

Course structure for 2-Year 4-Semester M.Tech. Degree in Electrical Engineering with Specializations in

I. Smart Grid Systems

II. Advanced Control and Measurement Systems

(w. e. f. the academic year 2017 - 2018)

Paper	Subjects		Periods			Evaluation Scheme				Credits
	Specialization I	Specialization II	L	T	P	TA	CT	ESE	TOTAL	
Semester I										
EE901	Computational Intelligence		4	-	-	20	10	70	100	4
EE902	Dynamics of Linear Systems		4	-	-	20	10	70	100	4
EE(I)903 / EE(II)903	Smart Grid Architecture	Nonlinear and Optimal Control	4	-	-	20	10	70	100	4
EE(I)904 / EE(II)904	Elective – I	Elective – I	4	-	-	20	10	70	100	4
EE(I)905 / EE(II)905	Advanced Power System Lab	Advanced Control Lab	-	1	7	50	-	50	100	4
Semester-I Total			16	01	07	130	40	330	500	20
Semester II										
EE1001	Sensing Technology and Networking		4	-	-	20	10	70	100	4
EE1002	Embedded Systems		4	-	-	20	10	70	100	4
EE(I)1003 / EE(II)1003	Smart Grid Security and Reliability	Adaptive and Intelligent Control System	4	-	-	20	10	70	100	4
EE(I)1004 / EE(II)1004	Elective – II	Elective – II	4	-	-	20	10	70	100	4
EE1005	System Design Lab		-	1	7	50	-	50	100	4
EE1006	Term Paper leading towards Thesis		-	2	6	50	-	50	100	4
Semester-II Total			16	03	13	180	40	380	600	24
Semester III										
EE1101	Thesis Phase – I		-	4	12	100	-	200	300	12
EE1102	Seminar		-	2	6	50	-	50	100	4
Semester-III Total			-	06	18	150	-	250	400	16
Semester IV										

EE1201	Thesis Phase – II	-	8	24	100	-	300	400	16
EE1202	General Viva-voce	-	-	-	50	-	50	100	4
Semester-IV Total		-	08	24	150	-	350	500	20
Grand Total		32	18	62	610	80	1310	2000	80

Elective Papers:

Semester – I : Elective - I: (EE904):

1. Advanced Engineering Mathematics
2. EHVAC, HVDC & FACTS
3. Advanced Measurement Techniques
4. Advanced Electrical Machines
5. Advanced Electric Drives
6. Sustainable Power Generation and Supply
7. Power System Harmonics, Quality and Reliability
8. Precision Instruments and Standardization Practices
9. Microwave principles and Measurements
10. Orthogonal Function Domain based Control Approaches

Semester – II: Elective - II: (EE1004):

1. Power Electronics in Grid Integration
2. Incremental Motion Devices and Robotics
3. Advanced Digital Signal Processing
4. Power System Stability and Protection
5. Power Plant instrumentation
6. High Voltage Engineering
7. Power System Analysis
8. Power System Communication and SCADA
9. Advanced Control Techniques
10. Active Circuits and Systems