

VOCATIONAL FIELD: 5.8 EXPLORATION, MINING, AND PROCESSING OF MINERALS

FORM OF STUDY: FULL-TIME

DURATION OF STUDY: 1.5 YEARS

Duration of each semester: 15 weeks

| Year | Semester | № | Course unit code | Full name of the course units (course projects, practical training) | Form of control | Teaching hours (weekly) | | Overall teaching hours by type of seminar | | | Overall academic load per semester | Credits acc. to ECTS | |
|---|---------------------------------------|---|--|---|-----------------|-------------------------|-----------------------|---|------------|-----------|------------------------------------|----------------------|-----------|
| | | | | | | L | S | S | Lab | P | | | |
| First | First | 1 | 112135 | Organic Geochemistry | E | 2 | 2 | | 30 | | 60 | 5 | |
| | | 2 | 112119 | Unconventional Hydrocarbon Resources | E | 2 | 2 | | 30 | | 60 | 5 | |
| | | 3 | 122110 | Basin Analysis | E | 3 | 3 | 45 | | | 90 | 7 | |
| | | 4 | 112155 | Reservoir Geology | E | 2 | 2 | 30 | | | 60 | 5 | |
| | | | | <i>Elective course units</i> | | | | | | | | | |
| | | 5 | | Block 1 (1 of the following): | | CA | 2 | 2 | | 30 | | 60 | 5 |
| | | | 112250 | 1. Seismic Methods and Seismic Stratigraphy | | | | | | | | | |
| | | | 142209 | 2. Well-logging | | | | | | | | | |
| | | | 112223 | 3. Computer Technologies and Modelling in Petroleum Geology | | | | | | | | | |
| | | 6 | | Block 2 (1 of the following): | | CA | 2 | 2 | 30 | | | 60 | 5.0 |
| | | | 162262 | 1. Drilling for Oil and Gas | | | | | | | | | |
| | | | 162263 | 2. Oil and Gas Production, Transport and Storage | | | | | | | | | |
| | | | 112260 | 3. Underground Energy Storage | | | | | | | | | |
| | | | | <i>Optional course units</i> | | | | | | | | | |
| | 7 | 372300 | Physical Education and Sports - 2 hours/week | | TO | | | | | 30** | 30** | 1** | |
| | Overall for the first semester | | | | | 4+2 | 13 | 13 | 165 | 30 | | 390 | 32 |
| | | | Block "Legislative regulations" | | | | | | | | | | |
| | | 8 | 272161 | 1. Regulatory and contractual relations in the exploration and extraction of fossil fuels | | E | 2 | 2 | 30 | | | 60 | 5 |
| | | 9 | 272162 | 2. Energy policy, integration and energy security | | E | 2 | 2 | 30 | | | 60 | 5 |
| | | | Block "Economy of fossil fuels" | | | | | | | | | | |
| | | 10 | 272240 | 1. Innovation and investment management | | E | 2 | 2 | 30 | | | 60 | 5 |
| | 11 | 272126 | 2. Economic assessment of fossil fuels | | E | 2 | 2 | 30 | | | 60 | 5 | |
| | | Block "Environmental protection and sustainable development" | | | | | | | | | | | |
| | 12 | 172157 | 1. Legal and organizational aspects of environmental protection | | CA | 2 | 2 | 30 | | | 60 | 5 | |
| | 13 | 172174 | 2. Ecological risks and effective environmental management in the exploration and extraction of energy resources | | CA | 2 | 2 | 30 | | | 60 | 5 | |
| | | <i>Optional course units</i> | | | | | | | | | | | |
| | 14 | 372300 | Physical Education and Sports - 2 hours/week | | CA | | | | | 30** | 30** | 1** | |
| Overall for the second semester | | | | | 4+2 | 12 | 12 | 180 | | | 360 | 30 | |
| Second | Third | 15 | 112147 | Pre-diploma practice | | | 18 days (6 hours/day) | | | | 108 | 10 | |
| | | 16 | 112158 | Diploma design | | | | | | | | 15 | |
| | | | | Diploma defense | | | | | | | | | |
| OVERALL FOR THE FULL COURSE OF STUDY | | | | | 8+4 | 25 | 25 | 345 | 30 | | 858 | 87 | |

** Teaching hours and credits of optional course units, which are excluded from the total.

Abbreviations: E - examination; CA - continuous assessment; L - lectures; Lab - laboratory seminars; S - seminars; P - practical seminars.

Parameters of the Curriculum:

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|--|-----|
| Overall teaching hours for the full course of study: | 858 |
| Academic load: | 750 |
| lectures: | 375 |
| seminars: | 375 |
| - seminars | 345 |
| - laboratory seminars | 30 |
| - practical seminars | |
| Extracurricular load (practical training): | 108 |
| Number of exams: | 8 |
| Items of continuous assessment: | 4 |

CURRICULUM

EDUCATIONAL AND QUALIFICATION DEGREE: "MASTER"

COURSE OF STUDY: "ECONOMY OF FOSSIL FUELS", II vocational field: Coal Geology

VOCATIONAL FIELD: 5.8 EXPLORATION, MINING, AND PROCESSING OF MINERALS

FORM OF STUDY: FULL-TIME

DURATION OF STUDY: 1.5 YEARS

Duration of each semester: 15 weeks

| Year | Semester | № | Course unit code | Full name of the course units (course projects, practical training) | Form of control | Teaching hours (weekly) | | Overall teaching hours by type of seminar | | | Overall academic load per semester | Credits acc. to ECTS | |
|---|---------------------------------------|---|--|--|-----------------|-------------------------|-----------|---|------------|------------|------------------------------------|----------------------|-----------|
| | | | | | | L | S | S | Lab | P | | | |
| First | First | 1 | 112135 | Organic Geochemistry | E | 2 | 2 | | 30 | | 60 | 5 | |
| | | 2 | 112127 | Organic Petrology | E | 2 | 2 | | 30 | | 60 | 5 | |
| | | 3 | 122110 | Facies and paleogeography analysis | E | 2 | 2 | 30 | | | 60 | 5 | |
| | | 4 | 112155 | Geological and Industrial Assessment of Coal Fields | E | 2 | 2 | 30 | | | 60 | 5 | |
| | | 5 | 112156 | Ecological and Geochemical Aspects in the Study of Coal | | 2 | 2 | | 30 | | 60 | 5 | |
| | | | | <i>Elective course units</i> | | | | | | | | | |
| | | 6 | | <i>Geophysics (1 of the following):</i> | TO | 2 | 2 | | 30 | | 60 | 5 | |
| | | | 112250 | 1. Seismic Methods and Seismic Stratigraphy | | | | | | | | | |
| | | | 142209 | 2. Drilling Geophysics | | | | | | | | | |
| | | | | <i>Optional course units</i> | | | | | | | | | |
| | 7 | 372300 | Physical Education and Sports - 2 hours/week | TO | | | | | 30** | 30** | 1** | | |
| | Overall for the first semester | | | | | 4+2 | 12 | 12 | 60 | 120 | | 360 | 30 |
| | Second | Block "Legislative regulations" | | | | | | | | | | | |
| | | 8 | 272161 | 1. Regulatory and contractual relations in the exploration and extraction of fossil fuels | E | 2 | 2 | 30 | | | 60 | 5 | |
| | | 9 | 272162 | 2. Energy policy, integration and energy security | E | 2 | 2 | 30 | | | 60 | 5 | |
| | | Block "Economy of fossil fuels" | | | | | | | | | | | |
| | | 10 | 272240 | 1. Innovation and investment management | E | 2 | 2 | 30 | | | 60 | 5 | |
| | | 11 | 272126 | 2. Economic assessment of fossil fuels | E | 2 | 2 | 30 | | | 60 | 5 | |
| | | Block "Environmental protection and sustainable development" | | | | | | | | | | | |
| | | 12 | 172157 | 1. Legal and organizational aspects of environmental protection | CA | 2 | 2 | 30 | | | 60 | 5 | |
| | | 13 | 172174 | 2. Ecological risks and effective environmental management in the exploration and extraction of energy resources | CA | 2 | 2 | 30 | | | 60 | 5 | |
| | | | <i>Optional course units</i> | | | | | | | | | | |
| 14 | 372300 | Physical Education and Sports - 2 hours/week | CA | | | | | 30** | 30** | 1** | | | |
| Overall for the second semester | | | | | 4+2 | 12 | 12 | 180 | | 360 | 30 | | |
| Second | Third | 15 | 112147 | Pre-diploma practice | | 18 days (6 hours/day) | | | | 108 | 10 | | |
| | | 16 | 112158 | Diploma design | | | | | | | 15 | | |
| | | | | Diploma defense | | | | | | | | | |
| OVERALL FOR THE FULL COURSE OF STUDY | | | | | 8+4 | 24 | 24 | 240 | 120 | | 828 | 85 | |

** Teaching hours and credits of optional course units, which are excluded from the total.

Abbreviations: E - examination; CA - continuous assessment; L - lectures; Lab - laboratory seminars; S - seminars; P - practical seminars.

Parameters of the Curriculum:

| | |
|--|-----|
| Overall teaching hours for the full course of study: | 828 |
| Academic load: | 720 |
| lectures: | 360 |
| seminars: | 360 |
| - seminars | 240 |
| - laboratory seminars | 120 |
| - practical seminars | |
| Extracurricular load (practical training): | 108 |
| Number of exams: | 8 |
| Items of continuous assessment: | 4 |