

## Department of Mining Engineering

### Details of Departmental Compulsory (DC) Courses

Departmental Compulsory (DC) Courses				
S. No.	Course Code	Course Name	L-T-P	Course Type
1	<a href="#">MNC200</a>	Elements of Mining	3-0-0	Theory
2	<a href="#">MNC201</a>	Rock Breakage	3-0-0	Theory
3	<a href="#">MNC202</a>	Mine Surveying	3-0-0	Theory
4	<a href="#">MNC203</a>	Mine Surveying Practical	0-0-2	Practical
5	<a href="#">MNC204</a>	Rock Breakage Practical	0-0-2	Practical
6	<a href="#">MNC205</a>	Rock Mechanics	3-0-0	Theory
7	<a href="#">MNC206</a>	Mine Ventilation	3-0-0	Theory
8	<a href="#">MNC207</a>	Underground Metal Mining	3-0-0	Theory
9	<a href="#">MNC208</a>	Underground Coal Mining	3-0-0	Theory
10	<a href="#">MNC209</a>	Rock Mechanics Practical	0-0-2	Practical
11	<a href="#">MNC210</a>	Mine Ventilation Practical - I	0-0-2	Practical
12	<a href="#">MNC300</a>	Surface Mining	3-0-0	Theory
13	<a href="#">MNC301</a>	Mine Planning and Economics	3-0-0	Theory
14	<a href="#">MNC302</a>	Computer Aided Mine Planning Practical	0-0-3	Practical
15	<a href="#">MNC303</a>	Mine Ventilation Practical - II	0-0-2	Practical
16	<a href="#">MNC304</a>	Mine Legislation and Safety	3-0-0	Theory
17	<a href="#">MNC305</a>	Mine Automation and Data Analytics	3-0-0	Theory
18	<a href="#">MNC306</a>	Mine Data Analytics Practical	0-0-2	Practical
19	<a href="#">MNC307</a>	Numerical Modelling/Remote Sensing & GIS Practical	0-0-2	Practical
20	MNC401	Project - I	0-0-0 (6)	Non-Contact
21	MNC402	Project - II	0-0-0 (6)	Non-Contact
22	<a href="#">MNC503</a>	Mine Planning and Design	3-0-0	Theory
23	<a href="#">MNC504</a>	Risk and Workplace Safety Management	3-0-0	Theory
24	<a href="#">MNC505</a>	Geomechanics Practical	0-0-2	Practical
25	<a href="#">MNC506</a>	Computer Aided Mine Planning and Design Practical	0-0-3	Practical
26	<a href="#">MNC508</a>	Geostatistics and Mine Valuation	3-0-0	Theory
27	<a href="#">MNC509</a>	Mine Simulation and Data Analytics Practical	0-0-3	Practical
28	<a href="#">MNC516</a>	Rock Excavation Practical	0-0-3	Practical
29	<a href="#">MNC520</a>	NATM and TBM Tunneling	3-0-0	Theory
30	MNC523	Mine Surveying Techniques	3-0-0	Theory
31	MNC524	Geographical Information System	3-0-0	Theory
32	MNC525	Remote Sensing and Digital Image Processing	3-0-0	Theory
33	MNC527	Geodesy and GNSS Surveying	3-0-0	Theory
34	MNC528	Advanced Surveying Practical	0-0-3	Practical
35	MNC529	GIS Practical	0-0-2	Practical
36	MNC530	Computer Aided Mine Planning and Design	3-0-0	Theory
37	MNC531	Microwave Remote Sensing	3-0-0	Theory
38	MNC532	Remote Sensing and Image Processing Practical	0-0-3	Practical
39	MNC533	Survey Camp	0-0-2	Practical
40	<a href="#">MNC534</a>	Geomechanics for Underground Space	3-0-0	Theory
41	<a href="#">MNC535</a>	Excavation Methods for Tunnels and Caverns	3-0-0	Theory
42	<a href="#">MNC536</a>	Computational Subsurface Ventilation and Environment	3-0-0	Theory
43	<a href="#">MNC537</a>	Computational Subsurface Ventilation and Environment Practical	0-0-3	Theory
44	<a href="#">MNC538</a>	Mass Production Mining Technology	3-0-0	Theory
45	<a href="#">MNC539</a>	Computational Geomechanics and Ground Control	3-0-0	Theory
46	<a href="#">MNC540</a>	Mining Equipment Reliability, Maintainability and Availability	3-0-0	Theory
47	<a href="#">MNC542</a>	Planning and design for Tunnels and Caverns	3-0-0	Theory
48	<a href="#">MNC543</a>	Numerical Modelling Practical	0-0-2	Practical
49	MNC597	Thesis	0-0-0 (36)	Non-Contact
50	MNC598	Thesis	0-0-0 (18)	Non-Contact
51	MNC599	Thesis	0-0-0 (S/X)	Audit
52	MNC700	Research Methodology	3-0-0	Theory
53	MNS401	Internship	0-0-0 (S/X)	Audit

### Details of Engineering Science Option (ESO) Courses

Engineering Science Option (ESO) Courses				
S. No.	Course Code	Course Name	L-T-P	Course Type
1	<a href="#">MNE201</a>	Introduction to Mining	3-0-0	Theory
2	<a href="#">MNE202</a>	Introductory Rock Mechanics	3-0-0	Theory

### Details of Departmental Elective (DE) Courses

Departmental Elective (DE) Courses				
S. No.	Course Code	Course Name	L-T-P	Course Type
1	<a href="#">MND400</a>	Rock Excavation Engineering	3-0-0	Theory
2	<a href="#">MND401</a>	Advanced Mine Ventilation	3-0-0	Theory

3	<a href="#">MND402</a>	Open Pit Slope Analysis and Design	3-0-0	Theory
4	<a href="#">MND403</a>	Geospatial Technology in Mining	3-0-0	Theory
5	<a href="#">MND404</a>	Mine System Engineering	3-0-0	Theory
6	<a href="#">MND405</a>	Mine Safety Engineering	3-0-0	Theory
7	<a href="#">MND406</a>	Mine Environmental Engineering	3-0-0	Theory
8	<a href="#">MND407</a>	Underground Space Technology	3-0-0	Theory
9	<a href="#">MND408</a>	Innovative Mining Systems	3-0-0	Theory
10	<a href="#">MND409</a>	Introduction to Geographical Information System	3-0-0	Theory
11	<a href="#">MND410</a>	Advanced Blasting Techniques	3-0-0	Theory
12	<a href="#">MND411</a>	Advanced Underground Mining Methods	3-0-0	Theory
13	<a href="#">MND500</a>	Managerial Decision Making	3-0-0	Theory
14	<a href="#">MND501</a>	Mine Simulation and Data Analytics	3-0-0	Theory
15	<a href="#">MND504</a>	Modelling and Analysis of Geospatial data	3-0-0	Theory
16	<a href="#">MND505</a>	Geospatial Technologies for Natural Resources	3-0-0	Theory
17	<a href="#">MND510</a>	Analysis & Design of Slopes	3-0-0	Theory
18	<a href="#">MND511</a>	Modern Blasting Technology in Mining	3-0-0	Theory
19	<a href="#">MND540</a>	Element of Mining Engineering	3-0-0	Theory
20	<a href="#">MND547</a>	Mine Automation	3-0-0	Theory
21	<a href="#">MND556</a>	Computational Geomechanics	3-0-0	Theory

### Details of Open Elective (OE) Courses

Open Elective (OE) Courses				
S. No.	Course Code	Course Name	L-T-P	Course Type
1	MNO301	Modern Surveying Techniques	3-0-0	Theory
2	<a href="#">MNO302</a>	Seabed Mining and Asteroid Mining	3-0-0	Theory
3	<a href="#">MNO303</a>	Underground Construction Engineering	3-0-0	Theory
4	MNO401	Rock Engineering	3-0-0	Theory
5	<a href="#">MNO500</a>	Responsible Mining	3-0-0	Theory
6	<a href="#">MNO501</a>	Mining, Energy and Climate Change	3-0-0	Theory
7	<a href="#">MNO510</a>	Rock Excavation Technology	3-0-0	Theory