

**JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD**

**B. TECH. ELECTRICAL AND ELECTRONICS ENGINEERING (2009-10)**

**I YEAR**

**COURSE STRUCTURE**

Code	Subject	L	T/P/D	C
	English	2	-	4
	Mathematics - I	3	1	6
	Mathematical Methods	3	1	6
	Engineering Physics	2	1	4
	Engineering Chemistry	2	-	4
	Computer Programming & Data Structures	3	-	6
	Engineering Drawing	2	3	4
	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
	<b>Total</b>	<b>17</b>	<b>18</b>	<b>50</b>

**II YEAR I SEMESTER**

**COURSE STRUCTURE**

Code	Subject	L	T/P/D	C
	Mathematics – III	3	1	3
	Fluid Mechanics and Hydraulic Machinery	3	1	3
	Electronic Devices & Circuits	4	-	4
	Electrical Circuits	4	1	4
	Electro magnetic fields	3	1	3
	Electrical Machines -I	4	1	4
	Fluid Mechanics and Hydraulic Machinery Lab	-	3	2
	Electronic Devices & Circuits Lab	-	3	2
	<b>Total</b>	<b>21</b>	<b>11</b>	<b>25</b>

**II YEAR II SEMESTER**

**COURSE STRUCTURE**

Code	Subject	L	T/P/D	C
	Managerial Economics & Financial Analysis	4	-	4
	Power Systems – I	3	1	3
	Electronic Circuits	3	1	3
	Switching Theory and Logic Design	4	1	4
	Network Theory	3	1	3
	Electrical Machines – II	4	1	4
	Electrical Machines Lab – I	-	3	2
	Electric Circuits and Simulation Lab.	-	3	2
	<b>Total</b>	<b>21</b>	<b>11</b>	<b>25</b>

**III YEAR I SEMESTER**

**COURSE STRUCTURE**

Code	Subject	L	T/P/D	C
	IC Applications	3	1	3
	Management Science	3	1	3
	Power Systems – II	4	-	4
	Control Systems	3	1	3
	Power Electronics	4	1	4
	Electrical Machines – III	4	1	4
	Electrical Machines Lab – II	-	3	2
	Control Systems and Simulation Lab.	-	3	2
	<b>Total</b>	<b>21</b>	<b>11</b>	<b>25</b>

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**III YEAR II SEMESTER**

**COURSE STRUCTURE**

<b>Code</b>	<b>Subject</b>	<b>L</b>	<b>T/P/D</b>	<b>C</b>
	Electrical Measurements	3	1	3
	Power Semiconductor Drives	4	1	4
	Computer Methods in Power Systems	4	-	4
	Microprocessors and Microcontrollers	4	1	4
	Open Elective	3	1	3
	Renewable Energy Sources			
	Intellectual Property Rights			
	Nanotechnology			
	Environmental Studies	3	1	3
	Advanced English Communication Skills Lab.	-	3	2
	Power Electronics and Simulation Lab.	-	3	2
	<b>Total</b>	<b>21</b>	<b>11</b>	<b>25</b>

**IV YEAR I SEMESTER**

**COURSE STRUCTURE**

<b>Code</b>	<b>Subject</b>	<b>L</b>	<b>T/P/D</b>	<b>C</b>
	Switchgear and Protection	3	1	3
	Utilization of Electrical Energy	3	1	3
	Instrumentation	3	1	3
	Power System operation and Control	4	-	4
	Elective – I	4	1	4
	High Voltage Engineering			
	VLSI Design			
	Digital Control Systems			
	Elective – II	4	1	4
	Optimization Techniques			
	Electrical Distribution Systems			
	Principles of Digital Signal Processing			
	Microprocessors and Microcontrollers Lab	-	3	2
	Electrical Measurements Lab	-	3	2
	<b>Total</b>	<b>21</b>	<b>11</b>	<b>25</b>

**IV YEAR II SEMESTER**

**COURSE STRUCTURE**

<b>Code</b>	<b>Subject</b>	<b>L</b>	<b>T/P/D</b>	<b>C</b>
	HVDC Transmission	3	-	3
	Elective – III	3	1	3
	Neural Networks and Fuzzy Logic			
	Linear Systems Analysis			
	Reliability Engineering and Application to Power Systems			
	Elective – IV	3	1	3
	Advanced Control Systems			
	EHV AC Transmission			
	Computer System Organization			
	Industry Oriented Mini Project	-	-	2
	Seminar	-	6	2
	Major Project	-	15	10
	Comprehensive Viva	-	-	2
	<b>Total</b>	<b>9</b>	<b>23</b>	<b>25</b>

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

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