

MS in Mining Engineering

Program Overview

We at the Mining Engineering Department are striving for a high-quality graduate program supported by a contemporary and compatible curriculum, applied research, and to produce technically competent mining graduates possessing skills to contribute to the Mining industry of Pakistan in general and Balochistan in particular with an environmentally friendly approach. We aim to recognize, investigate and address engineering problems related to the exploitation of mineral deposits of Pakistan in general and Balochistan in particular by employing modern techniques. The students learn to exhibit a high level of technical competency, problem-solving skills and applying research to produce solutions in the field of Mining Engineering. They exercise professional excellence utilizing intrapersonal skills focused on workplace safety, environmental sustainability and engineering professional ethics addressing interests of major stakeholders and societal growth. They learn to address complex engineering problems related to Mining Engineering by persuading lifelong learning.

Main Areas of Research:

- Rock Mechanics
- Mineral Processing
- Mine Ventilation
- Occupational Health and Safety in Mining
- Underground and Surface Mine Design

For more information, please refer to the list of faculty members for their research field on the Department website.

Admission Requirement:

16 years of education or equivalent e.g. B.E/BS – 4 years in the relevant field from HEC recognized university with at least 60% marks (Annual System) or CGPA 2.5 out of 4.0 (Semester System).

GAT general with at least 50% marks or GAT subject with at least 60% marks or HAT for the admission /scholarship in the specific program of study.

For more information on application deadlines, tests and other admission requirements, please visit the admissions section of the Graduate Studies Office.

Program Requirement:

The minimum and maximum duration of the MS program is 1.5 to 4 years. Students must meet the following requirements for graduation:

- A minimum of 24 credit hours course work with a minimum CGPA of 2.5
- Successful defense of synopsis/ research proposal and its approval from Advanced Studies and Research Board (AS&RB).
- A minimum of 6 credit hours research work/ thesis.
- Thesis defense and viva.

Program Structure:

S#	Course Codes	Course Title	Credit Hours
FIRST SEMESTER			
1		Core/Elective	3 + 0
2		Core/Elective	3 + 0
		Core/Elective	
3		Core/Elective	3 + 0
SECOND SEMESTER			
1		Core/Elective	3 + 0
2		Core/Elective	3 + 0
		Core/Elective	3 + 0
3		Core/Elective	3 + 0
THIRD SEMESTER			
1		Thesis	6 + 0
TOTAL			6
Total Courses			24
Total Credit Hours			30

*Out of the total eight courses, Minimum four courses to be taken from Group A and Two from Group B and the remaining two are selected on University's choice subject to the availability of specialized faculty.

Group A: (Compulsory)

Serial No.	Course Code	Name of Course	Credit Hours
1	MINE-503	Advanced Drilling and Blasting	03
2	MINE-633	Mineral Process Selection and Design	03
3	MINE-617	Computer Aided Mine Planning and Design	03
4	MINE-631	Advanced Mineral Processing	03
5	MINE-662	Modern Mine Management	03
6	MINE-502	Advanced Rock Mechanics	03
7	MINE-618	Design and Control of Mine	03
8	MINE-616	Advanced Excavation Engineering & Tunneling	03
9	MINE-646	Loss Control and Safety in Mining	03
10	MINE-603	Dimension Stone Engineering	03
11	MINE-676	Exploration and Reserve Estimation	03
12	MINE-516	Underground Mine Design	03
13	RES-503	Research Methods & Techniques	03
14	MINE-602	Advanced Surface Mine Design	03

Group B: (Electives)

Serial No	Course Cod	Name of Course	Credit Hours
1	MINE-647	Mine Environmental Controls in Mining	03
2	MINE-620	Rock Slope Engineering	03
3	MINE-632	Coal Preparation	03
4	MINE-604	Non-Explosive Rock Fragmentation	03
5	ENGG-501	Nano Technology	03
6	MINE-661	Management in the Minerals Industry	03
7	MINE-677	Mine Cost Analysis & Control	03
8	MINE-621	Subsurface Geological & Geotechnical Investigation	03
9	MINE-601	Advanced Mineral Dressing	03
10	MINE-546	Environmental Geology	03
11	MINE-619	Mine Feasibility and Planning	03

Contact Information:

Prof. Dr. Khan Gul Jadoon
Chairperson Mining Engineering
khan.gul@buitms.edu.pk

Phone No. :+92 (81) 2899911 Ext. 547

Dr. Mohammad Najam Khan
Graduate Program Manager Mining Engineering
najam.khan@buitms.edu.pk

Phone No. :+92 (81) 2899911 Ext. 547