

| | | | | | | | | | | | | | | | | |
|---|------------------------|---------|----|-----|--------|-----|---|--|----|----|----|----|----|----|----|----|
| 4205 | Elective | PD, CCH | 5 | 180 | 2/1/0* | 105 | E | | | | | 5 | | | | |
| 4306 | Elective | PD, CCH | 5 | 180 | 2/1/0* | 105 | E | | | | | 5 | | | | |
| AAPI43 | Production practice I | PD, UC | 2 | | 0/0/2 | | | | 2 | | | | | | | |
| AAPI85 | Production practice II | PD, UC | 3 | | 0/0/3 | | | | | 3 | | | | | | |
| M-11. Module of "R&D" | | | | | | | | | | | | | | | | |
| 4507 | Elective | PD, CCH | 5 | 180 | 2/1/0* | 105 | E | | | | | 5 | | | | |
| M-12. Module of final attestation | | | | | | | | | | | | | | | | |
| ECA105 | Final attestation | FA | 12 | | | | | | | | | 12 | | | | |
| M-13. Module of additional types of training | | | | | | | | | | | | | | | | |
| AA2500 | Military affairs | ATT | 0 | | | | | | | | | | | | | |
| Total based on UNIVERSITY: | | | | | | | | | 31 | 29 | 28 | 12 | 29 | 31 | 33 | 27 |
| | | | | | | | | | 60 | | 60 | | 60 | | 60 | |

| Number of credits for the entire period of study | | | | | | |
|--|--|-------------------------|---------------------------|---------------------------|--|------------|
| Cycle code | Cycles of disciplines | Credits | | | | Total |
| | | required component (RC) | university component (UC) | component of choice (CCH) | | |
| GED | Cycle of general education disciplines | 51 | | 5 | | 56 |
| BD | Cycle of basic disciplines | | 81 | 31 | | 112 |
| PD | Cycle of profile disciplines | | 25 | 35 | | 60 |
| <i>Total for theoretical training:</i> | | <i>51</i> | <i>106</i> | <i>71</i> | | <i>228</i> |
| FA | Final attestation | | 12 | | | 12 |
| TOTAL: | | 63 | 106 | 71 | | 240 |

Decision of the Academic Council of KazNRTU named after K.Satpayev. Protocol № 13 от "28" 04 2022 y.

Decision of the Educational and Methodological Council of KazNRTU named after K.Satpayev. Protocol № 4 от "26" 04 2022 y.

Decision of the Academic Council of MaMI named after O. Baikonurov. Protocol № 5 от "20" 12 2021 y.

Vice-Rector for Academic Affairs

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ELECTIVE DISCIPLINES of the educational program for recruitment for the 2022-2023 academic year
Educational program 6B07213 - "Mineral processing"
Group of educational programs B071 - "Mining and extraction of minerals"

Form of study: full-time Duration of study: 4 years Academic degree: Bachelor of Engineering and Technology

| Year of study | Elective code according to the curriculum | Discipline code | Name of disciplines | Semester | Cycle | Total amount in credits | Total hours | classroom volume of lek/lab/pr | SIS (including TSIS) in hours |
|--|---|---|--|----------|-------|-------------------------|-------------|--------------------------------|-------------------------------|
| Module of basic training | | | | | | | | | |
| 2 | 2201 | MET516 | Magnetic and special enrichment methods | 3 | B | 5 | 150 | 1/1/1 | 105 |
| | | MET642 | Enrichment of gold-bearing ores and technogenic raw materials | | | | | 2/0/1 | |
| 2 | 2202 | MET512 | Hydroacromechanics of processing processes | 4 | B | 5 | 150 | 2/1/0 | 105 |
| | | MET643 | Coal enrichment | | | | | 2/1/0 | |
| 3 | 3203 | MET521 | Processes and devices of processing production | 5 | B | 5 | 150 | 2/1/0 | 105 |
| | | MET522 | Auxiliary economy in mineral processing | | | | | 2/0/1 | |
| | 3204 | AUT427 | Automation of production processes at concentrating plants | 6 | B | 5 | 150 | 1/1/1 | 105 |
| | | MET517 | Flotation reagents in mineral processing | | | | | 2/1/0 | |
| 3205 | MET644 | Theory and practice of hydrometallurgical processes | 6 | B | 5 | 150 | 2/0/1 | 105 | |
| | MET645 | Development of innovative equipment in enrichment | | | | | 2/0/1 | | |
| 4 | 4206 | MET646 | Technologies for the enrichment of non-ferrous metal ores | 7 | B | 6 | 180 | 2/0/2 | 120 |
| | | MET647 | Reagent facilities of processing plants | | | | | 2/0/2 | |
| Module of professional activity | | | | | | | | | |
| 3 | 3301 | MET531 | Enrichment of polymetallic ores | 6 | P | 5 | 150 | 1/1/1 | 105 |
| | | MET648 | Technologies for processing uranium-containing ores and concentrates | | | | | 2/1/0 | |
| | 3302 | MET419 | Enrichment of rare metal ores | 6 | P | 4 | 120 | 2/1/0 | 75 |
| | | MET574 | Ore beneficiation research | | | | | 2/1/0 | |
| 4 | 4303 | MET156 | Modeling of concentrating processes | 7 | P | 6 | 180 | 1/1/1 | 120 |
| | | MET151 | Geotechnological methods of enriching | | | | | 2/1/1 | |
| | 4304 | MET536 | Enrichment of mining and chemical and non-metallic raw materials | 7 | P | 5 | 150 | 2/1/0 | 105 |
| | | MET569 | Technology of underground leaching of ores | | | | | 2/1/0 | |
| | 4305 | MET570 | Magnetic and electrical methods of lightening | 8 | P | 5 | 150 | 2/1/0 | 105 |
| | | MET537 | Enrichment of ferrous metal ores | | | | | 1/1/1 | |
| | 4306 | MET371 | Special and combined methods of dressing | 8 | P | 5 | 150 | 1/1/1 | 105 |
| | | MET372 | Fundamentals of scientific research in ore dressing | | | | | 2/1/0 | |
| Module of "R&D" | | | | | | | | | |
| 4 | 4307 | MET564 | Design of concentrating factory | 8 | P | 5 | 150 | 2/1/0 | 105 |
| | | MET649 | Digitalization of mining and processing plants | | | | | 2/0/1 | |

| The number of credits in elective subjects for the entire period of study | |
|---|-----------|
| Cycles of disciplines | Credits |
| Cycle of basic disciplines (B) | 31 |
| Cycle of profile disciplines (P) | 35 |
| TOTAL: | 66 |

Decision of the Scientific Council of the Mining and Metallurgical Institute named after O.A. Baikunurov. Protocol № 5 or "26" 12 2021 y.

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