

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. INSTRUMENTATION AND CONTROL ENGINEERING

I YEAR

Code	Subject	L	T/P/D	C
	English	2	-	4
	Mathematics-I	3	1	6
	Mathematical Methods	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
	IT Workshop / Engineering Workshop	-	3	4
	Total	19	16	56

II YEAR I SEMESTER

Code	Subject	L	T/P/D	C
	Mathematics-III	4	-	4
	Fundamentals of Electrical Engineering	4	-	4
	Electronic Devices and Circuits	4	-	4
	Signals and Systems	4	-	4
	Switching Theory and Logic Design	4	-	4
	Transduction of Physical Variables	4	-	4
	Electronic Devices and Circuits lab	-	3	2
	Electrical Engineering Lab	-	3	2
	Total	24	6	28

II YEAR II SEMESTER

Code	Subject	L	T/P/D	C
	Environmental Studies	4	-	4
	Principles of Communication	4	-	4
	Electronic Circuit Analysis	4	-	4
	Structured Digital System Design	4	-	4
	Control Systems	4	-	4
	Sensors & Signal Conditioning	4	-	4
	Sensors and Instrumentation Lab	-	3	2
	Control Systems Lab	-	3	2
	Total	24	6	28

III YEAR I SEMESTER

Code	Subject	L	T/P/D	C
	Managerial Economics and Financial Analysis	4	-	4
	Digital Signal Processing	4	-	4
	Pulse and Digital Circuits	4	-	4
	Linear IC Applications	4	-	4
	Instrumentation Practices in Industries	4	-	4
	Microprocessors & Computer Organization	4	-	4
	Microprocessors Lab	-	3	2
	Industrial Instrumentation Lab	-	3	2
	Total	24	6	28

III YEAR II SEMESTER

Code	Subject	L	T/P/D	C
	Management Science	4	-	4
	Open Elective Disaster Management Human Values and Professional Ethics Intellectual Property Rights	4	-	4
	Process Control Instrumentation	4	-	4
	VLSI Design	4	-	4
	Probability Theory and Stochastic Process	4	-	4
	Virtual Instrumentation	4	-	4
	Process Control Instrumentation Lab	-	3	2
	Advanced Communication Skills Lab	-	3	2
	Total	24	6	28

IV YEAR I SEMESTER

Code	Subject	L	T/P/D	C
	Embedded Systems	4	-	4
	Computer Aided Design of Control Systems	4	-	4
	Analytical Instrumentation	4	-	4
	Digital Control Systems	4	-	4
	Elective – I Object Oriented Programming Through JAVA Optoelectronic & Laser Instrumentation Telemetry and Tele Control	4	-	4
	Elective – II Instrumentation and Control in Manufacturing systems Computer Networks Bio medical Instrumentation	4	-	4
	Analytical Instrumentation Lab	-	3	2
	Embedded Control Systems Lab	-	3	2
	Total	24	6	28

IV YEAR II SEMESTER

Code	Subject	L	T/P/D	C
	Elective – III Adaptive Control Systems SCADA & Distributed Control Systems Hydraulics and Pneumatic Control Systems	4	-	4
	Elective – IV Optimal Control Systems PC based Instrumentation Neural Networks & Fuzzy Logic	4	-	4
	Reliability Engineering	4	-	4
	Industry Oriented Mini Project	-	-	2
	Seminar	-	6	2
	Major Project	-	15	10
	Comprehensive Viva	-	-	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**