

**ANNA UNIVERSITY, CHENNAI**  
**AFFILIATED INSTITUTIONS**  
**REGULATIONS – 2017**  
**CHOICE BASED CREDIT SYSTEM**  
**M.E. POWER SYSTEMS ENGINEERING (FULL TIME)**  
**CURRICULUM AND SYLLABUS I TO IV SEMESTERS**

**SEMESTER I**

S.No	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
<b>THEORY</b>								
1.	MA5155	Applied Mathematics for Electrical Engineers	FC	4	4	0	0	4
2.	PS5101	Advanced Power System Analysis	PC	4	4	0	0	4
3.	PS5102	Power System Operation and Control	PC	3	3	0	0	3
4.	PS5103	Analysis and Computation of Electromagnetic Transients in Power Systems	PC	3	3	0	0	3
5.	IN5152	System Theory	PC	5	3	2	0	4
6.		Professional Elective I	PE	3	3	0	0	3
<b>PRACTICALS</b>								
7.	PS5111	Power System Simulation Lab	PC	4	0	0	4	2
<b>TOTAL</b>				<b>26</b>	<b>20</b>	<b>2</b>	<b>4</b>	<b>23</b>

**SEMESTER II**

S.No	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
<b>THEORY</b>								
1.	PS5201	Power System Dynamics	PC	3	3	0	0	3
2.	PS5202	HVDC and FACTS	PC	3	3	0	0	3
3.	PS5203	Advanced Power System Protection	PC	3	3	0	0	3
4.	PS5204	Restructured Power System	PC	3	3	0	0	3
5.		Professional Elective II	PE	3	3	0	0	3
6.		Professional Elective III	PE	3	3	0	0	3
<b>PRACTICALS</b>								
7.	PS5211	Advanced Power System Simulation Laboratory	PC	4	0	0	4	2
8.	PS5212	Technical Seminar	EEC	2	0	0	2	1
<b>TOTAL</b>				<b>24</b>	<b>18</b>	<b>0</b>	<b>6</b>	<b>21</b>

**SEMESTER III**

S.No	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
<b>THEORY</b>								
1.		Professional Elective IV	PE	3	3	0	0	3
2.		Professional Elective V	PE	3	3	0	0	3
3.		Professional Elective VI	PE	3	3	0	0	3
<b>PRACTICALS</b>								
4.	PS5311	Project Work Phase I	EEC	12	0	0	12	6
<b>TOTAL</b>				<b>21</b>	<b>9</b>	<b>0</b>	<b>12</b>	<b>15</b>

**SEMESTER IV**

SI.No	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
<b>PRACTICALS</b>								
1.	PS5411	Project Work Phase II	EEC	24	0	0	24	12
<b>TOTAL</b>				<b>24</b>	<b>0</b>	<b>0</b>	<b>24</b>	<b>12</b>

**TOTAL NO. OF CREDITS : 71****FOUNDATION COURSES (FC)**

S.No	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
1.	MA5155	Applied Mathematics for Electrical Engineers	FC	4	4	0	0	4

**PROFESSIONAL CORE (PC)**

S.No	Course Code	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
1.	PS5101	Advanced Power System Analysis	PC	4	4	0	0	4
2.	PS5102	Power System Operation and Control	PC	3	3	0	0	3
3.	PS5103	Analysis and Computation of Electromagnetic Transients in Power Systems	PC	3	3	0	0	3
4.	IN5152	System Theory	PC	5	3	2	0	4
5.	PS5111	Power System Simulation Laboratory	PC	4	0	0	4	2

6.	PS5201	Power System Dynamics	PC	3	3	0	0	3
7.	PS5202	HVDC and FACTS	PC	3	3	0	0	3
8.	PS5203	Advanced Power System Protection	PC	3	3	0	0	3
9.	PS5204	Restructured Power System	PC	3	3	0	0	3
10.	PS5211	Advanced Power System Simulation Laboratory	PC	4	0	0	4	2

### PROFESSIONAL ELECTIVES (PE)\*

#### Semester I Elective I

S.No	Course Code	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
1.	PX5151	Analysis of Electrical Machines	PE		3	0	0	3
2.	PX5152	Analysis and Design of Power Converters	PE		3	0	0	3
3.	PS5001	Industrial Power System Analysis and Design	PE		3	0	0	3

#### Semester II Elective II and III

1.	PS5091	Smart Grid	PE		3	0	0	3
2.	PS5092	Solar and Energy Storage Systems	PE		3	0	0	3
3.	PS5002	Power System Reliability	PE		3	0	0	3
4.	ET5071	Advanced Digital Signal Processing	PE		3	0	0	3
5.	PS5071	Distributed Generation and Microgrid	PE		3	0	0	3
6.	IN5091	Soft Computing Techniques	PE		3	0	0	3

#### Semester III Elective IV, V and VI

1.	PS5003	Electrical Distribution System	PE		3	0	0	3
2.	PS5072	Energy Management and Auditing	PE		3	0	0	3
3.	PX5071	Wind Energy Conversion Systems	PE		3	0	0	3
4.	PS5073	Electric Vehicles and Power Management	PE		3	0	0	3
5.	PX5092	Electromagnetic	PE		3	0	0	3

		Interference and Compatibility						
6.	PX5091	Control System Design for Power Electronics	PE		3	0	0	3
7.	PS5004	Principles of Electric Power Transmission	PE		3	0	0	3
8.	PS5005	Advanced Power System Dynamics	PE		3	0	0	3
9.	PS5006	Design of Substations	PE		3	0	0	3

**\*Professional Electives are grouped according to elective number as was done previously.**

### EMPLOYABILITY ENHANCEMENT COURSES (EEC)

S.No	Course Code	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
1.	PS5212	Technical Seminar	EEC	2	0	0	2	1
2.	PS5311	Project Work Phase I	EEC	12	0	0	12	6
3.	PS5411	Project Work Phase II	EEC	24	0	0	24	12