

COURSE STRUCTURE & SYLLABUS (2015-16)

I Year – I Semester

S.No.	Subject Code	Subject	L	T	P/D	C	Max Marks	
							Int	Ext
1	5H101	English – I	2	-	---	2	25	75
2	5H111	Engineering Mathematics –I	3	1	---	3	25	75
3	5H121	Engineering Physics – I	3	1	---	3	25	75
4	5H131	Engineering Chemistry	2	1	---	2	25	75
5	5F101	Computer Programming	3	1	---	3	25	75
6	5B101	Engineering Drawing – I	1	1	4	3	25	75
7	5H171	English Language Communication Skills Lab	---	---	2	1	25	75
8	5H181	Engineering Physics Lab – I	---	---	2/2	1	25	75
9	5H186	Engineering Chemistry Lab	---	---	2/2	1	25	75
10	5F171	Computer Programming Lab	---	---	3	2	25	75
11	5B171	Engineering Workshop -I	---	---	2/2	1	25	75
12	5F172	IT work shop – I	---	--	2/2	1	25	75
13	5A191	Seminar on Current Affairs/Technical Topic	---	---	2	1	100	---
Total			14	5	15	24	400	900

I Year – II Semester

S.No.	Subject Code	Subject	L	T	P/D	C	Max Marks	
							Int	Ext
1	5H202	English – II	2	2	---	2	25	75
2	5H213	Engineering Mathematics – II	3	1	---	3	25	75
3	5H223	Applied Physics - I	3	1	---	3	25	75
4	5E201	Data Structures and C ++	3	1	---	3	25	75
5	5B202	Engineering Drawing – II	1	1	2	2	25	75
6	5H232	Environmental Chemistry & Ecology	2	1	---	2	25	75
7	5A201	Circuits & Networks – I	3	2	---	3	25	75
8	5H233	Ethics, Morals, Gender Sensitization and Yoga	1	1	--	1	25	75
9	5E271	Data Structures and C ++ Lab	---	---	3	2	25	75
10	5B272	Engineering Workshop – II	---	---	2/2	1	25	75
11	5H282	Engineering Physics Lab- II	---	---	2/2	1	25	75
12	5A292	Seminar on Science & Its Impact	---	---	2	1	100	---
Total			18	10	9	24	375	825

II Year – I Semester

S.No.	Subject Code	Subject	L	T	P/D	C	Max Marks	
							Int	Ext
1	5H315	Engineering Mathematics-III	3	1	---	3	25	75
2	5CC02	Switching Theory and Logic Design	3	1	---	3	25	75
3	5C301	Electronic Devices and Circuits	3	1	---	3	25	75
4	5A302	Electro Magnetic Fields	2	2	---	2	25	75
5	5A303	Electrical Machines – I	2	2	---	2	25	75
6	5A304	Circuits & Networks – II	2	2	---	2	25	75
7		Open Elective- I	3	2		3	25	75
8	5H373	Functional Communicative Written English (FCWE)	1	2	--	1	25	75
9	5C371	Electronic Devices and Circuits Lab	---	---	3	2	25	75
10	5A371	Electrical Circuits and Simulation Lab	---	---	3	2	25	75
11	5A393	Seminar on Technology and Its Impact	---	---	2	1	100	---
Total			19	13	8	24	350	750

Open Elective- I

5GC46	Applied Biology
5ZC11	Logistics & Supply Chain Management
5BC08	Fluid Mechanics & Hydraulic Machinery
5BC07	Metallurgy & Material Science
5BC51	Thermodynamics & Heat Transfer

II Year – II Semester

S.No.	Subject Code	Subject	L	T	P/D	C	Max Marks	
							Int	Ext
1	5HC17	Probability and Statistics	3	1	---	3	25	75
2	5A405	Electrical Machines – II	2	2	---	2	25	75
3	5A406	Power System – I	3	1	---	3	25	75
4	5AC07	Control Systems	3	1	---	3	25	75
5	5C446	Electronic Circuits	3	1	---	3	25	75
6		Professional Elective – I	3	2	---	3	25	75
7	5H474	Effective English Communication (EEC)	---	1	2	1	25	75
8	5A472	Comprehensive Viva-Voce- I	---	---	---	1	50	50

9	5A473	Electrical Machines Lab – I	---	---	3	2	25	75
10	5C483	Electronic Circuits Lab	---	---	3	2	25	75
11	5A494	Technical Seminar	---	---	2	1	100	---
Total			17	8	10	24	375	725

Professional Elective –I

5DC03	Computer Organization and Architecture
5A617	High Voltage Engineering
5EC41	Java Programming
5DC50	Digital System Design

III Year – I Semester

S.No.	Subject Code	Subject	L	T	P/D	C	Max Marks	
							Int	Ext
1	5ZC01	Managerial Economics and Financial Analysis	2	1	---	2	25	75
2	5CC16	Linear and Digital IC Applications	3	2	---	3	25	75
3	5A508	Electrical Machines – III	3	1	--	3	25	75
4	5A509	Power Electronics	3	1	--	3	25	75
5	5A510	Power Systems – II	3	1	--	3	25	75
6		Open Elective – II	2	1	--	2	25	75
7	5H501	Quantitative Aptitude	--	--	2	1	25	75
8	5A574	Group Project	--	--	2	1	25	75
9	5CC89	Linear and Digital IC Applications Lab	--	--	3	2	25	75
10	5A575	Control Systems & Simulation Lab	--	--	3	2	25	75
11	5A595	Technical Literature Review and Seminar-I	---	---	2	1	100	---
Total			12	7	12	23	350	750

Open Elective – II

5CC57	Fundamentals of Signals And Systems	Electronics Stream
5ZC20	Product and Services	TEP Stream
5EC26	SAP-I: SAP ABAP workbench fundamentals	SAP Stream
5HC46	Basic German Language	Foreign Language Stream
5FC32	Data Base Systems	Computer Stream
5ZC05	Banking Operations, Insurance and Risk Management	Management Stream
5GC47	Fundamentals of Bio - Informatics	Bio Tech Stream
5BC61	Fundamentals of Smart Materials	Mechanical Stream

III Year – II Semester

S.No.	Subject Code	Subject	L	T	P/D	C	Max Marks	
							Int	Ext
1	5GC49	Intellectual Property Rights	1	1	--	1	25	75
2	5DC05	Microprocessor and Microcontrollers	3	1	--	3	25	75
3	5A611	Switch Gear and Protection	3	1	---	3	25	75
4	5A612	Measurements & Instrumentation	3	1	--	3	25	75
5	5A613	Power Semi Conductor Drives	3	1	---	3	25	75
6	5A616	Utilization of Electrical Energy	3	1	---	3	25	75
7		Open Elective – III	2	1	--	2	25	75
8	5H601	Logical Reasoning	---	--	2	1	25	75
9	5A676	Comprehensive Viva-Voce- II	--	--	--	1	50	50
10	5A677	Electrical Machines Lab – II	--	--	3	2	25	75
11	5A678	Power Electronics & Simulation Lab	--	--	3	2	25	75
12	5A696	Technical Literature Review and Seminar -II	---	---	2	1	100	---
Total			17	6	10	24	400	800

Open Elective – III

5EC04	Fundamentals of Operating Systems	Computer Stream
5HC41	Basic French Language	Foreign Language Stream
5ZC19	Entrepreneurship, Project Management And Structured Finance	Management Stream
5EC27	SAP-II : SAP ABAP workbench concepts	SAP Stream
5ZC05	General Management and Entrepreneurship	TEP Stream
5GC48	Bio – Medical Instrumentation	Bio Tech Stream
5BC63	Principles of Operations Research	Mechanical Stream

Note: Industry Oriented Mini Project will be conducted by all students in summer vacation of III / IV B. Tech, II – Semester for a period of One Month. The report must be submitted in IV / IV B. Tech I –Semester and will have to be defended. Marks allotted are “100” and Two Credits are provided.

IV Year – I Semester

S.No.	Subject Code	Subject	L	T	P/D	C	Max Marks	
							INT	EXT
1	5ZC02	Management Science	3	1	---	3	25	75
2	5A714	Power System Analysis and Control	4	1	--	4	25	75
3	5A715	Renewable Sources of Energy	3	1	--	3	25	75
4		Professional Elective – II	3	1	--	3	25	75

5		Professional Elective – III	3	1	--	3	25	75
6	5A779	Project Phase –I	--	1	3	3	100	---
7	5A780	Industry Oriented Mini Project	--	--	--	2	25	75
8	5A781	Electrical workshop	--	--	3	2	25	75
9	5DC71	Microprocessor and Microcontrollers Lab	--	--	3	2	25	75
10	5A782	Measurements & Instrumentation Lab	--	--	3	2	25	75
11	5A797	Technical Literature Review and Seminar-III	---	---	2	1	100	---
			15	6	14	28	425	675

Professional Elective –II

5CC10	Digital Signal Processing
5A725	Advanced Control Systems
5A733	Switch Mode Power Conversion
5A727	Reactive Power Compensation & Management

Professional Elective - III

5A734	HVDC & FACTS
5A718	Optimization Techniques
5A724	Digital Control Systems
5CC56	VLSI and Embedded Systems

IV Year – II Semester

S.No.	Subject Code	Subject	L	T	P/D	C	Max Marks	
							Int	Ext
1		Professional Elective – IV	3	1	--	3	25	75
2		Professional Elective – V	3	1	---	3	25	75
3	5A883	Project Phase –II	---	---	20	12	50	150
4	5A884	Comprehensive Viva-voce-III	---	---	---	1	50	50
5	5A898	Technical Literature Review and Seminar-IV	---	---	2	1	100	---
Total			6	2	22	20	250	350

Professional Elective – IV

5A820	Electrical Distribution Systems
5A822	Electrical Machine Design
5A829	Power System Deregulation
5EC21	Neural Networks

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Professional Elective – V

5A831	Smart Grid
5A835	Energy Storage Systems
5A825	Programmable Logic Controllers
5A828	Power Quality
5A830	Real Time Control of Power Systems

L - Lectures; T - Tutorial; P/D - Practical / Drawing; C – Credit
Note: All End Examinations (Theory and Practical) are of **Three** hours duration.