2 Year M. Tech Programme in Power Electronics and Drives

Course Structure (2015-17 onwards)

Semester-I					Course Type
S.No.	Subject Code	Courses	L-T-P	Credits	
	THEORY				
1.	MA406/MA507/ MA402	Operation Research /Optimization Techniques/ Modeling and Simulation	3-1-0	4	EGE-D1
2.	EE501	Power Electronics Devices and Magnetics	3-0-0	3	C-D1
3.	EE503	Modeling of Electrical Apparatus	3-0-0	3	C-D2
4.	EE505	DC Power Converters	3-0-0	3	C-D3
5.		Elective-1	3-0-0	3	EDSE-D1
6.		Open Elective	3-0-0	3	OE-D1
	PRACTICALS				
7	EE513	Advance Power Electronics Lab	0-0-3	2	C-D4
8	EE597	Seminar	0-0-3	2	SEC1
	GP	General Proficiency		NC	
		Total		23	
		Total Contact Hours	25		

Open Elective: Courses offered from other school

Semester-II					Course Type
S.No.	Subject Code	Courses	L-T-P	Credits	
	THEORY				
1.	MA406/MA507/ MA402	Operation Research /Optimization Techniques/ Modeling and Simulation	3-1-0	4	EGE-D2
2.	EE502	Industrial Instrumentation and Automation	3-0-0	3	C-D5
3.	EE504	Electric Drive Systems	3-0-0	3	C-D6
4.	EE506	Digital Controllers Architecture and Interfacing	3-0-0	3	C-D7
5.		Specialized Elective-I	3-0-0	3	EDSE-D2
	PRACTICALS				
	EE598	Project	0-0-10	5	EDP-D1
	EE516	Advance Electric Drives Lab	0-0-3	2	C-D8
	GP	General Proficiency		NC	
		Total		23	
		Total Contact Hours	29		

Semester-III					Course Type
S.No.	Subject Code	Courses	L-T-P	Credits	
	THEORY				
1.	EE601	Special Electromechanical Devices	3-0-0	3	C-D9
2.	EE603	HVDC and Flexible AC Transmission Systems Devices	3-0-0	3	C-D10
3.		Specialized Elective-II	3-0-0	3	EDSE-D3
4.		Specialized Elective-III	3-0-0	3	EDSE-D4
	PRACTICALS				
	EE699	Dissertation -I	6*-0-3	8	EDP-D2
	EE623	Power Converter and Simulation Lab	0-0-3	2	C-D11
	GP	General Proficiency		NC	
		Total		22	

		Total Contact Hours	24	

Semester-IV					Course Type
S.No.	Subject Code	Courses	L-T-P	Credits	
	THEORY				
1.	EE698	Dissertation -II	----	22	EDP-D3
2.	GP	General Proficiency		NC	
		Total		22	
		Total Contact Hours			

Total Program Credits: 90

Elective-I
EE507: Advance AI and Soft Computing Techniques
EE509: Drive Systems and Optimization Techniques
EE511: Nonlinear Control Systems
EE589: Wavelet methods in Engineering
EE543: Embedded System
EE665: Research Techniques and Methodology
M.Tech. (PS) Sem-I Electives

Specialized Elective-I

EE508: AC Power Converter
EE510: HVAC Transmission and Technology
EE512: Custom Power Devices and Technology
EE514: Control and Estimation of Electric Drive
M.Tech. (PS) Sem-II Electives

Specialized Elective-II
EE605: Power Quality

EE607: Energy Storage Systems and Charging Control
EE609: Applications of Converters for Renewable Energy Systems
EE611: Smart Grid
M.Tech. (PS) Sem-III Electives

Specialized Elective-III
EE613: Supervisory Control and Distribution Automation
EE615: Distribution Generation System & Design
EE617: Digital Signal Processing and its Applications
EE619: Robotics and Vehicular Power Electronics
EE621: Computer Aided Design of Electrical Apparatus
M.Tech. (PS) Sem-III Electives

Nomenclature:

1. AEC: Ability Enhancement Courses
   - AEC-C: Ability Enhancement Courses-compulsory
   - SEC: Skill Enhancement Course
2. CC: Core Course
3. Elective Courses
   - E-DSE: Discipline specific elective
   - E-GE: Generic Elective
   - E-DP: Dissertation and Project