



Grams: "TECHNOLOGY"
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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. MECHANICAL ENGINEERING (MECHATRONICS)

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
	Total	19	16	56

II YEAR I SEMESTER

Code	Subject	L	T/P/D	C
	Probability and Statistics	4	-	4
	Electrical Engineering	4	-	4
	Mechanics of Solids	4	-	4
	Electronic Devices & Circuits	4	-	4
	Thermal Science	4	-	4
	Metallurgy and Material Science	4	-	4
	Mechanics of Solids & Metallurgy Lab	0	3	2
	Electronic Devices and Circuits Lab	0	3	2
	Total	24	6	28

II YEAR II SEMESTER

Code	Subject	L	T/P/D	C
	Production Technology	4	-	4
	Kinematics of Machinery	4	-	4
	Environmental Studies	4	-	4
	Numerical Methods	4	-	4
	Machine Drawing	0	6	4
	Fluid Mechanics and Heat Transfer	4	-	4
	Electrical Engineering Lab	0	3	2
	Fluid Mechanics and Thermal Engineering Lab	0	3	2
	Total	20	12	28

III YEAR I SEMESTER

Code	Subject	L	T/P/D	C
	Managerial Economics and Financial Analysis	4	-	4
	Dynamics of Machinery	4	-	4
	Finite Element Techniques	4	-	4
	Switching Theory and Logic Design	4	-	4
	Machine Tools	4	-	4
	Principles of Machine Design	4	-	4
	Machine Tools Lab	0	3	2
	Heat Transfer and Production Technology Lab	0	3	2
	Total	24	6	28

III YEAR II SEMESTER

Code	Subject	L	T/P/D	C
	Industrial Management	4	-	4
	CAD/CAM	4	-	4
	Mechanical Measurements and Control Systems	4	-	4
	Analog and Digital I.C. Applications	4	-	4
	Open Elective Disaster Management Human Values & Professional Ethics Intellectual Property Rights	4	-	4
	Automobile Engineering	4	-	4
	CAD / CAM and Instrumentation & control Systems Lab	0	3	2
	Advanced English Communication Skills Lab	0	3	2
	Total	24	6	28

IV YEAR I SEMESTER

Code	Subject	L	T/P/D	C
	Operations Research	4	-	4
	Microprocessors and Micro Controllers	4	-	4
	Robotics & its applications	4	-	4
	Motion Control Design	4	-	4
	Elective-I Product Design and Assembly Automation Renewable Energy Sources Computational Fluid Dynamics Advanced Data Structures	4	-	4
	Elective-II Power Plant Engineering Computer Organization Flexible Manufacturing System Advanced Kinematics and Dynamics of Machinery	4	-	4
	Microprocessors and Micro Controllers Lab	0	3	2
	Motion Control Design and CNC & Robotics Lab	0	3	2
	Total	24	6	28

IV YEAR II SEMESTER

Code	Subject	L	T/P/D	C
	Automation in manufacturing	4	-	4
	Elective-III MEMS Design Production Planning and Control Concurrent Engineering Plant Engineering & Maintenance	4	-	4
	Elective-IV Artificial Neural Networks Mathematical Modeling and Simulation Principles of Entrepreneurship MATLAB Applications	4	-	4
	Industry Oriented Mini Project	0	-	2
	Seminar	0	6	2
	Project Work	0	15	10
	Comprehensive Viva	0	0	2
	Total	12	21	28

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

T-Tutorial

L – Theory

P – Practical/Drawing

C – Credits