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## JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

(Established by Andhra Pradesh Act No.30 of 2008)

Kukatpally, Hyderabad – 500 085, Andhra Pradesh (India)

### B.TECH. MINING MACHINERY

#### I YEAR

Code	Subject	L	T/P/D	C
	English	2	-	4
	Mathematics – I	3	1	6
	Engineering Mechanics	3	-	6
	Engineering Physics	3	-	6
	Engineering Chemistry	3	-	6
	Computer Programming	3	-	6
	Engineering Drawing	2	3	6
	Computer Programming Lab.	-	3	4
	Engineering Physics & Engineering Chemistry Lab	-	3	4
	English Language Communication Skills Lab.	-	3	4
	Engineering Workshop / IT Workshop	-	3	4
	<b>Total</b>	<b>19</b>	<b>16</b>	<b>56</b>

#### II YEAR I SEMESTER

Code	Subject	L	T/P/D	C
	Environmental Studies	4	-	4
	Probability and Statistics	4	-	4
	Electrical Technology	4	-	4
	Mechanics of Solids	4	-	4
	Thermodynamics	4	-	4
	Metallurgy and Material Science	4	-	4
	Electrical Engineering Applications Lab	-	3	2
	Metallurgy and Mechanics of Solids Lab	-	3	2
	<b>Total</b>	<b>24</b>	<b>6</b>	<b>28</b>

#### II YEAR II SEMESTER

Code	Subject	L	T/P/D	C
	Mathematics-II	4	-	4
	Kinematics of Machinery	4	-	4
	IC Engines and Gas Turbines	4	-	4
	Mechanics of fluids and Hydraulic Machines	4	-	4
	Mining Methods and Unit Operations	4	-	4
	Machine Drawing and Computer Aided Graphics	-	6	4
	Mechanics of fluids and Hydraulic Machines Lab	-	3	2
	Thermal Engineering Lab	-	3	2
	<b>Total</b>	<b>20</b>	<b>12</b>	<b>28</b>

#### III YEAR I SEMESTER

Code	Subject	L	T/P/D	C
	Managerial Economics and Financial Analysis	4	-	4
	Production Technology	4	-	4
	Electronics Devices and Circuits	4	-	4
	Applied Electrical Engineering	4	-	4
	Dynamics of Machinery	4	-	4
	Design of Machine Members	4	-	4
	Production Technology Lab	-	3	2
	Electronics Devices and Circuits Lab	-	3	2
	<b>Total</b>	<b>24</b>	<b>6</b>	<b>28</b>

## III YEAR II SEMESTER

Code	Subject	L	T/P/D	C
	Industrial Management	4	-	4
	Fluid Power and Control	4	-	4
	Open Cast Drilling and Production Equipment	4	-	4
	Instrumentation and Control System Engineering	4	-	4
	Bulk Solids Handling Equipment	4	-	4
	<b>Open Elective</b>	4	-	4
	Human Values and Professional Ethics			
	Intellectual Property Rights			
	Disaster Management			
	Mining Machines Lab	-	3	2
	Advanced Communication Skills Lab	-	3	2
	<b>Total</b>	<b>24</b>	<b>6</b>	<b>28</b>

## IV YEAR I SEMESTER

Code	Subject	L	T/P/D	C
	Material Handling in Mines	4	-	4
	Mine Electrical Engineering	4	-	4
	Automobile Engineering	4	-	4
	Metrology and Machine Tools	4	-	4
	<b>Elective-I</b>	4	-	4
	Principles of Tribology			
	Mechanical Systems Design			
	Microprocessors and microcontrollers			
	Mechatronics			
	<b>Elective-II</b>	4	-	4
	Underground Production Equipment			
	Maintenance Engineering			
	System Modeling and Simulation			
	Electrical Machines Power and Controls Lab	-	3	2
	Metrology and Machine Tools Lab	-	3	2
	<b>Total</b>	<b>24</b>	<b>6</b>	<b>28</b>

## IV YEAR II SEMESTER

Code	Subject	L	T/P/D	C
	Power Plant Engineering	4	-	4
	<b>Elective-III</b>	4	-	4
	Automation and Robotics			
	Electrical Drives			
	Refrigeration and Air Conditioning			
	Neural Networks and Fuzzy Logic			
	<b>Elective-IV</b>	4	-	4
	Operations Research			
	Reliability Engineering			
	Renewable Energy Sources			
	Industrial Training	-	-	2
	Seminar	-	6	2
	Project work	-	15	10
	Comprehensive Viva	-	-	2
	<b>Total</b>	<b>12</b>	<b>21</b>	<b>28</b>

**Note:** All End Examinations (Theory and Practical) are of three hours duration.

**T-Tutorial      L – Theory      P – Practical/Drawing      C – Credits**