Modified Course curriculum for BTech in Electrical Engineering

Semester III

Sl. No.	Category	Course Title	Hours per week			Credit
			L	T	P	
1	Professional Core Course	Signals and Systems	3	1	0	4
2	Basic Science course	Mathematics III	3	1	0	4
3	Professional Core Course	Analog Electronics	3	1	0	4
4	Engineering Science Courses	Energy Science and Technology	3	0	0	3
5	Professional Core Course	Measuring Instruments and Measurement	3	1	0	4
6	Professional Core Course	Electromagnetic Field Theory	3	1	0	4
7	Professional Core Laboratory	Software Lab	0	0	3	2
8	Professional Core Laboratory	Measurement Lab	0	0	3	2
9	Professional Core Laboratory	Analog Electronics Lab	0	0	3	2

TOTAL CREDIT (Semester III) 29

Semester IV

Sl. No.	Category	Course Title	Hours per week			Credit
			L	T	P	
1	Professional Core Course	Electrical Machines -I	3	1	0	4
2	Professional Core Course	Powers Systems I	3	1	0	4
3	Professional Core Course	Digital Electronics	3	1	0	4
4	Professional Core Course / Basic Science Course	Circuit Theory	3	1	0	4
5	Professional Core Course	Microprocessors & Microcontrollers	3	0	0	3
6	Professional Core Course	Programming & data structure	3	0	0	3
7	Professional Core Laboratory	Microprocessor & Microcontroller Lab	0	0	3	2
8	Professional Core Laboratory	Digital Electronics Lab	0	0	3	2
9	Professional Core Laboratory	Circuit Theory Lab	0	0	3	2

TOTAL CREDIT (Semester IV) 28

Second Year Total Credit - 57

Semester V

Sl. No.	Category	Course Title	Hours per week			Credit
			L	T	P	
1	Professional Core Course	Control Systems I	3	1	0	4
2	Professional Core Course	Powers Systems II	3	1	0	4
3	Professional Core Course	Electrical Machines II	3	1	0	4
4	Professional Core Course	Power Electronics	3	1	0	4
5	Professional Core Course	Digital Signal Processing	3	0	0	3
6	Professional Core Laboratory	Electrical Machine Lab-I	0	0	3	2
7	Professional Core Laboratory	Power System Lab-I	0	0	3	2
8	Professional Core Laboratory	Control System Lab	0	0	3	2
9	Professional Core Laboratory	Signal Processing Lab	0	0	3	2

TOTAL CREDIT (Semester V) 27

Semester VI

Sl. No.	Category	Course Title	Hours per week			Credit
			L	T	P	
1	Professional Core Course	Switchgear and Protection	3	1	0	4
2	Professional Core Course	Industrial Drives	3	1	0	4
3	Professional Core Course	Analog and Digital Communication	3	1	0	4
4	Professional Core Course	Instrumentation	3	0	0	3
5	Professional Core Elective	Professional Core Elective I	3	0	0	3
6	Open Elective	Open Elective I	3	0	0	3
7	Professional Core Laboratory	Electrical Machine Lab II	0	0	3	2
8	Professional Core Laboratory	Power System Lab II	0	0	3	2
9	Professional Core Laboratory	Power Electronics and drives Lab	0	0	3	2

TOTAL CREDIT (Semester VI) 27

Third Year Total Credit - 54

Semester VII

Sl. No.	Category	Course Title	Hours per week			Credit
			L	T	P	
1	Economics / Management	Engineering Economics / Management Studies	3	0	0	3
2	Professional Core Course	Control and Industrial Automation	3	1	0	4
4	Professional Core Elective	Professional Core Elective II	3	0	0	3
5	Open Elective	Open Elective II	3	0	0	3
6	Project	Project I	0	0	6	6

TOTAL CREDIT (Semester VII) 19

Semester VIII

Sl. No.	Category	Course Title	Hours per week			Credit
			L	T	P	
1	Professional Core Elective	Professional Core Elective III	3	1	0	3
2	Professional Core Elective	Professional Core Elective IV	3	0	0	3
3	Open Elective	Open Elective III	3	0	0	3
4	Project	Project II	0	0	6	6

TOTAL CREDIT (Semester VI) 15

Fourth Year Total Credit - 34

Summary

Semester I: 28 & Semester II: 27, First Year total : 55

Credit from Sem-III to Sem-VIII is (29+28+27+27+19+15)=145

Total 55+145=200

Professional Core Elective I

1. Computer Application in Power System
2. Advanced Electrical Machines
3. Flexible AC Transmission
4. Demand Side Management
5. Biomedical Instrumentation
6. LT & HT Distribution Systems
7. Energy Auditing, Conservation and Management
8. System Identification and Parameter Estimation
9. Digital Control Systems
10. Electrical Engineering Materials

Professional Core Elective II

1. Intelligent and Knowledge Based Systems
2. High Voltage AC/DC
3. Modeling and Simulation
4. Electric Power Utilization and Traction
5. Biomedical Engineering
6. Power Qualities
7. Data Acquisition and Signal Conditioning
8. Higher Control Systems
9. AC Drives
10. Power System Operation and Control

Professional Core Elective III

1. Computer Organization
2. EHV Transmission
3. Advanced Power Electronics and Devices
4. Integrated Circuits and VLSI Design
5. Computer Control of Industrial Processes
6. Switched-mode Power Supplies
7. Advanced Digital Signal Processing
8. Power System Stability and Control
9. Power System Reliability and Deregulation
10. Optimal and Adaptive Control

Professional Core Elective IV

1. Distribution Systems Planning and Automation
2. Renewable Energy Source and Management
3. Intelligent Algorithms for Power Systems
4. Hydro-electric Engineering
5. Non-conventional Energy Systems and Applications
6. Control & Guidance Engineering
7. Non-linear System Analysis
8. Smart Grid Technologies
9. Computer Relaying and Phasor Measurement Unit
10. Advanced Instrumentation

Open Elective I

1. Foundation in Optimization Methods
2. Principles of Electrical Power Conversion
3. Fuzzy Logic Systems
4. Illumination Technology

Open Elective II

1. Industrial Instrumentation
2. Industrial Management
3. Planning an Entrepreneurial Venture
4. Linear System Theory

Open Elective III

1. Electric Vehicles
2. Soft Computing Techniques
3. Artificial Neural Networks
4. Electrical Safety