

**Draft of Proposed Course Structure
for Post Graduate Degree Programme
M. Tech. in Mining Engineering
(Starting from the Session 2020-2021)**



**Dr. Babasaheb Ambedkar Technological University
Lonere 402 103, Dist- Raigad, Maharashtra, INDIA**

Goal of the Mining engineering at Dr. Babasaheb Ambedkar technological University, Lonere (BATU) is to provide students with preparation to become worthy of professional careers in the field and to be motivated for lifelong learning. All prescribed courses have definite objectives and outcomes. Program objectives are expected qualities of engineers as under:

- a) **Preparation:** To prepare students to excel in various educational programmes or to succeed in industry / technical profession through further education/training;
- b) **Core Competence:** To provide students with a solid foundation in mathematical, scientific fundamentals required to solve Mining problems;
- c) **Breadth:** To train students with a breadth of scientific knowledge to comprehend, analyze, design & create novel products and solutions for real life problems;
- d) **Professionalism:** To inculcate in students professional/ethical attitude, effective team work skills, multidisciplinary approach and to relate engineering issues to a broader context;
- e) **Learning Environment:** To provide students with academic environment of excellence, leadership, ethical guidelines and life-long learning needed for a long / productive career.

In addition to above DBATU graduate is expected to be :-

1. Taking pride in their profession and have commitment to highest standards of ethical practices and related technical disciplines;
2. Able to design structural system that is safe, economical and efficient;
3. Capable of using modern tools efficiently in all aspects of professional practices;
4. Dealing successfully with real life civil engineering problems and achieve practical solutions based on a sound science and engineering knowledge;
5. Shall be engage in continuous research, development and exchange of knowledge for professional development;
6. Be honest in their control and performing their duties and promote effective use of resources through open, honest and impartial services to the public;
7. Act in such a manner which will uphold the honour, integrity, or dignity of the engineering profession, and avoid knowingly engaging in business or professional practices of a fraudulent, dishonest or unethical nature;
8. Recognize that the lives, safety, health and welfare of the general public are dependent upon engineering, decision and practices;
9. Continue their professional development throughout their careers and provide opportunities for the professional development;

First Semester

Sr.No.	Subject Code	Name of Subject	Hours /Week			Credit	Examination Scheme				
			L	P	T		Theory		CA	P R/ O R	Total
							TH	MT E			
1	MN101	Operations Research	3	-	1	4	60	20	20	-	100
2	MN102	Applied Rock Mechanics	3	-	1	4	60	20	20	-	100
3	MN103	Advance Mining Methods	3	-	1	4	60	20	20	-	100
4	MN104	Communication Skills	2	-	-	2	-	-	25	25	50
4	MN104	Elective – I	3	-	-	3	60	20	20	-	100
5	MN105	Elective – II	3	-	-	3	60	20	20	-	100
6	MN106	PG Lab-I (Applied Rock Mechanics)	-	3	-	2	-	-	25	25	50
			17	3	3	22	300	100	150	50	600

Elective-I

MN104A: Eco-friendly Mining

MN104B: Physical and Numerical Simulation

MN104C: Geo-informatics

Elective-II

MN105A: Reliability Engineering

MN105B: Safety and Risk Management in Mines

MN105C: Industrial Hygiene Evaluation Methods

Second Semester

Sr.No.	Subject Code	Name of Subject	Hours /Week			Credit	Examination Scheme				
			L	P	T		Theory		CA	P R/ O R	Total
							TH	MT E			
1	MN201	Design of Underground Structures in Rocks	3	-	1	4	60	20	20	-	100
2	MN202	Underground Mine Ventilation and Environmental Engg.	3	-	-	3	60	20	20	-	100
3	MN203	Planning and Design of Underground Methods of Exploitation for Coal & Metalliferous Deposits	3	-	1	4	60	20	20	-	100
4	MN204	Advanced Mine Safety Engineering	3	-	-	3	60	20	20	-	100
5	MN204	Elective – I	3	-	-	3	60	20	20	-	100
6	MN205	Elective – II	3	-	-	3	60	20	20	-	100
7	MN206	PG Lab-I (Computer Aided Mine Planning & Design (S))	-	3	-	2	-	-	25	25	50
			18	3	2	22	300	100	150	50	650

Elective –I (any one)

Opencast Mining

MN204A - Planning and Design of Surface Mines

MN204B - Analysis and Design of Slopes in Surface Mines

MN204C - Environmental Aspects of Mining

Elective –II (any one)

Rock Excavation Engineering

MN205A - Blasting Technology in Rock Excavation

MN205B - Tunnel Engineering

MN206C - Rock Excavation Technology and Equipment

Third Semester

Sr.No.	Subject Code	Name of Subject	Hours /Week			Credit	Examination Scheme				
			L	P	T		Theory		CA	P R/ O R	Total
							TH	MT E			
1	MN301	Project Management & and Intellectual Property Rights	3	-	-	3	60	20	20	-	100
2	MN302	Mine Economics	3	-	-	3	60	20	20	-	100
3	MN303	Project Phase - 1	-	-	-	10	-	-	50	50	100
			6	-	2	16	120	40	90	50	300

Forth Semester

Sr.No.	Subject Code	Name of Subject	Hours /Week			Credit	Examination Scheme				
			L	P	T		Theory		CA	PR/ OR	Total
							TH	MT E			
1	MN301	Project Stage-II	-	-	-	15	-	-	75	75	150
			-	-	-	15	-	-	75	75	150