IV Year, Semester- I(7th Semester)

S.No	Course Code	Course Category	Course Title	Hours per week			Total Contact Hours	Credits
				Lecture	Tutorial	Practical		
1	18IT7T01	PCC	Big Data & Hadoop	3			3	3
2	18IT7T02	PCC	E-Commerce	3			3	3
3	18IT7T 03/04/05	PEC	**Program Elective-III** 18IT7T 03 Information Retrieval Systems 18IT7T 04 Software Testing Methodologies 18IT7T 05 Software Project Management	2	1		3	3
4	18IT7T 06/07/08	PEC	**Program Elective-IV** 18IT7 T06 Cryptography and Network Security 18IT7 T07 Mobile Computing 18IT7 T08 Multimedia and Application Development	2	1		3	3
5	**OEC Open Elective-III**			3			3	3
6	18IT7L20	PCC	Big Data & Hadoop Lab			4	2	2
7	18IT7T21	PROJ	Mini Project/Internship			4	2	2
							Total Number of Credits	**19**

IV Year, Semester- II(8th Semester)

S.No	Course Code	Course Category	Course Title		Hours per week			Total Contact Hours	Credits
					Lecture	Tutorial	Practical		
1	18IT8T 01/02/03	PEC	**Program Elective-V**		3	-	-	3	3
			18IT8 T01	Cloud Computing					
			18IT8 T02	Machine Learning & Deep Learning					
			18IT8 T03	Principles of TCP/IP					
2	18IT8T 04/05/06	PEC	**Program Elective-VI**		3	-	-	3	3
			18IT8 T04	Real Time Systems					
			18IT8 T05	Human Computer Interaction					
			18IT8 T06	Introduction to Main-Frame Systems					
3	**OEC Open Elective-IV**				3	-	-	3	3
4	**OEC Open Elective-V OR MOOC**				2	-	-	2	2
5	18IT8L 22	PROJ	Major Project		-	-	16	8	8
Total Number of Credits									**19**

B. Tech III SEMESTER

S.No	Course Code	Course Category	Course Title	Hours per week			Total Contact Hours	Credits
				Lecture	Tutorial	Practical		
1	18ME3T01	PCC	Complex variables & Numerical methods	2	1	0	3	3
2	18ME3T02	BSC	Mechanics of Solids	2	1	0	3	3
3	18ME3T03	PCC	Kinematics of Machines	2	1	0	3	3
4	18ME3T04	PCC	Thermodynamics	2	1	0	3	3
5	18ME3T05	ESC	Materials science and Engineering	3	0	0	3	3
6	18ME3T06	PCC	Fluid mechanics & hydraulic machines	3	0	0	3	3
7	18ME3L07	PCC	Fluid mechanics & Hydraulic machines lab	0	0	3	1.5	1.5
8	18ME3L08	PCC	Mechanics of Solids & Metallurgy LAB	0	0	3	1.5	1.5
9	18ME3L09	HSMC	Proficiency through Reading and Writing	0	0	2	2	1
				Total number of credits				22

B. Tech IV SEMESTER

S.No	Course Code	Course Category	Course Title	Hours per week			Total Contact Hours	Credits
				Lecture	Tutorial	Practical		
1	18ME4T01	BSC	Probability & Statistics	2	1	0	3	3
2	18ME4T02	ESC	Production Technology	3	0	0	3	3
3	18ME4T03	PCC	Design of Machine Elements	2	1	0	3	3
4	18ME4T04	ESC	IC Engines & Air Compressors	2	1	0	3	3
5	18ME4T05	PCC	Computer Aided Machine Drawing	1	0	4	3	3
6		OEC	**Open Elective-1**	3	0	0	3	3
7	18ME4L09	ESC	Production Technology Lab	0	0	3	3	1.5
8	18ME4L10	PCC	Thermal engineering Lab	0	0	3	3	1.5
9	18ME4T11	MC	Indian constitution	2	0	0	2	0
10	18ME4I12	P	Summer Internship	0	0	0	0	1
				Total number of credits				22

B. Tech V SEMESTER

S.No	Course Code	Course Category	Course Title	Hours per week			Total Contact Hours	Credits
				Lecture	Tutorial	Practical		
1	18ME5T01	PCC	Dynamics of Machines	2	1	0	3	3
2	18ME5T02	HSMC	Management Science & Productivity	3	0	0	3	3
3	18ME5T03	PCC	Turbo machines	3	0	0	3	3
4	18ME5T04	PCC	MC&MT	3	0	0	3	3
5		OEC	**Open Elective-2**	3	0	0	3	3
6	18ME5L13	PCC	Theory of machines Lab	0	0	3	1.5	1.5
7	18ME5L14	PCC	MT Lab	0	0	3	1.5	1.5
8	18ME5L15	HSMC	Communication Skills Lab	0	0	2	2	1
9	18ME5T16	MC	Essence of Indian Traditional Culture	2	0	0	0	0
				Total number of credits				19

B. Tech VI SEMESTER

S.No	Course Code	Course Category	Course Title	Hours per week			Total Contact Hours	Credits
				Lecture	Tutorial	Practical		
1	18ME6T01	PCC	Design of Transmission Elements	2	1	0	3	3
2	18ME6T02	PCC	Heat Transfer	2	1	0	3	3
3	18ME6T03	PCC	Metrology and measurements	3	0	3	3	3
4		PEC	**Professional Elective -1**	3	0	0	3	3
	18ME6T04		Experimental Stress Analysis					
	18ME6T05		Design for Manufacturing					
	18ME6T06		R & AC					
5		OEC	**Open Elective-3**	3	0	0	3	3
6	18ME6L21	PCC	Metrology & Instrumentation Lab	0	0	3	3	1.5
7	18ME6L22	PCC	Heat Transfer Lab	0	0	3	3	1.5
8	18ME6T23	MC	Disaster Management	2	0	0	2	0
9	18ME6I24	P	Summer Internship	-	-	-	-	1
				Total number of credits				19

B. Tech VII SEMESTER

S.No	Course Code	Course Category	Course Title	Hours per week			Total Contact Hours	Credits
				Lecture	Tutorial	Practical		
1	18ME7T01	PCC	CAD CAM	3	0	0	3	3
2	18ME7T02	HSMC	Operational Research	3	0	0	3	3
3		PEC	**Professional Elective -2**	3	0	0	3	3
	18ME7T03		Finite Element Methods					
	18ME7T04		Gas Dynamics & Jet Propulsion					
	18ME7T05		Production Planning & Control					
4		PEC	**Professional Elective -3**	3	0	0	3	3
	18ME7T06		Advanced Materials					
	18ME7T07		Power plant Engineering					
	18ME7T08		Optimization Techniques through MATLAB					
5		PEC	**Professional Elective -4**	3	0	0	3	3
	18ME7T09		Condition Monitoring and Signal Conditioning					
	18ME7T10		Computational Fluid Dynamics					
	18ME7T11		Advanced Machining Processes					
6	18ME7L12	PCC	CAD CAM Lab	-	-	4	2	2
7	18ME7P13	P	Mini project	-	-	4	2	2
			Total number of credits					19

B. Tech VIII SEMESTER

S.No	Course Code	Course Category	Course Title	Hours per week			Total Contact Hours	Credits
				Lecture	Tutorial	Practical		
1		PEC	**Professional Elective -5**	3	0	0	3	3
	18ME8T01		Mechanical Vibrations					
	18ME8T02		Automobile Engineering					
	18ME8T03		Non Destructive Evaluation					
2		OEC	**Open Elective-4**	3	0	0	3	3
3		OEC	**Open Elective-5**	3	0	0	3	3
4	18ME8S19	P	MOOCS	-	-	4	4	2
5	18ME8P20	P	Project	-	-	16	16	8
			Total number of credits					19

DEPARTMENT OF MECHANICAL ENGINEERING

PROPOSED COURSE STRUCTURE (Autonomous) for M. Tech (Machine Design)

I Year I Semester

S.No	Course Code	Course Title	Hours Per Week			Total Contact Hours	Credits
			L	T	P		
1	18311T01	Advanced Stress Analysis	3	---	---	3	3
2	18311T02	Advanced Vibrations and Acoustics	3	---	---	3	3
3	18311T03	1.Advanced Machine Design	3	---	---	3	3
	18311T04	2.Design for Manufacturing and Assembly					
	18311T05	3.Mathematical Methods in Engineering					
4	18311T06	1.Advanced Engineering Materials	3	---	---	3	3
	18311T07	2.Mechanics of Composite Materials					
	18311T08	3.Analysis and Synthesis of Mechanisms					
5	18311L11	Machine dynamics lab	---	---	4	4	2
6	18311L12	Numerical Simulation lab	---	---	4	4	2
7	18311T09	Research Methodology and IPR	2	---	---	2	2
8	18311T10	Audit Course – I	2	---	---	2	0
		TOTAL	16	—	8	24	18

I Year II Semester

S.No	Course Code	Course Title	Hours Per Week			Total Contact Hours	Credits
			L	T	P		
1	18312T01	Finite Element Method	3	---	---	3	3
2	18312T02	Computer Aided Design	3	---	---	3	3
3	18312T03	1. Tribology in Design	3	---	—	3	3
	18312T04	2. Robotics					
	18312T05	3. Fracture Mechanics					
4	18312T06	1. Multi-body Dynamics	3	---	—	3	3
	18312T07	2. Condition Based Monitoring					
	18312T08	3. Optimization Techniques in Design					
5	18312L11	Computer Aided Design lab	---	---	4	4	2
6	18312L12	Simulation lab	---	---	4	4	2
7	18312T09	Audit Course-2	2	---	---	2	0
8	18312P10	Mini-Project with Seminar	—	---	4	4	2
		TOTAL	14	—	12	26	18

(K. SRINIVAS) (Dr. G. RAJESH) (P. Bhagat Singh)

II Year III Semester

Sr. No.	Course Code	Course Title	L	T	P	Contact Hrs./ Wk.	Credits
1	18413T01 18413T02 18413T03	**Programme Elective V** 1. Advanced Computer Architecture 2. ASIC Design 3. Design for IOT	3	0	0	3	3
2	18413T04 18413T05 18413T06	**Programme Elective VI** 1. Image and Video Processing 2. Wireless communications and Networks 3. Multimedia Systems	3	0	0	3	3
3	18413P07	Project Work part-1	0	0	20	20	10
						Total Credits	**16**

II Year IV Semester

Sr. No.	Course Code	Course Title	L	T	P	Contact Hrs./ Wk.	Credits
1	18414S01	Comprehensive Viva-Voce	0	0	4	4	2
2	18414P02	Project Work Part -II	0	0	28	28	14
						Total Credits	**16**

Dr.M Rama Subba Reddy

Dr. Anil Kumar

Dr. Goutam Kumar Gupta

Dr.I Santhi Prabha

Mr.N Pradeep

MBA III SEMESTER

S. No	Course Code	Course Title	Hours per week			Total contact hours	Credits
			Lecture	Tutorial	Practical		
1	18MB3T01	Strategic Management	4	1	--	5	3
2	18MB3L02	Data Science using R	0	0	6	3	3
3	18MB3T03	Operations Research	4	1	--	5	3
4		Elective -1 Paper 1	4	1	--	5	3
5		Elective -1 Paper 2	4	1	--	5	3
6		Elective -2 Paper 1	4	1	--	5	3
7		Elective -2 Paper 2	4	1	--	5	3
Total						**33**	**21**

MBA IV SEMESTER

S. No	Course Code	Course Title	Hours per week			Total contact hours	Credits
			Lecture	Tutorial	Practical		
1	18MB4T01	Logistics and Supply Chain Management	4	1	--	5	3
2	18MB4T02	Legal Aspects of Business	4	1	--	5	3
3	18MB4T03	Entrepreneurship & Project Management	4	1	--	5	3
4		Elective -1 Paper 3	4	1	--	5	3
5		Elective -1 Paper 4	4	1	--	5	3
6		Elective -2 Paper 3	4	1	--	5	3
7		Elective -2 Paper 4	4	1	--	5	3
8	18MB4P19	Project	--	--	--	--	6
Total						**35**	**27**

MCA V Semester

S.No	Course Code	Course Category	Course Title	Hours per week			Total Contact Hours	Credits
				Lecture	Tutorial	Practical		
1	18MC5T01	PCC	Software Testing Methodologies	3			3	3
2	18MC5T02	PCC	Hadoop & Big Data	3			3	3
3	18MC5T03	PCC	Mobile Computing	3			3	3
4	18MC5T04/ 18MC5T05/ 18MC5T06	PEC	**Elective 2:** Machine learning &Deep Learning Cloud computing Human Computer Interaction	3			3	3
5	18MC5T07/ 18MC5T08/ 18MC5T09	PEC	**Elective 3:** Internet of Things Software Project Management Data Analytics	3			3	3
6	18MC5L10	PCC	Hadoop & Big Data Lab			4	2	2
7	18MC5L11	PCC	Mobile Application Development Lab			4	2	2
8	18MC5T12	PROJ	Project – I			4	2	2
								21

MCA VI Semester

S.No	Course Code	Course Category	Course Title	Hours per week			Total Contact Hours	Credits
				Lecture	Tutorial	Practical		
1	18MC6T01	T	Technical Seminar		3		3	3
2	18MC6L02	PROJ	Project – II			32	16	16
								19

			18CS6T06	Distributed Systems					
5	**OEC Open Elective-II**				3	-	-	3	3
6	18CS6L21	PCC	Computer Networks Lab		-	-	4	2	2
7	18CS6L22	PCC	Software Engineering Lab		-	-	4	2	2
8	18CS6T23	MC	Essence of Indian Traditional Knowledge		2	-	-	2	--
								Total Number Of Credits	**19**

Course Structure for IV Year, Semester- I (7th Semester)

S.No	Course Code	Course Category	Course Title		Hours per week			Total Contact Hours	Credits
					Lecture	Tutorial	Practical		
1	18CS7T01	PCC	Big Data & Hadoop		3	-	-	3	3
2	18CS7T02	PCC	Cryptography & Network Security		2	1	-	3	3
3	18CS7T 03/04/05	PEC	**Program Elective-III**		2	1	-	3	3
			18CS7T03	Machine Learning & Deep Learning					
			18CS7T04	Soft Computing					
			18CS7T05	Data Analytics					
4	18CS7T 06/07/08	PEC	**Program Elective-IV**		3	-	-	3	3
			18CS7T06	Embedded Systems					
			18CS7T07	Software Testing Methodologies					
			18CS7T08	Software Project Management					
5	**OEC Open Elective-III**				3	-	-	3	3
6	18CS7L20	PCC	Big Data & Hadoop Lab		-	-	4	2	2
7	18CS7L21	PROJ	Mini Project /Internship		-	-	4	2	2
								Total Number Of Credits	**19**

Course Structure for IV Year, Semester- II (8th Semester)

S.No	Course Code	Course Category	Course Title		Hours per week			Total Contact Hours	Credits
					Lecture	Tutorial	Practical		
1	18CS8T 01/02/03	PEC	**Program Elective-V**		3	-	-	3	3
			18CS8T 01	Cloud Computing					
			18CS8T 02	Mobile Computing					
			18CS8T 03	Image Processing					
2	18CS8T 04/05/06	PEC	**Program Elective-VI**		3	-	-	3	3
			18CS8T 04	Adhoc And Sensor Networks					
			18CS8T 05	Human Computer Interaction					
			18CS8T 06	Artificial Intelligence & Neural Networks					
3	**OEC Open Elective-IV**				3	-	-	3	3
4	**OEC Open Elective-V or MOOC**				2	-	-	2	2
5	18CS8L22	PROJ	Major Project		-	-	16	8	8
								Total Number Of Credits	**19**

Course Structure for B. Tech III Semester

S.No	Course Code	Course Category	Course Title	Hours per week			Total Contact Hours	Credits
				Lecture	Tutorial	Practical		
1	18EC3T01	BSC	Probability Theory & Stochastic Processes	3	1	**0**	3	4
2	18EC3T02	PCC	Electronic Circuit Analysis	3	0	**0**	3	3
3	18EC3T03	PCC	Digital Electronics	3	0	0	3	3
4	18EC3T04	ESC	Network Theory	3	0	0	3	3
5	18EC3T05	PCC	Signals & Systems	3	0	0	3	3
6	18EC3T06	HSMC	Managerial Economics & Finance Analysis	3	0	0	3	3
7	18EC3L07	PCC	Electronic Circuit Analysis Lab	0	0	3	3	1.5
8	18EC3L08	PCC	Signals & Systems Lab	0	0	3	3	1.5
9	18EC3N09	MC	Constitution of India	2	0	0	2	0
							Total number of credits	**22**

Course Structure for B. Tech IV Semester

S.No	Course Code	Course Category	Course Title	Hours per week			Total Contact Hours	Credits
				Lecture	Tutorial	Practical		
1	18EC4T01	HSMC	Humanities (Effective Technical Communication)	3	0	0	3	3
2	18EC4T02	BSC	Physics of Materials	2	0	0	2	2
3	18EC4T03	PCC	Analog IC Applications	3	0	**0**	3	3
4	18EC4T04	PCC	Digital System Design Using HDL	3	0	0	3	3
5	18EC4T05	PCC	Electromagnetic Waves & Transmission lines	3	0	0	3	3
6	18EC4T06	PCC	Control Systems	3	0	0	3	3
7	18EC4L07	PCC	Analog IC Applications Lab	0	0	3	3	1.5
8	18EC4L08	PCC	Digital System Design Using HDL Lab	0	0	3	3	1.5
9	18EC4L09	Project	Mini Project	0	0	4	4	2
							Total number of credits	**22**

Course Structure for B. Tech VII Semester

S.No	Course Code	Course Category	Course Title	Hours per week			Total Contac t Hours	Credits
				Lecture	Tutorial	Practical		
1	18EC7T01	PCC	Digital Image Processing	3	0	0	3	3
2	18EC7T02	PCC	Microwave Engineering	3	0	0	3	3
3	18EC7T03 18EC7T04 18EC7T05	PEC	Professional Elective-2	3	0	0	3	3
4	18EC7T06 18EC7T07 18EC7T08	PEC	Professional Elective-3	3	0	0	3	3
5	18EC7T09 18EC7T10 18EC7T11	OEC	Open Elective-3	3	0	0	3	3
6	18EC7L12	PCC	Microwave & OC LAB	1	0	2	3	2
7	18EC7P13	Projects	INDUSTRIAL INTERNSHIP	0	0	2	2	2
							Total number of credits	**19**

Course Structure for B. Tech VIII Semester

S.No	Course Code	Course Category	Course Title	Hours per week			Total Contac t Hours	Credits
				Lectu re	Tutori al	Practic al		
1	18EC8T01	PCC	Coding Theory & Techniques	3	0	0	3	3
2	18EC8T02 18EC8T03 18EC8T04	PEC	Professional Elective-4	3	0	0	3	3
3	18EC8T05 18EC8T06 18EC8T07	OEC	Open Elective-4	3	0	0	3	3
4	18EC8T08 18EC8T09 18EC8T10	OEC5/ MOOCS	Data Communication& Networking Renewable Energy sources twork Security & Cryptography	2	0	0	2	2
5	18EC8P11	PROJECTS	PROJECT	0	0	16	16	8
6	18EC8L12	Lab course	Comprehensive Viva Voice					0
							Total number of credits	**19**

B. Tech VII SEMESTER

S.No	Course Code	Course Category	Course Title	Hours per week			Total Contact Hours	Credits
				Lecture	Tutorial	Practical		
	18EE7T01	PCC	Digital Signal Processing	3	-	-	3	3
	18EE7T02	PCC	Power System Operation & Control	3	-	-	3	3
1	**Professional Elective-I**			3	-	-	3	3
	18EE7T03	PEC-I	Electric Vehicles					
	18EE7T04		Renewable Energy Sources					
	18EE7T05		Smart Grid Technologies					
4	**Professional Elective-II**			3	-	-	3	3
	18EE7T06	PEC-II	Programmable Logic Controllers					
	18EE7T07		AI Techniques					
	18EE7T08		Special Electrical Machines					
5		OEC-III	**Open Elective-III**	3	-	-	3	3
6	18EE7L09	PCC	Digital Signal Processing Lab	-	-	3	3	1.5
7	18EE7L10	PCC	Power Systems & Simulation Lab	-	-	3	3	1.5
8	18EE7P11	PROJ	Summer Internship / Mini Project	-	-	-	-	1
							Total number of credits	**19**

B. Tech VIII SEMESTER

S.No	Course Code	Course Category	Course Title	Hours per week			Total Contact Hours	Credits
				Lecture	Tutorial	Practical		
1	18EE8T01	PCC	Utilization of Electrical Energy	3	-	-	3	3
2	**Professional Elective-III**			3	-	-	3	3
	18EE8T02	PEC-III	Digital Control Systems					
	18EE8T03		Electrical Distribution Systems					
	18EE8T04		Power Electronic Control of Electric Drives					
3	**Professional Elective-IV**			3	-	-	3	3
	18EE8T05	PEC-IV	HVDC & FACTS					
	18EE8T06		Instrumentation					
	18EE8T07		Advanced Control Systems					
4		OEC-IV	MOOC/Open Elective IV	-	-	-	-	2
5	18EE8P09	PROJ	Project	-	-	-	-	8
							Total number of credits	**19**

B. Tech V SEMESTER

S. No	Course Code	Course Category	Course Title	Hours per week			Total Contact Hours	Credits
				Lecture	Tutorial	Practical		
1	20EC5T01	PCC	Microprocessors and Microcontrollers	3	-	-	3	3
2	20EC5T02	PCC	Antennas and Wave Propagation	3	-	-	3	3
3	20EC5T03	PCC	Digital system Design using VHDL& Verilog	3	-	-	3	3
4	**Open Elective–I**			3	-	-	3	3
Professional Elective–I				3	-	-	3	3
5	20EC5T07	PEC-I	Computer Architecture and Organization					
	20EC5T08		Telematics					
	20EC5T09		Cellular and Mobile Communications					
6	20EC5L10	PCC	Microprocessors and Micro-controllers Lab	-	-	3	3	1.5
7	20EC5L11	PCC	Digital system Design using VHDL & Verilog Lab	-	-	3	3	1.5
8	20EC5S12	SC	JAVA Programming	-	-	4	4	2
9	20EC5M13	MC	Essence of Indian Traditional knowledge	2	-	-	2	-
10	20EC5I14	I	Summer internship	-	-	-	-	1.5
Total number of credits								**21.5**
Honors/Minor courses				**4**	**0**	**0**	**-**	**4**

B. Tech VI SEMESTER

S.No	Course Code	Course Category	Course Title	Hours per week			Total Contact Hours	Credits
				Lecture	Tutorial	Practical		
1	20EC6T01	PCC	VLSI Design	3	-	-	3	3
2	20EC6T02	PCC	Digital Signal Processing	3	-	-	3	3
3	20EC6T03	PCC	Microwave Engineering	3	-	-	3	3
Professional Elective-II				3	-	-	3	3
4	20EC6T04	PEC-II	Embedded systems					
	20EC6T05		Electronics Measurements and Instrumentation					
	20EC6T06		Digital Modulation Techniques					
5	**Open Elective–II**			3	-	-	3	3
6	20EC6L10	PCC LAB	Microwave Engineering and optical communications Lab	-	-	3	3	1.5
7	20EC6L11	PCC LAB	VLSI Design lab	-	-	3	3	1.5
8	20EC6L12	PCC LAB	Digital Signal Processing Lab	-	-	3	3	1.5
9	20EC6S13	SC	Soft Skills	-	-	4	4	2
10	20EC6M14	MC	Disaster Management	2	-	-	2	-
11	20EC6P15	P	Community Service Project	-	-	-	-	4
Total number of credits								**25.5**
Honors/Minor courses				**4**	**-**	**-**	**-**	**4**

B. Tech VII SEMESTER

S.No	Course Code	Course Category	Course Title	Hours per week			Contact Hours	Credits
				Lecture	Tutorial	Practical		
Professional Elective-III				3	0	0	3	3
1	20EC7T01	PEC-III	CMOS Analog IC Design					
	20EC7T02		Data Communications And Networks					
	20EC7T03		Information theory and Coding					
Professional Elective-IV				3	0	0	3	3
2	20EC7T04	PEC-IV	Digital Image processing					
	20EC7T05		Low power VLSI Design					
	20EC7T06		Optical Communications					
Professional Elective-V				3	0	0	3	3
3	20EC7T07	PEC-V	Radar Engineering					
	20EC7T08		Embedded real time Operating Systems					
	20EC7T09		Satellite Communications					
4	**Open Elective-III**			3	0	0	3	3
5	**Open Elective-IV**			3	0	0	3	3
6	20EC7T16	HSMC	Universal Human values 2 Understanding Harmony	3	0	0	3	3
7	20EC7S17	SC	Internet of things applications with Latest Boards	-	-	4	4	2
8	20EC7I18	I	Industrial Internship	-	-	-	-	3
Total number of credits								**23**
Honors/Minor courses				4	0	0	-	**4**

B. Tech VIII SEMESTER

S.No	Course Code	Course Category	Course Title	Hours per week			Total Contact Hours	Credits
				Lecture	Tutorial	Practical		
1	20EC8P01	P	Project work	-	-	-	-	8
Total number of credits								**8**

B. Tech III SEMESTER

S.No	Course Code	Course Category	Course Title	Hours per week			Total Contact Hours	Credits
				Lecture	Tutorial	Practical		
1	20EE3T01	BSC	Numerical Methods and Vector Calculus	3	-	-	3	3
2	20EE3T02	PCC	Electrical Circuit Analysis – II	3	-	-	3	3
3	20EE3T03	PCC	Analog Electronics-I	3	-	-	3	3
4	20EE3T04	PCC	Electrical Machines -I	3	-	-	3	3
5	20EE3T05	PCC	Electromagnetic Fields	3	-	-	3	3
6	20EE3L06	PCC	Electrical Circuits Lab	-	-	3	3	1.5
7	20EE3L07	PCC	Electrical Machines Lab- I	-	-	3	3	1.5
8	20EE3L08	PCC	Analog Electronics Lab	-	-	3	3	1.5
9	20EE3S09	SC	Python Programming	-	-	4	4	2
Total number of credits								**21.5**

B. Tech IV SEMESTER

S.No	Course Code	Course Category	Course Title	Hours per week			Total Contact Hours	Credits
				Lecture	Tutorial	Practical		
1	20EE4T01	BSC	Complex Variables and Statistical Methods	3	-	-	3	3
2	20EE4T02	PCC	Electrical Machines – II	3	-	-	3	3
3	20EE4T03	PCC	Electrical Measurements	3	-	-	3	3
4	20EE4T04	PCC	Power Systems –II	3	-	-	3	3
5	20EE4T05	HSMC	Managerial Economics and Financial Analysis	3	-	-	3	3
6	20EE4L06	PCC	Electrical Machines Lab-II	-	-	3	3	1.5
7	20EE4L07	PCC	Electrical Measurements Lab	-	-	3	3	1.5
8	20EE4L08	ESC	Data structures through C Lab	-	-	3	3	1.5
9	20EE4S09	SC	Introduction to MATLAB	-	-	4	4	2
10	20EE4M10	MC	Constitution of India	2	-	-	2	-
Total number of credits								**21.5**
Internship 2 Months (Mandatory) during summer vacation								
Honors/Minor courses				**4**	**0**	**0**	**-**	**4**

B. Tech V SEMESTER

S.No	Course Code	Course Category	Course Title	Hours per week			Total Contact Hours	Credits
				Lecture	Tutorial	Practical		
1	20EE5T01	PCC	Control Systems	3	-	-	3	3
2	20EE5T02	PCC	Switchgear and Protection	3	-	-	3	3
3	20EE5T03	ESC	Analog Electronics - II	3	-	-	3	3
4	**Open Elective – I**			3	-	-	3	3
Professional Elective –I				3	-	-	3	3
5	20EE5T06	PEC-I	AI Techniques in Electrical Engineering					
	20EE5T07		Digital Electronics					
	20EE5T08		Programmable Logic Controllers and Applications					
	20EE5T09		VLSI Design					
6	20EE5L10	PCC	Control Systems Lab	-	-	3	3	1.5
7	20EE5L11	PCC	Electrical Simulation Lab	-	-	3	3	1.5
3	20EE5S12	SC	JAVA Programming	-	-	4	4	2
8	20EE5M13	MC	Essence of Indian Traditional knowledge	2	-	-	2	-
9	20EE5I14	I	Summer internship	-	-	-	-	1.5
Total number of credits								**21.5**
Honors/Minor courses				**4**	**0**	**0**	**-**	**4**

B. Tech VI SEMESTER

S.No	Course Code	Course Category	Course Title	Hours per week			Total Contact Hours	Credits
				Lecture	Tutorial	Practical		
1	20EE6T01	PCC	Microprocessors and Micro controllers	3	-	-	3	3
2	20EE6T02	PCC	Power system Operation and Control	3	-	-	3	3
3	20EE6T03	PCC	Power Electronics	3	-	-	3	3
Professional Elective-II				3	-	-	3	3
4	20EE6T04	PEC-II	Digital control systems					
	20EE6T05		Power quality					
	20EE6T06		Renewable and Distributed Energy Technologies					
	20EE6T07		Utilisation of Electrical Energy					
5	**Open Elective – II**			3	-	-	3	3
6	20EE6L10	PCC	Microprocessors and Micro Controllers Lab	-	-	3	3	1.5
7	20EE6L11	PCC	Power Systems Lab	-	-	3	3	1.5
8	20EE6L12	PCC	Power Electronics Lab	-	-	3	3	1.5
9	20EE6S13	SC	Soft Skills	-	-	4	4	2
10	20EE6M14	MC	Disaster Management	2	-	-	2	-
11	20EE6P15	P	Community Service Project	-	-	-	-	4
Total number of credits								**25.5**
Honors/Minor courses				4	-	-	-	4

B. Tech VII SEMESTER

S.No	Course Code	Course Category	Course Title	Hours per week			Contact Hours	Credits
				Lecture	Tutorial	Practical		
Professional Elective-III				3	0	0	3	3
1	20EE7T01	PEC-III	Power Electronic Control of Electric Drives					
	20EE7T02		High Voltage Engineering					
	20EE7T03		Smart Grid Technologies					
	20EE7T04		Advanced control systems					
Professional Elective -IV				3	0	0	3	3
2	20EE7T05	PEC-IV	Digital Signal Processing					
	20EE7T06		Special electrical machines					
	20EE7T07		HVDC & FACTS					
	20EE7T08		Evolutionary Algorithms and Applications					
Professional Elective -V				3	0	0	3	3
3	20EE7T09	PEC-V	IoT Applications in Electrical Engineering					
	20EE7T10		Switch Mode Power Conversion					
	20EE7T11		Electric Vehicles					
	20EE7T12		Electrical Distribution Systems					
4	**Open Elective-III**			3	0	0	3	3
5	**Open Elective-IV**			3	0	0	3	3
6	20EE7T17	HSMC	Universal Human Values 2: Understanding Harmony	0	0	3	3	3
7	20EE7S18	SC	Electrical CAD	0	0	4	4	2
8	20EE7I19	I	Industrial Internship	-	-	-	-	3
Total number of credits								**23**
Honors/Minor courses				**4**	**0**	**0**	**-**	**4**

B. Tech VIII SEMESTER

S.No	Course Code	Course Category	Course Title	Hours per week			Total Contact Hours	Credits
				Lecture	Tutorial	Practical		
1	20EE8P01	P	Project work	-	-	-	-	8
Total number of credits								**8**

B.TECH V SEMESTER

S.No	Course Code	Course Category	Course Title	Hours per week			Contact Hours	Credits
				Lecture	Tutorial	Practical		
1	20IT5T01	PCC	Formal Languages & Automata Theory	3	0	0	3	3
2	20IT5T02	PCC	Data Warehousing & Data Mining	3	0	0	3	3
3	20IT5T03	PCC	Computer Networks	3	0	0	3	3
Professional Elective-I				3	0	0	3	3
4	20IT5T04	PEC-I	Computer Graphics					
5	20IT5T05		E-Commerce					
6	20IT5T06		Software Testing Methodologies					
Open Elective-I				3	0	0	3	3
7	20IT5L09	PCC	Computer Networks Lab	0	0	3	3	1.5
8	20IT5L10	PCC	Data Warehousing and Mining Lab Through Python	0	0	3	3	1.5
9	20IT5S11	SC	Testing Tools	0	0	4	4	2
10	20IT5M12	MC	Disaster Management	2	0	0	2	-
11	20IT5I13	I	Internship	0	0	0	1.5	1.5
Total number of credits								**21.5**
Honors/Minor course				**4**	**0**	**0**	**-**	**4**

B.TECH VI SEMESTER

S.No	Course Code	Course Category	Course Title	Hours per week			Contact Hours	Credits
				Lecture	Tutorial	Practical		
1	20IT6T01	PCC	Machine Learning	3	0	0	3	3
2	20IT6T02	PCC	Cloud Computing	3	0	0	3	3
3	20IT6T03	PCC	Big Data Analytics	3	0	0	3	3
Professional Elective-II				3	0	0	3	3
4	20IT6T04	PEC-II	MEAN Stack Technologies					
5	20IT6T05		Compiler Design					
6	20IT6T06		Software Architecture and Design patterns					
	Open Elective-II			3	0	0	3	3
7	20IT6L09	PCC	Machine Learning Lab	0	0	3	3	1.5
8	20IT6L10	PCC	Cloud Computing Lab	0	0	3	3	1.5
9	20IT6L11	PCC	Hadoop Lab	0	0	3	3	1.5
10	20IT6S12	SC	Soft Skills	0	0	4	4	2
11	20IT6M13	MC	Essence of Indian traditional knowledge	2	0	0	2	-
12	20IT6P14	P	Community Service Project	-	-	-	-	4
Total number of credits								**25.5**
Honors/Minor courses				**4**	**0**	**0**	**-**	**4**

B.TECH VII SEMESTER

S.No	Course Code	Course Category	Course Title	Hours per week			Contact Hours	Credits
				Lecture	Tutorial	Practical		
Professional Elective-III				3	0	0	3	3
1	20IT7T01	PEC-III	Intelligent Agents					
2	20IT7T02		Mobile Computing					
3	20IT7T03		Software Project Management					
Professional Elective-IV				3	0	0	3	3
4	20IT7T04	PEC-IV	Neural Networks and Deep Learning					
5	20IT7T05		Information Security					
6	20IT7T06		Business Intelligence					
Professional Elective-V				3	0	0	3	3
7	20IT7T07	PEC-V	Ethical Hacking					
8	20IT7T08		Information Retrieval Systems					
9	20IT7T09		Internet of Things					
10	**Open Elective-III**			3	0	0	3	3
11	**Open Elective-IV**			3	0	0	3	3
12	20IT7T14	HSMC	Universal Human Values 2: Understanding Harmony	0	0	3	3	3
13	20IT7S15	SC	Data Visualization using Tableau	0	0	4	4	2
14	20IT7I16	I	Industrial Internship	-	-	-	-	3
Total number of credits								**23**
Honors/Minor courses				**4**	**0**	**0**	**-**	**4**

B.TECH VIII SEMESTER

S.No	Course Code	Course Category	Course Title	Hours per week			Total Contact Hours	Credits
				Lecture	Tutorial	Practical		
1	20IT8P01	P	Project	-	-	-	-	8
Total number of credits								**8**

B.TECH V SEMESTER

S. No	Course Code	Course Category	Course Title	Hours per week			Total Contact Hours	Credits
				Lecture	Tutorial	Practical		
1	20ME5T01	PCC	Dynamics of Machines	3	-	-	3	3
2	20ME5T02	PCC	Turbo machines	3	-	-	3	3
3	20ME5T03	PCC	Metal Cutting &Machine Tools	3	-	-	3	3
4		**OEC**	**Open Elective-I**	3	-	-	3	3
5	**Professional Elective -I**			3	-	-	3	3
	20ME5T06	PEC	Experimental Stress Analysis					
	20ME5T07		Design for Manufacturing					
	20ME5T08		Refrigeration & Air Conditioning					
6	20ME5L09	PCC	Theory of Machines Lab	-	-	3	3	1.5
7	20ME5L10	PCC	Machine Tools & Computer Aided Manufacturing Lab	-	-	3	3	1.5
8	20ME5S11	SC	Simulation of Mechanical Systems Lab	-	-	4	4	2
9	20ME5M12	MC	Essence of Indian Traditional knowledge	2	-	-	2	-
10	20ME5I13	I	Summer Internship	-	-	-	-	1.5
Total number of credits								**21.5**
Honors/Minor courses				**4**	**-**	**-**	**4**	**4**

B. TECH VI SEMESTER

S. No	Course Code	Course Category	Course Title	Hours per week			Total Contact Hours	Credits
				Lecture	Tutorial	Practical		
1	20ME6T01	PCC	Design of Transmission Elements	3	-	-	3	3
2	20ME6T02	PCC	Heat Transfer	3	-	-	3	3
3	20ME6T03	PCC	Metrology and Measurements	3	-	-	3	3
4	**Professional Elective -II**			3	-	-	3	3
	20ME6T04	PEC	Finite Element Methods					
	20ME6T05		Computational Fluid Dynamics					
	20ME6T06		Production Planning & Control					
5		**OEC**	**Open Elective-II**	3	-	-	3	3
6	20ME6L09	PCC	Metrology & Instrumentation Lab	-	-	3	3	1.5
7	20ME6L10	PCC	Heat Transfer Lab	-	-	3	3	1.5
8	20ME6L11	PCC	CAE & CFD Lab	-	-	3	3	1.5
9	20ME6S12	SC	Soft skills	-	-	4	4	2
10	20ME6M13	MC	Disaster Management	2	-	-	2	-
11	20ME6P14	P	Community Service Project	_	-	-	-	4
Total number of credits								**25.5**
Honors/Minor courses				**4**	**-**	**-**	**4**	**4**

B. TECH VII SEMESTER

S. No	Course Code	Course Category	Course Title	Hours per week			Total Contact Hours	Credits
				Lecture	Tutorial	Practical		
1	**Professional Elective –III/MOOCS**			3	-	-	3	3
	20ME7T01	PEC	Advanced Materials					
	20ME7T02		Power Plant Engineering					
	20ME7T03		Advanced Optimization Techniques					
2	**Professional Elective –IV/ MOOCS**			3	-	-	3	3
	20ME7T04	PEC	Management Science					
	20ME7T05		Additive Manufacturing					
	20ME7T06		Advanced Machining Processes					
3	**Professional Elective -V / MOOCS**			3	-	-	3	3
	20ME7T07	PEC	Mechanical Vibrations					
	20ME7T08		Automobile Engineering					
	20ME7T09		Non Destructive Evaluation					
4		OEC	**Open Elective-III**	3	-	-	3	3
5		OEC	**Open Elective-IV**	3	-	-	3	3
6	20ME7T14	HSMC	Universal Human Values 2: Understanding Harmony	3	-	-	3	3
7	20ME7S15	SC	Python Programming Lab	1	-	2	3	2
8	20ME7I16	I	Industrial Internship	-	-	-	-	3
Total number of credits								**23**
Honors/Minor courses				**4**	**-**	**-**	**4**	**4**

B. TECH VIII SEMESTER

S. No	Course Code	Course Category	Course Title	Hours per week			Total Contact Hours	Credits
				Lecture	Tutorial	Practical		
1	20ME8P01	P	Project (Project work/internship)	-	-	-	-	8
	INTERNSHIP (6 MONTHS)							
Total number of credits								**8**

III SEMESTER

S.No	Course Code	Course Category	Course Title	L	T	P	Credits
1	20513T01/ 20513T02	PE	**Program Elective-5** 1. Deep Learning 2. Social Network Analysis 3. MOOC-1(NPTEL/SWAYAM) 12 Week program related to the program which is not listed in the course structure	3	0	0	3
4	20513T03/ 20513T04	OE	**Open Elective** 1. Human Resource Management 2. Digital Marketing 3. MOOC-2 (NPTEL/SWAYM) 12 Week program related to the program which is not listed in the course structure	3	0	0	3
5	20513P05	PROJ	Dissertation-1/ Industrial Project	-	-	-	10
Total Credits							**16**

#Students going for Industrial Project/Thesis will complete these courses through MOOCs

IV SEMESTER

S.No	Course Code	Course Category	Course Title	L	T	P	Credits
1	20514P01	PROJ	Dissertation-II	-	-	-	16
Total Credits							**16**

COURSE STRUCTURE-MIC20
M. Tech (Machine Design)
M. Tech I Semester

S.No	Course Code	Course Title	Hours Per Week			Total Contact Hours	Credits
			L	T	P		
1	20311T01	Advanced Stress Analysis	3	---	---	3	3
2	20311T02	Advanced Vibrations and Acoustics	3	---	---	3	3
3	20311T03	1.Advanced Machine Design	3	---	---	3	3
	20311T04	2.Design for Manufacturing and Assembly					
	20311T05	3.Mathematical Methods in Engineering					
4	20311T06	1.Advanced Engineering Materials	3	---	---	3	3
	20311T07	2.Mechanics of Composite Materials					
	20311T08	3.Analysis and Synthesis of Mechanisms					
5	20311L11	Machine dynamics lab	---	---	4	4	2
6	20311L12	Numerical Simulation lab	---	---	4	4	2
7	20311T09	Research Methodology and IPR	2	---	---	2	2
8	20311T10	Audit Course - 1	2	---	---	2	0
		TOTAL	16	---	8	24	18

M. Tech II Semester

S.No	Course Code	Course Title	Hours Per Week			Total Contact Hours	Credits
			L	T	P		
1	20312T01	Finite Element Method	3	---	---	3	3
2	20312T02	Computer Aided Design	3	---	---	3	3
3	20312T03	1. Tribology in Design	3	---	---	3	3
	20312T04	2. Robotics					
	20312T05	3. Fracture Mechanics					
4	20312T06	1. Multi-body Dynamics	3	---	---	3	3
	20312T07	2. Condition Based Monitoring					
	20312T08	3. Optimization Techniques in Design					
5	20312L11	Computer Aided Design lab	---	---	4	4	2
6	20312L12	Simulation lab	---	---	4	4	2
7	20312T09	Audit -2	2	---	---	2	0
8	20312P10	Mini-Project with Seminar	---	---	4	4	2
		TOTAL	14	---	12	26	18

M. Tech III Semester

S.No	Course Code	Course Title	Hours Per Week			Total Contact Hours	Credits
			L	T	P		
1	20313T01	1. Advanced Finite Element Method	3	---	---	3	3
	20313T02	2. Advanced Metallurgy					
2	20313T03	1. Business Analytics	3	---	---	3	3
	20313T04	2. Industrial Safety					
	20313T05	3. Operations Research					
	20313T06	4. Cost Management of Engineering Projects					
	20313T07	5. Composite Materials					
	20313T08	6. Waste to Energy					
3	20313P08	Dissertation Phase – I	---	---	20	20	10
		TOTAL	6	---	20	26	16

M.Tech IV Semester

S. No	Course Code	Course Title	Hours Per Week			Total Contact Hours	Credits
			L	T	P		
1	20314P01	Dissertation Phase – II	---	--	32	32	32
		TOTAL	---	--	32	32	16

Audit course 1 & 2

1. English for Research Paper Writing
2. Disaster Management
3. Sanskrit for Technical Knowledge
4. Value Education
5. Constitution of India
6. Pedagogy Studies
7. Stress Management by Yoga
8. Personality Development through Life Enlightenment Skills.

M. Tech: POWER ELECTRONICS AND DRIVES

COURSE STRUCTURE

I Year, Semester – I

S.No	Course Code	Course Category	Course Title	Hours per week			Total Contact Hours	Credits
				Lecture	Tutorial	Practical		
1	20211T01	PCC	Mathematical Modeling of Machines	3	-	-	3	3
2	20211T02	PCC	Analysis of power Electronic Converters	3	-	-	3	3
3	20211T03	PCC	Power Electronic Control of DC Drives	3	-	-	3	3
4	20211T04	PCC	Digital Signal processing	3	-	-	3	3
5	20211T05	HSMC	Research Methodology & IPR	3	-	-	3	3
6	20211L06	PCC	Simulation of Electrical Machines and Converters	-	-	6	6	3
Total number of credits								**18**

I Year, Semester – II

S.No	Course Code	Course Category	Course Title	Hours per week			Total Contact Hours	Credits
				Lecture	Tutorial	Practical		
1	20212T01	PCC	Power Electronic Control of AC Drives	3	-	-	3	3
2	20212T02	PCC	Advanced Power Electronic Converters	3	-	-	3	3
Professional Elective-I				3	-	-	3	3
3	20212T03	PEC	Renewable Energy Sources					
	20212T04		Special Electrical Machines					
	20212T05		Digital Control Systems					
Professional Elective-II				3	-	-	3	3
4	20212T06	PEC	Smart Grids					
	20212T07		Flexible AC Transmission Systems					
	20212T08		Optimization Techniques					
5	20212L09	PCC	Electric Drives Lab	-	-	6	6	3
6	20212P10	P	Mini Project with Seminar	-	-	6	6	3
Total number of credits								**18**

II Year, Semester – III

S.No	Course Code	Course Category	Course Title	Hours per week			Total Contact Hours	Credits
				Lecture	Tutorial	Practical		
1	20213T01	PCC	Digital Control of Drives	3	-	-	3	3
Professional Elective-III				3	-	-	3	3
2	20213T02	PEC	Embedded Systems					
	20213T03		VLSI Design					
	20213T04		Image Processing					
3	20213T03	PROJ	Phase – I Dissertation	-	-	-	20	10
Total number of credits								**16**

II Year, Semester – IV

S.No	Course Code	Course Category	Course Title	Hours per week			Total Contact Hours	Credits
				Lecture	Tutorial	Practical		
1	20214P01	PROJ	Phase – II Dissertation	-	-	-	32	16
Total number of credits								**16**

II Year III Semester

Sr. No.	Course Code	Course Title	L	T	P	Contact Hrs./ Wk.	Credits
1	20413L01	Comprehensive Viva-Voce	4	0	0	4	4
2	20413L02	Seminar	2	0	0	2	2
3	20413L03	Project Work part-1	0	0	14	14	7
						Total Credits	**13**

II Year IV Semester

Sr. No.	Course Code	Course Title	L	T	P	Contact Hrs./ Wk.	Credits
1	20414L01	Project Work Part -II	0	0	26	26	13
						Total Credits	**13**

MBA III SEMESTER

S. No	Course Code	Course Title	Hours per week			Total Marks	Credits
			Lecture	Tutorial	Practical		
1	20MB3T01	Strategic Management	4	0	0	100	4
2	20MB3T02	Operations Research	4	0	0	100	4
3		Elective -1 Paper 1	4	0	0	100	3
4		Elective -1 Paper 2	4	0	0	100	3
5		Elective -2 Paper 1	4	0	0	100	3
6		Elective -2 Paper 2	4	0	0	100	3
7	20MB3T28	Industrial Project based on Summer Internship	0	0	0	100	3
		Total	**28**	**0**	**0**	**700**	**23**

MBA IV SEMESTER

S. No	Course Code	Course Title	Hours per week			Total Marks	Credits
			Lecture	Tutorial	Practical		
1	20MB4T01	Logistics and Supply Chain Management	4	0	0	100	4
2	20MB4T02	Entrepreneurship & Innovative Management	4	0	0	100	4
3		Elective -1 Paper 3	4	0	0	100	3
4		Elective -1 Paper 4	4	0	0	100	3
5		Elective -2 Paper 3	4	0	0	100	3
6		Elective -2 Paper 4	4	0	0	100	3
7	20MB4T29	Comprehensive Viva-Voce	0	0	0	100	3
		Total	**24**	**0**	**0**	**700**	**23**

MCA III SEMESTER

S.No	Course Code	Course Category	Course Tile	L	T	P	Credits
1	20MC3T01	PC	Machine Learning with Python	3	0	0	3
2	20MC3T02	PC	Big Data Analytics	3	0	0	3
3	20MC3T03	PC	Web Technologies	3	0	0	3
4	20MC3T04	PC	Cryptography and Network Security	3	0	0	3
5	20MC3T05/ 20MC3T06/ 20MC3T07/ 20MC3T08	PE	**Elective-II** Software Project Management Cloud Computing Cyber Security Advanced Data Bases	3	0	0	3
6	20MC3L09	PC	Machine Learning with Python Lab	0	0	3	1.5
7	20MC3L10	PC	Big Data Analytics Lab	0	0	3	1.5
8	20MC3L11	PC	Web Technologies Lab	0	0	4	2
9	20MC2P12	PR	Internship / Industry Oriented Mini Project/ Skill Development Course (Minimum 6-weeks)	0	0	0	2
			Total	15	0	10	22

MCA IV SEMESTER

S.No	Course Code		Course Title	L	T	P	Credits
1	20MC4T01/ 20MC4T02/ 20MC4T03	PE	**Elective-III *** Digital Marketing/ Human Resource Management/ Ad-hoc and Sensor Networks/ MOOCs-1(NPTEL/SWAYAM) Full Stack Technologies Any Recommended Course	3	0	0	3
2	20MC4T04/ 20MC4T05/ 20MC4T06 20MC4T07	PE	Elective-IV * Block Chain Technologies/ Software Testing Methodologies/ E Commerce MOOCs-2(NPTEL/SWAYAM) -Data Science -Any Recommended Course	3	0	0	3
3	20MC4P08	PR	Project Work/ Dissertation	0	0	0	12
			Total	6	0	0	18

***Students going for Industrial Project/Thesis will complete these courses through MOOCs (even in earlier semester)**

B. TECH III SEMESTER

S.No	Course Code	Course Category	Course Title	Hours per week			Contact Hours	Credits
				Lecture	Tutorial	Practical		
1	20AD3T01	BSC	Numerical Methods & Vector Calculus	3	-	-	3	3
2	20AD3T02	PCC	Object Oriented Programming through Java	3	-	-	3	3
3	20AD3T03	PCC	Data Base Management Systems	3	-	-	3	3
4	20AD3T04	PCC	Introduction to Artificial Intelligence	3	-	-	3	3
5	20AD3T05	PCC	Operating Systems	3	-	-	3	3
6	20AD3L06	PCC	Object Oriented Programming through Java Lab	-	-	3		1.5
7	20AD3L07	PCC	Data Base Management Systems Lab	-	-	3		1.5
8	20AD3L08	PCC	UNIX and Shell programming Lab	-	-	3		1.5
9	20AD3S09	SC	Data Analysis and visualization with Python	-	-	4		2
10	20AD3M10	MC	Constitution of India	2	-	-		-
Total Number of Credits								**21.5**

B. TECH IV SEMESTER

S.No	Course Code	Course Category	Course Title	Hours per week			Contact Hours	Credits
				Lecture	Tutorial	Practical		
1	20AD4T01	BSC	Probability and Statistics	3	-	-	3	3
2	20AD4T02	ESC	Discrete Mathematical Structures	3	-	-	3	3
3	20AD4T03	PCC	Design and Analysis of Algorithms	3	-	-	3	3
4	20AD4T04	PCC	Foundations of Data science	3	-	-	3	3
5	20AD4T05	HSMC	Managerial Economics and Financial Analysis	3	-	-	3	3
6	20AD4L06	ESC	R Programming Lab	-	-	3	3	1.5
7	20AD4L07	PCC	Data Science lab	-	-	3	3	1.5
8	20AD4L08	PCC	Design and Analysis of Algorithms Lab	-	-	3	3	1.5
9	20AD4S09	SC	Basic Web programming	-	-	4	4	2
Total number of credits								**21.5**
Internship 2 Months (Mandatory) during summer vacation								
Honors/Minor courses				**4**	**0**	**0**	**-**	**4**

B.TECH V SEMESTER

S.No	Course Code	Course Category	Course Title	Hours per week			Contact Hours	Credits
				Lecture	Tutorial	Practical		
1	20AD5T01	PCC	Theory of Automata	3	0	0	3	3
2	20AD5T02	PCC	Data Warehousing & Mining	3	0	0	3	3
3	20AD5T03	PCC	Machine Learning	3	0	0	3	3
Program Elective-I				3	0	0	3	3
4	20AD5T04	PE-I	Advanced Data Structures					
5	20AD5T05		E-Commerce					
6	20AD5T06		Software Engineering					
7	**Open Elective-I**			3	0	0	3	3
8	20AD5L08	PCC	Machine Learning Lab	0	0	3	3	1.5
9	20AD5L09	PCC	Data Warehousing and Mining Lab	0	0	3	3	1.5
10	20AD5S10	SC	Testing Tools Lab	0	0	4	4	2
11	20AD5M11	MC	Disaster Management	2	0	0	2	-
12	20AD5I12	I	Summer Internship	0	0	0	1.5	1.5
Total number of credits								**21.5**
Honors/Minor courses				**4**	**0**	**0**	**-**	**4**

B.TECH VI SEMESTER

S.No	Course Code	Course Category	Course Title	Hours per week			Contact Hours	Credits
				Lecture	Tutorial	Practical		
1	20AD6T01	PCC	NoSQL Databases	3	0	0	3	3
2	20AD6T02	PCC	Computer Networks	3	0	0	3	3
3	20AD6T03	PCC	Big Data Analytics	3	0	0	3	3
Program Elective-II				3	0	0	3	3
4	20AD6T04	PE-II	MEAN Stack Technologies					
5	20AD6T05		Compiler Design					
6	20AD6T06		Software Architecture and Design patterns					
7	**Open Elective-II**			3	0	0	3	3
8	20AD6L08	PCC	NoSQL Lab	0	0	3	3	1.5
9	20AD6L09	PCC	Computer Networks Lab	0	0	3	3	1.5
10	20AD6L10	PCC	BDA Lab	0	0	3	3	1.5
11	20AD6S11	SC	Soft Skills	0	0	4	4	2
12	20AD6M12	MC	Essence of Indian traditional knowledge	2	0	0	2	-
13	20AD6P13	P	Community Service Project	-	-	-	-	4
Total number of credits								**25.5**
Honors/Minor courses				**4**	**0**	**0**	**-**	**4**

B.TECH VII SEMESTER

S.No	Course Code	Course Category	Course Title	Hours per week			Contact Hours	Credits
				Lecture	Tutorial	Practical		
Program Elective-III				3	0	0	3	3
1	20AD7T01	PE-III	Cloud computing					
2	20AD7T02		Natural Language Processing					
3	20AD7T03		Software Project Management					
Program Elective-IV				3	0	0	3	3
4	20AD7T04	PE-IV	Neural Networks and Deep Learning					
5	20AD7T05		Information Security					
6	20AD7T06		Business Intelligence					
Program Elective-V				3	0	0	3	3
7	20AD7T07	PE-V	Soft Computing					
8	20AD7T08		Computer Vision					
9	20AD7T09		Internet of Things					
10	**Open Elective-III**			3	0	0	3	3
11	**Open Elective-IV**			3	0	0	3	3
12	20AD5L12	HSMC	Universal Human Values 2: Understanding Harmony	0	0	3	3	3
13	20AD5S13	SC	Data Visualization using Tableau	0	0	4	4	2
14	20AD5I14	I	Industrial Internship	-	-	-	-	3
Total number of credits								**23**
Honors/Minor courses				**4**	**0**	**0**	**-**	**4**

B.TECH VIII SEMESTER

S.No	Course Code	Course Category	Course Title	Hours per week			Total Contact Hours	Credits
				Lecture	Tutorial	Practical		
1	20AD8P01	P	Project	0	0	0	12	8
Total number of credits								**8**

B. TECH III SEMESTER

S.No.	Course Code	Course Category	Course Title	Hours per week			Contact Hours	Credits
				Lecture	Tutorial	Practical		
1	20AM3T01	BSC	Numerical Methods & Vector Calculus	3	-	-	3	3
2	20AM3T02	PCC	Object Oriented Programming through Java	3	-	-	3	3
3	20AM3T03	PCC	Data Base Management Systems	3	-	-	3	3
4	20AM3T04	PCC	Introduction to Artificial Intelligence	3	-	-	3	3
5	20AM3T05	PCC	Operating Systems	3	-	-	3	3
6	20AM3L06	PCC	Object Oriented Programming through Java Lab	-	-	3	3	1.5
7	20AM3L07	PCC	Data Base Management Systems Lab	-	-	3	3	1.5
8	20AM3L08	PCC	UNIX and Shell programming Lab	-	-	3	3	1.5
9	20AM3S09	SC	Data analysis and visualization with python	-	-	4	4	2
10	20AM3M10	MC	Constitution of India	2	-	-	2	-
Total number of credits								**21.5**

B. TECH IV SEMESTER

S.No	Course Code	Course Category	Course Title	Hours per week			Contact Hours	Credits
				Lecture	Tutorial	Practical		
1	20AM4T01	BSC	Probability and Statistics	3	-	-		3
2	20AM4T02	ESC	Discrete Mathematical Structures	3	-	-		3
3	20AM4T03	PCC	Design and Analysis of Algorithms	3	-	-		3
4	20AM4T04	PCC	Machine Learning	3	-	-		3
5	20AM4T05	HSMC	Managerial Economics and Financial Analysis	3	-	-		3
6	20AM4L06	ESC	R Programming Lab	-	-	3		1.5
7	20AM4L07	PCC	Machine Learning Using Python Lab	-	-	3		1.5
8	20AM4L08	PCC	Design and analysis of Algorithms Lab	-	-	3		1.5
9	20AM4S09	SC	Basic Web programming	-	-	4		2
Total number of credits								**21.5**
Internship 2 Months (Mandatory) during summer vacation								
Honors/Minor courses				4	0	0	-	4

B.TECH V SEMESTER

S.No	Course Code	Course Category	Course Title	Hours per week			Contact Hours	Credits
				Lecture	Tutorial	Practical		
1	20AM5T01	PCC	Theory of Automata	3	0	0	3	3
2	20AM5T02	PCC	Data Warehousing & Mining	3	0	0	3	3
3	20AM5T03	PCC	Software Engineering	3	0	0	3	3
Program Elective-I				3	0	0	3	3
4	20AM5T04	PE-I	Computer Graphics					
5	20AM5T05		E-Commerce					
6	20AM5T06		Data Science and Visualization					
7	**Open Elective-I**			3	0	0	3	3
8	20AM5L08	PCC	CASE Tools Lab	0	0	3	3	1.5
9	20AM5L09	PCC	Data Warehousing and Mining Lab	0	0	3	3	1.5
10	20AM5S10	SC	Testing Tools Lab	0	0	4	4	2
11	20AM5M11	MC	Disaster Management	2	0	0	2	-
12	20AM5I12	I	Summer Internship	0	0	0	1.5	1.5
Total number of credits								**21.5**
Honors/Minor courses				**4**	**0**	**0**	**-**	**4**

B.TECH VI SEMESTER

S.No	Course Code	Course Category	Course Title	Hours per week			Contact Hours	Credits
				Lecture	Tutorial	Practical		
1	20AM6T01	PCC	Deep Learning	3	0	0	3	3
2	20AM6T02	PCC	Computer Networks	3	0	0	3	3
3	20AM6T03	PCC	Big Data Analytics	3	0	0	3	3
Program Elective-II				3	0	0	3	3
4	20AM6T04	PE-II	MEAN Stack Technologies					
5	20AM6T05		Compiler Design					
6	20AM6T06		Software Architecture and Design patterns					
7	**Open Elective-II**			3	0	0	3	3
8	20AM6L08	PCC	Deep Learning Lab	0	0	3	3	1.5
9	20AM6L09	PCC	Computer Networks Lab	0	0	3	3	1.5
10	20AM6L10	PCC	BDA Lab	0	0	3	3	1.5
11	20AM6S11	SC	Soft Skills	0	0	4	4	2
12	20AM6M12	MC	Essence of Indian traditional knowledge	2	0	0	2	-
13	20AM6P13	P	Community Service Project	-	-	-	-	4
Total number of credits								**25.5**
Honors/Minor courses				**4**	**0**	**0**	**-**	**4**

B.TECH VII SEMESTER

S.No	Course Code	Course Category	Course Title	Hours per week			Contact Hours	Credits
				Lecture	Tutorial	Practical		
Program Elective-III				3	0	0	3	3
1	20AM7T01	PE-III	Cloud Computing					
2	20AM7T02		Natural Language Processing					
3	20AM7T03		Software Project Management					
Program Elective-IV				3	0	0	3	3
4	20AM7T04	PE-IV	Software Testing Methodologies					
5	20AM7T05		Information Security					
6	20AM7T06		Business Intelligence					
Program Elective-V				3	0	0	3	3
7	20AM7T07	PE-V	Soft Computing					
8	20AM7T08		Robotics and its Applications					
9	20AM7T09		Internet of Things					
10	**Open Elective-III**			3	0	0	3	3
11	**Open Elective-IV**			3	0	0	3	3
12	20AM5L12	HSMC	Universal Human Values Understanding Harmony	0	0	3	3	3
13	20AM5S13	SC	Data Visualization using Tableau	0	0	4	4	2
14	20AM5I14	I	Industrial Internship	-	-	-	-	3
Total number of credits								**23**
Honors/Minor courses				**4**	**0**	**0**	**-**	**4**

B.TECH VIII SEMESTER

S.No	Course Code	Course Category	Course Title	Hours per week			Total Contact Hours	Credits
				Lecture	Tutorial	Practical		
2	20AM8P01	P	Project	0	0	0	-	8
Total number of credits								**8**

B. TECH III SEMESTER

S. No	Course Code	Course Category	Course Title	Hours per week			Total Contact Hours	Credits
				Lecture	Tutorial	Practical		
1	20CE3T01	BSC	Numerical Methods and Vector calculus	3	-	-	3	3
2	20CE3T02	PCC	Strength of Materials	3	-	-	3	3
3	20CE3T03	PCC	Fluid Mechanics	3	-	-	3	3
4	20CE3T04	PCC	Concrete Technology	3	-	-	3	3
5	20CE3T05	PCC	Surveying	3	-	-	3	3
6	20CE3L06	PCC LAB	Strength of Materials Lab	-	-	3	3	1.5
7	20CE3L07	PCC LAB	Surveying Field Work	-	-	3	3	1.5
8	20CE3L08	PCC LAB	Concrete Technology Lab	-	-	3	3	1.5
9	20CE3S09	SC	AUTO CAD 2D&3D	-	-	4	4	2
Total number of credits								**21.5**

B. TECH IV SEMESTER

S. No	Course Code	Course Category	Course Title	Hours per week			Total Contact Hours	Credits
				Lecture	Tutorial	Practical		
1	20CE4T01	BSC	Complex Variables and Statistical Methods	3	-	-	3	3
2	20CE4T02	ESC	Engineering Geology	3	-	-	3	3
3	20CE4T03	PCC	Hydraulics and Hydraulic Machinery	3	-	-	3	3
4	20CE4T04	PCC	Structural Analysis-1	3	-	-	3	3
5	20CE4T05	HSMC	Managerial Economics and Financial Analysis	3	-	-	3	3
6	20CE4L06	PCC LAB	Engineering Geology Lab	-	-	3	3	1.5
7	20CE4L07	PCC LAB	Fluid Mechanics and Hydraulic Machinery Lab	-	-	3	3	1.5
8	20CE4L08	PCC LAB	Advanced Surveying Lab	-	-	3	3	1.5
9	20CE4S09	SC	Revit Architecture	-	-	4	4	2
10	20CE4M10	MC	Constitution of India	2	-	-	-	-
Total number of credits								**21.5**
Internship 2 Months (Mandatory) during summer vacation								
Honors/ Minor Course				**4**	**0**	**0**	**4**	**4**

B. TECH V SEMESTER

S. No	Course Code	Course Category	Course Title	Hours per week			Total Contact Hours	Credits
				Lecture	Tutorial	Practical		
1	20CE5T01	PCC	Geotechnical Engineering-1	3	-	-	3	3
2	20CE5T02	PCC	Transportation Engineering -1	3	-	-	3	3
3	20CE5T03	PCC	Design and Drawing of Reinforced Concrete Structures	3	-	-	3	3
4	**Open Elective–I**			3	-	-	3	3
5	**Professional Elective–I**			3	-	-	3	3
	20CE5T06	PEC	Structural Analysis – 2					
	20CE5T07		Rural Water Supply and Environmental Sanitation					
	20CE5T08		Geo synthetics					
	20CE5T09		Interior Designs and Decorations					
6	20CE5L10	PCC LAB	Geotechnical Engineering Lab	-	-	3	3	1.5
7	20CE5L11	PCC LAB	Transportation Engineering Lab	-	-	3	3	1.5
8	20CE5L12	SC	STAAD PRO LAB	-	-	4	4	2
9	20CE5M13	MC	Essence of Indian Traditional Knowledge	2	-	-	2	-
10	20CE5I14	I	Summer Internship	-	-	-	-	1.5
Total number of credits								**21.5**
Honors/ Minor Course				**4**	**0**	**0**	**4**	**4**

B. TECH VI SEMESTER

S. No	Course Code	Course Category	Course Title	Hours per week			Total Contact Hours	Credits
				Lecture	Tutorial	Practical		
1	20CE6T01	PCC	Design and Drawing of Steel Structures	3	-	-	3	3
2	20CE6T02	PCC	Water Resources Engineering-1	3	-	-	3	3
3	20CE6T03	PCC	Environmental Engineering	3	-	-	3	3
4	**Professional Elective-II**			3	-	-	3	3
	20CE6T04	PEC	Geotechnical Engineering -2					
	20CE6T05		Air pollution and Control					
	20CE6T06		Urban Transportation Planning					
	20CE6T07		Ground water development and Management.					
5	**Open Elective–II**			3	-	-	3	3
6	20CE6L10	PCC LAB	Environmental Engineering Lab	-	-	3	3	1.5
7	20CE6L11	PCC LAB	Design and Drawing of Irrigation Structures	-	-	3	3	1.5
8	20CE6L12	PCC LAB	Geographical Information Systems Lab	-	-	3	3	1.5
9	20CE6S13	SC	Soft Skills	-	-	4	4	2
10	20CE6M14	MC	Disaster Management	2	-	-	-	-
11	20CE6P15	P	Community Service Project	-	-	-	-	4
Total number of credits								**25.5**
Internship 2 Months (Mandatory) during summer vacation								
Honors/ Minor Course				**4**	**0**	**0**	**4**	**4**

B. TECH VII SEMESTER

S. No	Course Code	Course Category	Course Title	Hours per week			Total Contact Hours	Credits
				Lecture	Tutorial	Practical		
1	**Professional Elective-III**			3	-	-	3	3
	20CE7T01	PEC	Transportation Engineering-2					
	20CE7T02		Solid and Hazardous Management					
	20CE7T03		Bridge Engineering					
	20CE7T04		Ground Improvement Techniques.					
2	**Professional Elective-IV**			3	-	-	3	3
	20CE7T05	PEC	Water Resources Engineering-2					
	20CE7T06		Finite Element Methods					
	20CE7T07		Pavement Design					
	20CE7T08		Port and Harbour Structures					
3	**Professional Elective-V**			3	-	-	3	3
	20CE7T09	PEC	Estimation, Specification and Contracts					
	20CE7T10		Pre stressed Concrete					
	20CE7T11		Geo environmental Engineering					
	20CE7T12		Water Harvesting and Conservation.					
4	**Open Elective–III**			3	-	-	3	3
5	**Open Elective–IV**			3	-	-	3	3
6	20CE7T17	HSMC	Universal Human Values 2 Understanding Harmony	-	-	3	3	3
7	20CE7S18	SC	ETABS	1	-	2	3	2
8	20CE7I19	I	Industrial Internship					3
Total number of credits								**23**
Honors/ Minor Course				4	0	0	4	4

B. TECH VIII SEMESTER

S. No	Course Code	Course Category	Course Title	Hours per week			Total Contact Hours	Credits
				Lecture	Tutorial	Practical		
1	20CE8P01	PROJ	Project	-	-	-		8
Total number of credits								**8**

B.TECH V SEMESTER

S.No	Course Code	Course Category	Course Title	Hours per week			Contact Hours	Credits
				Lecture	Tutorial	Practical		
1	20CS5T01	PCC	Formal Languages & Automata Theory	3	0	0	3	3
2	20CS5T02	PCC	Data Warehousing & Data Mining	3	0	0	3	3
3	20CS5T03	PCC	Design and Analysis of Algorithms	3	0	0	3	3
Professional Elective-I				3	0	0	3	3
4	20CS5T04	PEC-I	Object Oriented Analysis and Design					
5	20CS5T05		Advanced Computer Architecture					
6	20CS5T06		Artificial Intelligence					
7	**Open Elective-I**			3	0	0	3	3
8	20CS5L10	PCC	Data Warehousing and Mining Lab Through Python	0	0	3	3	1.5
9	20CS5L11	PCC	Design and Analysis of Algorithms Lab	0	0	3	3	1.5
10	20CS5S12	SC	Mobile Application Development	0	0	4	4	2
11	20CS5M13	MC	Disaster Management	2	0	0	2	-
12	20CS5I14	I	Summer Internship	0	0	3	1.5	1.5
Total number of credits								**21.5**
Honors/Minor courses				**4**	**0**	**0**	**-**	**4**

B.TECH VI SEMESTER

S.No	Course Code	Course Category	Course Title	Hours per week			Contact Hours	Credits
				Lecture	Tutorial	Practical		
1	20CS6T01	PCC	Machine Learning	3	0	0	3	3
2	20CS6T02	PCC	Computer Networks	3	0	0	3	3
3	20CS6T03	PCC	Big Data Analytics	3	0	0	3	3
Professional Elective-II				3	0	0	3	3
4	20CS6T04	PEC-II	Software Testing Methodologies					
5	20CS6T05		Mean Stack Technologies					
6	20CS6T06		Compiler Design					
7	**Open Elective-II**			3	0	0	3	3
8	20CS6L10	PCC	Machine Learning Lab	0	0	3	3	1.5
9	20CS6L11	PCC	Computer Networks Lab	0	0	3	3	1.5
10	20CS6L12	PCC	Big Data Analytics Lab	0	0	3	3	1.5
11	20CS6S13	SC	Soft Skills	0	0	4	4	2
12	20CS6M14	MC	Essence of Indian traditional knowledge	2	0	0	2	-
13	20CS6P15	P	Community Service Project	-	-	-	-	4
Total number of credits								**25.5**
Honors/Minor courses				**4**	**0**	**0**	**-**	**4**

B.TECH VII SEMESTER

S.No	Course Code	Course Category	Course Title	Hours per week			Contact Hours	Credits
				Lecture	Tutorial	Practical		
Professional Elective-III				3	0	0	3	3
1	20CS7T01	PEC-III	Software Project Management					
2	20CS7T02		Cloud Computing					
3	20CS7T03		Cryptography & Network Security					
Professional Elective-IV				3	0	0	3	3
4	20CS7T04	PEC-IV	Human Computer Interaction					
5	20CS7T05		Mobile Computing					
6	20CS7T06		High-Performance Computing					
Professional Elective-V				3	0	0	3	3
7	20CS7T07	PEC-V	Software Architecture and Design Patterns					
8	20CS7T08		Adhoc & Sensor Networks					
9	20CS7T09		Social Network Analysis					
10	**Open Elective-III**			3	0	0	3	3
11	**Open Elective-IV**			3	0	0	3	3
8	20CS5L16	HSMC	Universal Human Values 2: Understanding Harmony	0	0	3	3	3
10	20CS5S17	SC	Data Visualization using Tableau	0	0	4	4	2
11	20CS5I18	I	Industrial Internship	-	-	-	-	3
Total number of credits								**23**
Honors/Minor courses				**4**	**0**	**0**	**-**	**4**

B.TECH VIII SEMESTER

S.No	Course Code	Course Category	Course Title	Hours per week			Total Contact Hours	Credits
				Lecture	Tutorial	Practical		
2	20CS8P01	P	Project	0	0	24	24	8
Total number of credits								**8**

III Year, Semester- II(6th Semester)

S.No	Course Code	Course Category	Course Title	Hours per week			Total Contact Hours	Credits
				Lecture	Tutorial	Practical		
1.	18IT6T01	PCC	Compiler Design	2	1	-	3	3
2.	18IT6T02	PCC	Computer Networks	3	-	-	3	3
3.	18IT6T03	PCC	Software Engineering	3	-	-	3	3
4.	18IT6T 04/05/06	PEC	**Program Elective-II**	3	-	-	3	3
			18IT6T 04 Business Intelligence					
			18IT6T 05 UML & Design Patterns					
			18IT6T 06 Advanced Java Programming					
5.	**OEC Open Elective-II**			3	-	-	3	3
6.	18IT6L21	PCC	Computer Networks Lab	-	-	4	2	2
7.	18IT6L22	PCC	Software Engineering Lab	-	-	4	2	2
8.	18IT6T23	MC	Essence of Indian Traditional Knowledge	2	-	-	2	-
						Total Number of Credits		**19**

IV Year, Semester- I(7th Semester)

S.No	Course Code	Course Category	Course Title	Hours per week			Total Contact Hours	Credits
				Lecture	Tutorial	Practical		
1	18IT7T01	PCC	Big Data & Hadoop	3			3	3
2	18IT7T02	PCC	E-Commerce	3			3	3
3	18IT7T 03/04/05	PEC	**Program Elective-III** 18IT7T 03 Information Retrieval Systems 18IT7T 04 Software Testing Methodologies 18IT7T 05 Software Project Management	2	1		3	3
4	18IT7T 06/07/08	PEC	**Program Elective-IV** 18IT7 T06 Cryptography and Network Security 18IT7 T07 Mobile Computing 18IT7 T08 Multimedia and Application Development	2	1		3	3
5	**OEC Open Elective-III**			3			3	3
6	18IT7L20	PCC	Big Data & Hadoop Lab			4	2	2
7	18IT7T21	PROJ	Mini Project/Internship			4	2	2
							Total Number of Credits	**19**

IV Year, Semester- II(8th Semester)

S.No	Course Code	Course Category	Course Title		Hours per week			Total Contact Hours	Credits
					Lecture	Tutorial	Practical		
1	18IT8T 01/02/03	PEC	**Program Elective-V**		3	-	-	3	3
			18IT8 T01	Cloud Computing					
			18IT8 T02	Machine Learning & Deep Learning					
			18IT8 T03	Principles of TCP/IP					
2	18IT8T 04/05/06	PEC	**Program Elective-VI**		3	-	-	3	3
			18IT8 T04	Real Time Systems					
			18IT8 T05	Human Computer Interaction					
			18IT8 T06	Introduction to Main-Frame Systems					
3	**OEC Open Elective-IV**				3	-	-	3	3
4	**OEC Open Elective-V OR MOOC**				2	-	-	2	2
5	18IT8L 22	PROJ	Major Project		-	-	16	8	8
Total Number of Credits									**19**

Open Elective – 1

S.No	Course Code	Course Title	Offering Dept
1	18IT5T08	Employability Skills: Competitive Coding	CSE/IT
2	18IT5T09	Optimization Techniques	BED
3	18IT5T10	Electrical Engineering Materials	EEE
4	18IT5T11	Basics of Control Systems	EEE
5	18IT5T12	Design Thinking &Product Innovation	ME
6	18IT5T13	Solid State Devices and Circuits	ECE
7	18IT5T14	Principles of Communication	ECE
8	18IT5T15	Employability Skills: Quantitative Aptitude & Reasoning	BED

Open Elective II

S.No	Course Code	Course Title	Offering Dept
1	18IT6T07	Employability Skills: Quantitative Aptitude & Reasoning	BED
2	18IT6T08	Basic Civil Engineering	CE
3	18IT6T09	Sustainable Engineering Practices	CE
4	18IT6T10	Disaster Management	CE
5	18IT6T11	Low Cost Housing	CE
6	18IT6T12	Design and Estimation of Electrical Systems	EEE
7	18IT6T13	Energy Audit, Conservation and Management	EEE
8	18IT6T14	Nanotechnology	ME
9	18IT6T15	Microprocessors and microcontroller	ECE
10	18IT6T16	Embedded Systems	ECE
11	18IT6T17	Employability Skills: Competitive Coding	CSE/IT
12	18IT6T18	Computer Networks	CSE/IT
13	18IT6T19	Managerial Economics and Financial Analysis	DMS
14	18IT6T20	Cross Cultural management	DMS

Open Elective III

S.No	Course Code	Course Title	Offering Dept
1	18IT7T09	Fuzzy Sets and Fuzzy Logic	BED
2	18IT7T10	Remote sensing and GIS	CE
3	18IT7T11	Green Buildings	CE
4	18IT7T12	Electric Vehicles	EEE
5	18IT7T13	Special Electrical Machines	EEE
6	18IT7T14	Bio Medical Instrumentation	ECE
7	18IT7T15	Nano Electronics	ECE
8	18IT7T16	Software Project Management.	CSE/IT
9	18IT7T17	Computer Architecture & Organization	CSE/IT
10	18IT7T18	Technology Innovation Management	DMS
11	18IT7T19	Global Environment Trends	DMS

Open Elective IV

S.No	Course Code	Course Title	Offering Dept
1	18IT8T07	Soft Computing Techniques	ECE
2	18IT8T08	Satellite communication	ECE
3	18IT8T09	Internet of Things	CSE
4	18IT8T10	Utilization of Electrical Energy	EEE
5	18IT8T11	Mechatronics	ME
6	18IT8T12	Green Engineering Systems	ME
7	18IT8T13	Micro - Electro - Mechanical Systems	ME
8	18IT8T14	Advanced Drawing for Civil Engineers	CE
9	18IT8T15	Polymer Chemistry	BED

Open Elective V

S.No	Course Code	Course Title	Offering Dept
1	18IT8T16	Operating Systems	CSE
2	18IT8T17	Robotics	ME
3	18IT8T18	Solar Energy Systems	ME
4	18IT8T19	Power Quality	EEE
5	18IT8T20	Additive Manufacturing	ME
6	18IT8T21	Advanced Civil Engineering Technologies	CE

Note: Prior approval from the department is required for the selection of Open Electives

MECHANICAL ENGINEERING
COURSE STRUCTURE
B. Tech I SEMESTER

S.No	Course Code	Course Category	Course Title	Hours per week			Total Contact Hours	Credits
				Lecture	Tutorial	Practical		
1	18ME1T01	HSMC	English-1	2	-	-	2	2
2	18ME1T02	BSC	Linear Algebra & Differential Equations	3	1	-	4	4
3	18ME1T03	BSC	Engineering Chemistry	3	-	-	3	3
4	18ME1T04	ESC	Problem solving through C	3	-	-	3	3
5	18ME1T05	ESC	Engineering Mechanics	3	1	-	4	4
6	18ME1L06	HSMC	English Communication Skill Lab-1	-	-	2	2	1
7	18ME1L07	BSC	Engineering Chemistry Lab	-	-	3	3	1.5
8	18ME1L08	ESC	Problem solving through C Lab	-	-	3	3	1.5
9	18ME1T09	MC	Environmental Studies	2	-	-	2	-
							Total number of credits	**20**

B. Tech II SEMESTER

S.No	Course Code	Course Category	Course Title	Hours per week			Total Contact Hours	Credits
				Lecture	Tutorial	Practical		
1	18ME2T01	HSMC	English-II	1	0	**2**	3	2
2	18ME2T02	BSC	Vector Calculus and Fourier Transforms	3	0	-	3	3
3	18ME2T03	BSC	Engineering Physics	3	0	-	3	3
4	18ME2T04	BSC	Biology for Engineers	2	-	-	2	2
5	18ME2T05	ESC	Basic Electrical & Electronics Engineering	3	-	-	3	3
6	18ME2T06	ESC	Engineering Graphics	3	-	-	3	3
7	18ME2L07	BSC	Engineering Physics Lab	-	-	3	3	1.5
8	18ME2L08	ESC	Basic Electrical & Electronics Engineering Lab	-	-	2	2	1
9	18ME2L09	ESC	Basic Engineering & IT Workshop	-	-	3	3	1.5
							Total number of credits	**20**

B. Tech III SEMESTER

S.No	Course Code	Course Category	Course Title	Hours per week			Total Contact Hours	Credits
				Lecture	Tutorial	Practical		
1	18ME3T01	PCC	Complex variables & Numerical methods	2	1	0	3	3
2	18ME3T02	BSC	Mechanics of Solids	2	1	0	3	3
3	18ME3T03	PCC	Kinematics of Machines	2	1	0	3	3
4	18ME3T04	PCC	Thermodynamics	2	1	0	3	3
5	18ME3T05	ESC	Materials science and Engineering	3	0	0	3	3
6	18ME3T06	PCC	Fluid mechanics & hydraulic machines	3	0	0	3	3
7	18ME3L07	PCC	Fluid mechanics & Hydraulic machines lab	0	0	3	1.5	1.5
8	18ME3L08	PCC	Mechanics of Solids & Metallurgy LAB	0	0	3	1.5	1.5
9	18ME3L09	HSMC	Proficiency through Reading and Writing	0	0	2	2	1
				Total number of credits				22

B. Tech IV SEMESTER

S.No	Course Code	Course Category	Course Title	Hours per week			Total Contact Hours	Credits
				Lecture	Tutorial	Practical		
1	18ME4T01	BSC	Probability & Statistics	2	1	0	3	3
2	18ME4T02	ESC	Production Technology	3	0	0	3	3
3	18ME4T03	PCC	Design of Machine Elements	2	1	0	3	3
4	18ME4T04	ESC	IC Engines & Air Compressors	2	1	0	3	3
5	18ME4T05	PCC	Computer Aided Machine Drawing	1	0	4	3	3
6		OEC	**Open Elective-1**	3	0	0	3	3
7	18ME4L09	ESC	Production Technology Lab	0	0	3	3	1.5
8	18ME4L10	PCC	Thermal engineering Lab	0	0	3	3	1.5
9	18ME4T11	MC	Indian constitution	2	0	0	2	0
10	18ME4I12	P	Summer Internship	0	0	0	0	1
				Total number of credits				22

B. Tech V SEMESTER

S.No	Course Code	Course Category	Course Title	Hours per week			Total Contact Hours	Credits
				Lecture	Tutorial	Practical		
1	18ME5T01	PCC	Dynamics of Machines	2	1	0	3	3
2	18ME5T02	HSMC	Management Science & Productivity	3	0	0	3	3
3	18ME5T03	PCC	Turbo machines	3	0	0	3	3
4	18ME5T04	PCC	MC&MT	3	0	0	3	3
5		OEC	**Open Elective-2**	3	0	0	3	3
6	18ME5L13	PCC	Theory of machines Lab	0	0	3	1.5	1.5
7	18ME5L14	PCC	MT Lab	0	0	3	1.5	1.5
8	18ME5L15	HSMC	Communication Skills Lab	0	0	2	2	1
9	18ME5T16	MC	Essence of Indian Traditional Culture	2	0	0	0	0
				Total number of credits				19

B. Tech VI SEMESTER

S.No	Course Code	Course Category	Course Title	Hours per week			Total Contact Hours	Credits
				Lecture	Tutorial	Practical		
1	18ME6T01	PCC	Design of Transmission Elements	2	1	0	3	3
2	18ME6T02	PCC	Heat Transfer	2	1	0	3	3
3	18ME6T03	PCC	Metrology and measurements	3	0	3	3	3
4		PEC	**Professional Elective -1**	3	0	0	3	3
	18ME6T04		Experimental Stress Analysis					
	18ME6T05		Design for Manufacturing					
	18ME6T06		R & AC					
5		OEC	**Open Elective-3**	3	0	0	3	3
6	18ME6L21	PCC	Metrology & Instrumentation Lab	0	0	3	3	1.5
7	18ME6L22	PCC	Heat Transfer Lab	0	0	3	3	1.5
8	18ME6T23	MC	Disaster Management	2	0	0	2	0
9	18ME6I24	P	Summer Internship	-	-	-	-	1
				Total number of credits				19

B. Tech VII SEMESTER

S.No	Course Code	Course Category	Course Title	Hours per week			Total Contact Hours	Credits
				Lecture	Tutorial	Practical		
1	18ME7T01	PCC	CAD CAM	3	0	0	3	3
2	18ME7T02	HSMC	Operational Research	3	0	0	3	3
3		PEC	**Professional Elective -2**	3	0	0	3	3
	18ME7T03		Finite Element Methods					
	18ME7T04		Gas Dynamics & Jet Propulsion					
	18ME7T05		Production Planning & Control					
4		PEC	**Professional Elective -3**	3	0	0	3	3
	18ME7T06		Advanced Materials					
	18ME7T07		Power plant Engineering					
	18ME7T08		Optimization Techniques through MATLAB					
5		PEC	**Professional Elective -4**	3	0	0	3	3
	18ME7T09		Condition Monitoring and Signal Conditioning					
	18ME7T10		Computational Fluid Dynamics					
	18ME7T11		Advanced Machining Processes					
6	18ME7L12	PCC	CAD CAM Lab	-	-	4	2	2
7	18ME7P13	P	Mini project	-	-	4	2	2
			Total number of credits					19

B. Tech VIII SEMESTER

S.No	Course Code	Course Category	Course Title	Hours per week			Total Contact Hours	Credits
				Lecture	Tutorial	Practical		
1		PEC	**Professional Elective -5**	3	0	0	3	3
	18ME8T01		Mechanical Vibrations					
	18ME8T02		Automobile Engineering					
	18ME8T03		Non Destructive Evaluation					
2		OEC	**Open Elective-4**	3	0	0	3	3
3		OEC	**Open Elective-5**	3	0	0	3	3
4	18ME8S19	P	MOOCS	-	-	4	4	2
5	18ME8P20	P	Project	-	-	16	16	8
			Total number of credits					19

S.No	Course Code	Course Title	Hours Per Week			Total Contact Hours	Credits
			L	T	P		
1	18312T01	Finite Element Method	3	---	---	3	3
2	18312T02	Computer Aided Design	3	---	---	3	3
	18312T03	1. Tribology in Design			---		
3	18312T04	2. Robotics	3	---	---	3	3
	18312T05	3. Fracture Mechanics			---		
	18312T06	1. Multi-body Dynamics					
4	18312T07	2. Condition Based Monitoring	3	---	---	3	3
	18312T08	3. Optimization Techniques in Design					
5	18312L11	Computer Aided Design lab	---	---	4	4	2
6	18312L12	Simulation lab	---	---	4	4	2
7	18312T09	Audit Course-2	2	---	---	2	0
8	18312P10	Mini-Project with Seminar	---	---	4	4	2
		TOTAL	14		12	26	18

						Total Credits	16

II Year IV Semester							
Sr. No.	Course Code	Course Title	L	T	P	Contact Hrs./ Wk.	Credits
1	18414801	Comprehensive Viva-Voce	0	0	4	4	2
2	18414P02	Project Work Part -II	0	0	28	28	14
						Total Credits	16

Dr.I Santhi Prabha

Dr.M Rama Subba Reddy

Dr. Anil Kumar

Dr. Goutam Kumar Gupta

Mr.N Pradeep

MBA III SEMESTER

S. No	Course Code	Course Title	Hours per week			Total contact hours	Credits
			Lecture	Tutorial	Practical		
1	18MB3T01	Strategic Management	4	1	--	5	3
2	18MB3L02	Data Science using R	0	0	6	3	3
3	18MB3T03	Operations Research	4	1	--	5	3
4		Elective -1 Paper 1	4	1	--	5	3
5		Elective -1 Paper 2	4	1	--	5	3
6		Elective -2 Paper 1	4	1	--	5	3
7		Elective -2 Paper 2	4	1	--	5	3
Total						**33**	**21**

MBA IV SEMESTER

S. No	Course Code	Course Title	Hours per week			Total contact hours	Credits
			Lecture	Tutorial	Practical		
1	18MB4T01	Logistics and Supply Chain Management	4	1	--	5	3
2	18MB4T02	Legal Aspects of Business	4	1	--	5	3
3	18MB4T03	Entrepreneurship & Project Management	4	1	--	5	3
4		Elective -1 Paper 3	4	1	--	5	3
5		Elective -1 Paper 4	4	1	--	5	3
6		Elective -2 Paper 3	4	1	--	5	3
7		Elective -2 Paper 4	4	1	--	5	3
8	18MB4P19	Project	--	--	--	--	6
Total						**35**	**27**

MCA V Semester

S.No	Course Code	Course Category	Course Title	Hours per week			Total Contact Hours	Credits
				Lecture	Tutorial	Practical		
1	18MC5T01	PCC	Software Testing Methodologies	3			3	3
2	18MC5T02	PCC	Hadoop & Big Data	3			3	3
3	18MC5T03	PCC	Mobile Computing	3			3	3
4	18MC5T04/ 18MC5T05/ 18MC5T06	PEC	**Elective 2:** Machine learning &Deep Learning Cloud computing Human Computer Interaction	3			3	3
5	18MC5T07/ 18MC5T08/ 18MC5T09	PEC	**Elective 3:** Internet of Things Software Project Management Data Analytics	3			3	3
6	18MC5L10	PCC	Hadoop & Big Data Lab			4	2	2
7	18MC5L11	PCC	Mobile Application Development Lab			4	2	2
8	18MC5T12	PROJ	Project – I			4	2	2
								21

MCA VI Semester

S.No	Course Code	Course Category	Course Title	Hours per week			Total Contact Hours	Credits
				Lecture	Tutorial	Practical		
1	18MC6T01	T	Technical Seminar		3		3	3
2	18MC6L02	PROJ	Project – II			32	16	16
								19

			18CS6T06	Distributed Systems					
5	**OEC Open Elective-II**				3	-	-	3	3
6	18CS6L21	PCC	Computer Networks Lab		-	-	4	2	2
7	18CS6L22	PCC	Software Engineering Lab		-	-	4	2	2
8	18CS6T23	MC	Essence of Indian Traditional Knowledge		2	-	-	2	--
								Total Number Of Credits	**19**

Course Structure for IV Year, Semester- I (7th Semester)

S.No	Course Code	Course Category	Course Title		Hours per week			Total Contact Hours	Credits
					Lecture	Tutorial	Practical		
1	18CS7T01	PCC	Big Data & Hadoop		3	-	-	3	3
2	18CS7T02	PCC	Cryptography & Network Security		2	1	-	3	3
3	18CS7T 03/04/05	PEC	**Program Elective-III**		2	1	-	3	3
			18CS7T03	Machine Learning & Deep Learning					
			18CS7T04	Soft Computing					
			18CS7T05	Data Analytics					
4	18CS7T 06/07/08	PEC	**Program Elective-IV**		3	-	-	3	3
			18CS7T06	Embedded Systems					
			18CS7T07	Software Testing Methodologies					
			18CS7T08	Software Project Management					
5	**OEC Open Elective-III**				3	-	-	3	3
6	18CS7L20	PCC	Big Data & Hadoop Lab		-	-	4	2	2
7	18CS7L21	PROJ	Mini Project /Internship		-	-	4	2	2
								Total Number Of Credits	**19**

Course Structure for IV Year, Semester- II (8th Semester)

S.No	Course Code	Course Category	Course Title		Hours per week			Total Contact Hours	Credits
					Lecture	Tutorial	Practical		
1	18CS8T 01/02/03	PEC	**Program Elective-V**		3	-	-	3	3
			18CS8T 01	Cloud Computing					
			18CS8T 02	Mobile Computing					
			18CS8T 03	Image Processing					
2	18CS8T 04/05/06	PEC	**Program Elective-VI**		3	-	-	3	3
			18CS8T 04	Adhoc And Sensor Networks					
			18CS8T 05	Human Computer Interaction					
			18CS8T 06	Artificial Intelligence & Neural Networks					
3	**OEC Open Elective-IV**				3	-	-	3	3
4	**OEC Open Elective-V or MOOC**				2	-	-	2	2
5	18CS8L22	PROJ	Major Project		-	-	16	8	8
								Total Number Of Credits	**19**

Course Structure for B. Tech III Semester

S.No	Course Code	Course Category	Course Title	Hours per week			Total Contact Hours	Credits
				Lecture	Tutorial	Practical		
1	18EC3T01	BSC	Probability Theory & Stochastic Processes	3	1	**0**	3	4
2	18EC3T02	PCC	Electronic Circuit Analysis	3	0	**0**	3	3
3	18EC3T03	PCC	Digital Electronics	3	0	0	3	3
4	18EC3T04	ESC	Network Theory	3	0	0	3	3
5	18EC3T05	PCC	Signals & Systems	3	0	0	3	3
6	18EC3T06	HSMC	Managerial Economics & Finance Analysis	3	0	0	3	3
7	18EC3L07	PCC	Electronic Circuit Analysis Lab	0	0	3	3	1.5
8	18EC3L08	PCC	Signals & Systems Lab	0	0	3	3	1.5
9	18EC3N09	MC	Constitution of India	2	0	0	2	0
							Total number of credits	**22**

Course Structure for B. Tech IV Semester

S.No	Course Code	Course Category	Course Title	Hours per week			Total Contact Hours	Credits
				Lecture	Tutorial	Practical		
1	18EC4T01	HSMC	Humanities (Effective Technical Communication)	3	0	0	3	3
2	18EC4T02	BSC	Physics of Materials	2	0	0	2	2
3	18EC4T03	PCC	Analog IC Applications	3	0	**0**	3	3
4	18EC4T04	PCC	Digital System Design Using HDL	3	0	0	3	3
5	18EC4T05	PCC	Electromagnetic Waves & Transmission lines	3	0	0	3	3
6	18EC4T06	PCC	Control Systems	3	0	0	3	3
7	18EC4L07	PCC	Analog IC Applications Lab	0	0	3	3	1.5
8	18EC4L08	PCC	Digital System Design Using HDL Lab	0	0	3	3	1.5
9	18EC4L09	Project	Mini Project	0	0	4	4	2
							Total number of credits	**22**

Course Structure for B. Tech VII Semester

S.No	Course Code	Course Category	Course Title	Hours per week			Total Contac t Hours	Credits
				Lecture	Tutorial	Practical		
1	18EC7T01	PCC	Digital Image Processing	3	0	0	3	3
2	18EC7T02	PCC	Microwave Engineering	3	0	0	3	3
3	18EC7T03 18EC7T04 18EC7T05	PEC	Professional Elective-2	3	0	0	3	3
4	18EC7T06 18EC7T07 18EC7T08	PEC	Professional Elective-3	3	0	0	3	3
5	18EC7T09 18EC7T10 18EC7T11	OEC	Open Elective-3	3	0	0	3	3
6	18EC7L12	PCC	Microwave & OC LAB	1	0	2	3	2
7	18EC7P13	Projects	INDUSTRIAL INTERNSHIP	0	0	2	2	2
							Total number of credits	**19**

Course Structure for B. Tech VIII Semester

S.No	Course Code	Course Category	Course Title	Hours per week			Total Contac t Hours	Credits
				Lectu re	Tutori al	Practic al		
1	18EC8T01	PCC	Coding Theory & Techniques	3	0	0	3	3
2	18EC8T02 18EC8T03 18EC8T04	PEC	Professional Elective-4	3	0	0	3	3
3	18EC8T05 18EC8T06 18EC8T07	OEC	Open Elective-4	3	0	0	3	3
4	18EC8T08 18EC8T09 18EC8T10	OEC5/ MOOCS	Data Communication& Networking Renewable Energy sources twork Security & Cryptography	2	0	0	2	2
5	18EC8P11	PROJECTS	PROJECT	0	0	16	16	8
6	18EC8L12	Lab course	Comprehensive Viva Voice					0
							Total number of credits	**19**

B. Tech VII SEMESTER

S.No	Course Code	Course Category	Course Title	Hours per week			Total Contact Hours	Credits
				Lecture	Tutorial	Practical		
	18EE7T01	PCC	Digital Signal Processing	3	-	-	3	3
	18EE7T02	PCC	Power System Operation & Control	3	-	-	3	3
1	**Professional Elective-I**			3	-	-	3	3
	18EE7T03	PEC-I	Electric Vehicles					
	18EE7T04		Renewable Energy Sources					
	18EE7T05		Smart Grid Technologies					
4	**Professional Elective-II**			3	-	-	3	3
	18EE7T06	PEC-II	Programmable Logic Controllers					
	18EE7T07		AI Techniques					
	18EE7T08		Special Electrical Machines					
5		OEC-III	**Open Elective-III**	3	-	-	3	3
6	18EE7L09	PCC	Digital Signal Processing Lab	-	-	3	3	1.5
7	18EE7L10	PCC	Power Systems & Simulation Lab	-	-	3	3	1.5
8	18EE7P11	PROJ	Summer Internship / Mini Project	-	-	-	-	1
							Total number of credits	**19**

B. Tech VIII SEMESTER

S.No	Course Code	Course Category	Course Title	Hours per week			Total Contact Hours	Credits
				Lecture	Tutorial	Practical		
1	18EE8T01	PCC	Utilization of Electrical Energy	3	-	-	3	3
2	**Professional Elective-III**			3	-	-	3	3
	18EE8T02	PEC-III	Digital Control Systems					
	18EE8T03		Electrical Distribution Systems					
	18EE8T04		Power Electronic Control of Electric Drives					
3	**Professional Elective-IV**			3	-	-	3	3
	18EE8T05	PEC-IV	HVDC & FACTS					
	18EE8T06		Instrumentation					
	18EE8T07		Advanced Control Systems					
4		OEC-IV	MOOC/Open Elective IV	-	-	-	-	2
5	18EE8P09	PROJ	Project	-	-	-	-	8
							Total number of credits	**19**

ELECTRONICS & COMMUNICATION ENGINEERING
COURSE STRUCTURE
B.TECH I SEMESTER

S. No.	Course Code	Course Category	Course Title	Hours per week			Contact Hours	Credits
				Lecture	Tutorial	Practical		
1	20EC1T01	BSC	Linear Algebra and Differential Equations	3	-	-	3	3
2	20EC1T02	BSC	Applied Physics	3	-	-	3	3
3	20EC1T03	HSMC	English	3	-	-	3	3
4	20EC1T04	ESC	Electronic Devices	2	-		2	2
5	20EC1T05	ESC	Problem solving through C	3	-	-	3	3
6	20EC1L06	HSMC	English Communication Skills Lab	-	-	3	3	1.5
7	20EC1L07	BSC	Applied Physics Lab	-	-	3	3	1.5
8	20EC1L08	ESC	Problem solving through C Lab	-	-	3	3	1.5
9	20EC1L09	ESC	Electronic Devices Lab	-	-	2	2	1
Total number of Credits								**19.5**

B.TECH II SEMESTER

S.No.	Course Code	Course Category	Course Title	Hours per week			Contact Hours	Credits
				Lecture	Tutorial	Practical		
1	20EC2T01	BSC	Transform Techniques	3	-	-	3	3
2	20EC2T02	BSC	Applied Chemistry	3	-	-	3	3
3	20EC2T03	ESC	Network Theory	3	-	-	3	3
4	20EC2T04	ESC	Basic Electrical Technology	3	-	-	3	3
5	20EC2T05	ESC	Engineering Drawing	1	-	4	5	3
6	20EC2L06	BSC	Applied Chemistry Lab	-	-	3	3	1.5
7	20EC2L07	ESC	Engineering & IT Workshop	-	-	3	3	1.5
8	20EC2L08	ESC	Basic Electrical Technology Lab	-	-	3	3	1.5
9	20EC2M09	MC	Environmental Science	3	-	-	3	0
Total number of Credits								**19.5**

B.TECH III SEMESTER

S.No.	Course Code	Course Category	Course Title	Hours per week			Total Contact Hours	Credits
				Lecture	Tutorial	Practical		
1	20EC3T01	BSC	Complex Variables	3	0	0	3	3
2	20EC3T02	PCC	Probability Theory and Stochastic Processes	3	0	0	3	3
3	20EC3T03	PCC	Digital Electronics	3	0	0	3	3
4	20EC3T04	PCC	Signals & Systems	3	0	0	3	3
5	20EC3T05	PCC	Electronic Circuits Analysis	3	0	0	3	3
6	20EC3L06	PCC	Electronics Circuits Analysis Lab	0	0	3	3	1.5
7	20EC3L07	PCC	Signals & Systems Lab	0	0	3	3	1.5
8	20EC3L08	PCC	Digital Electronics Lab	0	0	3	3	1.5
9	20EC3S09	SC	Data Structures through C	0	0	4	4	2
Total number of credits								**21.5**

B.TECH IV SEMESTER

S.No	Course Code	Course Category	Course Title	Hours per week			Total Contact Hours	Credits
				Lecture	Tutorial	Practical		
1	20EC4T01	BSC	Numerical Methods and Vector Calculus	3	0	0	3	3
2	20EC4T02	ESC	Control Systems	2	0	0	2	2
3	20EC4T03	PCC	Analog Integrated Circuits	3	0	0	3	3
4	20EC4T04	PCC	Electromagnetic Waves and Transmission lines	3	0	0	3	3
5	20EC4T05	HSMC	Managerial Economics and Financial Analysis	3	0	0	3	3
6	20EC4T06	PCC	Analog and Digital Communications	3	0	0	3	3
7	20EC4L07	PCC	Analog Integrated Circuits lab	0	0	2	2	1
8	20EC4L08	PCC	Analog and Digital Communications Lab	0	0	3	3	1.5
9	20EC4S09	SC	Python Programming	0	0	4	4	2
10	20EC4M10	MC	Constitution of India	2	0	0	2	0
Total number of credits								**21.5**
Honors/Minor courses				**4**	**0**	**0**	**4**	**4**

B. Tech V SEMESTER

S. No	Course Code	Course Category	Course Title	Hours per week			Total Contact Hours	Credits
				Lecture	Tutorial	Practical		
1	20EC5T01	PCC	Microprocessors and Microcontrollers	3	-	-	3	3
2	20EC5T02	PCC	Antennas and Wave Propagation	3	-	-	3	3
3	20EC5T03	PCC	Digital system Design using VHDL& Verilog	3	-	-	3	3
4	**Open Elective–I**			3	-	-	3	3
Professional Elective–I				3	-	-	3	3
5	20EC5T07	PEC-I	Computer Architecture and Organization					
	20EC5T08		Telematics					
	20EC5T09		Cellular and Mobile Communications					
6	20EC5L10	PCC	Microprocessors and Micro-controllers Lab	-	-	3	3	1.5
7	20EC5L11	PCC	Digital system Design using VHDL & Verilog Lab	-	-	3	3	1.5
8	20EC5S12	SC	JAVA Programming	-	-	4	4	2
9	20EC5M13	MC	Essence of Indian Traditional knowledge	2	-	-	2	-
10	20EC5I14	I	Summer internship	-	-	-	-	1.5
Total number of credits								**21.5**
Honors/Minor courses				**4**	**0**	**0**	**-**	**4**

B. Tech VI SEMESTER

S.No	Course Code	Course Category	Course Title	Hours per week			Total Contact Hours	Credits
				Lecture	Tutorial	Practical		
1	20EC6T01	PCC	VLSI Design	3	-	-	3	3
2	20EC6T02	PCC	Digital Signal Processing	3	-	-	3	3
3	20EC6T03	PCC	Microwave Engineering	3	-	-	3	3
Professional Elective-II				3	-	-	3	3
4	20EC6T04	PEC-II	Embedded systems					
	20EC6T05		Electronics Measurements and Instrumentation					
	20EC6T06		Digital Modulation Techniques					
5	**Open Elective–II**			3	-	-	3	3
6	20EC6L10	PCC LAB	Microwave Engineering and optical communications Lab	-	-	3	3	1.5
7	20EC6L11	PCC LAB	VLSI Design lab	-	-	3	3	1.5
8	20EC6L12	PCC LAB	Digital Signal Processing Lab	-	-	3	3	1.5
9	20EC6S13	SC	Soft Skills	-	-	4	4	2
10	20EC6M14	MC	Disaster Management	2	-	-	2	-
11	20EC6P15	P	Community Service Project	-	-	-	-	4
Total number of credits								**25.5**
Honors/Minor courses				**4**	**-**	**-**	**-**	**4**

B. Tech VII SEMESTER

S.No	Course Code	Course Category	Course Title	Hours per week			Contact Hours	Credits
				Lecture	Tutorial	Practical		
Professional Elective-III				3	0	0	3	3
1	20EC7T01	PEC-III	CMOS Analog IC Design					
	20EC7T02		Data Communications And Networks					
	20EC7T03		Information theory and Coding					
Professional Elective-IV				3	0	0	3	3
2	20EC7T04	PEC-IV	Digital Image processing					
	20EC7T05		Low power VLSI Design					
	20EC7T06		Optical Communications					
Professional Elective-V				3	0	0	3	3
3	20EC7T07	PEC-V	Radar Engineering					
	20EC7T08		Embedded real time Operating Systems					
	20EC7T09		Satellite Communications					
4	**Open Elective-III**			3	0	0	3	3
5	**Open Elective-IV**			3	0	0	3	3
6	20EC7T16	HSMC	Universal Human values 2 Understanding Harmony	3	0	0	3	3
7	20EC7S17	SC	Internet of things applications with Latest Boards	-	-	4	4	2
8	20EC7I18	I	Industrial Internship	-	-	-	-	3
Total number of credits								**23**
Honors/Minor courses				4	0	0	-	**4**

B. Tech VIII SEMESTER

S.No	Course Code	Course Category	Course Title	Hours per week			Total Contact Hours	Credits
				Lecture	Tutorial	Practical		
1	20EC8P01	P	Project work	-	-	-	-	8
Total number of credits								**8**

OPEN ELECTIVE –I:

S. No.	Course Code	Course Name	L	T	P	C	Offered by
1	20CE5T04	Architecture and Town Planning	3	0	0	3	CE
2	20CE5T05	Elements of Civil Engineering	3	0	0	3	CE
3	20EE5T04	Basics of Control Systems	3	0	0	3	EEE
4	20EE5T05	Special Electrical Machines	3	0	0	3	EEE
5	20ME5T04	Design Thinking & Product Innovation	3	0	0	3	ME
6	20ME5T05	Nanotechnology	3	0	0	3	ME
7	20EC5T04	Linear System Analysis	3	0	0	3	ECE
8	20EC5T05	Digital Logic Design	3	0	0	3	ECE
9	20EC5T06	Solid State Devices	3	0	0	3	ECE
10	20CS5T07	Introduction to Artificial Intelligence	3	0	0	3	CSE
11	20CS5T08	Operating System	3	0	0	3	CSE
12	20CS5T09	Software Engineering	3	0	0	3	CSE
13	20IT5T07	Computer Networks	3	0	0	3	IT
14	20IT5T08	Computer Graphics	3	0	0	3	IT
15	20HS5T01	Quantitative Aptitude and Reasoning	3	0	0	3	BED
16	20MB5T01	Principles of Management	3	0	0	3	DMS
17	20MB5T02	Technology Management	3	0	0	3	DMS
18	20AD5T07	Foundations of Data Science	3	0	0	3	AIDS
19	20AM5T07	Introduction to Machine Learning	3	0	0	3	AIML

OPEN ELECTIVE –II:

S. No.	Course Code	Course Name	L	T	P	C	Offered by
1	20CE6T08	Remote Sensing and GIS	3	0	0	3	CE
2	20CE6T09	Environmental Impact Assessment	3	0	0	3	CE
3	20EE6T08	Renewable Energy Sources	3	0	0	3	EEE
4	20EE6T09	Energy Audit, Conservation and Management	3	0	0	3	EEE
5	20ME6T07	Industrial Robotics	3	0	0	3	ME
6	20ME6T08	3D Printing	3	0	0	3	ME
7	20EC6T07	Electronic Circuits and Networks	3	0	0	3	ECE
8	20EC6T08	Principles of Communications	3	0	0	3	ECE
9	20EC6T09	Microcontrollers and its Applications	3	0	0	3	ECE

10	20CS6T07	Introduction to Machine Learning	3	0	0	3	CSE
11	20CS6T08	Information Security	3	0	0	3	CSE
12	20CS6T09	Agile Technologies	3	0	0	3	CSE
13	20IT6T07	Fundamentals of Machine Learning	3	0	0	3	IT
14	20IT6T08	Database Management Systems	3	0	0	3	IT
15	20HS6T01	Operations Research	3	0	0	3	BED
16	20MB6T01	Organizational Behaviour	3	0	0	3	DMS
17	20MB6T02	Project Management	3	0	0	3	DMS
18	20AD6T07	Visual Analytics	3	0	0	3	AIDS
19	20AM6T07	Big data Analytics	3	0	0	3	AIML

OPEN ELECTIVE –III:

S. No.	Course code	Course Name	L	T	P	C	Offered by
1	20CE7T13	Construction Technology and Management	3	0	0	3	CE
2	20CE7T14	Green Buildings	3	0	0	3	CE
3	20EE7T13	Concept of Power System Engineering	3	0	0	3	EEE
4	20EE7T14	Instrumentation	3	0	0	3	EEE
5	20ME7T10	Green Engineering Systems	3	0	0	3	ME
6	20ME7T11	Hybrid Electric Vehicles	3	0	0	3	ME
7	20EC7T10	Data Communications	3	0	0	3	ECE
8	20EC7T11	Mechatronics	3	0	0	3	ECE
9	20EC7T12	Bio Medical Instrumentation	3	0	0	3	ECE
10	20CS7T10	Artificial Neural Networks	3	0	0	3	CSE
11	20CS7T11	Cyber Security	3	0	0	3	CSE
12	20CS7T12	Software Testing Methodologies	3	0	0	3	CSE
13	20IT7T10	Internet of Things	3	0	0	3	IT
14	20IT7T11	Computer Vision	3	0	0	3	IT
15	20HS7T01	Fuzzy sets	3	0	0	3	BED
16	20MB7T01	Digital Media management	3	0	0	3	DMS
17	20MB7T02	Entrepreneurship Development	3	0	0	3	DMS
18	20AD7T10	Data Analysis and Visualization with Python	3	0	0	3	AIDS
19	20AM7T10	NoSQL Databases	3	0	0	3	AIML

OPEN ELECTIVE –IV:

S. No.	Course Code	Course Name	L	T	P	C	Offered by
1	20CE7T15	Waste water treatment	3	0	0	3	CE
2	20CE7T16	Repair and Rehabilitation of Concrete Structures	3	0	0	3	CE
3	20EE7T15	Power Quality	3	0	0	3	EEE
4	20EE7T16	Electric Vehicles	3	0	0	3	EEE
5	20ME7T12	Micro-Electro- Mechanical Systems	3	0	0	3	ME
6	20ME7T13	Solar Energy Systems	3	0	0	3	ME
7	20EC7T13	Introduction to Embedded Systems	3	0	0	3	ECE
8	20EC7T14	Internet of Things	3	0	0	3	ECE
9	20EC7T15	Analog and Digital IC applications	3	0	0	3	ECE
10	20CS7T13	Data Analytics	3	0	0	3	CSE
11	20CS7T14	Block Chain Technology	3	0	0	3	CSE
12	20CS7T15	Software Project Management	3	0	0	3	CSE
13	20IT7T13	Cloud Computing	3	0	0	3	IT
14	20IT7T14	Business Intelligence	3	0	0	3	IT
15	20HS7T02	Polymer Chemistry	3	0	0	3	BED
16	20MB7T03	Total Engineering Quality Management	3	0	0	3	DMS
17	20MB7T04	Stress Management	3	0	0	3	DMS
18	20AD7T11	Natural Language Processing	3	0	0	3	AIDS
19	20AM7T11	Deep Learning	3	0	0	3	AIML

HONORS/MINOR COURSES OFFERED BY THE DEPARTMENT

Honors/ Minor Course Fulfillments:

- The 20 additional credits need to be acquired, 16 credits can be earned by undergoing specified courses, with each carrying 4 credits.
- The remaining 4 credits must be acquired through two online MOOCs (SWAYAM /NPTEL), which shall be domain specific, each with 2 credits and with a minimum duration of 8/12weeks as recommended by the Board of Studies.
- Minor Engineering subjects are offered to other branches by ECE Department (except for ECE Students).
- Honors engineering subjects are offered to ECE Students.
- The head of the department will float the list of allowed MOOC electives in each academic year, based on the list floated by MOOCs (SWAYAM/NPTEL).

HONORS COURSES

S.No.	Course code	Course Name	L	T	P	C
Pool-1						
1	20ECHN01	Micro Electronic Devices	4	0	0	4
2	20ECHN02	Wireless sensor Networks	4	0	0	4
3	20ECHN03	CMOS Digital IC Applications	4	0	0	4
4	20ECHN04	Image and Video Processing	4	0	0	4
Pool-2						
5	20ECHN05	Analog VLSI Design	4	0	0	4
6	20ECHN06	Spread spectrum Communications	4	0	0	4
7	20ECHN07	Advanced Digital Signal processing	4	0	0	4
8	20ECHN08	Optical Networks	4	0	0	4
Pool-3						
9	20ECHN09	VLSI Signal Processing	4	0	0	4
10	20ECHN10	Wireless Communications	4	0	0	4
11	20ECHN11	Adaptive Signal Processing	4	0	0	4
12	20ECHN12	Software Design Radio	4	0	0	4
Pool-4						
13	20ECHN13	FPGA Design	4	0	0	4
14	20ECHN14	DSP Processors & Architecture	4	0	0	4
15	20ECHN15	Soft Computing Techniques	4	0	0	4
16	20ECHN16	RF and Mixed signals Circuits	4	0	0	4

MINOR COURSES

S.No.	Course code	Course Name	L	T	P	C	Offered by
1	20ECMN01	Systems and Signal Processing	4	0	0	4	**ECE**
2	20ECMN02	Networks and Transmission Lines	4	0	0	4	**ECE**
3	20ECMN03	Modulation Techniques	4	0	0	4	**ECE**
4	20ECMN04	Analog Electronics	4	0	0	4	**ECE**
5	20ECMN05	Sensors and Actuators	4	0	0	4	**ECE**
6	20ECMN06	Antenna Theory	4	0	0	4	**ECE**
7	20ECMN07	Digital Electronics	4	0	0	4	**ECE**
8	20ECMN08	Mobile Communications	4	0	0	4	**ECE**
9	20ECMN09	Advanced Microcontrollers	4	0	0	4	**ECE**
10	20ECMN10	Statistical Signal Processing	4	0	0	4	**ECE**
11	20ECMN11	Mixed System Design	4	0	0	4	**ECE**
12	20ECMN12	Nano Technology	4	0	0	4	**ECE**

ELECTRICAL & ELECTRONICS ENGINEERING
COURSE STRUCTURE
B. TECH I SEMESTER

S.No	Course Code	Course Category	Course Title	Hours per week			Total Contact Hours	Credits
				Lecture	Tutorial	Practical		
1	20EE1T01	BSC	Linear Algebra and Differential Equations	3	-	-	3	3
2	20EE1T02	BSC	Applied Physics	3	-	-	3	3
3	20EE1T03	HSMC	English	3	-	-	3	3
4	20EE1T04	ESC	Basic Mechanical Engineering	3	-	-	3	3
5	20EE1T05	ESC	Engineering Graphics	1	-	4	5	3
6	20EE1L06	HSMC	English Communication Skills Lab	-	-	3	3	1.5
7	20EE1L07	BSC	Applied Physics Lab	-	-	3	3	1.5
8	20EE1L08	ESC	Electrical Engineering Workshop	-	-	3	3	1.5
Total number of credits								**19.5**

B. TECH II SEMESTER

S.No	Course Code	Course Category	Course Title	Hours per week			Total Contact Hours	Credits
				Lecture	Tutorial	Practical		
1	20EE2T01	BSC	Transform Techniques	3	-	-	3	3
2	20EE2T02	BSC	Applied Chemistry	3	-	-	3	3
3	20EE2T03	ESC	Electrical Circuit Analysis – I	3	-	-	3	3
4	20EE2T04	ESC	Power Systems-I	3	-	-	3	3
5	20EE2T05	ESC	Problem Solving Through C	3	-	-	3	3
6	20EE2L06	BSC	Applied Chemistry Lab	-	-	3	3	1.5
7	20EE2L07	ESC	Engineering & IT Workshop	-	-	3	3	1.5
8	20EE2L08	ESC	Problem Solving Through C Lab	-	-	3	3	1.5
9	20EE2M09	MC	Environmental Science	2	-	-	2	-
Total number of credits								**19.5**

B. Tech III SEMESTER

S.No	Course Code	Course Category	Course Title	Hours per week			Total Contact Hours	Credits
				Lecture	Tutorial	Practical		
1	20EE3T01	BSC	Numerical Methods and Vector Calculus	3	-	-	3	3
2	20EE3T02	PCC	Electrical Circuit Analysis – II	3	-	-	3	3
3	20EE3T03	PCC	Analog Electronics-I	3	-	-	3	3
4	20EE3T04	PCC	Electrical Machines -I	3	-	-	3	3
5	20EE3T05	PCC	Electromagnetic Fields	3	-	-	3	3
6	20EE3L06	PCC	Electrical Circuits Lab	-	-	3	3	1.5
7	20EE3L07	PCC	Electrical Machines Lab- I	-	-	3	3	1.5
8	20EE3L08	PCC	Analog Electronics Lab	-	-	3	3	1.5
9	20EE3S09	SC	Python Programming	-	-	4	4	2
Total number of credits								**21.5**

B. Tech IV SEMESTER

S.No	Course Code	Course Category	Course Title	Hours per week			Total Contact Hours	Credits
				Lecture	Tutorial	Practical		
1	20EE4T01	BSC	Complex Variables and Statistical Methods	3	-	-	3	3
2	20EE4T02	PCC	Electrical Machines – II	3	-	-	3	3
3	20EE4T03	PCC	Electrical Measurements	3	-	-	3	3
4	20EE4T04	PCC	Power Systems –II	3	-	-	3	3
5	20EE4T05	HSMC	Managerial Economics and Financial Analysis	3	-	-	3	3
6	20EE4L06	PCC	Electrical Machines Lab-II	-	-	3	3	1.5
7	20EE4L07	PCC	Electrical Measurements Lab	-	-	3	3	1.5
8	20EE4L08	ESC	Data structures through C Lab	-	-	3	3	1.5
9	20EE4S09	SC	Introduction to MATLAB	-	-	4	4	2
10	20EE4M10	MC	Constitution of India	2	-	-	2	-
Total number of credits								**21.5**
Internship 2 Months (Mandatory) during summer vacation								
Honors/Minor courses				**4**	**0**	**0**	**-**	**4**

B. Tech V SEMESTER

S.No	Course Code	Course Category	Course Title	Hours per week			Total Contact Hours	Credits
				Lecture	Tutorial	Practical		
1	20EE5T01	PCC	Control Systems	3	-	-	3	3
2	20EE5T02	PCC	Switchgear and Protection	3	-	-	3	3
3	20EE5T03	ESC	Analog Electronics - II	3	-	-	3	3
4	**Open Elective – I**			3	-	-	3	3
Professional Elective –I				3	-	-	3	3
5	20EE5T06	PEC-I	AI Techniques in Electrical Engineering					
	20EE5T07		Digital Electronics					
	20EE5T08		Programmable Logic Controllers and Applications					
	20EE5T09		VLSI Design					
6	20EE5L10	PCC	Control Systems Lab	-	-	3	3	1.5
7	20EE5L11	PCC	Electrical Simulation Lab	-	-	3	3	1.5
3	20EE5S12	SC	JAVA Programming	-	-	4	4	2
8	20EE5M13	MC	Essence of Indian Traditional knowledge	2	-	-	2	-
9	20EE5I14	I	Summer internship	-	-	-	-	1.5
Total number of credits								**21.5**
Honors/Minor courses				**4**	**0**	**0**	**-**	**4**

B. Tech VI SEMESTER

S.No	Course Code	Course Category	Course Title	Hours per week			Total Contact Hours	Credits
				Lecture	Tutorial	Practical		
1	20EE6T01	PCC	Microprocessors and Micro controllers	3	-	-	3	3
2	20EE6T02	PCC	Power system Operation and Control	3	-	-	3	3
3	20EE6T03	PCC	Power Electronics	3	-	-	3	3
Professional Elective-II				3	-	-	3	3
4	20EE6T04	PEC-II	Digital control systems					
	20EE6T05		Power quality					
	20EE6T06		Renewable and Distributed Energy Technologies					
	20EE6T07		Utilisation of Electrical Energy					
5	**Open Elective – II**			3	-	-	3	3
6	20EE6L10	PCC	Microprocessors and Micro Controllers Lab	-	-	3	3	1.5
7	20EE6L11	PCC	Power Systems Lab	-	-	3	3	1.5
8	20EE6L12	PCC	Power Electronics Lab	-	-	3	3	1.5
9	20EE6S13	SC	Soft Skills	-	-	4	4	2
10	20EE6M14	MC	Disaster Management	2	-	-	2	-
11	20EE6P15	P	Community Service Project	-	-	-	-	4
Total number of credits								**25.5**
Honors/Minor courses				4	-	-	-	4

B. Tech VII SEMESTER

S.No	Course Code	Course Category	Course Title	Hours per week			Contact Hours	Credits
				Lecture	Tutorial	Practical		
Professional Elective-III				3	0	0	3	3
1	20EE7T01	PEC-III	Power Electronic Control of Electric Drives					
	20EE7T02		High Voltage Engineering					
	20EE7T03		Smart Grid Technologies					
	20EE7T04		Advanced control systems					
Professional Elective -IV				3	0	0	3	3
2	20EE7T05	PEC-IV	Digital Signal Processing					
	20EE7T06		Special electrical machines					
	20EE7T07		HVDC & FACTS					
	20EE7T08		Evolutionary Algorithms and Applications					
Professional Elective -V				3	0	0	3	3
3	20EE7T09	PEC-V	IoT Applications in Electrical Engineering					
	20EE7T10		Switch Mode Power Conversion					
	20EE7T11		Electric Vehicles					
	20EE7T12		Electrical Distribution Systems					
4	**Open Elective-III**			3	0	0	3	3
5	**Open Elective-IV**			3	0	0	3	3
6	20EE7T17	HSMC	Universal Human Values 2: Understanding Harmony	0	0	3	3	3
7	20EE7S18	SC	Electrical CAD	0	0	4	4	2
8	20EE7I19	I	Industrial Internship	-	-	-	-	3
Total number of credits								**23**
Honors/Minor courses				**4**	**0**	**0**	**-**	**4**

B. Tech VIII SEMESTER

S.No	Course Code	Course Category	Course Title	Hours per week			Total Contact Hours	Credits
				Lecture	Tutorial	Practical		
1	20EE8P01	P	Project work	-	-	-	-	8
Total number of credits								**8**

OPEN ELECTIVE –I:

S. No.	Course Code	Course Name	L	T	P	C	Offered by
1	20CE5T04	Architecture and Town Planning	3	0	0	3	CE
2	20CE5T05	Elements of Civil Engineering	3	0	0	3	CE
3	20EE5T04	Basics of Control Systems	3	0	0	3	EEE
4	20EE5T05	Special Electrical Machines	3	0	0	3	EEE
5	20ME5T04	Design Thinking & Product Innovation	3	0	0	3	ME
6	20ME5T05	Nanotechnology	3	0	0	3	ME
7	20EC5T04	Linear System Analysis	3	0	0	3	ECE
8	20EC5T05	Digital Logic Design	3	0	0	3	ECE
9	20EC5T06	Solid State Devices	3	0	0	3	ECE
10	20CS5T07	Introduction to Artificial Intelligence	3	0	0	3	CSE
11	20CS5T08	Operating System	3	0	0	3	CSE
12	20CS5T09	Software Engineering	3	0	0	3	CSE
13	20IT5T07	Computer Networks	3	0	0	3	IT
14	20IT5T08	Computer Graphics	3	0	0	3	IT
15	20HS5T01	Quantitative Aptitude and Reasoning	3	0	0	3	BED
16	20MB5T01	Principles of Management	3	0	0	3	DMS
17	20MB5T02	Technology Management	3	0	0	3	DMS
18	20AD5T07	Foundations of Data Science	3	0	0	3	AIDS
19	20AM5T07	Introduction to Machine Learning	3	0	0	3	AIML

OPEN ELECTIVE –II:

S. No.	Course Code	Course Name	L	T	P	C	Offered by
1	20CE6T08	Remote Sensing and GIS	3	0	0	3	CE
2	20CE6T09	Environmental Impact Assessment	3	0	0	3	CE
3	20EE6T08	Renewable Energy Sources	3	0	0	3	EEE
4	20EE6T09	Energy Audit, Conservation and Management	3	0	0	3	EEE
5	20ME6T07	Industrial Robotics	3	0	0	3	ME
6	20ME6T08	3D Printing	3	0	0	3	ME
7	20EC6T07	Electronic Circuits and Networks	3	0	0	3	ECE

8	20EC6T08	Principles of Communications	3	0	0	3	ECE
9	20EC6T09	Microcontrollers & its Applications	3	0	0	3	ECE
10	20CS6T07	Introduction to Machine Learning	3	0	0	3	CSE
11	20CS6T08	Information Security	3	0	0	3	CSE
12	20CS6T09	Agile Technologies	3	0	0	3	CSE
13	20IT6T07	Fundamentals of Machine Learning	3	0	0	3	IT
14	20IT6T08	Database Management Systems	3	0	0	3	IT
15	20HS6T01	Operations Research	3	0	0	3	BED
16	20MB6T01	Organizational Behaviour	3	0	0	3	DMS
17	20MB6T02	Project Management	3	0	0	3	DMS
18	20AD6T07	Visual Analytics	3	0	0	3	AIDS
19	20AM6T07	Big data Analytics	3	0	0	3	AIML

OPEN ELECTIVE –III:

S. No.	Course code	Course Name	L	T	P	C	Offered by
1	20CE7T13	Construction Technology and Management	3	0	0	3	CE
2	20CE7T14	Green Buildings	3	0	0	3	CE
3	20EE7T13	Concept of Power System Engineering	3	0	0	3	EEE
4	20EE7T14	Instrumentation	3	0	0	3	EEE
5	20ME7T10	Green Engineering Systems	3	0	0	3	ME
6	20ME7T11	Hybrid Electric Vehicles	3	0	0	3	ME
7	20EC7T10	Data Communications	3	0	0	3	ECE
8	20EC7T11	Mechatronics	3	0	0	3	ECE
9	20EC7T12	Bio Medical Instrumentation	3	0	0	3	ECE
10	20CS7T10	Artificial Neural Networks	3	0	0	3	CSE
11	20CS7T11	Cyber Security	3	0	0	3	CSE
12	20CS7T12	Software Testing Methodologies	3	0	0	3	CSE
13	20IT7T10	Internet of Things	3	0	0	3	IT
14	20IT7T11	Computer Vision	3	0	0	3	IT
15	20HS7T01	Fuzzy sets	3	0	0	3	BED
16	20MB7T01	Digital Media management	3	0	0	3	DMS
17	20MB7T02	Entrepreneurship Development	3	0	0	3	DMS

18	20AD7T10	Data Analysis and Visualization with Python	3	0	0	3	AIDS
19	20AM7T10	NOSQL Databases	3	0	0	3	AIML

OPEN ELECTIVE –IV:

S. No.	Course Code	Course Name	L	T	P	C	Offered by
1	20CE7T15	Waste water treatment	3	0	0	3	CE
2	20CE7T16	Repair and Rehabilitation of Concrete Structures	3	0	0	3	CE
3	20EE7T15	Power Quality	3	0	0	3	EEE
4	20EE7T16	Electric Vehicles	3	0	0	3	EEE
5	20ME7T12	Micro-Electro- Mechanical Systems	3	0	0	3	ME
6	20ME7T13	Solar Energy Systems	3	0	0	3	ME
7	20EC7T13	Introduction to Embedded Systems	3	0	0	3	ECE
8	20EC7T14	Internet of Things	3	0	0	3	ECE
9	20EC7T15	Analog and Digital IC applications	3	0	0	3	ECE
10	20CS7T13	Data Analytics	3	0	0	3	CSE
11	20CS7T14	Block Chain Technology	3	0	0	3	CSE
12	20CS7T15	Software Project Management	3	0	0	3	CSE
13	20IT7T13	Cloud Computing	3	0	0	3	IT
14	20IT7T14	Business Intelligence	3	0	0	3	IT
15	20HS7T02	Polymer Chemistry	3	0	0	3	BED
16	20MB7T03	Total Engineering Quality Management	3	0	0	3	DMS
17	20MB7T04	Stress Management	3	0	0	3	DMS
18	20AD7T11	Natural Language Processing	3	0	0	3	AIDS
19	20AM7T11	Deep Learning	3	0	0	3	AIML

HONORS/MINOR COURSES OFFERED BY THE DEPARTMENT

Honors/ Minor Course Fulfillments:

- The 20 additional credits need to be acquired, 16 credits can be earned by undergoing specified courses, with each carrying 4 credits.
- The remaining 4 credits must be acquired through two online MOOCs (SWAYAM /NPTEL), which shall be domain specific, each with 2 credits and with a minimum duration of 8/12weeks as recommended by the Board of Studies.
- Minor Engineering subjects are offered to other branches by CSE Department (except for CSE Students).
- Honors engineering subjects are offered to CSE Students.
- The head of the department will float the list of allowed MOOC electives in each academic year, based on the list floated by MOOCs (SWAYAM/NPTEL).

HONORS COURSES

S.No.	Course code	Course Name	L	T	P	C
Pool-1(Power Systems)						
1	20EEHN01	Distribution System Planning & Automation	4	0	0	4
2	20EEHN02	Substation Automation	4	0	0	4
3	20EEHN03	Advanced Power Systems	4	0	0	4
4	20EEHN04	Economic operation of Power system	4	0	0	4
Pool-2(Energy Systems)						
5	20EEHN05	Wind and Solar Energy Systems	4	0	0	4
6	20EEHN06	Grid Integration of Renewable Energy Systems	4	0	0	4
7	20EEHN07	SCADA and Energy Management Systems	4	0	0	4
8	20EEHN08	Energy Storage Systems	4	0	0	4
Pool-3(Control Systems)						
9	20EEHN09	Control Systems Design	4	0	0	4
10	20EEHN10	Modern Control Systems	4	0	0	4
11	20EEHN11	Advanced Control Systems	4	0	0	4
12	20EEHN12	Industrial Process Control	4	0	0	4
Pool-4(Power Electronics)						
13	20EEHN13	Advanced Power Converters	4	0	0	4
14	20EEHN14	Modelling and Analysis of Electrical Machines	4	0	0	4
15	20EEHN15	Custom Power Devices	4	0	0	4
16	20EEHN16	Automotive Power Electronics	4	0	0	4

MINOR COURSES

S.No.	Course code	Course Name	L	T	P	C	Offered by
1	20EEMN01	Basics of Power Systems	4	0	0	4	EEE
2	20EEMN02	Basics of Power Electronics	4	0	0	4	EEE
3	20EEMN03	Fundamentals of Electrical and Electronic Measurements	4	0	0	4	EEE
4	20EEMN04	Basics of Electrical Machines**(Except ECE & ME)**	4	0	0	4	EEE
5	20EEMN05	Fundaments of Electrical Circuits(**Except ECE**)	4	0	0	4	EEE
6	20EEMN06	Electrical Safety	4	0	0	4	EEE

INFORMATION TECHNOLOGY
COURSE STRUCTURE
B. TECH I SEMESTER

S.No.	Course Code	Course Category	Course Title	Hours per week			Contact Hours	Credits
				Lecture	Tutorial	Practical		
1	20IT1T01	BSC	Linear Algebra and Differential Equations	3	-	-	3	3
2	20IT1T02	BSC	Applied Chemistry	3	-	-	3	3
3	20IT1T03	HSMC	English	3	-	-	3	3
4	20IT1L04	ESC	Computer Engineering Workshop	1	-	4	3	3
5	20IT1T05	ESC	Problem Solving through C	3	-	-	3	3
6	20IT1L06	HSMC	English Communication Skills Lab	-	-	3	3	1.5
7	20IT1L07	BSC	Applied Chemistry Lab	-	-	3	3	1.5
8	20IT1L08	ESC	Problem Solving through C Lab	-	-	3	3	1.5
9	20IT1M09	MC	Environmental Science	2	-	-	2	-
Total Number of Credits								**19.5**

B. TECH II SEMESTER

S.No.	Course Code	Course Category	Course Title	Hours per week			Contact Hours	Credits
				Lecture	Tutorial	Practical		
1	20IT2T01	BSC	Transform Techniques	3	-	-	3	3
2	20IT2T02	BSC	Applied Physics	3	-	-	3	3
3	20IT2T03	ESC	Digital Logic Design	3	-	-	3	3
4	20IT2T04	ESC	Data Structures	3	-	-	3	3
5	20IT2T05	ESC	Python Programming	3	-	-	3	3
6	20IT2L06	BSC	Applied Physics Lab	-	-	3	3	1.5
7	20IT2L07	ESC	Data Structures Lab	-	-	3	3	1.5
8	20IT2L08	ESC	Python Programming Lab	-	-	3	3	1.5
Total Number of Credits								**19.5**

B. TECH III SEMESTER

S.No	Course Code	Course Category	Course Title	Hours per week			Contact Hours	Credits
				Lecture	Tutorial	Practical		
1	20IT3T01	BSC	Numerical Methods and Vector Calculus	3	0	0	3	3
2	20IT3T02	PCC	Object Oriented Programming through Java	3	0	0	3	3
3	20IT3T03	PCC	Data Base Management Systems	3	0	0	3	3
4	20IT3T04	PCC	Software Engineering	3	0	0	3	3
5	20IT3T05	PCC	Computer Organization	3	0	0	3	3
6	20IT3L06	PCC	Object Oriented Programming through Java Lab	0	0	3	3	1.5
7	20IT3L07	PCC	Data Base Management Systems Lab	0	0	3	3	1.5
8	20IT3L08	PCC	Software Engineering Lab	0	0	3	3	1.5
9	20IT3S09	SC	Basic Web Programming	0	0	4	4	2
10	20IT3M10	MC	Constitution of India	2	-	-	2	-
Total number of credits								**21.5**

B. TECH IV SEMESTER

S.No	Course Code	Course Category	Course Title	Hours per week			Total Contact Hours	Credits
				Lecture	Tutorial	Practical		
1	20IT4T01	BSC	Probability and Statistics	3	0	0	3	3
2	20IT4T02	ESC	Discrete Mathematical Structures	3	0	0	3	3
3	20IT4T03	PCC	Operating Systems	3	0	0	3	3
4	20IT4T04	PCC	Advanced Data Structures	3	0	0	3	3
5	20IT4T05	HSMC	Managerial Economics and Financial Analysis	3	0	0	3	3
6	20IT4L06	ESC	R Programming Lab	0	0	3	3	1.5
7	20IT4L07	PCC	Operating Systems Lab	0	0	3	3	1.5
8	20IT4L08	PCC	Advanced Data Structures Lab	0	0	3	3	1.5
9	20IT4S09	SC	Mobile Application Development	0	0	4	4	2
Total number of credits								**21.5**
Honors/Minor courses				**4**	**0**	**0**	**-**	**4**

B.TECH V SEMESTER

S.No	Course Code	Course Category	Course Title	Hours per week			Contact Hours	Credits
				Lecture	Tutorial	Practical		
1	20IT5T01	PCC	Formal Languages & Automata Theory	3	0	0	3	3
2	20IT5T02	PCC	Data Warehousing & Data Mining	3	0	0	3	3
3	20IT5T03	PCC	Computer Networks	3	0	0	3	3
Professional Elective-I				3	0	0	3	3
4	20IT5T04	PEC-I	Computer Graphics					
5	20IT5T05		E-Commerce					
6	20IT5T06		Software Testing Methodologies					
Open Elective-I				3	0	0	3	3
7	20IT5L09	PCC	Computer Networks Lab	0	0	3	3	1.5
8	20IT5L10	PCC	Data Warehousing and Mining Lab Through Python	0	0	3	3	1.5
9	20IT5S11	SC	Testing Tools	0	0	4	4	2
10	20IT5M12	MC	Disaster Management	2	0	0	2	-
11	20IT5I13	I	Internship	0	0	0	1.5	1.5
Total number of credits								**21.5**
Honors/Minor course				**4**	**0**	**0**	**-**	**4**

B.TECH VI SEMESTER

S.No	Course Code	Course Category	Course Title	Hours per week			Contact Hours	Credits
				Lecture	Tutorial	Practical		
1	20IT6T01	PCC	Machine Learning	3	0	0	3	3
2	20IT6T02	PCC	Cloud Computing	3	0	0	3	3
3	20IT6T03	PCC	Big Data Analytics	3	0	0	3	3
Professional Elective-II				3	0	0	3	3
4	20IT6T04	PEC-II	MEAN Stack Technologies					
5	20IT6T05		Compiler Design					
6	20IT6T06		Software Architecture and Design patterns					
	Open Elective-II			3	0	0	3	3
7	20IT6L09	PCC	Machine Learning Lab	0	0	3	3	1.5
8	20IT6L10	PCC	Cloud Computing Lab	0	0	3	3	1.5
9	20IT6L11	PCC	Hadoop Lab	0	0	3	3	1.5
10	20IT6S12	SC	Soft Skills	0	0	4	4	2
11	20IT6M13	MC	Essence of Indian traditional knowledge	2	0	0	2	-
12	20IT6P14	P	Community Service Project	-	-	-	-	4
Total number of credits								**25.5**
Honors/Minor courses				**4**	**0**	**0**	**-**	**4**

B.TECH VII SEMESTER

S.No	Course Code	Course Category	Course Title	Hours per week			Contact Hours	Credits
				Lecture	Tutorial	Practical		
Professional Elective-III				3	0	0	3	3
1	20IT7T01	PEC-III	Intelligent Agents					
2	20IT7T02		Mobile Computing					
3	20IT7T03		Software Project Management					
Professional Elective-IV				3	0	0	3	3
4	20IT7T04	PEC-IV	Neural Networks and Deep Learning					
5	20IT7T05		Information Security					
6	20IT7T06		Business Intelligence					
Professional Elective-V				3	0	0	3	3
7	20IT7T07	PEC-V	Ethical Hacking					
8	20IT7T08		Information Retrieval Systems					
9	20IT7T09		Internet of Things					
10	**Open Elective-III**			3	0	0	3	3
11	**Open Elective-IV**			3	0	0	3	3
12	20IT7T14	HSMC	Universal Human Values 2: Understanding Harmony	0	0	3	3	3
13	20IT7S15	SC	Data Visualization using Tableau	0	0	4	4	2
14	20IT7I16	I	Industrial Internship	-	-	-	-	3
Total number of credits								**23**
Honors/Minor courses				**4**	**0**	**0**	**-**	**4**

B.TECH VIII SEMESTER

S.No	Course Code	Course Category	Course Title	Hours per week			Total Contact Hours	Credits
				Lecture	Tutorial	Practical		
1	20IT8P01	P	Project	-	-	-	-	8
Total number of credits								**8**

OPEN ELECTIVE –I:

S. No.	Course Code	Course Name	L	T	P	C	Offered by
1	20CE5T04	Architecture and Town Planning	3	0	0	3	CE
2	20CE5T05	Elements of Civil Engineering	3	0	0	3	CE
3	20EE5T04	Basics of Control Systems	3	0	0	3	EEE
4	20EE5T05	Special Electrical Machines	3	0	0	3	EEE
5	20ME5T04	Design Thinking & Product Innovation	3	0	0	3	ME
6	20ME5T05	Nanotechnology	3	0	0	3	ME
7	20EC5T04	Linear System Analysis	3	0	0	3	ECE
8	20EC5T05	Digital Logic Design	3	0	0	3	ECE
9	20EC5T06	Solid State Devices	3	0	0	3	ECE
10	20CS5T07	Introduction to Artificial Intelligence	3	0	0	3	CSE
11	20CS5T08	Operating System	3	0	0	3	CSE
12	20CS5T09	Software Engineering	3	0	0	3	CSE
13	20IT5T07	Computer Networks	3	0	0	3	IT
14	20IT5T08	Computer Graphics	3	0	0	3	IT
15	20HS5T02	Operations Research	3	0	0	3	BED
16	20MB5T01	Principles of Management	3	0	0	3	DMS
17	20MB5T02	Technology Management	3	0	0	3	DMS
18	20AD5T07	Foundations of Data Science	3	0	0	3	AIDS
19	20AM5T07	Introduction to Machine Learning	3	0	0	3	AIML

OPEN ELECTIVE –II:

S. No.	Course Code	Course Name	L	T	P	C	Offered by
1	20CE6T08	Remote Sensing and GIS	3	0	0	3	CE
2	20CE6T09	Environmental Impact Assessment	3	0	0	3	CE
3	20EE6T08	Renewable Energy Sources	3	0	0	3	EEE
4	20EE6T09	Energy Audit, Conservation and Management	3	0	0	3	EEE
5	20ME6T07	Industrial Robotics	3	0	0	3	ME
6	20ME6T08	3D Printing	3	0	0	3	ME
7	20EC6T07	Electronic Circuits and Networks	3	0	0	3	ECE

8	20EC6T08	Principles of Communications	3	0	0	3	ECE
9	20EC6T09	Microcontrollers & its Applications	3	0	0	3	ECE
10	20CS6T07	Introduction to Machine Learning	3	0	0	3	CSE
11	20CS6T08	Information Security	3	0	0	3	CSE
12	20CS6T09	Agile Technologies	3	0	0	3	CSE
13	20IT6T07	Fundamentals of Machine Learning	3	0	0	3	IT
14	20IT6T08	Database Management Systems	3	0	0	3	IT
15	20HS6T02	Quantitative Aptitude & Reasoning	3	0	0	3	BED
16	20MB6T01	Organizational Behaviour	3	0	0	3	DMS
17	20MB6T02	Project Management	3	0	0	3	DMS
18	20AD6T07	Visual Analytics	3	0	0	3	AIDS
19	20AM6T07	Big data Analytics	3	0	0	3	AIML

OPEN ELECTIVE –III:

S. No.	Course code	Course Name	L	T	P	C	Offered by
1	20CE7T13	Construction Technology and Management	3	0	0	3	CE
2	20CE7T14	Green Buildings	3	0	0	3	CE
3	20EE7T13	Concept of Power System Engineering	3	0	0	3	EEE
4	20EE7T14	Instrumentation	3	0	0	3	EEE
5	20ME7T10	Green Engineering Systems	3	0	0	3	ME
6	20ME7T11	Hybrid Electric Vehicles	3	0	0	3	ME
7	20EC7T10	Data Communications	3	0	0	3	ECE
8	20EC7T11	Mechatronics	3	0	0	3	ECE
9	20EC7T12	Bio Medical Instrumentation	3	0	0	3	ECE
10	20CS7T10	Artificial Neural Networks	3	0	0	3	CSE
11	20CS7T11	Cyber Security	3	0	0	3	CSE
12	20CS7T12	Software Testing Methodologies	3	0	0	3	CSE
13	20IT7T10	Internet of Things	3	0	0	3	IT
14	20IT7T11	Computer Vision	3	0	0	3	IT
15	20HS7T01	Fuzzy sets	3	0	0	3	BED
16	20MB7T01	Digital Media management	3	0	0	3	DMS
17	20MB7T02	Entrepreneurship Development	3	0	0	3	DMS

18	20AD7T10	Data Analysis and Visualization with Python	3	0	0	3	AIDS
19	20AM7T10	NOSQL Databases	3	0	0	3	AIML

OPEN ELECTIVE –IV:

S. No.	Course Code	Course Name	L	T	P	C	Offered by
1	20CE7T15	Waste water treatment	3	0	0	3	CE
2	20CE7T16	Repair and Rehabilitation of Concrete Structures	3	0	0	3	CE
3	20EE7T15	Power Quality	3	0	0	3	EEE
4	20EE7T16	Electric Vehicles	3	0	0	3	EEE
5	20ME7T12	Micro-Electro- Mechanical Systems	3	0	0	3	ME
6	20ME7T13	Solar Energy Systems	3	0	0	3	ME
7	20EC7T13	Introduction to Embedded Systems	3	0	0	3	ECE
8	20EC7T14	Internet of Things	3	0	0	3	ECE
9	20EC7T15	Analog and Digital IC applications	3	0	0	3	ECE
10	20CS7T13	Data Analytics	3	0	0	3	CSE
11	20CS7T14	Block Chain Technology	3	0	0	3	CSE
12	20CS7T15	Software Project Management	3	0	0	3	CSE
13	20IT7T13	Cloud Computing	3	0	0	3	IT
14	20IT7T14	Business Intelligence	3	0	0	3	IT
15	20HS7T02	Polymer Chemistry	3	0	0	3	BED
16	20MB7T03	Total Engineering Quality Management	3	0	0	3	DMS
17	20MB7T04	Stress Management	3	0	0	3	DMS
18	20AD7T11	Natural Language Processing	3	0	0	3	AIDS
19	20AM7T11	Deep Learning	3	0	0	3	AIML

HONORS/MINOR COURSES OFFERED BY THE DEPARTMENT

Honors/ Minor Course Fulfillments:

- The 20 additional credits need to be acquired, 16 credits can be earned by undergoing specified courses, with each carrying 4 credits.
- The remaining 4 credits must be acquired through two online MOOCs (SWAYAM /NPTEL), which shall be domain specific, each with 2 credits and with a minimum duration of 8/12weeks as recommended by the Board of Studies.
- Minor Engineering subjects are offered to other branches by IT Department (except for IT Students).
- Honors engineering subjects are offered to IT Students.
- The head of the department will float the list of allowed MOOC electives in each academic year, based on the list floated by MOOCs (SWAYAM/NPTEL).

MINOR COURSES

S.No.	Course code	Course Name	L	T	P	C	Offered by
1	20ITMN01	Computer Organization	3	1	0	4	IT
2	20ITMN02	Operating Systems	3	1	0	4	IT
3	20ITMN03	Database Management Systems	3	1	0	4	IT
4	20ITMN04	Internet of Things	3	1	0	4	IT
5	20ITMN05	E-Commerce	3	1	0	4	IT
6	20ITMN06	Web Technologies	3	1	0	4	IT
7	20ITMN07	MOOC1	-	-	-	2	IT
8	20ITMN08	MOOC2	-	-	-	2	IT

COURSE STRUCTURE
MECHANICAL ENGINEERING
B. TECH I SEMESTER

S. No	Course Code	Course Category	Course Title	Hours per week			Total Contact Hours	Credits
				Lecture	Tutorial	Practical		
1	20ME1T01	BSC	Linear Algebra and Differential Equations	3	-	-	3	3
2	20ME1T02	BSC	Engineering Physics	3	-	-	3	3
3	20ME1T03	HSMC	English	3	-	-	3	3
4	20ME1T04	ESC	Basic Electrical & Electronics Engineering	3	-	-	3	3
5	20ME1T05	ESC	Engineering Graphics	1	-	4	5	3
6	20ME1L06	HSMC	English Communication Skills Lab	-	-	3	3	1.5
7	20ME1L07	BSC	Engineering Physics Lab	-	-	3	3	1.5
8	20ME1L08	ESC	Basic Electrical & Electronics Engineering Lab	-	-	3	3	1.5
Total number of credits								**19.5**

B. TECH II SEMESTER

S. No	Course Code	Course Category	Course Title	Hours per week			Total Contact Hours	Credits
				Lecture	Tutorial	Practical		
1	20ME2T01	BSC	Transform Techniques	3	-	-	3	3
2	20ME2T02	BSC	Engineering Chemistry	3	-	-	3	3
3	20ME2T03	ESC	Engineering Mechanics	3	-	-	3	3
4	20ME2T04	ESC	Thermodynamics	3	-	-	3	3
5	20ME2T05	ESC	Problem Solving Through C	3	-	-	3	3
6	20ME2L06	BSC	Engineering Chemistry Lab	-	-	3	3	1.5
7	20ME2L07	ESC	Engineering & IT Workshop	-	-	3	3	1.5
8	20ME2L08	ESC	Problem Solving through C Lab	-	-	3	3	1.5
9	20ME2M09	MC	Environmental Science	2	-	-	2	-
Total number of credits								**19.5**

B. TECH III SEMESTER

S. No	Course Code	Course Category	Course Title	Hours per week			Total Contact Hours	Credits
				Lecture	Tutorial	Practical		
1	20ME3T01	BSC	Numerical Methods and Vector Calculus	3	-	-	3	3
2	20ME3T02	PCC	Material Science & Metallurgy	3	-	-	3	3
3	20ME3T03	PCC	Production Technology	3	-	-	3	3
4	20ME3T04	PCC	Mechanics of Solids	3	-	-	3	3
5	20ME3T05	PCC	Fluid Mechanics and Hydraulic Machines	3	-	-	3	3
6	20ME3L06	PCC	Production Technology Lab	-	-	3	3	1.5
7	20ME3L07	PCC	Fluid Mechanics and Hydraulic Machines Lab	-	-	3	3	1.5
8	20ME3L08	PCC	Mechanics of Solids & Metallurgy Lab	-	-	3	3	1.5
9	20ME3S09	SC	Computer aided drafting and modeling Lab	0	-	4	4	2
Total number of credits								**21.5**

B. TECH IV SEMESTER

S. No	Course Code	Course Category	Course Title	Hours per week			Total Contact Hours	Credits
				Lecture	Tutorial	Practical		
1	20ME4T01	BSC	Complex Variables and Statistical Methods	3	-	-	3	3
2	20ME4T02	PCC	Design of Machine Elements	3	-	-	3	3
3	20ME4T03	PCC	Internal Combustion Engines & Air Compressors	3	-	-	3	3
4	20ME4T04	PCC	Kinematics of Machinery	3	-	-	3	3
5	20ME4T05	HSMC	Managerial Economics & Financial Analysis	3	-	-	3	3
6	20ME4L06	PCC	Proficiency Through Reading & Writing Lab	-	-	3	3	1.5
7	20ME4L07	PCC	Computer Aided Machine Drawing Lab	-	-	3	3	1.5
8	20ME4L08	PCC	Thermal Engineering Lab	-	-	3	3	1.5
9	20ME4S09	SC	Programming through MATLAB	0	-	4	4	2
10	20ME3M10	MC	Constitution of India	2	-	-	2	-
Total number of credits								**21.5**
Honors/Minor courses				**4**	**0**	**0**	**-**	**4**

B.TECH V SEMESTER

S. No	Course Code	Course Category	Course Title	Hours per week			Total Contact Hours	Credits
				Lecture	Tutorial	Practical		
1	20ME5T01	PCC	Dynamics of Machines	3	-	-	3	3
2	20ME5T02	PCC	Turbo machines	3	-	-	3	3
3	20ME5T03	PCC	Metal Cutting &Machine Tools	3	-	-	3	3
4		**OEC**	**Open Elective-I**	3	-	-	3	3
5	**Professional Elective -I**			3	-	-	3	3
	20ME5T06	PEC	Experimental Stress Analysis					
	20ME5T07		Design for Manufacturing					
	20ME5T08		Refrigeration & Air Conditioning					
6	20ME5L09	PCC	Theory of Machines Lab	-	-	3	3	1.5
7	20ME5L10	PCC	Machine Tools & Computer Aided Manufacturing Lab	-	-	3	3	1.5
8	20ME5S11	SC	Simulation of Mechanical Systems Lab	-	-	4	4	2
9	20ME5M12	MC	Essence of Indian Traditional knowledge	2	-	-	2	-
10	20ME5I13	I	Summer Internship	-	-	-	-	1.5
Total number of credits								**21.5**
Honors/Minor courses				**4**	**-**	**-**	**4**	**4**

B. TECH VI SEMESTER

S. No	Course Code	Course Category	Course Title	Hours per week			Total Contact Hours	Credits
				Lecture	Tutorial	Practical		
1	20ME6T01	PCC	Design of Transmission Elements	3	-	-	3	3
2	20ME6T02	PCC	Heat Transfer	3	-	-	3	3
3	20ME6T03	PCC	Metrology and Measurements	3	-	-	3	3
4	**Professional Elective -II**			3	-	-	3	3
	20ME6T04	PEC	Finite Element Methods					
	20ME6T05		Computational Fluid Dynamics					
	20ME6T06		Production Planning & Control					
5		**OEC**	**Open Elective-II**	3	-	-	3	3
6	20ME6L09	PCC	Metrology & Instrumentation Lab	-	-	3	3	1.5
7	20ME6L10	PCC	Heat Transfer Lab	-	-	3	3	1.5
8	20ME6L11	PCC	CAE & CFD Lab	-	-	3	3	1.5
9	20ME6S12	SC	Soft skills	-	-	4	4	2
10	20ME6M13	MC	Disaster Management	2	-	-	2	-
11	20ME6P14	P	Community Service Project	_	-	-	-	4
Total number of credits								**25.5**
Honors/Minor courses				**4**	**-**	**-**	**4**	**4**

B. TECH VII SEMESTER

S. No	Course Code	Course Category	Course Title	Hours per week			Total Contact Hours	Credits
				Lecture	Tutorial	Practical		
1	**Professional Elective –III/MOOCS**			3	-	-	3	3
	20ME7T01	PEC	Advanced Materials					
	20ME7T02		Power Plant Engineering					
	20ME7T03		Advanced Optimization Techniques					
2	**Professional Elective –IV/ MOOCS**			3	-	-	3	3
	20ME7T04	PEC	Management Science					
	20ME7T05		Additive Manufacturing					
	20ME7T06		Advanced Machining Processes					
3	**Professional Elective -V / MOOCS**			3	-	-	3	3
	20ME7T07	PEC	Mechanical Vibrations					
	20ME7T08		Automobile Engineering					
	20ME7T09		Non Destructive Evaluation					
4		OEC	**Open Elective-III**	3	-	-	3	3
5		OEC	**Open Elective-IV**	3	-	-	3	3
6	20ME7T14	HSMC	Universal Human Values 2: Understanding Harmony	3	-	-	3	3
7	20ME7S15	SC	Python Programming Lab	1	-	2	3	2
8	20ME7I16	I	Industrial Internship	-	-	-	-	3
Total number of credits								**23**
Honors/Minor courses				**4**	**-**	**-**	**4**	**4**

B. TECH VIII SEMESTER

S. No	Course Code	Course Category	Course Title	Hours per week			Total Contact Hours	Credits
				Lecture	Tutorial	Practical		
1	20ME8P01	P	Project (Project work/internship)	-	-	-	-	8
	INTERNSHIP (6 MONTHS)							
Total number of credits								**8**

OPEN ELECTIVE –I:

S. No.	Course Code	Course Name	L	T	P	C	Offered by
1	20CE5T04	Architecture and Town Planning	3	0	0	3	CE
2	20CE5T05	Elements of Civil Engineering	3	0	0	3	CE
3	20EE5T04	Basics of Control Systems	3	0	0	3	EEE
4	20EE5T05	Special Electrical Machines	3	0	0	3	EEE
5	20ME5T04	Design Thinking & Product Innovation	3	0	0	3	ME
6	20ME5T05	Nanotechnology	3	0	0	3	ME
7	20EC5T04	Linear System Analysis	3	0	0	3	ECE
8	20EC5T05	Digital Logic Design	3	0	0	3	ECE
9	20EC5T06	Solid State Devices	3	0	0	3	ECE
10	20CS5T07	Introduction to Artificial Intelligence	3	0	0	3	CSE
11	20CS5T08	Operating System	3	0	0	3	CSE
12	20CS5T09	Software Engineering	3	0	0	3	CSE
13	20IT5T07	Computer Networks	3	0	0	3	IT
14	20IT5T08	Computer Graphics	3	0	0	3	IT
15	20HS5T01	Quantitative Aptitude and Reasoning	3	0	0	3	BED
16	20MB5T01	Principles of Management	3	0	0	3	DMS
17	20MB5T02	Technology Management	3	0	0	3	DMS
18	20AD5T07	Foundations of Data Science	3	0	0	3	AIDS
19	20AM5T07	Introduction to Machine Learning	3	0	0	3	AIML

OPEN ELECTIVE –II:

S. No.	Course Code	Course Name	L	T	P	C	Offered by
1	20CE6T08	Remote Sensing and GIS	3	0	0	3	CE
2	20CE6T09	Environmental Impact Assessment	3	0	0	3	CE
3	20EE6T08	Renewable Energy Sources	3	0	0	3	EEE
4	20EE6T09	Energy Audit, Conservation and Management	3	0	0	3	EEE
5	20ME6T07	Industrial Robotics	3	0	0	3	ME
6	20ME6T08	3D Printing	3	0	0	3	ME

7	20EC6T07	Electronic Circuits and Networks	3	0	0	3	ECE
8	20EC6T08	Principles of Communications	3	0	0	3	ECE
9	20EC6T09	Microcontrollers & its Applications	3	0	0	3	ECE
10	20CS6T07	Introduction to Machine Learning	3	0	0	3	CSE
11	20CS6T08	Information Security	3	0	0	3	CSE
12	20CS6T09	Agile Technologies	3	0	0	3	CSE
13	20IT6T07	Fundamentals of Machine Learning	3	0	0	3	IT
14	20IT6T08	Database Management Systems	3	0	0	3	IT
15	20HS6T01	Operations Research	3	0	0	3	BED
16	20MB6T01	Organizational Behaviour	3	0	0	3	DMS
17	20MB6T02	Project Management	3	0	0	3	DMS
18	20AD6T07	Visual Analytics	3	0	0	3	AIDS
19	20AM6T07	Big data Analytics	3	0	0	3	AIML

OPEN ELECTIVE –III:

S. No.	Course code	Course Name	L	T	P	C	Offered by
1	20CE7T13	Construction Technology and Management	3	0	0	3	CE
2	20CE7T14	Green Buildings	3	0	0	3	CE
3	20EE7T13	Concept of Power System Engineering	3	0	0	3	EEE
4	20EE7T14	Instrumentation	3	0	0	3	EEE
5	20ME7T10	Green Engineering Systems	3	0	0	3	ME
6	20ME7T11	Hybrid Electric Vehicles	3	0	0	3	ME
7	20EC7T10	Data Communications	3	0	0	3	ECE
8	20EC7T11	Mechatronics	3	0	0	3	ECE
9	20EC7T12	Bio Medical Instrumentation	3	0	0	3	ECE
10	20CS7T10	Artificial Neural Networks	3	0	0	3	CSE
11	20CS7T11	Cyber Security	3	0	0	3	CSE
12	20CS7T12	Software Testing Methodologies	3	0	0	3	CSE
13	20IT7T10	Internet of Things	3	0	0	3	IT
14	20IT7T11	Computer Vision	3	0	0	3	IT
15	20HS7T01	Fuzzy sets	3	0	0	3	BED

16	20MB7T01	Digital Media management	3	0	0	3	DMS
17	20MB7T02	Entrepreneurship Development	3	0	0	3	DMS
18	20AD7T10	Data Analysis and Visualization with Python	3	0	0	3	AIDS
19	20AM7T10	NOSQL Databases	3	0	0	3	AIML

OPEN ELECTIVE –IV:

S. No.	Course Code	Course Name	L	T	P	C	Offered by
1	20CE7T15	Waste water treatment	3	0	0	3	CE
2	20CE7T16	Repair and Rehabilitation of Concrete Structures	3	0	0	3	CE
3	20EE7T15	Power Quality	3	0	0	3	EEE
4	20EE7T16	Electric Vehicles	3	0	0	3	EEE
5	20ME7T12	Micro-Electro- Mechanical Systems	3	0	0	3	ME
6	20ME7T13	Solar Energy Systems	3	0	0	3	ME
7	20EC7T13	Introduction to Embedded Systems	3	0	0	3	ECE
8	20EC7T14	Internet of Things	3	0	0	3	ECE
9	20EC7T15	Analog and Digital IC applications	3	0	0	3	ECE
10	20CS7T13	Data Analytics	3	0	0	3	CSE
11	20CS7T14	Block Chain Technology	3	0	0	3	CSE
12	20CS7T15	Software Project Management	3	0	0	3	CSE
13	20IT7T13	Cloud Computing	3	0	0	3	IT
14	20IT7T14	Business Intelligence	3	0	0	3	IT
15	20HS7T02	Polymer Chemistry	3	0	0	3	BED
16	20MB7T03	Total Engineering Quality Management	3	0	0	3	DMS
17	20MB7T04	Stress Management	3	0	0	3	DMS
18	20AD7T11	Natural Language Processing	3	0	0	3	AIDS
19	20AM7T11	Deep Learning	3	0	0	3	AIML

HONORS/MINOR COURSES OFFERED BY THE DEPARTMENT

Honors/ Minor Course Fulfillments:

- The 20 additional credits need to be acquired, 16 credits can be earned by undergoing specified courses, with each carrying 4 credits.
- The remaining 4 credits must be acquired through two online MOOCs (SWAYAM /NPTEL), which shall be domain specific, each with 2 credits and with a minimum duration of 8/12weeks as recommended by the Board of Studies.
- Minor Engineering subjects are offered to other branches by ME Department (except for ME Students).
- Honors engineering subjects are offered to ME Students.
- The head of the department will float the list of allowed MOOC electives in each academic year, based on the list floated by MOOCs (SWAYAM/NPTEL).

HONORS COURSES

S.No.	Course code	Course Name	L	T	P	C
		Pool-1				
1	20MEHN01	Advanced Mechanics of Solids	4	0	0	4
2	20MEHN02	Fracture Mechanics	4	0	0	4
3	20MEHN03	Advanced Machine Design	4	0	0	4
4	20MEHN04	Tribology	4	0	0	4
		Pool-2				
5	20MEHN05	Measurements in Heat Transfer	4	0	0	4
6	20MEHN06	Advanced Mechanics of Fluids	4	0	0	4
7	20MEHN07	Energy Storage Systems	4	0	0	4
8	20MEHN08	Advanced Thermodynamics	4	0	0	4
		Pool-3				
9	20MEHN09	Metrology and Computer Aided Inspection	4	0	0	4
10	20MEHN10	Lean Manufacturing	4	0	0	4
11	20MEHN11	Flexible Manufacturing Systems	4	0	0	4
12	20MEHN12	Robotics & Control	4	0	0	4
		Pool-4				
13	20MEHN13	Quality Engineering in Manufacturing	4	0	0	4
14	20MEHN14	Precision Engineering	4	0	0	4
15	20MEHN15	Automation in Manufacturing	4	0	0	4
16	20MEHN16	Materials Characterization Techniques	4	0	0	4

MINOR COURSES

S.No.	Course code	Course Name	L	T	P	C	Offered by
1	20MEMN01	Engineering Mechanics	3	1	0	4	MECH
2	20MEMN02	Thermal Engineering	3	1	0	4	MECH
3	20MEMN03	Production Technology	3	1	0	4	MECH
4	20MEMN04	Fundamentals of Engineering Design	3	1	0	4	MECH
5	20MEMN05	Production Planning and control	3	1	0	4	MECH
6	20MEMN06	Materials Technology	3	1	0	4	MECH
7	20MEMN07	Basics of Mechanical Engineering	3	1	0	4	MECH
8	20MEMN08	Automobile Engineering	3	1	0	4	MECH

M. Tech Computer Science and Engineering
COURSE STRUCTURE
I Semester

S.No	Course Code	Course Category	Course Title	L	T	P	Credits
1	20511T01	PC	Mathematical Foundations of Computer Science	3	0	0	3
2	20511T02	PC	Advanced Data Structures & Algorithms	3	0	0	3
3	20511T03/ 20511T04/ 20511T05	PE	**Program Elective-1** 1. Big Data Analytics 2. Digital Image Processing 3. Advanced Operating Systems	3	0	0	3
4	20511T06/ 20511T07/ 20511T08	PE	**Program Elective-2** 1. Advanced Computer Networks 2. Internet of Things 3. Object Oriented Software Engineering	3	0	0	3
5	20511T09	CC	Research Methodology and IPR	2	0	0	2
6	20511L10	PC	Advanced Data Structures & Algorithms Lab	0	0	4	2
7	20511L11	PC	Advanced Computing Lab	0	0	4	2
8	20511M12	MC	Audit Course 1*	2	0	0	0
Total Credits							**18**

II Semester

S.No	Course Code	Course Category	Course Title	L	T	P	Credits
1	20512T01	PC	Machine Learning	3	0	0	3
2	20512T02	PC	MEAN Stack Technologies	3	0	0	3
3	20512T03/ 20512T04/ 20512T05	PE	**Program Elective-3** 1. Advanced Databases and Mining 2. Adhoc & Sensor Networks 3. Soft Computing	3	0	0	3
4	20512T06/ 20512T07/ 20512T08	PE	**Program Elective-4** 1. Cloud Computing 2. Principles of Computer Security 3. High Performance Computing	3	0	0	3
5	20512L09	PC	Machine Learning with Python Lab	0	0	4	2
6	20512L10	PC	MEAN Stack Technologies Lab	0	0	4	2
7	20512P11	PROJ	Mini Project with Seminar	-	-	-	2
8	20512M12	MC	Audit Course 2*	2	0	0	0
Total Credits							**18**

III SEMESTER

S.No	Course Code	Course Category	Course Title	L	T	P	Credits
1	20513T01/ 20513T02	PE	**Program Elective-5** 1. Deep Learning 2. Social Network Analysis 3. MOOC-1(NPTEL/SWAYAM) 12 Week program related to the program which is not listed in the course structure	3	0	0	3
4	20513T03/ 20513T04	OE	**Open Elective** 1. Human Resource Management 2. Digital Marketing 3. MOOC-2 (NPTEL/SWAYM) 12 Week program related to the program which is not listed in the course structure	3	0	0	3
5	20513P05	PROJ	Dissertation-1/ Industrial Project	-	-	-	10
Total Credits							**16**

#Students going for Industrial Project/Thesis will complete these courses through MOOCs

IV SEMESTER

S.No	Course Code	Course Category	Course Title	L	T	P	Credits
1	20514P01	PROJ	Dissertation-II	-	-	-	16
Total Credits							**16**

COURSE STRUCTURE-MIC20
M. Tech (Machine Design)
M. Tech I Semester

S.No	Course Code	Course Title	Hours Per Week			Total Contact Hours	Credits
			L	T	P		
1	20311T01	Advanced Stress Analysis	3	---	---	3	3
2	20311T02	Advanced Vibrations and Acoustics	3	---	---	3	3
3	20311T03	1.Advanced Machine Design	3	---	---	3	3
	20311T04	2.Design for Manufacturing and Assembly					
	20311T05	3.Mathematical Methods in Engineering					
4	20311T06	1.Advanced Engineering Materials	3	---	---	3	3
	20311T07	2.Mechanics of Composite Materials					
	20311T08	3.Analysis and Synthesis of Mechanisms					
5	20311L11	Machine dynamics lab	---	---	4	4	2
6	20311L12	Numerical Simulation lab	---	---	4	4	2
7	20311T09	Research Methodology and IPR	2	---	---	2	2
8	20311T10	Audit Course - 1	2	---	---	2	0
		TOTAL	16	---	8	24	18

M. Tech II Semester

S.No	Course Code	Course Title	Hours Per Week			Total Contact Hours	Credits
			L	T	P		
1	20312T01	Finite Element Method	3	---	---	3	3
2	20312T02	Computer Aided Design	3	---	---	3	3
3	20312T03	1. Tribology in Design	3	---	---	3	3
	20312T04	2. Robotics					
	20312T05	3. Fracture Mechanics					
4	20312T06	1. Multi-body Dynamics	3	---	---	3	3
	20312T07	2. Condition Based Monitoring					
	20312T08	3. Optimization Techniques in Design					
5	20312L11	Computer Aided Design lab	---	---	4	4	2
6	20312L12	Simulation lab	---	---	4	4	2
7	20312T09	Audit -2	2	---	---	2	0
8	20312P10	Mini-Project with Seminar	---	---	4	4	2
		TOTAL	14	---	12	26	18

M. Tech III Semester

S.No	Course Code	Course Title	Hours Per Week			Total Contact Hours	Credits
			L	T	P		
1	20313T01	1. Advanced Finite Element Method	3	---	---	3	3
	20313T02	2. Advanced Metallurgy					
2	20313T03	1. Business Analytics	3	---	---	3	3
	20313T04	2. Industrial Safety					
	20313T05	3. Operations Research					
	20313T06	4. Cost Management of Engineering Projects					
	20313T07	5. Composite Materials					
	20313T08	6. Waste to Energy					
3	20313P08	Dissertation Phase – I	---	---	20	20	10
		TOTAL	6	---	20	26	16

M.Tech IV Semester

S. No	Course Code	Course Title	Hours Per Week			Total Contact Hours	Credits
			L	T	P		
1	20314P01	Dissertation Phase – II	---	--	32	32	32
		TOTAL	---	--	32	32	16

Audit course 1 & 2

1. English for Research Paper Writing
2. Disaster Management
3. Sanskrit for Technical Knowledge
4. Value Education
5. Constitution of India
6. Pedagogy Studies
7. Stress Management by Yoga
8. Personality Development through Life Enlightenment Skills.

M. Tech: POWER ELECTRONICS AND DRIVES

COURSE STRUCTURE

I Year, Semester – I

S.No	Course Code	Course Category	Course Title	Hours per week			Total Contact Hours	Credits
				Lecture	Tutorial	Practical		
1	20211T01	PCC	Mathematical Modeling of Machines	3	-	-	3	3
2	20211T02	PCC	Analysis of power Electronic Converters	3	-	-	3	3
3	20211T03	PCC	Power Electronic Control of DC Drives	3	-	-	3	3
4	20211T04	PCC	Digital Signal processing	3	-	-	3	3
5	20211T05	HSMC	Research Methodology & IPR	3	-	-	3	3
6	20211L06	PCC	Simulation of Electrical Machines and Converters	-	-	6	6	3
Total number of credits								**18**

I Year, Semester – II

S.No	Course Code	Course Category	Course Title	Hours per week			Total Contact Hours	Credits
				Lecture	Tutorial	Practical		
1	20212T01	PCC	Power Electronic Control of AC Drives	3	-	-	3	3
2	20212T02	PCC	Advanced Power Electronic Converters	3	-	-	3	3
Professional Elective-I				3	-	-	3	3
3	20212T03	PEC	Renewable Energy Sources					
	20212T04		Special Electrical Machines					
	20212T05		Digital Control Systems					
Professional Elective-II				3	-	-	3	3
4	20212T06	PEC	Smart Grids					
	20212T07		Flexible AC Transmission Systems					
	20212T08		Optimization Techniques					
5	20212L09	PCC	Electric Drives Lab	-	-	6	6	3
6	20212P10	P	Mini Project with Seminar	-	-	6	6	3
Total number of credits								**18**

II Year, Semester – III

S.No	Course Code	Course Category	Course Title	Hours per week			Total Contact Hours	Credits
				Lecture	Tutorial	Practical		
1	20213T01	PCC	Digital Control of Drives	3	-	-	3	3
Professional Elective-III				3	-	-	3	3
2	20213T02	PEC	Embedded Systems					
	20213T03		VLSI Design					
	20213T04		Image Processing					
3	20213T03	PROJ	Phase – I Dissertation	-	-	-	20	10
Total number of credits								**16**

II Year, Semester – IV

S.No	Course Code	Course Category	Course Title	Hours per week			Total Contact Hours	Credits
				Lecture	Tutorial	Practical		
1	20214P01	PROJ	Phase – II Dissertation	-	-	-	32	16
Total number of credits								**16**

COURSE STRUCTURE
M.Tech (VLSI and Embedded Systems)
I Year I Semester

Sr. No.	Course Code	Course Title	L	T	P	Contact Hrs./ Wk.	Credits
1	20411T01	Digital System Design	3	0	0	3	3
2	20411T02	Embedded system Design	3	0	0	3	3
3	20411T03	Analog VLSI Design	3	0	0	3	3
4	20411T04 20411T05 20411T06	**Programme Elective I** 1.VLSI Technology and Design 2.CMOS Digital IC Design 3. System on Chip Design	3	0	0	3	3
5	20411T07 20411T08 20411L09	**Programme Elective II** 1. Advanced Operating Systems 2. Soft Computing Techniques 3. Network Security and Cryptography	3	0	0	3	3
6	20411L10	VLSI System design Lab-I	0	0	4	2	2
7	20411L11	Digital System Design using Verilog and VHDL	0	0	4	2	2
8	20411T12	Research Methodology	2	0	0	2	2
						Total Credits	**21**

I Year II Semester

Sr. No.	Course Code	Course Title	L	T	P	Contact Hrs./ Wk.	Credits
1	20412T01	Embedded Real Time Operating Systems	3	0	0	3	3
2	20412T02	Low Power VLSI Design	3	0	0	3	3
3	20412T03	CMOS Mixed Signal Circuit Design					
4	20412T04 20412T05 20412T06	**Programme Elective III** 1.VLSI Signal Processing 2. CPLD & FPGA Architectures and Applications. 3. Advanced Computer Architecture	3	0	0	3	3
5	20412T07 20412T08 20412L09	**Programme Elective IV** 1.Design of IOT 2. DSP Processors & Architectures 3. Semiconductor Memory Design and Testing.	3	0	0	3	3
6	20412L10	Embedded System Design lab	0	0	4	4	2
7	20412L11	VLSI System design Lab-II	0	0	4	4	2
8	20412T12	Intellectual Property Rights And Patents	2	0	0	2	2
						Total Credits	**21**

II Year III Semester

Sr. No.	Course Code	Course Title	L	T	P	Contact Hrs./ Wk.	Credits
1	20413L01	Comprehensive Viva-Voce	4	0	0	4	4
2	20413L02	Seminar	2	0	0	2	2
3	20413L03	Project Work part-1	0	0	14	14	7
						Total Credits	**13**

II Year IV Semester

Sr. No.	Course Code	Course Title	L	T	P	Contact Hrs./ Wk.	Credits
1	20414L01	Project Work Part -II	0	0	26	26	13
						Total Credits	**13**

MBA III SEMESTER

S. No	Course Code	Course Title	Hours per week			Total Marks	Credits
			Lecture	Tutorial	Practical		
1	20MB3T01	Strategic Management	4	0	0	100	4
2	20MB3T02	Operations Research	4	0	0	100	4
3		Elective -1 Paper 1	4	0	0	100	3
4		Elective -1 Paper 2	4	0	0	100	3
5		Elective -2 Paper 1	4	0	0	100	3
6		Elective -2 Paper 2	4	0	0	100	3
7	20MB3T28	Industrial Project based on Summer Internship	0	0	0	100	3
		Total	**28**	**0**	**0**	**700**	**23**

MBA IV SEMESTER

S. No	Course Code	Course Title	Hours per week			Total Marks	Credits
			Lecture	Tutorial	Practical		
1	20MB4T01	Logistics and Supply Chain Management	4	0	0	100	4
2	20MB4T02	Entrepreneurship & Innovative Management	4	0	0	100	4
3		Elective -1 Paper 3	4	0	0	100	3
4		Elective -1 Paper 4	4	0	0	100	3
5		Elective -2 Paper 3	4	0	0	100	3
6		Elective -2 Paper 4	4	0	0	100	3
7	20MB4T29	Comprehensive Viva-Voce	0	0	0	100	3
		Total	**24**	**0**	**0**	**700**	**23**

MCA III SEMESTER

S.No	Course Code	Course Category	Course Tile	L	T	P	Credits
1	20MC3T01	PC	Machine Learning with Python	3	0	0	3
2	20MC3T02	PC	Big Data Analytics	3	0	0	3
3	20MC3T03	PC	Web Technologies	3	0	0	3
4	20MC3T04	PC	Cryptography and Network Security	3	0	0	3
5	20MC3T05/ 20MC3T06/ 20MC3T07/ 20MC3T08	PE	**Elective-II** Software Project Management Cloud Computing Cyber Security Advanced Data Bases	3	0	0	3
6	20MC3L09	PC	Machine Learning with Python Lab	0	0	3	1.5
7	20MC3L10	PC	Big Data Analytics Lab	0	0	3	1.5
8	20MC3L11	PC	Web Technologies Lab	0	0	4	2
9	20MC2P12	PR	Internship / Industry Oriented Mini Project/ Skill Development Course (Minimum 6-weeks)	0	0	0	2
			Total	15	0	10	22

MCA IV SEMESTER

S.No	Course Code		Course Title	L	T	P	Credits
1	20MC4T01/ 20MC4T02/ 20MC4T03	PE	**Elective-III *** Digital Marketing/ Human Resource Management/ Ad-hoc and Sensor Networks/ MOOCs-1(NPTEL/SWAYAM) Full Stack Technologies Any Recommended Course	3	0	0	3
2	20MC4T04/ 20MC4T05/ 20MC4T06 20MC4T07	PE	Elective-IV * Block Chain Technologies/ Software Testing Methodologies/ E Commerce MOOCs-2(NPTEL/SWAYAM) -Data Science -Any Recommended Course	3	0	0	3
3	20MC4P08	PR	Project Work/ Dissertation	0	0	0	12
			Total	6	0	0	18

***Students going for Industrial Project/Thesis will complete these courses through MOOCs (even in earlier semester)**

B. TECH III SEMESTER

S.No	Course Code	Course Category	Course Title	Hours per week			Contact Hours	Credits
				Lecture	Tutorial	Practical		
1	20AD3T01	BSC	Numerical Methods & Vector Calculus	3	-	-	3	3
2	20AD3T02	PCC	Object Oriented Programming through Java	3	-	-	3	3
3	20AD3T03	PCC	Data Base Management Systems	3	-	-	3	3
4	20AD3T04	PCC	Introduction to Artificial Intelligence	3	-	-	3	3
5	20AD3T05	PCC	Operating Systems	3	-	-	3	3
6	20AD3L06	PCC	Object Oriented Programming through Java Lab	-	-	3		1.5
7	20AD3L07	PCC	Data Base Management Systems Lab	-	-	3		1.5
8	20AD3L08	PCC	UNIX and Shell programming Lab	-	-	3		1.5
9	20AD3S09	SC	Data Analysis and visualization with Python	-	-	4		2
10	20AD3M10	MC	Constitution of India	2	-	-		-
Total Number of Credits								**21.5**

B. TECH IV SEMESTER

S.No	Course Code	Course Category	Course Title	Hours per week			Contact Hours	Credits
				Lecture	Tutorial	Practical		
1	20AD4T01	BSC	Probability and Statistics	3	-	-	3	3
2	20AD4T02	ESC	Discrete Mathematical Structures	3	-	-	3	3
3	20AD4T03	PCC	Design and Analysis of Algorithms	3	-	-	3	3
4	20AD4T04	PCC	Foundations of Data science	3	-	-	3	3
5	20AD4T05	HSMC	Managerial Economics and Financial Analysis	3	-	-	3	3
6	20AD4L06	ESC	R Programming Lab	-	-	3	3	1.5
7	20AD4L07	PCC	Data Science lab	-	-	3	3	1.5
8	20AD4L08	PCC	Design and Analysis of Algorithms Lab	-	-	3	3	1.5
9	20AD4S09	SC	Basic Web programming	-	-	4	4	2
Total number of credits								**21.5**
Internship 2 Months (Mandatory) during summer vacation								
Honors/Minor courses				**4**	**0**	**0**	**-**	**4**

B.TECH V SEMESTER

S.No	Course Code	Course Category	Course Title	Hours per week			Contact Hours	Credits
				Lecture	Tutorial	Practical		
1	20AD5T01	PCC	Theory of Automata	3	0	0	3	3
2	20AD5T02	PCC	Data Warehousing & Mining	3	0	0	3	3
3	20AD5T03	PCC	Machine Learning	3	0	0	3	3
Program Elective-I				3	0	0	3	3
4	20AD5T04	PE-I	Advanced Data Structures					
5	20AD5T05		E-Commerce					
6	20AD5T06		Software Engineering					
7	**Open Elective-I**			3	0	0	3	3
8	20AD5L08	PCC	Machine Learning Lab	0	0	3	3	1.5
9	20AD5L09	PCC	Data Warehousing and Mining Lab	0	0	3	3	1.5
10	20AD5S10	SC	Testing Tools Lab	0	0	4	4	2
11	20AD5M11	MC	Disaster Management	2	0	0	2	-
12	20AD5I12	I	Summer Internship	0	0	0	1.5	1.5
Total number of credits								**21.5**
Honors/Minor courses				**4**	**0**	**0**	**-**	**4**

B.TECH VI SEMESTER

S.No	Course Code	Course Category	Course Title	Hours per week			Contact Hours	Credits
				Lecture	Tutorial	Practical		
1	20AD6T01	PCC	NoSQL Databases	3	0	0	3	3
2	20AD6T02	PCC	Computer Networks	3	0	0	3	3
3	20AD6T03	PCC	Big Data Analytics	3	0	0	3	3
Program Elective-II				3	0	0	3	3
4	20AD6T04	PE-II	MEAN Stack Technologies					
5	20AD6T05		Compiler Design					
6	20AD6T06		Software Architecture and Design patterns					
7	**Open Elective-II**			3	0	0	3	3
8	20AD6L08	PCC	NoSQL Lab	0	0	3	3	1.5
9	20AD6L09	PCC	Computer Networks Lab	0	0	3	3	1.5
10	20AD6L10	PCC	BDA Lab	0	0	3	3	1.5
11	20AD6S11	SC	Soft Skills	0	0	4	4	2
12	20AD6M12	MC	Essence of Indian traditional knowledge	2	0	0	2	-
13	20AD6P13	P	Community Service Project	-	-	-	-	4
Total number of credits								**25.5**
Honors/Minor courses				**4**	**0**	**0**	**-**	**4**

B.TECH VII SEMESTER

S.No	Course Code	Course Category	Course Title	Hours per week			Contact Hours	Credits
				Lecture	Tutorial	Practical		
Program Elective-III				3	0	0	3	3
1	20AD7T01	PE-III	Cloud computing					
2	20AD7T02		Natural Language Processing					
3	20AD7T03		Software Project Management					
Program Elective-IV				3	0	0	3	3
4	20AD7T04	PE-IV	Neural Networks and Deep Learning					
5	20AD7T05		Information Security					
6	20AD7T06		Business Intelligence					
Program Elective-V				3	0	0	3	3
7	20AD7T07	PE-V	Soft Computing					
8	20AD7T08		Computer Vision					
9	20AD7T09		Internet of Things					
10	**Open Elective-III**			3	0	0	3	3
11	**Open Elective-IV**			3	0	0	3	3
12	20AD5L12	HSMC	Universal Human Values 2: Understanding Harmony	0	0	3	3	3
13	20AD5S13	SC	Data Visualization using Tableau	0	0	4	4	2
14	20AD5I14	I	Industrial Internship	-	-	-	-	3
Total number of credits								**23**
Honors/Minor courses				**4**	**0**	**0**	**-**	**4**

B.TECH VIII SEMESTER

S.No	Course Code	Course Category	Course Title	Hours per week			Total Contact Hours	Credits
				Lecture	Tutorial	Practical		
1	20AD8P01	P	Project	0	0	0	12	8
Total number of credits								**8**

B. TECH III SEMESTER

S.No.	Course Code	Course Category	Course Title	Hours per week			Contact Hours	Credits
				Lecture	Tutorial	Practical		
1	20AM3T01	BSC	Numerical Methods & Vector Calculus	3	-	-	3	3
2	20AM3T02	PCC	Object Oriented Programming through Java	3	-	-	3	3
3	20AM3T03	PCC	Data Base Management Systems	3	-	-	3	3
4	20AM3T04	PCC	Introduction to Artificial Intelligence	3	-	-	3	3
5	20AM3T05	PCC	Operating Systems	3	-	-	3	3
6	20AM3L06	PCC	Object Oriented Programming through Java Lab	-	-	3	3	1.5
7	20AM3L07	PCC	Data Base Management Systems Lab	-	-	3	3	1.5
8	20AM3L08	PCC	UNIX and Shell programming Lab	-	-	3	3	1.5
9	20AM3S09	SC	Data analysis and visualization with python	-	-	4	4	2
10	20AM3M10	MC	Constitution of India	2	-	-	2	-
Total number of credits								**21.5**

B. TECH IV SEMESTER

S.No	Course Code	Course Category	Course Title	Hours per week			Contact Hours	Credits
				Lecture	Tutorial	Practical		
1	20AM4T01	BSC	Probability and Statistics	3	-	-		3
2	20AM4T02	ESC	Discrete Mathematical Structures	3	-	-		3
3	20AM4T03	PCC	Design and Analysis of Algorithms	3	-	-		3
4	20AM4T04	PCC	Machine Learning	3	-	-		3
5	20AM4T05	HSMC	Managerial Economics and Financial Analysis	3	-	-		3
6	20AM4L06	ESC	R Programming Lab	-	-	3		1.5
7	20AM4L07	PCC	Machine Learning Using Python Lab	-	-	3		1.5
8	20AM4L08	PCC	Design and analysis of Algorithms Lab	-	-	3		1.5
9	20AM4S09	SC	Basic Web programming	-	-	4		2
Total number of credits								**21.5**
Internship 2 Months (Mandatory) during summer vacation								
Honors/Minor courses				4	0	0	-	4

B.TECH V SEMESTER

S.No	Course Code	Course Category	Course Title	Hours per week			Contact Hours	Credits
				Lecture	Tutorial	Practical		
1	20AM5T01	PCC	Theory of Automata	3	0	0	3	3
2	20AM5T02	PCC	Data Warehousing & Mining	3	0	0	3	3
3	20AM5T03	PCC	Software Engineering	3	0	0	3	3
Program Elective-I				3	0	0	3	3
4	20AM5T04	PE-I	Computer Graphics					
5	20AM5T05		E-Commerce					
6	20AM5T06		Data Science and Visualization					
7	**Open Elective-I**			3	0	0	3	3
8	20AM5L08	PCC	CASE Tools Lab	0	0	3	3	1.5
9	20AM5L09	PCC	Data Warehousing and Mining Lab	0	0	3	3	1.5
10	20AM5S10	SC	Testing Tools Lab	0	0	4	4	2
11	20AM5M11	MC	Disaster Management	2	0	0	2	-
12	20AM5I12	I	Summer Internship	0	0	0	1.5	1.5
Total number of credits								**21.5**
Honors/Minor courses				**4**	**0**	**0**	**-**	**4**

B.TECH VI SEMESTER

S.No	Course Code	Course Category	Course Title	Hours per week			Contact Hours	Credits
				Lecture	Tutorial	Practical		
1	20AM6T01	PCC	Deep Learning	3	0	0	3	3
2	20AM6T02	PCC	Computer Networks	3	0	0	3	3
3	20AM6T03	PCC	Big Data Analytics	3	0	0	3	3
Program Elective-II				3	0	0	3	3
4	20AM6T04	PE-II	MEAN Stack Technologies					
5	20AM6T05		Compiler Design					
6	20AM6T06		Software Architecture and Design patterns					
7	**Open Elective-II**			3	0	0	3	3
8	20AM6L08	PCC	Deep Learning Lab	0	0	3	3	1.5
9	20AM6L09	PCC	Computer Networks Lab	0	0	3	3	1.5
10	20AM6L10	PCC	BDA Lab	0	0	3	3	1.5
11	20AM6S11	SC	Soft Skills	0	0	4	4	2
12	20AM6M12	MC	Essence of Indian traditional knowledge	2	0	0	2	-
13	20AM6P13	P	Community Service Project	-	-	-	-	4
Total number of credits								**25.5**
Honors/Minor courses				**4**	**0**	**0**	**-**	**4**

B.TECH VII SEMESTER

S.No	Course Code	Course Category	Course Title	Hours per week			Contact Hours	Credits
				Lecture	Tutorial	Practical		
Program Elective-III				3	0	0	3	3
1	20AM7T01	PE-III	Cloud Computing					
2	20AM7T02		Natural Language Processing					
3	20AM7T03		Software Project Management					
Program Elective-IV				3	0	0	3	3
4	20AM7T04	PE-IV	Software Testing Methodologies					
5	20AM7T05		Information Security					
6	20AM7T06		Business Intelligence					
Program Elective-V				3	0	0	3	3
7	20AM7T07	PE-V	Soft Computing					
8	20AM7T08		Robotics and its Applications					
9	20AM7T09		Internet of Things					
10	**Open Elective-III**			3	0	0	3	3
11	**Open Elective-IV**			3	0	0	3	3
12	20AM5L12	HSMC	Universal Human Values Understanding Harmony	0	0	3	3	3
13	20AM5S13	SC	Data Visualization using Tableau	0	0	4	4	2
14	20AM5I14	I	Industrial Internship	-	-	-	-	3
Total number of credits								**23**
Honors/Minor courses				**4**	**0**	**0**	**-**	**4**

B.TECH VIII SEMESTER

S.No	Course Code	Course Category	Course Title	Hours per week			Total Contact Hours	Credits
				Lecture	Tutorial	Practical		
2	20AM8P01	P	Project	0	0	0	-	8
Total number of credits								**8**

B. TECH III SEMESTER

S. No	Course Code	Course Category	Course Title	Hours per week			Total Contact Hours	Credits
				Lecture	Tutorial	Practical		
1	20CE3T01	BSC	Numerical Methods and Vector calculus	3	-	-	3	3
2	20CE3T02	PCC	Strength of Materials	3	-	-	3	3
3	20CE3T03	PCC	Fluid Mechanics	3	-	-	3	3
4	20CE3T04	PCC	Concrete Technology	3	-	-	3	3
5	20CE3T05	PCC	Surveying	3	-	-	3	3
6	20CE3L06	PCC LAB	Strength of Materials Lab	-	-	3	3	1.5
7	20CE3L07	PCC LAB	Surveying Field Work	-	-	3	3	1.5
8	20CE3L08	PCC LAB	Concrete Technology Lab	-	-	3	3	1.5
9	20CE3S09	SC	AUTO CAD 2D&3D	-	-	4	4	2
Total number of credits								**21.5**

B. TECH IV SEMESTER

S. No	Course Code	Course Category	Course Title	Hours per week			Total Contact Hours	Credits
				Lecture	Tutorial	Practical		
1	20CE4T01	BSC	Complex Variables and Statistical Methods	3	-	-	3	3
2	20CE4T02	ESC	Engineering Geology	3	-	-	3	3
3	20CE4T03	PCC	Hydraulics and Hydraulic Machinery	3	-	-	3	3
4	20CE4T04	PCC	Structural Analysis-1	3	-	-	3	3
5	20CE4T05	HSMC	Managerial Economics and Financial Analysis	3	-	-	3	3
6	20CE4L06	PCC LAB	Engineering Geology Lab	-	-	3	3	1.5
7	20CE4L07	PCC LAB	Fluid Mechanics and Hydraulic Machinery Lab	-	-	3	3	1.5
8	20CE4L08	PCC LAB	Advanced Surveying Lab	-	-	3	3	1.5
9	20CE4S09	SC	Revit Architecture	-	-	4	4	2
10	20CE4M10	MC	Constitution of India	2	-	-	-	-
Total number of credits								**21.5**
Internship 2 Months (Mandatory) during summer vacation								
Honors/ Minor Course				**4**	**0**	**0**	**4**	**4**

B. TECH V SEMESTER

S. No	Course Code	Course Category	Course Title	Hours per week			Total Contact Hours	Credits
				Lecture	Tutorial	Practical		
1	20CE5T01	PCC	Geotechnical Engineering-1	3	-	-	3	3
2	20CE5T02	PCC	Transportation Engineering -1	3	-	-	3	3
3	20CE5T03	PCC	Design and Drawing of Reinforced Concrete Structures	3	-	-	3	3
4	**Open Elective–I**			3	-	-	3	3
5	**Professional Elective–I**			3	-	-	3	3
	20CE5T06	PEC	Structural Analysis – 2					
	20CE5T07		Rural Water Supply and Environmental Sanitation					
	20CE5T08		Geo synthetics					
	20CE5T09		Interior Designs and Decorations					
6	20CE5L10	PCC LAB	Geotechnical Engineering Lab	-	-	3	3	1.5
7	20CE5L11	PCC LAB	Transportation Engineering Lab	-	-	3	3	1.5
8	20CE5L12	SC	STAAD PRO LAB	-	-	4	4	2
9	20CE5M13	MC	Essence of Indian Traditional Knowledge	2	-	-	2	-
10	20CE5I14	I	Summer Internship	-	-	-	-	1.5
Total number of credits								**21.5**
Honors/ Minor Course				**4**	**0**	**0**	**4**	**4**

B. TECH VI SEMESTER

S. No	Course Code	Course Category	Course Title	Hours per week			Total Contact Hours	Credits
				Lecture	Tutorial	Practical		
1	20CE6T01	PCC	Design and Drawing of Steel Structures	3	-	-	3	3
2	20CE6T02	PCC	Water Resources Engineering-1	3	-	-	3	3
3	20CE6T03	PCC	Environmental Engineering	3	-	-	3	3
4	**Professional Elective-II**			3	-	-	3	3
	20CE6T04	PEC	Geotechnical Engineering -2					
	20CE6T05		Air pollution and Control					
	20CE6T06		Urban Transportation Planning					
	20CE6T07		Ground water development and Management.					
5	**Open Elective–II**			3	-	-	3	3
6	20CE6L10	PCC LAB	Environmental Engineering Lab	-	-	3	3	1.5
7	20CE6L11	PCC LAB	Design and Drawing of Irrigation Structures	-	-	3	3	1.5
8	20CE6L12	PCC LAB	Geographical Information Systems Lab	-	-	3	3	1.5
9	20CE6S13	SC	Soft Skills	-	-	4	4	2
10	20CE6M14	MC	Disaster Management	2	-	-	-	-
11	20CE6P15	P	Community Service Project	-	-	-	-	4
Total number of credits								**25.5**
Internship 2 Months (Mandatory) during summer vacation								
Honors/ Minor Course				**4**	**0**	**0**	**4**	**4**

B. TECH VII SEMESTER

S. No	Course Code	Course Category	Course Title	Hours per week			Total Contact Hours	Credits
				Lecture	Tutorial	Practical		
1	**Professional Elective-III**			3	-	-	3	3
	20CE7T01	PEC	Transportation Engineering-2					
	20CE7T02		Solid and Hazardous Management					
	20CE7T03		Bridge Engineering					
	20CE7T04		Ground Improvement Techniques.					
2	**Professional Elective-IV**			3	-	-	3	3
	20CE7T05	PEC	Water Resources Engineering-2					
	20CE7T06		Finite Element Methods					
	20CE7T07		Pavement Design					
	20CE7T08		Port and Harbour Structures					
3	**Professional Elective-V**			3	-	-	3	3
	20CE7T09	PEC	Estimation, Specification and Contracts					
	20CE7T10		Pre stressed Concrete					
	20CE7T11		Geo environmental Engineering					
	20CE7T12		Water Harvesting and Conservation.					
4	**Open Elective–III**			3	-	-	3	3
5	**Open Elective–IV**			3	-	-	3	3
6	20CE7T17	HSMC	Universal Human Values 2 Understanding Harmony	-	-	3	3	3
7	20CE7S18	SC	ETABS	1	-	2	3	2
8	20CE7I19	I	Industrial Internship					3
Total number of credits								**23**
Honors/ Minor Course				4	0	0	4	4

B. TECH VIII SEMESTER

S. No	Course Code	Course Category	Course Title	Hours per week			Total Contact Hours	Credits
				Lecture	Tutorial	Practical		
1	20CE8P01	PROJ	Project	-	-	-		8
Total number of credits								**8**

B.TECH V SEMESTER

S.No	Course Code	Course Category	Course Title	Hours per week			Contact Hours	Credits
				Lecture	Tutorial	Practical		
1	20CS5T01	PCC	Formal Languages & Automata Theory	3	0	0	3	3
2	20CS5T02	PCC	Data Warehousing & Data Mining	3	0	0	3	3
3	20CS5T03	PCC	Design and Analysis of Algorithms	3	0	0	3	3
Professional Elective-I				3	0	0	3	3
4	20CS5T04	PEC-I	Object Oriented Analysis and Design					
5	20CS5T05		Advanced Computer Architecture					
6	20CS5T06		Artificial Intelligence					
7	**Open Elective-I**			3	0	0	3	3
8	20CS5L10	PCC	Data Warehousing and Mining Lab Through Python	0	0	3	3	1.5
9	20CS5L11	PCC	Design and Analysis of Algorithms Lab	0	0	3	3	1.5
10	20CS5S12	SC	Mobile Application Development	0	0	4	4	2
11	20CS5M13	MC	Disaster Management	2	0	0	2	-
12	20CS5I14	I	Summer Internship	0	0	3	1.5	1.5
Total number of credits								**21.5**
Honors/Minor courses				**4**	**0**	**0**	**-**	**4**

B.TECH VI SEMESTER

S.No	Course Code	Course Category	Course Title	Hours per week			Contact Hours	Credits
				Lecture	Tutorial	Practical		
1	20CS6T01	PCC	Machine Learning	3	0	0	3	3
2	20CS6T02	PCC	Computer Networks	3	0	0	3	3
3	20CS6T03	PCC	Big Data Analytics	3	0	0	3	3
Professional Elective-II				3	0	0	3	3
4	20CS6T04	PEC-II	Software Testing Methodologies					
5	20CS6T05		Mean Stack Technologies					
6	20CS6T06		Compiler Design					
7	**Open Elective-II**			3	0	0	3	3
8	20CS6L10	PCC	Machine Learning Lab	0	0	3	3	1.5
9	20CS6L11	PCC	Computer Networks Lab	0	0	3	3	1.5
10	20CS6L12	PCC	Big Data Analytics Lab	0	0	3	3	1.5
11	20CS6S13	SC	Soft Skills	0	0	4	4	2
12	20CS6M14	MC	Essence of Indian traditional knowledge	2	0	0	2	-
13	20CS6P15	P	Community Service Project	-	-	-	-	4
Total number of credits								**25.5**
Honors/Minor courses				**4**	**0**	**0**	**-**	**4**

B.TECH VII SEMESTER

S.No	Course Code	Course Category	Course Title	Hours per week			Contact Hours	Credits
				Lecture	Tutorial	Practical		
Professional Elective-III				3	0	0	3	3
1	20CS7T01	PEC-III	Software Project Management					
2	20CS7T02		Cloud Computing					
3	20CS7T03		Cryptography & Network Security					
Professional Elective-IV				3	0	0	3	3
4	20CS7T04	PEC-IV	Human Computer Interaction					
5	20CS7T05		Mobile Computing					
6	20CS7T06		High-Performance Computing					
Professional Elective-V				3	0	0	3	3
7	20CS7T07	PEC-V	Software Architecture and Design Patterns					
8	20CS7T08		Adhoc & Sensor Networks					
9	20CS7T09		Social Network Analysis					
10	**Open Elective-III**			3	0	0	3	3
11	**Open Elective-IV**			3	0	0	3	3
8	20CS5L16	HSMC	Universal Human Values 2: Understanding Harmony	0	0	3	3	3
10	20CS5S17	SC	Data Visualization using Tableau	0	0	4	4	2
11	20CS5I18	I	Industrial Internship	-	-	-	-	3
Total number of credits								**23**
Honors/Minor courses				**4**	**0**	**0**	**-**	**4**

B.TECH VIII SEMESTER

S.No	Course Code	Course Category	Course Title	Hours per week			Total Contact Hours	Credits
				Lecture	Tutorial	Practical		
2	20CS8P01	P	Project	0	0	24	24	8
Total number of credits								**8**