



**JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD**  
(Established by Andhra Pradesh Act No.30 of 2008)  
Kukatpally, Hyderabad – 500 085, Andhra Pradesh (India)

**B.TECH. MECHANICAL ENGINEERING**

**I YEAR**

Code	Subject	L	T/P/D	Credits
	English	2	-	4
	Mathematics – I	3	-	6
	Engineering Mechanics	3	-	6
	Engineering Physics	3	-	6
	Engineering Chemistry	3	-	6
	Computer Programming	3	-	6
	Engineering Drawing	3	3	6
	Computer Programming Lab.	-	3	4
	Engineering Physics & Engineering Chemistry Lab	-	3	4
	English Language Communication Skills Lab.	-	3	4
	Engineering Workshop	-	3	4
	<b>Total</b>	<b>20</b>	<b>15</b>	<b>56</b>

**II YEAR I SEMESTER**

Code	Subject	L	P/D	C
	Environmental Studies	4	-	4
	Probability and Statistics	4	-	4
	Electrical and Electronics Engineering	4	-	4
	Mechanics of Solids	4	-	4
	Thermodynamics	4	-	4
	Metallurgy and Materials Science	4	-	4
	Electrical and Electronics Engineering Lab	-	3	2
	Metallurgy & 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
	Production Technology	4	-	4
	Kinematics of Machinery	4	-	4
	Thermal Engineering -I	4	-	4
	Mechanics of Fluids and Hydraulic Machines	4	-	4
	Machine Drawing	-	6	4
	Mathematics –II	4	-	4
	Production Technology Lab	-	3	2
	Mechanics of Fluids & Hydraulic Machines 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
	Engineering Metrology	4	-	4
	Dynamics of Machinery	4	-	4
	Machine Tools	4	-	4
	Design of Machine Members – I	4	-	4
	Thermal Engineering -II	4	-	4
	Machine Tools & Metrology Lab	-	3	2
	Thermal Engineering 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
	Automobile Engineering	4	-	4
	Finite Element Methods	4	-	4
	Refrigeration and Air Conditioning	4	-	4
	Design of Machine Members – II	4	-	4
	Heat Transfer	4	-	4
	<b>Open Elective</b> Disaster Management Intellectual Property Rights Human Values and Professional Ethics	4	-	4
	Heat Transfer 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
	Operations Research	4	-	4
	Power Plant Engineering	4	-	4
	CAD/CAM	4	-	4
	Instrumentation and Control Systems	4	-	4
	<b>ELECTIVE – I</b> Robotics Mechanical Vibrations Mechatronics Composite Materials Industrial Management	4	-	4
	<b>ELECTIVE – II</b> Unconventional Machining Processes CNC Technology Automation in Manufacturing Design for Manufacturing Nanotechnology	4	-	4
	Computer Aided Design & Manufacturing Lab	-	3	2
	Production Drawing Practice and Instrumentation 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
	Production Planning and Control	4	-	4
	<b>ELECTIVE – III</b> Artificial Neural Networks Total Quality Management Maintenance and Safety Engineering Plant Layout & Material Handling	4	-	4
	<b>ELECTIVE – IV</b> Renewable Energy Sources Jet Propulsion & Rocket Engineering Computational Fluid Dynamics Gas Dynamics	4	-	4
	Industry Oriented Mini Project	-	-	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**