MINISTRY OF HIGHER AND SECONDARY SPECIAL EDUCATION
OF THE REPUBLIC OF UZBEKISTAN

KARSHI ENGINEERING-ECONOMICS INSTITUTE

Registered: № 540
"30" 08 2022

"APPROVED"
Educational Prorector
_____O.N.Bozorov
"____" _____2022

SYLLABUS

of the module

«MINING INTRODUCTION»

Knowledge sphere:	100 000 300 000	-	Humanities; Industrial engineering.
Education:	110 000 310 000	-	Pedagogy; Engineering work
Course of Study:	5311600	-	Mining:(enrichment of minerals); (open mining) (coal mining); (underground mining).

Karshi-2022

AnyScanner

This syllabus of the module has been developed in conformity with the curriculum

Draftsman: Z.Latipov — Associate Professor of the department of "Mining"

The working curriculum of the subject was discussed at the meeting of the Department of Mining № 1 of 28.08 and recommended for discussion by the Board of the Faculty of Geology and Mining.

The working curriculum of the subject is presented in the Methodological Commission of the Department of Mining (Statement _____), the Methodological Commission of the Faculty of Geology and Mining (Statement _____) and recommended for use in the learning process.

The head of educational-methodical department is _____ SH.Turdiyev

Dean of the Faculty of Geology and Mining _____ T.Yarboboyev

The head of the department is _____ A.Shodiyev

SCAN AnyScanner

SYLLABUS of the module «MINING INTRODUCTION»

Subject/module code KSK2304	**Academic year** 2022-2023	**Semester (s)** 3	**ECTS** 4
Subject(module) type compulsory	**Language of education** **English**		**Weekly class hours** 4
The name of the science	**Classroom lessons (hour)**	**Independent study**	**Total**
Mining introduction	60	60	120

Teacher information

Name of the department	**Mining**		
Teachers	Name	Phone number	e-mail
Lecturer	Latipov Zuhriddin Yoqub o‘g‘li	90 425 93 06	Zuhriddin.latipov@mail.ru
Practical training	Latipov Zuhriddin Yoqub o‘g‘li	90 425 93 06	Zuhriddin.latipov@mail.ru

GOALS AND OBJECTIVES OF DISCIPLINE

"Introduction to the mining industry" - an introduction to the basics of mining affairs, the main activities of specialists in this area. Learning the basic concepts and terms used in the framework of this specialty. Knowledge gained in mastering the “introduction to specialty ", intended to do further training in specialties more understandable and affordable, interest students, and also motivate them for further learning and self-education.

PLACE OF DISCIPLINES IN STRUCTURE

EDUCATIONAL PROGRAM

“Introduction to the mining industry” refers to the variable parts of the professional cycle of the main educational program, is the foundation for the preparation of bachelors in the direction 60721500 - "Mining engineering". "Introduction to the mining industry" is based on such disciplines like: Geology", "Physics", "Chemistry", "Higher mathematics". The knowledge gained during the development of the course "Introduction to the specialty", necessary for the study of disciplines: "Fundamentals of mining", “Mine Surveying and Fundamentals of the Geometry of Subsoil”, “Open Mining work", "Processes of underground mining", "Technology of underground mining ", " Technology of open mining", "Design mining enterprises”,“ Mineral processing”.

REQUIREMENTS FOR RESULTS OF DEVELOPMENT OF DISCIPLINE.

The process of studying the discipline is aimed at the formation of students of the following competencies:

- the ability to generalize and analyze information on mining, setting goals and choosing ways to achieve them;

- the ability is logically consistent, reasoned and clearstate thoughts, orrectly build oral and written speech;

- willingness to cooperate with colleagues, work in a team;

- using regulatory legal and instructive documents in their activities;

- the desire for self-development, advanced training and mastery;

- demonstrate the use of a computer as a means management and processing of information arrays;

As a result of mastering the discipline, students should demonstrate the following education results:

DISCIPLINE RESULTS

As a result of mastering the discipline, the student must know: The educational process in high school. Research students work. The history of mining. Basic information about open pit and underground mining, and also enrichment of minerals. Key concepts and definitions used in the framework directions.

Own: The basic concepts and definitions used in the direction

CONTENT OF DISCIPLINE

Discipline contains a course of lectures, practical exercises, independent work.

COURSE PROGRAM

INTRODUCTION TO THE MINING AND PRODUCING INDUSTRY

Themes of lectures 30 hours.

1. Introduction. Mining and mining terms (4 hours) The Republic of Uzbekistan. Independence. Sovereignty.

2. Mining industry of the Republic of Uzbekistan. (4 hours) Value Uzbekistan for the Central Asian republics. Territorial and spatial features of Uzbekistan.

3. Information on minerals. (2 hours) Minerals and rocks. Mineral reserves

4. Minerals and rocks. Mineral resources. (4 hours) Minerals Rocks and minerals. Useful stocks fossils.

5. Role and role of mining industry in regional development (2 hours) Geographical and geopolitical position. Socio-economic development of the country. The wealth of the subsoil. Place of Birth. Promising ore occurrences. Useful fossils. Capital investment efficiency.

6. Mining enterprises and their structure. . (2 hours) Production units. Shop. Production area. Households. The composition of production units. Production

structure enterprises. The structure of the Navoi and Almalyk mining and metallurgical plants. Central Mining Administration. North ore management. Zarafshan construction department. RU-5. South ore management. Industrial center in the city of Navoi. RU-2.

7. Navoi Mining and Metallurgical Combine and its directions. (4 hours) NMMC. Central Mining Administration. Northern Mining Administration. Southern Mining Administration. 5-mine management. 1– hydrometallurgical plant. 2- hydrometallurgical plant. 3- hydrometallurgical plant. 4- hydrometallurgical plant.

8. Almalyk mining and metallurgical plant and its directions. (4 hours) AMMC. Production structure of OJSC Almalyksky MMC. Mining complex. Ore management of Kalmyk. Field distant. Kizil-olma deposit. Kochbulak deposit.

9. Fundamentals of processes and technology of minerals enrichment. (2 hours) General information about underground mining. The main workings underground mining. Inclined trunk. The vertical trunk. Vertical blind trunk. underground mining technology.

Themes of practical exercises 30 hours

1. Role and value of coal industry in national economy. (4 hours). Underground mining equipment mineral. The composition of the mining extraction complexes. Lifting installation.

2. Mining technology: Underground mining of mineral deposits. (4 hours) General information about the open method of development. Career field and career. Advantages and disadvantages of an open development method.

3. Complex mechanization of underground mining of mineral deposits. (4 hours) The ratio of the volume of stripping and mining operations. Average stripping ratio. Average operating overburden ratio. Layer overburden ratio. Overburden contour coefficient. Operational overburden ratio. Boundary coefficient overburden. Stage of development.

4. Mining technology: Extraction of mineral deposits in an open way. (4 hours). Preparation of rocks for excavation. Excavation and loading operations. Rock mass movement. Waste dumping and unloading mineral resource. Technology and mechanization of mining. Komatsu. Caterpillar. Dressta. Liebherr.

5. Complex mechanization of open cast mining of coal deposits. (4 hours). Excavation operations. Moving quarry cargo. Cyclic-flow technology using steeply inclined conveyors on the deep career of Muruntau.

6. Traditional methods of mining (4 hours). The essence of an unconventional field development method minerals, its features. Circuit diagram non-traditional way of developing mineral deposits. Advantages of an unconventional field development method mineral.

7. Types and objects of non-traditional mining of mineral deposits. (4 hours). Explosives. Detonation wave. Initiators and blasting explosives. Individual features of explosives. Types
industrial explosives. Powdered and granular Explosives based on dense ammonium nitrate. Waterborne explosives suspension type. Emulsion explosive suspension type. Facilities initiation

8. Explosion and energy in mining. (4 hours). The history of the development of surveying. Surveying Tasks mineral exploration services. Tasks Mine surveying service for the development of mineral deposits. Role and value of research work in the mining industry. (2 hours). The concept of mineral processing. Enrichment processes mineral. Equipment used in the enrichment process mineral.

Self-study content

Familiarization and study of the basic terms of mining science. The study main and auxiliary production processes. Familiarization with technological schemes of drilling and blasting, excavation and loading operations, transportation of rock mass and dumping.

Content independent work

Independent preparation and study of lecture material.

Familiarization with the literature proposed by the work program.

List of references

Main literature:

1.Howard L.Hartman. Introductory mining ingineering. – USA.: Alabama, 2002. 584 p.

2. Sagatov N.X. Kon ishlari asoslari, O‘quv qo‘llanma. –T.: TDTU, 2005.- 121 b.

3. Norov Yu.D., Zairov Sh.Sh. Vvedenie v napravlenie. – N.:Navoi, 2015.-189 s.

4. Umarova I.K., Solijanova G.K. Foydali qazilmalarni boyitish va qayta ishlash. Darslik. – T.: Cho‘lpon. 2009

5. V.V. Rzhevsky. Open cast mining. Technology and complex mechanization. M .: Book House Librocom, 2010.-522 p.

8. Egorov P.V., other Underground mining mineral deposits (workshop). M., Moscow State University, 2002. –217 p.

Additional literature:

1. N.Ya. Repin. Preparation of rocks for excavation. M .: ed. “Mountain Book”, 2009. - 188 p.

2. N.Ya. Repin., L.N. Repin. Mining and loading work. M .: ed. The Mountain Book, 2010. - 267 p.

3. N.I. Kuchersky. Modern technologies for development of primary gold deposits. M., ed. “Ore and Metals”, 2007.

4. Mineral deposits. M .: ed. Moscow State University 2004

5. W. Scott Dunbar/ Americas school of mines: Basics of mining and mineral processing. University of British Columbia. USA, 2012.

Internet sites:

http://www.elibrarv.ru/menu info.asp – scientific electronic library.,

http://mggu.da.ru - Moscow State mining University.

http://www.mining-iournal.com/mi/MJ/mi.htm - Mining Journal

http://info.uibk.ac.at/c/c8/c813 - Institute of Geotechnical and Tunnel Engineering,

http://www.rsl.ru - Russian state bilbioteka,

http://www.minenet.com - Mining companies.

http://www.agmk.uz - Almalyk mining and metallurgical plant;

http://www.ngmk.uz - Navoi Mining and Metallurgical Combine.

http://www.uz/rus/industries/cmi.htm -Mining industry of Uzbekistan.

http://www.uz/rus/industries/zdo.htm -Gold mining industry.