

Courses/Credit Distribution of Electrical Engineering Department

I. Basic Science Courses (BSC)

Semester I					
Course code	Course name	L	T	P	Credits
CHN101	Applied Chemistry	3	0	3	4
Semester II					
Course code	Course name	L	T	P	Credits
MAN103	Probability & Statistics	3	1	0	4
PYN106	Electromagnetic Field Theory	3	1/2	2/2	4

II. Engineering Science Courses (ESC)

Semester II					
Course code	Course name	L	T	P	Credits
ESC205	Introduction to Electronics	3	1	0	4
Semester III					
Course code	Course name	L	T	P	Credits
ESC202	Information Technology in Engineering	3	0	2	4
Semester IV					
ESC211	Machine Learning	2	0	4	4

III. Departmental Core Courses (DCC)

Course code	Course name	L	T	P	Credits
EEN101	Introduction to Electrical Engineering	2	0	0	2
EEN102	Networks And Systems	3	0	2	4
EEN103	Electrical Measurements and Instrumentation	3	0	2	4
EEN202	Electrical Power Systems	3	0	2	4
EEN203	Electrical Machines – I	3	0	2	4
EEN204	Analog and Digital Electronics	3	0	2	4
EEN205	Technical Communication	0	0	3	2
EEN206	Engineering Analysis and Design	2	1	2	4
EEN207	Power Electronics	3	0	2	4
EEN208	Microprocessors and Peripheral Devices	3	0	2	4
EEN209	Electrical Machines – II	3	0	2	4
EEN210	Control Systems	3	0	2	4
EEN302	Switchgear and Protection	3	0	2	4
EEN304	CAD of Power Apparatus and Systems	3	0	2	4
EEN315	High Voltage Engineering	3	0	2	4
EEN311	Computer Aided Power System Analysis	2	0	2	3*
EEN371	Emerging Trends in Power Industry(For 5th semester)	1	0	1	1*

*the combined credits for these two subjects are 4

IV. Departmental Elective courses (DEC)

Group-I (Any One)

Course code	Course name	L	T	P	Credits
EEN201	Mechatronics (For 3 rd semester)	3	0	2	4
EEN313	Electric Drives (For 5 th semester)	3	0	2	4
Subjects for 7 th semester:					
EEN401	Restructured and Deregulated Power Systems	3	1	0	4
EEN402	Smart Grid Technologies	3	1	0	4
EEN403	Solar Energy Engineering	3	1/2	2/2	4
EEN404	Biomedical Engineering	4	0	0	4
EEN405	Energy Management & Audit	3	0	2	4

Group-2 (Any Two)

Course code	Course name	L	T	P	Credits
Subjects for 8th semester:					
EEN411	Neural Networks and Fuzzy Systems	3	1	0	4
EEN412	Advanced Control Systems	3	1	0	4
EEN413	Power System Operation and Control	3	1	0	4
EEN414	Utilization of Electrical Energy and Illumination Engineering	3	1/2	2/2	4
EEN415	Electrical System Instrumentation and Process Control	3	1	0	4
EEN416	Renewable Energy Systems	3	0	2	4
EEN417	Digital Signal Processing	3	1	0	4
EEN418	Biomedical Instrumentation	3	1	0	4
EEN419	PLC & SCADA	3	0	2	4
EEN420	Power Quality	3	0	2	4

V. Open Elective

Course code	Course name	L	T	P	Credits
EEN261	Mechatronics	3	0	2	4
EEN361	Electric Drives	3	0	2	4
EEN461	Advanced Control Systems	3	1	0	4
EEN462	Utilization of Electrical Energy and Illumination Engineering	3	1	0	4
EEN463	Neural Networks & Fuzzy Systems	3	1	0	4
EEN464	Renewable Energy Systems	3	1	0	4

VI. Major Specialization Courses (MJC)

Course code	Course name	L	T	P	Credits
EEN421	EHV AC & HVDC Transmission Systems	3	1	0	4
EEN422	Advanced Power Electronics	3	1	0	4
EEN423	Fast Transients in Power Systems	3	1	0	4
EEN424	Advanced Design Techniques in Control Systems	3	1	0	4
EEN425	Static Reactive Power Control & FACTS	3	1	0	4

VII. Minor Specialization Courses (MSC)

Course code	Course name	L	T	P	Credits
EEN431	Electrical Machines	3	1	0	4
EEN432	Power Generation, Transmission and Utilization	3	1	0	4
EEN433	Renewable Energy Systems	3	1	0	4
EEN434	Power Electronics	3	0	2	4
EEN435	Electrical Measurements and Instrumentation	3	0	2	4

**Teaching Scheme for B.E. Electrical Engineering
First Year**

Semester-I

S.No	Course Code	Subject	Credits	Category
1	MAN101	Mathematics - I	4	BSC
2	EEN101	Introduction to Electrical Engineering	2	DCC
3	CSN104/105	Computer Programming (Basic/Advanced)	4	ESC
4	CHN 101	Applied Chemistry	4	BSC
5	HSS102/103	Communication Skills (Basic/Advance)	2	HSSC
		Total	16	

SEMESTER-II

S.No	Course Code	Subject	Credits	Category
1	MAN103	Probability & Statistics	4	BSC
2	HSS 101	Ethics and Self Awareness	2	HSSC
3	GSN 101	Introduction to Environmental Science	4	GSC
4	ESC 205	Introduction to Electronics	4	ESC
5	EEN102	Networks and Systems	4	DCC
6	EEN103	Electrical Measurements and Instrumentation	4	DCC
7	PYN106	Electromagnetic Theory	4	BSC
8	PRO	Proficiency –I course	2	
		Total	28	

Second Year

Semester I

S.No	Course Code	Subject	Credits	Category
1	ESC202	Information Technology in Engineering	4	ESC
2		Departmental Elective Course –I / Open Elective Course	4	DEC/ OEC
3	EEN202	Electrical Power Systems	4	DCC
4	EEN203	Electrical Machines-I	4	DCC
5	EEN204	Analog and Digital Electronics	4	DCC
6	HSS201	Economics	3	HSSMEC
		Total	27	

Semester II

S.No	Course Code	Subject	Credits	Category
1	EEN206	Engineering Analysis and Design	4	DCC
2	ESC211	Machine Learning	4	ESC
3	EEN207	Power Electronics	4	DCC
4	EEN208	Microprocessors and Peripheral Devices	4	DCC
5	EEN209	Electrical Machines –II	4	DCC
6	EEN210	Control Systems	4	DCC
7	EEN205	Technical Communication	2	DCC
8	EEN221	Educational Tour	Non Credit	DCC
		Total	26	

Third Year

Semester I

S.No	Course Code	Subject	Credits	Category
1	EEN311	Computer Aided Power System Analysis	3	DCC
2	EEN371	Emerging Trends in Power Industry	1	DCC
3	EEN302	Switchgear and Protection	4	DCC
4	EEN304	CAD of Electrical Machines	4	DCC
5	EEN315	High Voltage Engineering	4	DCC
6	EEN321	Minor Project	4	DCC
7.		Departmental Elective Course –I / Open Elective Course	4	DEC/OEC
		Total	24	

Semester II

S.No	Course Code	Subject	Credits	Category
1	EEN331	Summer Internship*	20	DCC
		Total	20	

*Internship Seminar presentations may be held a week before the date of Registration in Semester – I, Fourth Year.

Fourth Year

Semester I

S.No	Course Code	Subject	Credits	Category
1		Open Elective	4	GSEC/MEC
2		Departmental Elective Course –I (Group-I)	4	DEC
3		Departmental Elective Course –II (Group-II)	4	DEC
4	EEN 441	Major Project	2*	DCC
5	EEN 432 EEN 421	Power Generation, Transmission and Distribution/ EHVAC & HVDC Transmission Systems	4	MSC/ MJC
6	EEN 431 EEN 422	Electrical Machines / Advanced Power Electronics	4	MSC/ MJC
		Total	14/22	

- Evaluation marks to be carried over to next semester.

Semester II

S.No	Course Code	Subject	Credits	Category
1		Entrepreneurship and project Management	3	HSSMEC
2		Departmental Elective Course –III (Group-II)	4	DEC
3	EEN 451	Major Project	6	DCC
4	EEN 434 EEN 423	Power Electronics/ Fast Transients in Power Systems	4	MSC/ MJC
5	EEN 435 EEN 424	Electrical Measurements and Instrumentation / Advanced Design Techniques in Control System	4	MSC/ MJC
6	EEN 416 EEN 425	Renewable Energy Systems/ Static Reactive Power Control and FACTS	4	MSC/ MJC
		Total	13/25	