

Name of the Department: Chemical Engineering

Study Scheme for Bachelor of Engineering in Chemical Engineering

Semester-I							
S No	Sub Code	Subject Name	L	T	P	Hrs.	Credits
1	BSMA-401	Engineering Mathematics I	3	1	0	4	4
2	BSCH-401	Applied Chemistry	3	1	0	4	4
3	ESME-401	Elements of Mechanical Engineering	2	1	0	3	3
4	ESME-402	Workshop Technology and Practice	1	0	0	1	1
5	HSMC-401	English Communication and Soft Skills	1	0	0	1	1
6	BSCH-402	Applied Chemistry Lab	0	0	2	2	1
7	ESME-403	Elements of Mechanical Engineering Lab	0	0	2	2	1
8	ESME-404	Engineering Drawing	0	0	4	4	2
9	ESME-405	Workshop Technology and Practice Lab	0	0	4	4	2
10	HSMC-402	English Communication and Soft Skills Lab	0	0	2	2	1
11	MCCH-401	Environmental Studies	3	0	0	3	0
		Total	13	3	14	30	20
Semester-II A							
S No	Sub Code	Subject Name	L	T	P	Hrs.	Credits
1	BSMA-402	Engineering Mathematics II	3	1	0	4	4
2	BSPH-401	Applied Physics	3	1	0	4	4
3	ESEE-401	Elements of Electrical Engineering	2	1	0	3	3
4	ESCS-401	Elements of Computer Engineering	2	0	0	2	2
5	ESEC-401	Elements of Electronics Engineering	2	0	0	2	2
6	BSPH-402	Applied Physics Lab	0	0	2	2	1
7	ESEE-402	Elements of Electrical Engineering Lab	0	0	2	2	1
8	ESCS-402	Elements of Computer Engineering Lab	0	0	4	4	2
9	ESEC-402	Elements of Electronics Engineering Lab	0	0	2	2	1
		Total	12	3	10	25	20
Semester-IIB							
1	TPIN-421	Practical Training During Summer Vacations (In-house) 02 weeks				80	1 (S/US)
2	TPIN-422	Technical Competency					1 (S/US)

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Study Scheme for Bachelor of Engineering in Chemical Engineering

Semester-III							
S No	Sub Code	Subject Name	L	T	P	Hrs.	Credits
1	ESME-501	Engineering Mechanics	3	1	0	4	4
2	PCCH-511	Material and Energy Balance	3	1	0	4	4
3	PCCH-512	Fluid Mechanics	3	0	0	3	3
4	PCCH-513	Chemical Engineering Thermodynamics	3	1	0	4	4
5	HSMC-501	Principles of management	3	0	0	3	3
6	PCCH-514	Fluid Mechanics lab	0	0	2	2	1
7	PCCH-515	Process Technology lab	0	0	2	2	1
		Total					20
9*	MDCH-511	Chemical Process Calculation	2	0	0	2	2
	MDCH-512	Chemical Process Industries	2	0	0	2	2
Semester-IVA							
S No	Sub Code	Subject Name	L	T	P	Hrs.	Credits
1	BSMA-501	Numerical and Statistical Methods	3	0	0	3	3
2	BSMA-502	Numerical and Statistical Methods Lab	0	0	2	2	1
3	BSBL-501	Biology for Engineers	2	0	0	2	2
4	PCCH-521	Mass Transfer - I	3	1	0	4	4
5	PCCH-522	Heat Transfer	3	1	0	4	4
6	PCCH-523	Fluid and Particle Mechanics	3	1	0	4	4
7	PCCH-524	Heat & Mass Transfer Lab	0	0	2	2	1
8	PCCH-525	Fluid and Particle Mechanics Lab	0	0	2	2	1
		Total					20
9*	MDCH-521	Heat Transfer	2	1	0	3	3
	MDCH-522	Heat & Mass Transfer Lab	0	0	2	2	1
Semester-IVB							
1	TPID-521	Industrial Training 02 weeks				80	1 (S/US)
2	EAA-521+	Fractional credit course/Extra Academic Activity +GROUP A/B/C					1 (S/US)

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Semester-VA							
S No	Sub Code	Subject Name	L	T	P	Hrs.	Credits
1	HSMC-603	Engineering Economics and Entrepreneurship	3	0	0	3	3
2	PCCH-611	Chemical Reaction Engineering - I	3	1	0	4	4
3	PCCH-612	Mass Transfer - II	3	0	0	3	3
4	OE##-611	Open Elective-1	3	0	0	3	3
5	OE##-612	Open Elective-2	3	0	0	3	3
6	PECH-611	Professional Elective-1	3	0	0	3	3
7	PCCH-613	Reaction Engineering Lab	0	0	2	2	1
		Total					20
8**	HDCH-611	Process Equipment Design	2	2	0	4	4
9**	HDCH-612	Optimization of Chemical Processes	3	1	0	4	4
10*	MDCH-611	Chemical Reaction Engineering	3	0	0	3	3
	MDCH-612	Chemical Reaction Engineering Lab	0	0	2	2	1
Semester-V B							
1	EAA-611+	Fractional credit course/Extra Academic Activity +GROUP A/B/C					1 (S/US)
Semester-VI A							
S No	Sub Code	Subject Name	L	T	P	Hrs.	Credits
1	HSMC-601	Technical communication	2	0	0	2	2
2	PCCH-621	Transport Phenomena	3	1	0	4	4
3	PCCH-622	Chemical Reaction Engineering - II	3	0	0	3	3
4	OE##-621	Open Elective-3	3	0	0	3	3
5	OE##-622	Open Elective-4	3	0	0	3	3
6	PECH-621	Professional Elective-II	3	0	0	3	3
7	PCCH-623	Design and simulation lab	0	0	2	2	1
8	HSMC-602	Technical communication lab	0	0	2	2	1
		Total					20
9**	HDCH-621	Process Integration	3	1	0	4	4
10*	MDCH-621	Mass Transfer	3	1	0	4	4
Semester-VI B							
1	TPID-621	Industrial Training 04 weeks				160	3 (S/US)
2	EAA-621+	Fractional credit course/Extra Academic Activity +GROUP A/B/C					1 (S/US)

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Semester-VII

S No	Sub Code	Subject Name	L	T	P	Hrs.	Credits
1	PCCH-711	Chemical Process Industries	3	0	0	3	3
2	PCCH-712	Process Instrumentation and Control	3	1	0	4	4
3	OE##-711	Open Elective-5	3	0	0	3	3
4	PECH-711	Professional Elective- III	3	1	0	4	4
5	PECH-712	Professional Elective -IV	3	0	0	3	3
6	PCCH-713	Process Instrumentation and Control lab	0	0	2	2	1
7	PR##-711	Project stage 1 and seminar	0	0	4	4	2
		Total					20
8**	HDCH-711	Computational Transport Phenomena	3	1	0	4	4
9*	MDCH-711	Process Equipment Design	3	1	0	4	4

Semester-VIII

S No	Sub Code	Subject Name	L	T	P	Hrs.	Credits
1	PECH-721	Professional Elective	3	0	0	3	3
2	PECH-722	Professional Elective	3	0	0	3	3
3	PRCH-721	Project Stage II	0	0	12	12	6
4	PHCH-721	Project Hons	0	0	08	08	4
		Total	6	0	20	26	16

OR

S No	Sub Code	Subject Name	L	T	P	Hrs.	Credits
1	INID-721	Internship in Industry					6
2	PRCH-721	Project Stage II	0	0	12	12	6
3	PHCH-721	Project Hons	0	0	08	08	4
		Total					16

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LIST OF OPEN ELECTIVES

S. No	Sub. Code	Subject Name	L	T	P	Hrs.	Credits
1		Open Elective-I	3	0	0	3	3
	OECH-611A	Fuel Cells	3	0	0	3	3
	OECH-611B	Analytical Methods and Instrumentation	3	0	0	3	3
2		Open Elective-II	3	0	0	3	3
	OECH-612A	Electrochemical Engineering	3	0	0	3	3
	OECH-612B	Renewable Energy Sources	3	0	0	3	3
3		Open Elective-III	3	0	0	3	3
	OECH-621A	Agro Residue Utilization	3	0	0	3	3
	OECH-621B	Corrosion Engineering	3	0	0	3	3
4		Open Elective-IV	3	0	0	3	3
	OECH-622A	Industrial Pollution Control	3	0	0	3	3
	OECH-622B	Energy Audit and Management	3	0	0	3	3
5		Open Elective-V	3	0	0	3	3
	OECH-711A	Optimization Techniques for Engineers	3	0	0	3	3
	OECH-711B	Polymer Technology	3	0	0	3	3
	OECH-711C	Paper Technology	3	0	0	3	3

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LIST OF PROFESSIONAL ELECTIVES

Sr.No	Sub. Code	Subject Name	L	T	P	Hrs.	Credits
1		Professional Elective-I					
	PECH-611A	Agro Residue Utilization	3	0	0	3	3
	PECH-611B	Paint Technology	3	0	0	3	3
	PECH-611C	Polymer Science and Engineering	3	0	0	3	3
	PECH-611D	Computational Fluid Dynamics	3	0	0	3	3
2		Professional Elective-II					
	PECH-621A	Pulping and Bleaching Technology	3	0	0	3	3
	PECH-621B	Biochemical Engineering	3	0	0	3	3
	PECH-621C	Polymer Technology	3	0	0	3	3
	PECH-621D	Modeling and Simulation	3	0	0	3	3
	PECH-621E	Fuel Cells	3	0	0	3	3
3		Professional Elective-III					
	PECH-711A	Novel Separation Technology	3	1	0	4	4
	PECH-711B	Electrochemical Engineering	3	1	0	4	4
	PECH-711C	Polymer Composites	3	1	0	4	4
	PECH-711D	Industrial Pollution Control	3	1	0	4	4
	PECH-711E	Biorefineries	3	1	0	4	4
	PECH-711F	Molecular Simulation	3	1	0	4	4
4		Professional Elective-IV					
	PECH-712A	Stock Preparation and Paper Making	3	0	0	3	3
	PECH-712B	Polymer Materials	3	0	0	3	3
	PECH-712C	Petroleum Refining and Petrochemicals	3	0	0	3	3
	PECH-712D	Fluidization Engineering	3	0	0	3	3
	PECH-712E	Renewable Energy Sources	3	0	0	3	3
5		Professional Elective-V					
	PECH-721A	Energy Audit and Management	3	0	0	3	3
	PECH-721B	Nanoscience and Nanotechnology	3	0	0	3	3

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	PECH-721C	Chemical Plant Utilities and Safety	3	0	0	3	3
	PECH-721D	Pharmaceutical Formulation	3	0	0	3	3
	PECH-721E	Fertilizer Technology	3	0	0	3	3
	PECH-721F	Hazardous Waste Management	3	0	0	3	3
6		Professional Elective-VI					
	PECH-722A	Chemical Recovery Processes in Pulp And Paper Industry	3	0	0	3	3
	PECH-722B	Rubber Technology	3	0	0	3	3
	PECH-722C	Advance Process Control	3	0	0	3	3
	PECH-722D	Combustion Technology	3	0	0	3	3
	PECH-722E	Environmental Impact Assessment	3	0	0	3	3

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Annexure-A

Study Scheme UG Programme: BE in Computer Science and Engineering

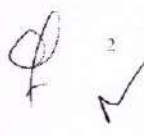
Semester-I						
S No	Sub Code	Subject Name	L	T	P	Credits
1	BSMA-401	Engineering Mathematics I	3	1	0	4
2	BSPH-401	Applied Physics	3	1	0	4
3	ESEE-401	Elements of Electrical Engineering	2	1	0	3
4	ESCS-401	Elements of Computer Engineering	2	0	0	2
5	ESEC-401	Elements of Electronics Engineering	2	0	0	2
6	BSPH-402	Applied Physics Lab	0	0	2	1
7	ESEE-402	Elements of Electrical Engineering Lab	0	0	2	1
8	ESCS-402	Elements of Computer Engineering Lab	0	0	4	2
9	ESEC-402	Elements of Electronics Engineering Lab	0	0	2	1
Total			12	3	10	20

Semester-II A						
S No	Sub Code	Subject Name	L	T	P	Credits
1	BSMA-402	Engineering Mathematics II	3	1	0	4
2	BSCH-401	Applied Chemistry	3	1	0	4
3	ESME-401	Elements of Mechanical Engineering	2	1	0	3
4	ESME-402	Workshop Technology and Practice	1	0	0	1
5	HSMC-401	English Communication and Soft Skills	1	0	0	1
6	BSCH-402	Applied Chemistry Lab	0	0	2	1
7	ESME-403	Elements of Mechanical Engineering Lab	0	0	2	1
8	ESME-404	Engineering Drawing	0	0	4	2
9	ESME-405	Workshop Technology and Practice Lab	0	0	4	2
10	HSMC-402	English Communication and Soft Skills Lab	0	0	2	1
11	MCCH-401	Environmental Studies	3	0	0	3
Total			13	3	14	30

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Semester-IIB							
1	TPIN-421	Practical Training During Summer Vacations (In-house) 02 weeks				40	1 (S/US)
2	TPIN-422	Technical Competency				40	1 (S/US)
Semester-III							
S No	Sub Code	Subject Name	L	T	P	Hrs.	Credits
1	BSMA-501	Numerical and Statistical Methods	3	0	0	3	3
2	PCCS-511	Digital Electronics	3	0	0	3	3
3	PCCS-512	Object Oriented Programming	2	1	0	3	3
4	PCCS-513	Data Structures	2	1	0	3	3
5	BSBL-501	Biology for Engineers	2	0	0	2	2
6	BSMA-502	Numerical and Statistical Methods Lab	0	0	2	2	1
7	PCCS-514	Digital Electronics Lab	0	0	2	2	1
8	PCCS-515	Object Oriented Programming Lab	0	0	4	4	2
9	PCCS-516	Data Structures Lab	0	0	4	4	2
		Total	12	2	12	26	20
Semester-IVA							
S No	Sub Code	Subject Name	L	T	P	Hrs.	Credits
1	ESME-501	Engineering Mechanics	3	1	0	4	4
2	PCCS-521	Computer Organization and Architecture	3	0	0	3	3
3	PCCS-522	Operating System	3	0	0	3	3
4	PCCS-523	Database Management System	2	1	0	3	3
5	HSMC-501	Principles of Management	3	0	0	3	3
6	PCCS-524	Operating System Lab	0	0	4	4	2
7	PCCS-525	Database Management System Lab	0	0	4	4	2
8	MCMH-501	Indian Constitution	3	0	0	3	0
		Total	17	2	8	27	20





Semester-IVB

1	TPID-521	Industrial Training 02 weeks				40	1 (S/US)
2	EAA-521+	Fractional credit course/Extra Academic Activity +GROUP A/B/C				40	1 (S/US)

Semester-VA

S No	Sub Code	Subject Name	L	T	P	Hrs.	Credits
1	PCCS-611	Discrete Mathematics	2	1	0	3	3
2	PCCS-612	Computer Networks	2	1	0	3	3
3	OECS-611	Open Elective-1	3	0	0	3	3
4	OECS-612	Open Elective-2	3	0	0	3	3
5	PECS-611	Professional Elective-1	3	0	0	3	3
6	HSMC-601	Technical Communication	2	0	0	2	2
7	PCCS-613	Computer Networks Lab	0	0	4	4	2
8	HSMC-602	Technical Communication Lab	0	0	2	2	1
Total			15	2	6	23	20

Semester-V B

1	EAA-611+	Fractional credit course/Extra Academic Activity +GROUP A/B/C				40	1 (S/US)
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Semester-VI A

S No	Sub Code	Subject Name	L	T	P	Hrs.	Credits
1	PCCS-621	Design and Analysis of Algorithm	2	1	0	3	3
2	PCCS-622	Automata Theory and Formal Languages	2	1	0	3	3
3	OECS-621	Open Elective-3	3	0	0	3	3
4	OECS-622	Open Elective-4	3	0	0	3	3
5	PECS-621	Professional Elective-2	3	0	0	3	3
6	HSMC-603	Engineering Economics and Entrepreneurship	3	0	0	3	3
7	PCCS-623	Design and Analysis of Algorithm Lab	0	0	4	4	2
Total			16	2	4	22	20

Semester-VI B

1	TPID-621	Industrial Training 04 weeks				40	2 (S/US)
2	EAA-622+	Fractional credit course/Extra Academic Activity +GROUP A/B/C				40	1 (S/US)

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Semester-VII							
S No	Sub Code	Subject Name	L	T	P	Hrs.	Credits
1	PCCS-711	Internet Programming	2	1	0	3	3
2	PCCS-712	Compiler Design	3	1	0	4	4
3	PECS-711	Professional Elective-3	3	0	0	3	3
4	PECS-712	Professional Elective-4	3	0	0	3	3
5	OECS-711	Open Elective-5	3	0	0	3	3
6	PCCS-713	Internet Programming Lab	0	0	4	4	2
7	PRCS-711	Project Stage I and Seminar	0	0	4	4	2
Total			14	2	8	24	20
Semester-VIII							
S No	Sub Code	Subject Name	L	T	P	Hrs.	Credits
1	PECS-721	Professional Elective-5	3	0	0	3	3
2	PECS-722	Professional Elective-6	3	0	0	3	3
3	PRCS-721	Project Stage II	0	0	12	12	6
Total			6	0	12	18	12
OR							
S No	Sub Code	Subject Name	L	T	P	Hrs.	Credits
1	INID-721	Internship in Industry					6
2	PRCS-721	Project Stage II	0	0	12	12	6
Total			0	0	12	12	12

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LIST OF OPEN ELECTIVES

S. No	Sub. Code	Subject Name	L	T	P	Hrs.	Credits
		Open Elective-I	3	0	0	3	3
	OECS-611A	Software Engineering	3	0	0	3	3
	OECS-611B	Enterprise Resource Planning	3	0	0	3	3
	OECS-611C	Cyber Laws and Ethics	3	0	0	3	3
	OECS-611D	Programming Methodology	3	0	0	3	3
	OECS-611E	Data Preparation and Analysis	3	0	0	3	3
2		Open Elective-II	3	0	0	3	3
	OECS-612A	Software Project Management	3	0	0	3	3
	OECS-612B	Decision Support System	3	0	0	3	3
	OECS-612C	Computer Networks	3	0	0	3	3
	OECS-612D	Object Oriented Programming	3	0	0	3	3
	OECS-612E	Database Management System	3	0	0	3	3
3		Open Elective-III	3	0	0	3	3
	OECS-621A	Requirement Engineering	3	0	0	3	3
	OECS-621B	Management Information System	3	0	0	3	3
	OECS-621C	System Installation and Troubleshooting	3	0	0	3	3
	OECS-621D	Internet Programming	3	0	0	3	3
	OECS-621E	Database Integrity and Security	3	0	0	3	3
4		Open Elective-IV	3	0	0	3	3
	OECS-622A	Object Oriented Analysis and Design	3	0	0	3	3

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	OECS-622B	E-Commerce	3	0	0	3	3
	OECS-622C	Computer Network Security	3	0	0	3	3
	OECS-622D	Computer Graphics	3	0	0	3	3
	OECS-622E	Data Analytics	3	0	0	3	3
5		Open Elective-V	3	0	0	3	3
	OECS-711A	Software Reliability and Testing	3	0	0	3	3
	OECS-711B	Human Resource Management	3	0	0	3	3
	OECS-711C	Client Server Architecture	3	0	0	3	3
	OECS-711D	Multimedia and Animation	3	0	0	3	3
	OECS-711E	Data Mining	3	0	0	3	3

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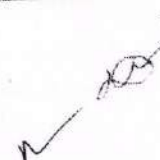
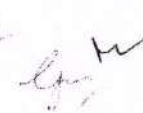
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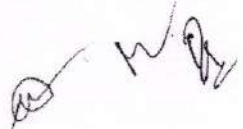
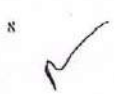
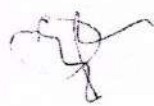
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List of Professional Electives:						
Sr. No	Sub. Code	Subject Name	L	T	P	Hrs. Credits
1		Professional Elective-I				
	PECS-611A	Computer Graphics	3	0	0	3 3
	PECS-611B	Data Mining	3	0	0	3 3
	PECS-611C	Cyber Laws and Ethics	3	0	0	3 3
	PECS-611D	Software Engineering	3	0	0	3 3
	PECS-611E	Enterprise Resource Planning	3	0	0	3 3
	PECS-611F	Network Operating System	3	0	0	3 3
2		Professional Elective-II				
	PECS-621A	Multimedia and Animation	3	0	0	3 3
	PECS-621B	Artificial Intelligence	3	0	0	3 3
	PECS-621C	Mobile Communication	3	0	0	3 3
	PECS-621D	Software Project Management	3	0	0	3 3
	PECS-621E	Decision Support System	3	0	0	3 3
	PECS-621F	Advanced Computer Architecture	3	0	0	3 3
3		Professional Elective-III				
	PECS-711A	Image Processing	3	0	0	3 3
	PECS-711B	Soft Computing	3	0	0	3 3
	PECS-711C	Computer Network and Security	3	0	0	3 3
	PECS-711D	Requirement Engineering	3	0	0	3 3
	PECS-711E	Management Information System	3	0	0	3 3
	PECS-711F	Distributed System	3	0	0	3 3



4		Professional Elective-IV					
	PECS-712A	Simulation and Modeling	3	0	0	3	3
	PECS-712B	Machine Learning	3	0	0	3	3
	PECS-712C	Adhoc and Wireless Sensor Networks	3	0	0	3	3
	PECS-712D	Object Oriented Analysis and Design	3	0	0	3	3
	PECS-712E	E-Commerce	3	0	0	3	3
	PECS-712F	Parallel Computing	3	0	0	3	3
5		Professional Elective-V					
	PECS-721A	Digital Signal Processing	3	0	0	3	3
	PECS-721B	Neural Networks and Deep Learning	3	0	0	3	3
	PECS-721C	Client Server Architecture	3	0	0	3	3
	PECS-721D	Software Reliability and Testing	3	0	0	3	3
	PECS-721E	Business Management System	3	0	0	3	3
	PECS-721F	Cloud Computing	3	0	0	3	3
6		Professional Elective-VI					
	PECS-722A	Python Programming	3	0	0	3	3
	PECS-722B	Computer Vision	3	0	0	3	3
	PECS-722C	High Speed Communication Networks	3	0	0	3	3
	PECS-722D	Software Quality Assurance	3	0	0	3	3
	PECS-722E	Human Resource Management	3	0	0	3	3
	PECS-722F	Embedded Systems	3	0	0	3	3

MINOR DEGREE

Semester-III							
S No	Sub Code	Subject Name	L	T	P	Hrs.	Credits
1	MDCS-511	Internet Technologies	3	1	0	4	4
		Total	3	1	0	4	4

Semester-IV							
S No	Sub Code	Subject Name	L	T	P	Hrs.	Credits
1	MDCS-521	Operating System	3	1	0	4	4
		Total	3	1	0	4	4

Semester-V							
S No	Sub Code	Subject Name	L	T	P	Hrs.	Credits
1	MDCS-611	Application development using Python	3	1	0	4	4
		Total	3	1	0	4	4

Semester-VI							
S No	Sub Code	Subject Name	L	T	P	Hrs.	Credits
1	MDCS-621	Artificial Intelligence	3	1	0	4	4
		Total	3	1	0	4	4

Semester-VII							
S No	Sub Code	Subject Name	L	T	P	Hrs.	Credits
1	MDCS-711	Soft Computing	3	1	0	4	4
		Total	3	1	0	4	4

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HONORS DEGREE

Semester-V							
S No	Sub Code	Subject Name	L	T	P	Hrs.	Credits
1	HDCS-611	Data Analytics	3	1	0	4	4
2	HDCS-612	Internet of Things	3	1	0	4	4
Total			6	2	0	8	8

Semester-VI							
S No	Sub Code	Subject Name	L	T	P	Hrs.	Credits
1	HDCS-621	Optimization Techniques	3	1	0	4	4
Total			3	1	0	4	4

Semester-VII							
S No	Sub Code	Subject Name	L	T	P	Hrs.	Credits
1	HDCS-711	Cryptography and Network Security	3	1	0	4	4
Total			3	1	0	4	4

Semester-VIII							
S No	Sub Code	Subject Name	L	T	P	Hrs.	Credits
1	PHCS-721	Project Hon's	0	0	08	08	4
Total			0	0	08	08	4

Annexure-B

Study Scheme PG Programme: M.Tech in Computer Science and Engineering

Semester-I						
Sr. No.	Subject Code	Subject Name	L	T	P	Credits
1	PCCS-811	Artificial Intelligence	3	0	0	3
2	PCCS-812	Advance Operating System	3	0	0	3
3	PECS-811	Core Elective-I	3	0	0	3
4	PECS-812	Core Elective-II	3	0	0	3
5	RMAL-811	Research Methodology and IPR	2	0	0	2
6	ACMH-811	English research paper writing & Professional Communication	2	0	0	0
7	PCCS-813	Artificial Intelligence Lab	0	0	4	2
8	PECS-813	Core Elective-I Lab	0	0	4	2
Total			16	0	8	18

Semester-II (A)						
Sr. No.	Subject Code	Subject Name	L	T	P	Credits
1	PCCS-821	Machine Learning	3	1	0	4
2	PCCS-822	Advance Computer Networks	3	0	0	3
3	PECS-821	Core Elective-III	3	0	0	3
4	PECS-822	Core Elective-IV	3	0	0	3
5	ACMH-821	Constitution Of India	2	0	0	0
6	PCCS-823	Advance Computer Networks Lab	0	0	2	1
7	PECS-823	Core Elective-IV Lab	0	0	2	1
8	PCCS-824	Seminar	0	0	2	1
9	PCCS-825	Project Lab	0	0	4	2
Total			14	1	10	18

Students are to be encouraged to go to industrial training/ Internship during summer break

Semester-III						
Sr. No.	Subject Code	Subject Name	L	T	P	Credits
1	PECS-911	Core Elective-V	3	0	0	3
2	OECS-911	Open Elective	3	0	0	3
3	PCCS-911	Dissertation (Part-1)	0	0	20	10
Total			6	0	20	16

Semester-IV						
Sr. No.	Subject Code	Subject Name	L	T	P	Credits
1	PCCS-921	Dissertation (Part-2)	0	0	32	16
Total			0	0	32	16

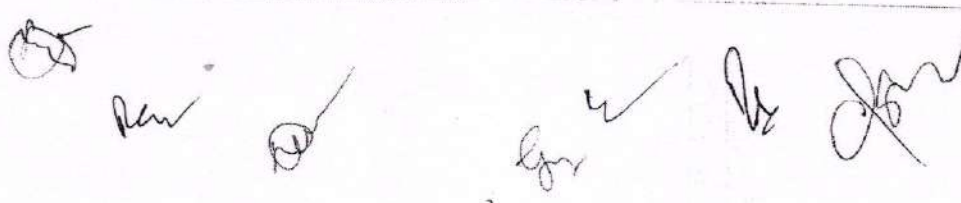
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List of Core Electives

CORE ELECTIVE-I (PECS-811)		
Sr. No.	Subject Code	Subject Name
1	PECS-811A	Parallel Computing
2	PECS-811B	Data Preparation and Analysis
3	PECS-811C	Advance Database Systems
CORE ELECTIVE-I LAB(PECS-813)		
Sr. No.	Subject Code	Subject Name
1	PECS-813A	Parallel Computing Lab
2	PECS-813B	Data Preparation and Analysis Lab
3	PECS-813C	Advance Database Systems Lab
CORE ELECTIVE-II (PECS-812)		
Sr. No.	Subject Code	Subject Name
1	PECS-812A	Distributed Systems
2	PECS-812B	Advance Algorithms
3	PECS-812C	Big Data Analytics
CORE ELECTIVE-III (PECS-821)		
Sr. No.	Subject Code	Subject Name
1	PECS-821A	Deep Learning
2	PECS-821B	Software Project Management
3	PECS-821C	Computer Vision
CORE ELECTIVE-IV (PECS-822)		
Sr. No.	Subject Code	Subject Name
1	PECS-822A	Cloud Computing
2	PECS-822B	Internet of Things
3	PECS-822C	Bioinformatics
CORE ELECTIVE-IV LAB (PECS-823)		
Sr. No.	Subject Code	Subject Name
1	PECS-823A	Cloud Computing Lab
2	PECS-823B	Internet of Things Lab
3	PECS-823C	Bioinformatics Lab
CORE ELECTIVE-V (PECS-911)		
Sr. No.	Subject Code	Subject Name
1	PECS-911A	Optimization Techniques
2	PECS-911B	Pattern Recognition
3	PECS-911C	Data Sciences

List of Open Electives

OPEN ELECTIVE		
Sr. No.	Subject Code	Subject Name
1	OECS-911A	Big Data Analytics
2	OECS-911B	Internet of Things
3	OECS-911C	Deep Learning
4	OECS-911D	Cloud Computing



**B.E. (Electronics and Communication Engineering)**

Semester-I (Group-A)							
S.No.	Sub Code	Subject Name	L	T	P	Hrs.	Credits
1	BSMA-401	Engineering Mathematics I	3	1	0	4	4
2	BSPH-401	Applied Physics	3	1	0	4	4
3	ESEE-401	Elements of Electrical Engineering	2	1	0	3	3
4	ESCS-401	Elements of Computer Engineering	2	0	0	2	2
5	ESEC-401	Elements of Electronics Engineering	2	0	0	2	2
6	BSPH-402	Applied Physics Lab	0	0	2	2	1
7	ESEE-402	Elements of Electrical Engineering Lab	0	0	2	2	1
8	ESCS-402	Elements of Computer Engineering Lab	0	0	4	4	2
9	ESEC-402	Elements of Electronics Engineering Lab	0	0	2	2	1
Total			12	3	10	25	20
Semester-II A (Group-A)							
S.No.	Sub Code	Subject Name	L	T	P	Hrs.	Credits
1	BSMA-402	Engineering Mathematics II	3	1	0	4	4
2	BSCH-401	Applied Chemistry	3	1	0	4	4
3	ESME-401	Elements of Mechanical Engineering	2	1	0	3	3
4	ESME-402	Workshop Technology and Practice	1	0	0	1	1
5	HSMC-401	English Communication and Soft Skills	1	0	0	1	1
6	BSCH-402	Applied Chemistry Lab	0	0	2	2	1
7	ESME-403	Elements of Mechanical Engineering Lab	0	0	2	2	1
8	ESME-404	Engineering Drawing	0	0	4	4	2
9	ESME-405	Workshop Technology and Practice Lab	0	0	4	4	2
10	HSMC-402	English Communication and Soft Skills Lab	0	0	2	2	1
11	MC-401	Environmental Studies	3	0	0	3	0
Total			13	3	14	30	20
Semester-II-B							
	TPIN-421	Practical Training During Summer Vacations (In-house) 02 weeks				80	1 (S/US)
	TPIN-422	Technical Competency					1 (S/US)

UG Syllabus for Degree Programme (applicable to 2018 batch onwards)

Semester-III							
S.No.	Sub Code	Subject Name	L	T	P	Hrs.	Credits
1	BSMA-501	Numerical and Statistical Methods	3	0	0	3	3
2	PCEC-511	Network Analysis & Synthesis	2	1	0	3	3
3	PCEC-512	Digital System Design	2	1	0	3	3
4	PCEC-513	Signals & Systems	2	1	0	3	3
5	PCEC-514	Electronic Devices & Circuits	2	1	0	3	3
6	BSBL-501	Biology for Engineers	2	0	0	2	2
7	BSMA-502	Numerical and Statistical Methods Lab	0	0	2	2	1
8	PCEC-515	Digital System Design Lab	0	0	4	4	2
		Total	14	03	06	23	20
9*							4
Semester-IV-A							
S.No.	Sub Code	Subject Name	L	T	P	Hrs.	Credits
1	ESME-501	Engineering Mechanics	3	1	0	4	4
2	PCEC-521	Analog Communication	3	0	0	3	3
3	PCEC-522	Analog Electronic Circuits	2	1	0	3	3
4	PCEC-523	Microprocessor & Microcontroller	3	0	0	3	3
5	HSMC-501	Principles of Management	3	0	0	3	3
6	PCEC-524	Analog Electronic Circuits Lab	0	0	4	4	2
7	PCEC-525	Microprocessor & Microcontroller Lab	0	0	4	4	2
8	MC-501	Constitution of India	3	0	0	3	0
		Total	17	02	8	27	20
9*							4
Semester-IV-B							
	TPID-521	Industrial Training 02 weeks				80	1 (S/US)
	EAA-521+	Fractional credit course/Extra Academic Activity +GROUP A/B/C					1 (S/US)
Semester-VA							
S.No.	Sub Code	Subject Name	L	T	P	Hrs.	Credits
1	PCEC-611	Digital Communication	3	0	0	3	3
2	PCEC-612	EMF & Transmission Lines	3	0	0	3	3
3	OEEC-611	Open Elective-1	3	0	0	3	3
4	OEEC-612	Open Elective-2	3	0	0	3	3
5	PEEC-611	Professional Elective-1	3	0	0	3	3
6	HSMC-601	Technical Communication	2	0	0	2	2
7	PCEC-613	Analog & Digital Communication Lab	0	0	4	4	2
8	HSMC-602	Technical Communication Lab	0	0	2	2	1

9*		Total	17	0	6	23	20
							4

Semester-VB							
	EAA-611+	Fractional credit course/Extra Academic Activity +GROUP A/B/C					1 (S/US)

Semester-VI-A							
S.No.	Sub Code	Subject Name	L	T	P	Hrs.	Credits
1	PCEC-621	Linear Integrated Circuits	2	1	0	3	3
2	PCEC-622	Wireless Communication	3	0	0	3	3
3	OEEC-621	Open Elective-3	3	0	0	3	3
4	OEEC-622	Open Elective-4	3	0	0	3	3
5	PEEC-621	Professional Elective-2	3	0	0	3	3
6	HSMC-603	Engineering Economics and Entrepreneurship	3	0	0	3	3
7	PCEC-623	Linear Integrated Circuits Lab	0	0	2	2	1
8	PCEC-624	MATLAB Programming Lab	0	0	2	2	1
8*		Total	17	1	4	22	20

Semester-VI-B							
	TPID-621	Industrial Training 04 weeks				160	3(S/US)
	EAA-622+	Fractional credit course/Extra Academic Activity +GROUP A/B/C					1 (S/US)

Semester-VII							
S.No.	Sub Code	Subject Name	L	T	P	Hrs.	Credits
1	PCEC-711	Digital Signal Processing	3	0	0	3	3
2	PCEC-712	Antenna and Wave Propagation	3	0	0	3	3
3	PEEC-711	Professional Elective-3	3	0	0	3	3
4	PEEC-712	Professional Elective-4	3	0	0	3	3
5	OEEC-711	Open Elective-5	3	0	0	3	3
6	PCEC-713	Digital Signal Processing Lab	0	0	2	2	1
7	PCEC-714	Antenna and Microwave Lab	0	0	4	4	2
8	PREC-711	Project Stage I and Seminar	0	0	4	4	2
9	HDEC-711	Hon's Subject-4	15	0	10	25	20
		Total					4

Semester-VIII							
S.No.	Sub Code	Subject Name	L	T	P	Hrs.	Credits
1	PEEC-721	Professional Elective-5	3	0	0	3	3
2	PEEC-722	Professional Elective-6	3	0	0	3	3
3	PREC-721	Project Stage II	0	0	12	12	6



	PHEC-721	Hon's Project	0	0	08	08	4
		Total	6	0	20	26	16
OR							
S.No.	Sub Code	Subject Name	L	T	P	Hrs.	Credits
1	INID-721	Internship in Industry					6
2	PREC-721	Project Stage II	0	0	12	12	6
	PHEC-721	Project Hons	0	0	08	08	4
		Total	0	0	20	20	16

*For honor subjects

Credit Structure Of Undergraduate Engineering Program						
S.No.	Category	L	T	P	Hrs.	Credits
1	Humanities and Social Sciences including Management courses	9	0	4	13	11
2	Basic Science courses	17	4	6	27	24
3	Engineering Science courses including workshop, drawing, basics of electrical/mechanical/computer etc.	12	3	18	33	24
4	Professional core courses	34	5	26	65	52
5	Professional Elective courses relevant to chosen specialization/branch	18	0	0	18	18
6	Open subjects – Electives from other technical and /or emerging subjects	15	0	0	15	15
7	Project work, seminar and internship in industry or elsewhere					16
8	Mandatory Courses [Environmental Sciences, Induction training, Indian Constitution, Essence of Indian Traditional Knowledge]	6	0	0	6	0
	Total	111	12	54	177	160

List of Professional Electives

Professional Elective-I			
Sr.No	Sub. Code	Subject Name	
1	PEEC-611A	Pulse and Digital Switching Circuits	
2	PEEC-611B	MEMS	
3	PEEC-611C	Information Theory & Coding	
Professional Elective-II			
Sr.No	Sub. Code	Subject Name	
1	PEEC-621A	Control System Engineering	
2	PEEC-621B	Telecommunication Switching Systems & Networks	
3	PEEC-621C	MOS Device Physics & Modelling	
Professional Elective-III			
Sr.No	Sub. Code	Subject Name	
1	PEEC-711A	Microelectronics	
2	PEEC-711B	Optoelectronics Devices & Circuits	
3	PEEC-711C	Computer Communication & Networks	
Professional Elective-IV			
Sr.No	Sub. Code	Subject Name	
1	PEEC-712A	Microwave & Radar Engineering	
2	PEEC-712B	Computer Architecture & Organization	
3	PEEC-712C	Industrial Electronics	
Professional Elective-V			
Sr.No	Sub. Code	Subject Name	
1	PEEC-721A	Wireless Sensor Networks	
2	PEEC-721B	Satellite Communication	
3	PEEC-721C	VLSI Circuits	
Professional Elective-VI			
Sr.No	Sub. Code	Subject Name	
1	PEEC-722A	Fiber Optics Communication	
2	PEEC-722B	Electronic Measurement & Instrumentation	
3	PEEC-722C	Neural Networks & Fuzzy Logic	



List of Open Electives

Open Elective-I			
Sr.No	Sub. Code	Subject Name	
1	OEEC-611A	Linear Integrated Circuits	
2	OEEC-611B	Digital Electronics	
3	OEEC-611C	Electronic Measurement & Instrumentation	
Open Elective-II			
Sr.No	Sub. Code	Subject Name	
1	OEEC-612A	Principle of Communication Engineering	
2	OEEC-612B	Optical Electronics	
3	OEEC-612C	MATLAB Programming	
Open Elective-III			
Sr.No	Sub. Code	Subject Name	
1	OEEC-621A	Microprocessor and Applications	
2	OEEC-621B	VLSI Technology	
3	OEEC-621C	Nano Technology	
Open Elective-IV			
Sr.No	Sub. Code	Subject Name	
1	OEEC-622A	Biomedical Electronics	
2	OEEC-622B	Control System Engineering	
3	OEEC-622C	Electronic System Design	
Open Elective-V			
Sr.No	Sub. Code	Subject Name	
1	OEEC-711A	Digital Systems	
2	OEEC-711B	Microcontroller and Embedded Systems	
3	OEEC-711C	Wireless Communication	

Study Scheme for Bachelor of Engineering in Electrical (GEE)

Semester-I Group-A (GEE)							
S. No.	Sub Code	Subject Name	L	T	P	Hrs.	Credits
1	BSMA-401	Engineering Mathematics I	3	1	0	4	4
2	BSPH-401	Applied Physics	3	1	0	4	4
3	ESEE-401	Elements of Electrical Engineering	2	1	0	3	3
4	ESCS-401	Elements of Computer Engineering	2	0	0	2	2
5	ESEC-401	Elements of Electronics Engineering	2	0	0	2	2
6	BSPH-402	Applied Physics Lab	0	0	2	2	1
7	ESEE-402	Elements of Electrical Engineering Lab	0	0	2	2	1
8	ESCS-402	Elements of Computer Engineering Lab	0	0	4	4	2
9	ESEC-402	Elements of Electronics Engineering Lab	0	0	2	2	1
		Total	12	03	10	25	20
Semester-II A Group-A (GEE)							
S. No.	Sub Code	Subject Name	L	T	P	Hrs.	Credits
1	BSMA-402	Engineering Mathematics II	3	1	0	4	4
2	BSCH-401	Applied Chemistry	3	1	0	4	4
3	ESME-401	Elements of Mechanical Engineering	2	1	0	3	3
4	ESME-402	Workshop Technology and Practice	1	0	0	1	1
5	HSMC-401	English Communication and Soft Skills	1	0	0	1	1
6	BSCH-402	Applied Chemistry Lab	0	0	2	2	1
7	ESME-403	Elements of Mechanical Engineering Lab	0	0	2	2	1
8	ESME-404	Engineering Drawing	0	0	4	4	2
9	ESME-405	Workshop Technology and Practice Lab	0	0	4	4	2
10	HSMC-402	English Communication and Soft Skills Lab	0	0	2	2	1
11	MCCH-401	Mandatory Course-I	3	0	0	3	0
		Total	13	03	14	30	20
Semester-II B Group-A (GEE)							
1	TPIN-421	Practical Training During Summer Vacations (In-house) 02 weeks				40	1 (S/US)
2	TPIN-422	Technical Competency				40	1 (S/US)

Semester-III Group-A (GEE)							
S. No.	Sub Code	Subject Name	L	T	P	Hrs.	Credits
1	BSMA-501	Numerical and Statistical Methods	3	0	0	3	3
2	PCEE-511	Electrical Circuit Analysis and Synthesis	3	1	0	4	4
3	PCEE-512	Electronic Devices and Circuits	3	1	0	4	4
4	PCEE-513	Electrical Machines-I (Transformers and DC Machines)	3	1	0	4	4
5	BSBL-501	Biology for Engineers	2	0	0	2	2
6	BSMA-502	Numerical and Statistical Methods Lab	0	0	2	2	1
7	PCEE-514	Electronic Machines-I Lab	0	0	2	2	1
8	PCEE-515	Electrical Circuit Lab	0	0	2	2	1
		Total	14	03	06	23	20
Semester-IV -A Group-A (GEE)							
S. No.	Sub Code	Subject Name	L	T	P	Hrs.	Credits
1	ESME-501	Engineering Mechanics	3	1	0	4	4
2	PCEE-521	Digital Electronics	3	0	0	3	3
3	PCEE-522	Electrical Machines-II (Asynchronous and Synchronous machines)	3	1	0	4	4
4	PCEE-523	Signals and Systems	3	1	0	4	4
5	HSMC-501	Principles of Management	3	0	0	3	3
6	PCEE-524	Analog and Digital Electronics Lab	0	0	2	2	1
7	PCEE-525	Electrical Machines-II Lab	0	0	2	2	1
8	MCMH-501	Mandatory Course - 2	3	0	0	3	0
		Total	18	3	4	25	20
Semester-IV-B Group-A (GEE)							
1	TPID-521	Industrial Training 02 weeks				40	1 (S/US)
2	EAA-521+	Fractional credit course/Extra Academic Activity +GROUP A/B/C				40	1 (S/US)

Semester-V-A Group-A (GEE)							
S No.	Sub Code	Subject Name	L	T	P	Hrs.	Credits
1	PCEE-611	Electrical Power System-I (Generation, transmission and distribution)	3	0	0	3	3
2	PCEE-612	Control Systems	3	1	0	4	4
3	OEEE-611	Open Elective-1	3	0	0	3	3
4	OEEE-612	Open Elective-2	3	0	0	3	3
5	PEEE-611	Professional Elective-1	3	0	0	3	3
6	HSMC-601	Technical Communication	2	0	0	2	2
7	PCEE-613	Control System Lab	0	0	2	2	1
8	HSMC-602	Technical Communication Lab	0	0	2	2	1
		Total	17	1	4	22	20
Semester-V-B Group-A (GEE)							
1	EAA-611+	Fractional credit course/Extra Academic Activity +GROUP A/B/C				40	1(S/US)
Semester-VI-A Group-A (GEE)							
S No.	Sub Code	Subject Name	L	T	P	Hrs.	Credits
1	PCEE-621	Electrical and Electronic Measurements	3	0	0	3	3
2	PCEE-622	Electrical Power System-II (Analysis and Protection)	3	1	0	4	4
3	OEEE-621	Open Elective-3	3	0	0	3	3
4	OEEE-622	Open Elective-4	3	0	0	3	3
5	PEEE-621	Professional Elective-2	3	0	0	3	3
6	HSMC-603	Engineering Economics and Entrepreneurship	3	0	0	3	3
7	PCEE-623	Power System Lab	0	0	2	2	1
		Total	18	1	2	21	20
Semester-VI-B Group-A (GEE)							
1	TPID-621	Industrial Training 04 weeks				40	2 (S/US)
2	EAA-622+	Fractional credit course/Extra Academic Activity +GROUP A/B/C				40	1 (S/US)

Semester-VII Group-A (GEE)							
S No.	Sub Code	Subject Name	L	T	P	Hrs.	Credits
1	PCEE-711	Microprocessors and Microcontrollers	3	1	0	4	4
2	PCEE-712	Power Electronics and Drives	3	0	0	3	3
3	PEEE-711	Professional Elective-3	3	0	0	3	3
4	PEEE-712	Professional Elective-4	3	0	0	3	3
5	OEEE-711	Open Elective-5	3	0	0	3	3
6	PCEE-713	Microprocessors and Microcontrollers Lab	0	0	2	2	1
7	PCEE-714	Power Electronics and Drives Lab	0	0	2	2	1
8	PREE-711	Project Stage I and Seminar	0	0	4	4	2
		Total	15	1	8	24	20
Semester-VIII Group-A (GEE)							
S No.	Sub Code	Subject Name	L	T	P	Hrs.	Credits
1	PEEE-721	Professional Elective-5	3	0	0	3	3
2	PREE-722	Professional Elective-6	3	0	0	3	3
3	PREE-721	Project Stage II	0	0	12	12	6
		Total	6	0	12	18	12
OR							
S No.	Sub Code	Subject Name	L	T	P	Hrs.	Credits
1	INID-721	Internship in Industry				40	6
2	PREE-721	Project Stage II	0	0	12	12	6
		Total					12

List of Mandatory Courses

1. MCCH-401 Mandatory Course – 1: Environmental Studies
2. MCMH-501 Mandatory Course – 2: Indian Constitution

List of Open Electives

LIST OF OPEN ELECTIVES							
S. No.	Sub. Code	Subject Name	L	T	P	Hrs.	Credits
1	OEEE-611	Open Elective-I	3	0	0	3	3
a)	OEEE-611A	Electrical Circuits	3	0	0	3	3
b)	OEEE-611B	Electrical Engineering Materials	3	0	0	3	3
c)	OEEE-611C	Renewable Energy Sources	3	0	0	3	3
2	OEEE-612	Open Elective-II	3	0	0	3	3
a)	OEEE-612A	Energy Conservation Practices	3	0	0	3	3
b)	OEEE-612B	Energy Auditing and Management	3	0	0	3	3
c)	OEEE-612C	Utilization of Electrical Energy	3	0	0	3	3
3	OEEE-621	Open Elective-III	3	0	0	3	3
a)	OEEE-621A	Microprocessors and Applications	3	0	0	3	3
b)	OEEE-621B	Elements of Power System	3	0	0	3	3
c)	OEEE-621C	Biomedical Instrumentation	3	0	0	3	3
4	OEEE-622	Open Elective-IV	3	0	0	3	3
a)	OEEE-622A	Control System	3	0	0	3	3
b)	OEEE-622B	Microcontrollers and Applications	3	0	0	3	3
c)	OEEE-622C	Electrical Safety and Standards	3	0	0	3	3
5	OEEE-711	Open Elective-V	3	0	0	3	3
a)	OEEE-711A	Signals and Systems	3	0	0	3	3
b)	OEEE-711B	Sensors and Transducers	3	0	0	3	3
c)	OEEE-711C	Soft Computing Techniques	3	0	0	3	3

List of Professional Electives

List of Professional Electives							
S. No.	Sub. Code	Subject Name	L	T	P	Hrs.	Credits
1	PEEE-611	Professional Elective-1	3	0	0	3	3
a)	PEEE-611A	Biomedical Instrumentation	3	0	0	3	3
b)	PEEE-611B	Electromagnetic Field Theory	3	0	0	3	3
c)	PEEE-611C	Electrical Safety and Standards	3	0	0	3	3
2	PEEE-621	Professional Elective-2	3	0	0	3	3
a)	PEEE-621A	Electrical Energy Conservation and Auditing	3	0	0	3	3
b)	PEEE-621B	Non-Linear and Optimal Control	3	0	0	3	3
c)	PEEE-621C	Telemetry and Data Acquisition	3	0	0	3	3
3	PEEE-711	Professional Elective-3	3	0	0	3	3
a)	PEEE-711A	Wind and Solar Energy Systems	3	0	0	3	3
b)	PEEE-711B	Computational Electromagnetic	3	0	0	3	3
c)	PEEE-711C	Reliability Engineering	3	0	0	3	3
4	PEEE-712	Professional Elective-4	3	0	0	3	3
a)	PEEE-712A	Soft Computing Techniques	3	0	0	3	3
b)	PEEE-712B	Electrical and Hybrid Vehicles	3	0	0	3	3
c)	PEEE-712C	Virtual Instrumentation	3	0	0	3	3
5	PEEE-721	Professional Elective-5	3	0	0	3	3
a)	PEEE-721A	Power Quality and FACTS	3	0	0	3	3
b)	PEEE-721B	Utilization of Electrical Energy	3	0	0	3	3
c)	PEEE-721C	Robotics	3	0	0	3	3
6	PEEE-722	Professional Elective-6	3	0	0	3	3
a)	PEEE-722A	Advanced Microprocessors and Microcontrollers	3	0	0	3	3
b)	PEEE-722B	High Voltage Engineering	3	0	0	3	3
c)	PEEE-722C	Modelling and Simulation	3	0	0	3	3

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Semester-I Group-B (FET)

S No	Sub Code	Subject Name	L	T	P	Hrs.	Credits
1	BSMA-401	Engineering Mathematics I	3	1	0	4	4
2	BSCH-401	Applied Chemistry	3	1	0	4	4
3	ESME-401	Elements of Mechanical Engineering	2	1	0	3	3
4	ESME-402	Workshop Technology and Practice	1	0	0	1	1
5	HSMC-401	English Communication and Soft Skills	1	0	0	1	1
6	BSCH-402	Applied Chemistry Lab	0	0	2	2	1
7	ESME-403	Elements of Mechanical Engineering Lab	0	0	2	2	1
8	ESME-404	Engineering Drawing	0	0	4	4	2
9	ESME-405	Workshop Technology and Practice Lab	0	0	4	4	2
10	HSMC-402	English Communication and Soft Skills Lab	0	0	2	2	1
11	MCCH-401	Environmental Studies	3	0	0	3	0
Total			13	3	14	30	20

Semester-II A Group-B (FET)

S No	Sub Code	Subject Name	L	T	P	Hrs.	Credits
1	BSMA-402	Engineering Mathematics II	3	1	0	4	4
2	BSPH-401	Applied Physics	3	1	0	4	4
3	ESEE-401	Elements of Electrical Engineering	2	1	0	3	3
4	ESCS-401	Elements of Computer Engineering	2	0	0	2	2
5	ESEC-401	Elements of Electronics Engineering	2	0	0	2	2
6	BSPH-402	Applied Physics Lab	0	0	2	2	1
7	ESEE-402	Elements of Electrical Engineering Lab	0	0	2	2	1
8	ESCS-402	Elements of Computer Engineering Lab	0	0	4	4	2
9	ESEC-402	Elements of Electronics Engineering Lab	0	0	2	2	1
Total			12	3	10	25	20

Semester-II B Group-B (FET)

1	TPIN-421	Practical Training During Summer Vacations (In-house) 02 weeks				80	1 (S/US)
2	TPIN-422	Technical Competency					1 (S/US)

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Semester-III Group B (FET)							
S No	Sub Code	Subject Name	L	T	P	Hrs.	Credits
1	ESME-501	Engineering Mechanics	3	1	0	4	4
2	PCFT-511	Food Chemistry	3	1	0	4	4
3	PCFT-512	Food Microbiology	3	0	0	3	3
4	PCFT-513	Heat and Mass Transfer	3	1	0	4	4
5	HSMC-501	Principles of management	3	0	0	3	3
6	PCFT-513	Heat and Mass Transfer Lab	0	0	2	2	1
7	PCFT-514	Food Chemistry and Microbiology Lab	0	0	2	2	1
8	MCMH-501	Indian Constitution	3	0	0	3	0
		Total	18	03	04	25	20
9	MDFT-511	Food Processing and Preservation	3	1	0	4	4
Semester-IVA Group B (FET)							
S No	Sub Code	Subject Name	L	T	P	Hrs.	Credits
1	BSMA-501	Numerical and statistical methods	3	0	0	3	3
2	BSMA-502	Numerical and statistical methods lab	0	0	2	2	1
3	BSBL-501	Biology for Engineers	2	0	0	2	2
4	PCFT-521	Food Biochemistry and Nutrition	3	1	0	4	4
5	PCFT-522	Food Biotechnology	4	0	0	4	4
6	PCFT-523	Food Engineering	3	1	0	4	4
7	PCFT-524	Food Engineering Lab	0	0	2	2	1
8	PCFT-525	Food Biochemistry and Nutrition and Biotechnology lab	0	0	2	2	1
		Total	15	2	6	23	20
9	MDFT-521	Food Biochemistry and Nutrition	3	1	0	4	4
Semester-IVB (FET)							
1	TPID-521	Industrial Training 02 weeks				40	1 (S/US)
2	EAA-521+	Fractional credit course/Extra Academic Activity +GROUP A/B/C					1 (S/US)

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Semester-V-A Group-B (FET)

S No	Sub Code	Subject Name	L	T	P	Hrs.	Credits
1	PCFT-611	Technology of Animal product (core course)	3	0	0	3	3
2	PCFT-612	Dairy Tech (core course)	3	0	0	3	3
3	OEFT-611	Open Elective-I	3	0	0	3	3
4	OEFT-612	Open Elective-II	3	0	0	3	3
5	PEFT-611	Professional Elective-I	3	0	0	3	3
6	PCFT-613	Animal product technology and Dairy technology lab	0	0	2	2	2
7	HSMC-603	Engineering economics and entrepreneurship	3	0	0	3	3
		Total	18	0	2	20	20
8	MDFT-611	Plant Food Product Technology	3	1	0	4	4
9	HDFT-611	Enzymes in Food Processing	3	1	0	4	4
10	HDFT-612	Basic Agricultural Process Engineering	3	1	0	4	4

Semester-V-B Group-B (FET)

1	EAA-611+	Fractional credit course/ Extra Academic Activity +GROUP A/B/C					1(S/US)
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Semester-VI-A Group-B (FET)

S No	Sub Code	Subject Name	L	T	P	Hrs.	Credits
1	PCFT-621	Technology of Cereal, Pulses and Oilseeds Processing	3	1	0	4	4
2	PCFT-622	Technology of Fruits and Vegetable Products	3	0	0	3	3
3	OEFT-621	Open Elective-III	3	0	0	3	3
4	OEFT-622	Open Elective-IV	3	0	0	3	3
5	PEFT-621	Professional Elective-II	3	0	0	3	3
6	PCFT-623	Plant Foods Lab	0	0	2	2	1
7	HSMC-601	Technical Communication	2	0	0	2	2
8	HSMC-602	Technical Communication lab	0	0	2	2	1
		Total	17	1	4	22	20
9	MDFT-621	Unit Operations in Food Engineering	3	1	0	4	4
10	HDFT-621	Instrumental Techniques in Food	3	1	0	4	4

Semester-VI B Group-B (FET)

1	TPID-621	Industrial Training 04 weeks				80 hrs	2 S/US
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Semester-VII Group-B (FET)

No	Sub Code	Subject Name	L	T	P	Hrs.	Credits
1	PCFT-711	Food analysis and Quality Control (core course)	3	1	0	4	4
2	PCFT-712	Packaging Technology	3	0	0	3	3
3	OEFT-711	Open Elective-V	3	0	0	3	3
4	PEFT-711	Professional Elective-III	3	1	0	4	4
5	PEFT-712	Professional Elective-IV	3	0	0	3	3
6	PCFT -713	Food Analysis, Quality Control and Packaging technology Lab	0	0	2	2	1
7	PRFT-711	Project Stage I and Seminar	0	0	4	4	2
		Total	15	2	6	23	20
8	MDFT-711	Engineering Properties of Foods	3	1	0	4	4
9	HDFT-711	Food Rheology	3	1	0	4	4

Semester-VIII Group B (FET)

No	Sub Code	Subject Name	L	T	P	Hrs.	Credits
1	PEFT-721	Professional Elective-V	3	0	0	3	3
2	PEFT-722	Professional Elective-VI	3	0	0	3	3
3	PRFT-721	Project Stage II	0	0	12	12	6
4	PHFT-721	Project Honors	0	0	08	08	4
		Total	6	0	12	18	16

OR

No	Sub Code	Subject Name	L	T	P	Hrs.	Credits
1	INID-721	Internship in Industry	0	0	0	40	6
2	PRFT-721	Project Stage II	0	0	12	12	6
3	PHFT-721	Project Honors	0	0	08	08	4
		Total	0	0	20	60	16

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LIST OF OPEN ELECTIVES

S.NO.	Sub. Code	Subject Name	L	T	P	Hrs.	Credits
1	OEFT-611	Open Elective-I	3	0	0	3	3
a	OEFT-611 A	Separation Technology	3	0	0	3	3
b	OEFT-611 B	Biochemical Engineering	3	0	0	3	3
2	OEFT-612	Open Elective-II	3	0	0	3	3
a	OEFT-612 A	Principle of Food Processing	3	0	0	3	3
b	OEFT-612 B	Principle of Food Preservation	3	0	0	3	3
3	OEFT-621	Open Elective-III	3	0	0	3	3
a)	OEFT-621 A	Food and Nutrition	3	0	0	3	3
b)	OEFT-621 B	Unit operations in food processing	3	0	0	3	3
4	OEFT-622	Open Elective-IV	3	0	0	3	3
a)	OEFT-622 A	Fundamentals of Biotechnology	3	0	0	3	3
b)	OEFT-622 B	Food Laws and Regulations	3	0	0	3	3
5	OEFT-711	Open Elective-V	3	0	0	3	3
a)	OEFT-711 A	Flavor Technology	3	0	0	3	3
b)	OEFT-711 B	Food plant Sanitation and Waste management	3	0	0	3	3

LIST OF PROFESSIONAL ELECTIVES

S.NO	Sub. Code	Subject name	L	T	P	Hrs	Credits
1	PEFT-615	Professional Elective-I	3	0	0	3	3
a)	PEFT-615A	Fluid Flow operation	3	0	0	3	3
b)	PEFT-615B	Post-harvest Engineering	3	0	0	3	3
2	PEFT-625	Professional Elective-II	3	0	0	3	3
a)	PEFT-625 A	Food storage Engineering	3	0	0	3	3
b)	PEFT-625 B	Technology of bakery and confectionary products	3	0	0	3	3
3	PEFT-711	Professional elective-III	3	0	0	3	3
a)	PEFT-711A	Health and Functional Food	3	0	0	3	3
b)	PEFT-711A	Technology of food plant by product utilization	3	0	0	3	3
4	PEFT-712	Professional Elective-IV	3	0	0	3	3
a)	PEFT-712 A	Technology of Beverages	3	0	0	3	3
b)	PEFT-712 B	Industrial Microbiology	3	0	0	3	3
5	PEFT-721	Professional Elective-V	3	0	0	3	3
a)	PEFT-721 A	Food Additives and Ingredients	3	0	0	3	3
b)	PEFT-721 B	Technology of Fats and oils	3	0	0	3	3
6	PEFT-722	Professional Elective-VI	3	0	0	3	3
a)	PEFT-722 A	Food Processing Plant Layout and design	3	0	0	3	3
b)	PEFT-722 B	Innovative Technique in Food Processing	3	0	0	3	3

Study Scheme for Bachelor of Engineering in Instrumentation and Control (GIN)

Semester-I Group-A (GIN)							
S. No.	Sub Code	Subject Name	L	T	P	Hrs.	Credits
1	BSMA-401	Engineering Mathematics I	3	1	0	4	4
2	BSPH-401	Applied Physics	3	1	0	4	4
3	ESEE-401	Elements of Electrical Engineering	2	1	0	3	3
4	ESCS-401	Elements of Computer Engineering	2	0	0	2	2
5	ESEC-401	Elements of Electronics Engineering	2	0	0	2	2
6	BSPH-402	Applied Physics Lab	0	0	2	2	1
7	ESEE-402	Elements of Electrical Engineering Lab	0	0	2	2	1
8	ESCS-402	Elements of Computer Engineering Lab	0	0	4	4	2
9	ESEC-402	Elements of Electronics Engineering Lab	0	0	2	2	1
		Total	12	03	10	25	20

Semester-II A Group-A (GIN)							
S. No.	Sub Code	Subject Name	L	T	P	Hrs.	Credits
1	BSMA-402	Engineering Mathematics II	3	1	0	4	4
2	BSCH-401	Applied Chemistry	3	1	0	4	4
3	ESME-401	Elements of Mechanical Engineering	2	1	0	3	3
4	ESME-402	Workshop Technology and Practice	1	0	0	1	1
5	HSMC-401	English Communication and Soft Skills	1	0	0	1	1
6	BSCH-402	Applied Chemistry Lab	0	0	2	2	1
7	ESME-403	Elements of Mechanical Engineering Lab	0	0	2	2	1
8	ESME-404	Engineering Drawing	0	0	4	4	2
9	ESME-405	Workshop Technology and Practice Lab	0	0	4	4	2
10	HSMC-402	English Communication and Soft Skills Lab	0	0	2	2	1
11	MCCH-401	Mandatory Course-I	3	0	0	3	0
		Total	13	03	14	30	20

Semester-II B Group-A (GIN)							
1	TPIN-421	Practical Training During Summer Vacations (In-house) 02 weeks				40	1 (S/U)
2	TPIN-422	Technical Competency				40	1 (S/U)

Semester-III Group-A (GIN)

S. No.	Sub Code	Subject Name	L	T	P	Hrs.	Credits
1	BSMA-501	Numerical and Statistical Methods	3	0	0	3	3
2	PCIE-511	Electrical Circuit Analysis and Synthesis	3	1	0	4	4
3	PCIE-512	Electronic Devices and Analog Integrated Circuits	3	1	0	4	4
4	PCIE-513	Electrical and Electronic Measurement	3	1	0	4	4
5	BSBL-501	Biology for Engineers	2	0	0	2	2
6	BSMA-502	Numerical and Statistical Methods Lab	0	0	2	2	1
7	PCIE-514	Electronic Devices and Analog Integrated Circuits Lab	0	0	2	2	1
8	PCIE-515	Electrical and Electronic Measurement Lab	0	0	2	2	1
		Total	14	03	06	23	20

Semester-IV -A Group-A (GIN)

S. No.	Sub Code	Subject Name	L	T	P	Hrs.	Credits
1	ESME-501	Engineering Mechanics	3	1	0	4	4
2	PCIE-521	Digital Electronics	3	0	0	3	3
3	PCIE-522	Sensors and Transducers	3	1	0	4	4
4	PCIE-523	Signals and Systems	3	1	0	4	4
5	HSMC-501	Principles of Management	3	0	0	3	3
6	PCIE-524	Digital Electronics Lab	0	0	2	2	1
7	PCIE-525	Sensors and Transducers Lab	0	0	2	2	1
8	MCMH-501	Mandatory Course-2	3	0	0	3	0
		Total	18	3	4	25	20

Semester-IV-B Group-A (GIN)

1	TPID-521	Industrial Training 02 weeks				40	1 (S/US)
2	EAA-521+	Fractional credit course/Extra Academic Activity +GROUP A/B/C				40	1 (S/US)

Semester-V-A Group-A (GIN)							
S No.	Sub Code	Subject Name	L	T	P	Hrs.	Credits
1	PCIE-611	Analytical and Optical Instrumentation	3	0	0	3	3
2	PCIE-612	Control Systems	3	1	0	4	4
3	OEIE-611	Open Elective-1	3	0	0	3	3
4	OEIE-612	Open Elective-2	3	0	0	3	3
5	PEIE-611	Professional Elective-1	3	0	0	3	3
6	HSMC-601	Technical Communication	2	0	0	2	2
7	PCIE-613	Control System Lab	0	0	2	2	1
8	HSMC-602	Technical Communication Lab	0	0	2	2	1
		Total	17	1	4	22	20

Semester-V-B Group-A (GIN)

1	EAA-611+	Fractional credit course/Extra Academic Activity +GROUP A/B/C				40	1(S/US)
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Semester-VI-A Group-A (GIN)

S No.	Sub Code	Subject Name	L	T	P	Hrs.	Credits
1	PCIE-621	Microprocessors and Microcontrollers	3	1	0	4	4
2	PCIE-622	Industrial Instrumentation	3	0	0	3	3
3	OEIE-621	Open Elective-3	3	0	0	3	3
4	OEIE-622	Open Elective-4	3	0	0	3	3
5	PEIE-621	Professional Elective-2	3	0	0	3	3
6	HSMC-603	Engineering Economics and Entrepreneurship	3	0	0	3	3
7	PCIE-623	Microprocessors and Microcontrollers Lab	0	0	2	2	1
		Total	18	1	2	21	20

Semester-VI-B Group-A (GIN)

1	TPID-621	Industrial Training 04 weeks				40	2 (S/US)
2	EAA-622+	Fractional credit course/Extra Academic Activity +GROUP A/B/C				40	1 (S/US)

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Semester-VII Group-A (GIN)							
S No.	Sub Code	Subject Name	L	T	P	Hrs.	Credits
1	PCIE-711	Process Dynamics and Control	3	1	0	4	4
2	PCIE-712	Data Communication and Networking	3	1	0	4	4
3	PEIE-711	Professional Elective-3	3	0	0	3	3
4	PEIE-712	Professional Elective-4	3	0	0	3	3
5	OEIE-711	Open Elective-5	3	0	0	3	3
6	PCIE-713	Process Dynamic and Control Lab	0	0	2	2	1
7	PRIE-711	Project Stage I and Seminar	0	0	4	4	2
		Total	15	2	6	23	20
Semester-VIII Group-A (GIN)							
S No.	Sub Code	Subject Name	L	T	P	Hrs.	Credits
1	PEIE-721	Professional Elective-5	3	0	0	3	3
2	PEIE-722	Professional Elective-6	3	0	0	3	3
3	PRIE-721	Project Stage II	0	0	12	12	6
		Total	6	0	12	18	12
OR							
S No.	Sub Code	Subject Name	L	T	P	Hrs.	Credits
1	INID-721	Internship in Industry				40	6
2	PRIE-721	Project Stage II	0	0	12	12	6
		Total					12

List of Mandatory Courses

1. MCCH-401 Mandatory Course – 1: Environmental Studies
2. MCMH-501 Mandatory Course – 2: Indian Constitution

List of Open Electives

LIST OF OPEN ELECTIVES							
S. No.	Sub. Code	Subject Name	L	T	P	Hrs.	Credit
1	OEIE-611	Open Elective-I	3	0	0	3	3
a)	OEIE-611A	Electrical Circuits	3	0	0	3	3
b)	OEIE-611B	Electrical Engineering Materials	3	0	0	3	3
c)	OEIE-611C	Renewable Energy Sources	3	0	0	3	3
2	OEIE-612	Open Elective-II	3	0	0	3	3
a)	OEIE-612A	Energy Conservation Practices	3	0	0	3	3
b)	OEIE-612B	Energy Auditing and Management	3	0	0	3	3
c)	OEIE-612C	Power Plant Engineering	3	0	0	3	3
3	OEIE-621	Open Elective-III	3	0	0	3	3
a)	OEIE-621A	Microprocessors and Applications	3	0	0	3	3
b)	OEIE-621B	Elements of Power System	3	0	0	3	3
c)	OEIE-621C	Biomedical Instrumentation	3	0	0	3	3
4	OEIE-622	Open Elective-IV	3	0	0	3	3
a)	OEIE-622A	Control System	3	0	0	3	3
b)	OEIE-622B	Microcontrollers and Applications	3	0	0	3	3
c)	OEIE-622C	Industrial Safety Engineering	3	0	0	3	3
5	OEIE-711	Open Elective-V	3	0	0	3	3
a)	OEIE-711A	Signals and Systems	3	0	0	3	3
b)	OEIE-711B	Sensors and Transducers	3	0	0	3	3
c)	OEIE-711C	Introduction to Soft Computing	3	0	0	3	3

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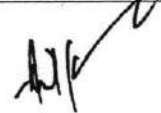
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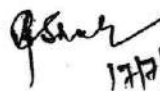
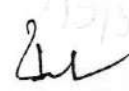
List of Professional Electives

List of Professional Electives							
S. No.	Sub. Code	Subject Name	L	T	P	Hrs.	Credits
1	PEIE-611	Professional Elective-1	3	0	0	3	3
a)	PEIE-611A	Biomedical Instrumentation	3	0	0	3	3
b)	PEIE-611B	Electrical Machines	3	0	0	3	3
c)	PEIE-611C	Industrial Safety	3	0	0	3	3
2	PEIE-621	Professional Elective-2	3	0	0	3	3
a)	PEIE-621A	Biomedical Signal and Image Processing	3	0	0	3	3
b)	PEIE-621B	Power Electronics and Drives	3	0	0	3	3
c)	PEIE-621C	Telemetry and Data Acquisition	3	0	0	3	3
3	PEIE-711	Professional Elective-3	3	0	0	3	3
a)	PEIE-711A	Wind and Solar Energy Systems	3	0	0	3	3
b)	PEIE-711B	Telemedicine and Robotic-Surgery	3	0	0	3	3
c)	PEIE-711C	Non-Linear and Optimal Control	3	0	0	3	3
4	PEIE-712	Professional Elective-4	3	0	0	3	3
a)	PEIE-712A	Digital Signal Processing	3	0	0	3	3
b)	PEIE-712B	Optimization Techniques	3	0	0	3	3
c)	PEIE-712C	Virtual Instrumentation	3	0	0	3	3
5	PEIE-721	Professional Elective-5	3	0	0	3	3
a)	PEIE-721A	Robotics	3	0	0	3	3
b)	PEIE-721B	Computer Control of Processes	3	0	0	3	3
c)	PEIE-721C	Introduction to MEMs	3	0	0	3	3
6	PEIE-722	Professional Elective-6	3	0	0	3	3
a)	PEIE-722A	Advanced Microprocessors and Microcontrollers	3	0	0	3	3
b)	PEIE-722B	Power Plant Instrumentation	3	0	0	3	3
c)	PEIE-722C	Modelling and Simulation	3	0	0	3	3

Study Scheme of UG Programme in "Mechanical Engineering (Manufacturing Engineering)"

Semester-I							
S No	Sub Code	Subject Name	L	T	P	Hrs.	Credits
1	BSMA-401	Engineering Mathematics I	3	1	0	4	4
2	BSCH-401	Applied Chemistry	3	1	0	4	4
3	ESME-401	Elements of Mechanical Engineering	2	1	0	3	3
4	ESME-402	Workshop Technology and Practice	1	0	0	1	1
5	HSMC-401	English Communication and Soft Skills	1	0	0	1	1
6	BSCH-402	Applied Chemistry Lab	0	0	2	2	1
7	ESME-403	Elements of Mechanical Engineering Lab	0	0	2	2	1
8	ESME-404	Engineering Drawing	0	0	4	4	2
9	ESME-405	Workshop Technology and Practice Lab	0	0	4	4	2
10	HSMC-402	English Communication and Soft Skills Lab	0	0	2	2	1
11	MCMH-401	Mandatory Course-1	3	0	0	3	0
Total			13	3	14	30	20
Semester-II- A							
S No	Sub Code	Subject Name	L	T	P	Hrs.	Credits
1	BSMA-402	Engineering Mathematics II	3	1	0	4	4
2	BSPH-401	Applied Physics	3	1	0	4	4
3	ESEE-401	Elements of Electrical Engineering	2	1	0	3	3
4	ESCS-401	Elements of Computer Engineering	2	0	0	2	2
5	ESEC-401	Elements of Electronics Engineering	2	0	0	2	2
6	BSPH-402	Applied Physics Lab	0	0	2	2	1
7	ESEE-402	Elements of Electrical Engineering Lab	0	0	2	2	1
8	ESCS-402	Elements of Computer Engineering Lab	0	0	4	4	2
9	ESEC-402	Elements of Electronics Engineering Lab	0	0	2	2	1
Total			12	3	12	25	20
Semester-II-B							
	TPIN-421	Practical Training During Summer Vacations (In-house) 02 weeks				80	1 (S/US)
	TPIN-422	Technical competency					1(S/US)
Semester-III							
S No	Sub Code	Subject Name	L	T	P	Hrs.	Credits
1	ESME-501	Engineering Mechanics	3	1	0	4	4
2	PCME-511	Applied Thermodynamics	3	1	0	4	4
3	PCME-512	Manufacturing Processes	3	0	0	3	3
4	PCME-513	Fluid Mechanics and Machinery	3	1	0	4	4
5	HSMC-501	Principles of Management	3	0	0	3	3
6	PCME-514	Applied Thermodynamics Lab	0	0	2	2	1
7	PCME-515	Fluid Mechanics and Machinery Lab	0	0	2	2	1
8	MCMH-501	Mandatory Course-2	3	0	0	3	0
Total			18	3	4	25	20



 (1)

Semester-IV-A							
S No	Sub Code	Subject Name	L	T	P	Hrs.	Credits
1	BSMA-501	Numerical and Statistical Methods	3	0	0	3	3
2	PCME-521	Physical Metallurgy	2	0	0	2	2
3	PCME-522	Kinematics of Machines	3	0	0	3	3
4	PCME-523	Strength of Material	3	1	0	4	4
5	BSBL-501	Biology for Engineers	2	0	0	2	2
6	BSMA-502	Numerical and Statistical Methods Lab	0	0	2	2	1
7	PCME-524	Kinematics of Machines Lab	0	0	2	2	1
8	PCME-525	Strength of Material Lab	0	0	2	2	1
9	PCME-526	Machine Drawing	0	0	4	4	2
10	PCME-527	Physical Metallurgy Lab	0	0	2	2	1
Total			13	1	12	26	20

Semester-IV-B

1	TPID-521	Industrial Training 02 weeks					1 (S/US)
2	EAA-521#(A/B/C)	Fractional credit course/Extra Academic activity Group A/B/C					1 (S/US)

Semester-V A

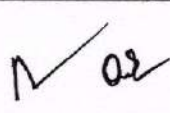
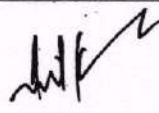
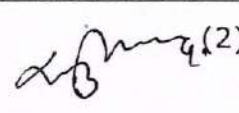
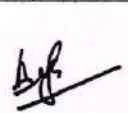
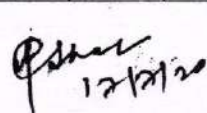
S No	Sub Code	Subject Name	L	T	P	Hrs.	Credits
1	PCME-611	Machine Design-I	3	1	0	4	4
2	PCME-612	Measurement and Instrumentation	2	1	0	3	3
3	OEME-611	Open Elective-1	3	0	0	3	3
4	OEME-612	Open Elective-2	3	0	0	3	3
5	PEME-611	Professional Elective-1	3	0	0	3	3
6	HSMC-603	Engineering Economics and Entrepreneurship	3	0	0	3	3
7	PCME-613	Measurement and Instrumentation Lab	0	0	2	2	1
8	HPME-611	Advance Manufacturing Processes	3	0	0	3	3
9	HPME-612	Advance Manufacturing Processes Lab	0	0	2	2	1
10	HPME-613	Modeling and Simulation	3	0	0	3	3
11	HPME-614	Modeling and Simulation lab	0	0	2	2	1
Total			23	2	6	31	28

Semester-V-B

	EAA-611#(A/B/C)	Fractional credit course/Extra Academic activity Group A/B/C					1 (S/US)
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Semester-VI-A

S No	Sub Code	Subject Name	L	T	P	Hrs.	Credits
1	PCME-621	Heat & Mass Transfer	3	0	0	3	3
2	PCME-622	Principles of Industrial Engineering	3	0	0	3	3
3	OEME-621	Open Elective-3	3	0	0	3	3

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4	OEME-622	Open Elective-4	3	0	0	3	3
5	PEME-621	Professional Elective-2	3	0	0	3	3
6	HSMC-601	Technical Communication	2	0	0	2	2
7	PCME-623	Heat & Mass Transfer Lab	0	0	2	2	1
8	HPME-621	Tool Design	3	1	0	4	4
9	HSMC-602	Technical Communication Lab	0	0	2	2	1
Total			20	2	4	26	24

Semester-VI-B

1	TPID-621	Industrial Training 04 weeks				160	2 (S/US)
2	EAA-621#(A/B/C)	Fractional credit course/Extra Academic activity Group A/B/C					1 (S/US)

Semester-VII

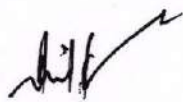
S No	Sub Code	Subject Name	L	T	P	Hrs.	Credits
1	PCME-711	CAD/CAM	3	0	0	3	3
2	PCME-712	Machine Design-II	3	1	0	4	4
3	OEME-711	Open Elective-5	3	0	0	3	3
4	PEME-711	Professional Elective-3	3	1	0	4	4
5	PEME-712	Professional Elective-4	3	0	0	3	3
6	PCME-713	CAD/CAM Lab	0	0	2	2	1
7	HPME-711	Non-Conventional Machining	3	0	0	3	3
8	HPME-712	Non-Conventional Machining lab	0	0	2	2	1
9	PROJME-711	Project Stage I and Seminar	0	0	4	4	2
Total			18	2	8	28	24

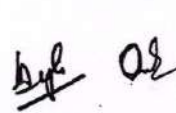
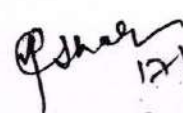
Semester-VIII

S No	Sub Code	Subject Name	L	T	P	Hrs.	Credits
1	PEME-721	Professional Elective-5	3	0	0	3	3
2	PEME-722	Professional Elective-6	3	0	0	3	3
3	HPME-721	Project-Honors/Specialization	0	0	8	8	4
4	PROJME-721	Project Stage II	0	0	12	12	6
Total			6	0	20	26	16

OR

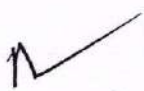
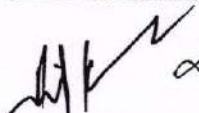
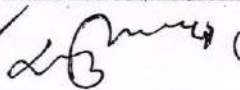
S No	Sub Code	Subject Name	L	T	P	Hrs.	Credits
1	INID-721	Internship in Industry					6
2	HPME-721	Project-Honors/Specialization	0	0	8	8	4
3	PROJME-721	Project Stage II	0	0	12	12	6
Total			0	0	20	20	16

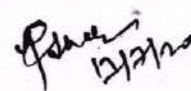
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Study Scheme of UG Programme in "Mechanical Engineering(Welding Technology)"

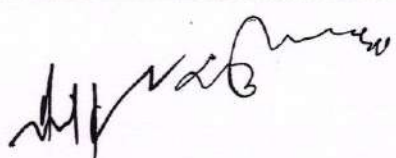
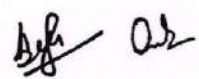
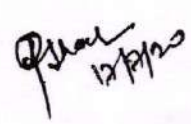
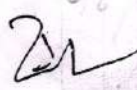
Semester-I							
S No	Sub Code	Subject Name	L	T	P	Hrs.	Credits
1	BSMA-401	Engineering Mathematics I	3	1	0	4	4
2	BSCH-401	Applied Chemistry	3	1	0	4	4
3	ESME-401	Elements of Mechanical Engineering	2	1	0	3	3
4	ESME-402	Workshop Technology and Practice	1	0	0	1	1
5	HSMC-401	English Communication and Soft Skills	1	0	0	1	1
6	BSCH-402	Applied Chemistry Lab	0	0	2	2	1
7	ESME-403	Elements of Mechanical Engineering Lab	0	0	2	2	1
8	ESME-404	Engineering Drawing	0	0	4	4	2
9	ESME-405	Workshop Technology and Practice Lab	0	0	4	4	2
10	HSMC-402	English Communication and Soft Skills Lab	0	0	2	2	1
11	MCMH-401	Mandatory Course-1	3	0	0	3	0
Total			13	3	14	30	20
Semester-II- A							
S No	Sub Code	Subject Name	L	T	P	Hrs.	Credits
1	BSMA-402	Engineering Mathematics II	3	1	0	4	4
2	BSPH-401	Applied Physics	3	1	0	4	4
3	ESEE-401	Elements of Electrical Engineering	2	1	0	3	3
4	ESCS-401	Elements of Computer Engineering	2	0	0	2	2
5	ESEC-401	Elements of Electronics Engineering	2	0	0	2	2
6	BSPH-402	Applied Physics Lab	0	0	2	2	1
7	ESEE-402	Elements of Electrical Engineering Lab	0	0	2	2	1
8	ESCS-402	Elements of Computer Engineering Lab	0	0	4	4	2
9	ESEC-402	Elements of Electronics Engineering Lab	0	0	2	2	1
Total			12	3	12	25	20
Semester-II-B							
	TPIN-421	Practical Training During Summer Vacations (In-house) 02 weeks				80	1 (S/US)
	TPIN-422	Technical competency					1(S/US)
Semester-III							
S No	Sub Code	Subject Name	L	T	P	Hrs.	Credits
1	ESME-501	Engineering Mechanics	3	1	0	4	4
2	PCME-511	Applied Thermodynamics	3	1	0	4	4
3	PCME-512	Manufacturing Processes	3	0	0	3	3
4	PCME-513	Fluid Mechanics and Machinery	3	1	0	4	4
5	HSMC-501	Principles of Management	3	0	0	3	3
6	PCME-514	Applied Thermodynamics Lab	0	0	2	2	1
7	PCME-515	Fluid Mechanics and Machinery Lab	0	0	2	2	1
8	MCMH-501	Mandatory Course-2	3	0	0	3	0
Total			18	3	4	25	20



 (4)






Semester-IV-A							
S No	Sub Code	Subject Name	L	T	P	Hrs.	Credits
1	BSMA-501	Numerical and Statistical Methods	3	0	0	3	3
2	PCME-521	Physical Metallurgy	2	0	0	2	2
3	PCME-522	Kinematics of Machines	3	0	0	3	3
4	PCME-523	Strength of Material	3	1	0	4	4
5	BSBL-501	Biology for Engineers	2	0	0	2	2
6	BSMA-502	Numerical and Statistical Methods Lab	0	0	2	2	1
7	PCME-524	Kinematics of Machines Lab	0	0	2	2	1
8	PCME-525	Strength of Material Lab	0	0	2	2	1
9	PCME-526	Machine Drawing	0	0	4	4	2
10	PCME-527	Physical Metallurgy Lab	0	0	2	2	1
Total			13	1	12	26	20
Semester-IV-B							
1	TPID-521	Industrial Training 02 weeks					1 (S/US)
2	EAA-521#(A/B/C)	Fractional credit course/Extra Academic activity Group A/B/C					1 (S/US)
Semester-V A							
S No	Sub Code	Subject Name	L	T	P	Hrs.	Credits
1	PCME-611	Machine Design-I	3	1	0	4	4
2	PCME-612	Measurement and Instrumentation	2	1	0	3	3
3	OEME-611	Open Elective-1	3	0	0	3	3
4	OEME-612	Open Elective-2	3	0	0	3	3
5	PEME-611	Professional Elective-1	3	0	0	3	3
6	HSMC-603	Engineering Economics and Entrepreneurship	3	0	0	3	3
7	PCME-613	Measurement and Instrumentation Lab	0	0	2	2	1
	HPWL-611	Advance Welding Processes	3	0	0	3	3
	HPWL-612	Advance Welding Processes lab	0	0	2	2	1
	HPWL-613	Welding metallurgy	3	0	0	3	3
	HPWL-614	Welding metallurgy lab	0	0	2	2	1
Total			23	2	6	31	28
Semester-V-B							
	EAA-611#(A/B/C)	Fractional credit course/Extra Academic activity Group A/B/C					1 (S/US)
Semester-VI-A							
S No	Sub Code	Subject Name	L	T	P	Hrs.	Credits
1	PCME-621	Heat & Mass Transfer	3	0	0	3	3
2	PCME-622	Principles of Industrial Engineering	3	1	0	4	4
3	HPWL-621	Inspection and testing of welds	3	0	0	3	3


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4	HPWL-622	Inspection and testing of welds lab	0	0	2	2	1
5	OEME-621	Open Elective-3	3	0	0	3	3
6	OEME-622	Open Elective-4	3	0	0	3	3
7	PEME-621	Professional Elective-2	3	0	0	3	3
8	HSMC-601	Technical Communication	2	0	0	2	2
9	PCME-623	Heat & Mass Transfer	0	0	2	2	1
10	HSMC-602	Technical Communication Lab	0	0	2	2	1
Total			20	1	6	27	24

Semester-VI-B

1	TPID-621	Industrial Training 04 weeks				160	2 (S/US)
2	EAA-621#(A/B/C)	Fractional credit course/Extra Academic activity Group A/B/C					1 (S/US)

Semester-VII

S No	Sub Code	Subject Name	L	T	P	Hrs.	Credits
1	PCME-711	CAD/CAM	3	0	0	3	3
2	PCME-712	Machine Design-II	3	1	0	4	4
3	OEME-711	Open Elective-5	3	0	0	3	3
4	PEME-711	Professional Elective-3	3	1	0	4	4
5	PEME-712	Professional Elective-4	3	0	0	3	3
6	PCME-713	CAD/CAM Lab	0	0	2	2	1
7	HPWL-711	Design of Welds	3	1	0	4	4
8	PROJME-711	Project Stage I and Seminar	0	0	4	4	2
Total			18	3	6	27	24

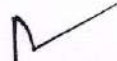
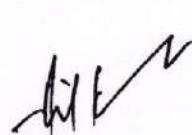
Semester-VIII

S No	Sub Code	Subject Name	L	T	P	Hrs.	Credits
1	PEME-721	Professional Elective-5	3	0	0	3	3
2	PEME-722	Professional Elective-6	3	0	0	3	3
3	HPWL-721	Project-Honors/Specialization	0	0	8	8	4
4	PROJME-721	Project Stage II	0	0	12	12	6
Total			6	0	20	26	16

OR

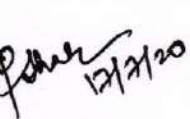
S No	Sub Code	Subject Name	L	T	P	Hrs.	Credits
1	INID-721	Internship in Industry					6
2	HPWL-721	Project-Honors/Specialization	0	0	8	8	4
3	PROJME-721	Project Stage II	0	0	12	12	6
Total			0	0	20	20	16

1	MC-401	Professional and Engineering Ethics
2	MC-501	Indian Constitution


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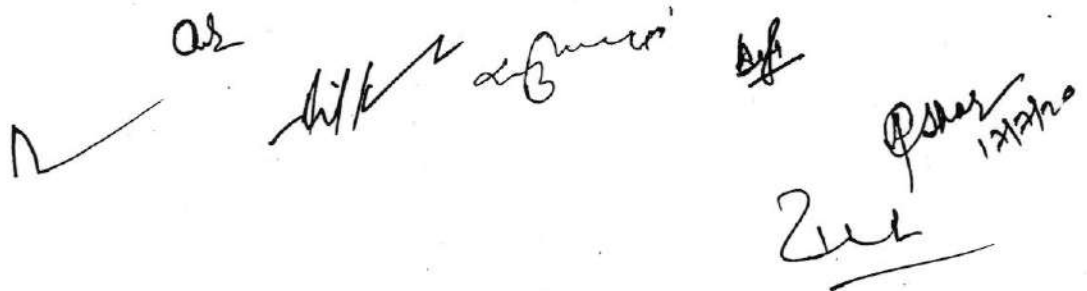
OEME-611	Open Elective- 1
OEME-611A	Power Plant Engineering
OEME-611B	Automobile Engineering
OEME-611C	Welding - Processes, Codes and Standards

OEME-612	Open Elective- 2
OEME-612A	Refrigeration & Air Conditioning
OEME-612B	Measurement and Instrumentation
OEME-612C	Finite Element Method (FEM)

OEME-621	Open Elective- 3
OEME-621A	Cryogenic Engineering
OEME-621B	Safety Engineering
OEME-621C	Supply Chain Management

OEME-622	Open Elective- 4
OEME-622A	Quality Engineering
OEME-622B	Industrial Automation
OEME-622C	Optimization Technique

OEME-711	Open Elective- 5
OEME-711A	Non Conventional Energy Resources
OEME-711B	Robotics
OEME-711C	Energy Auditing


 Handwritten signatures and initials are present below the tables. From left to right, there is a large 'N' with a checkmark, 'as', a signature 'Hik', a signature 'S. Kumar', a signature 'S. S.', a signature 'P. S.', and a signature 'Zee' with '12/12/20' written next to it.

PEME-611	Professional Elective- 1
PEME-611A	Theory of Metal Cutting and Forming
PEME-611B	Advanced Strength of Material
PEME-611C	Welding - Processes, Codes and Standards
PEME-621	Professional Elective- 2
PEME-621A	Automobile Engineering
PEME-621B	Dynamics of Machines
PEME-621C	Power Plant Engineering
PEME-711	Professional Elective- 3
PEME-711A	Refrigeration & Air Conditioning
PEME-711B	Optimization Technique
PEME-711C	Finite Element Method (FEM)

PEME-712	Professional Elective- 4
PEME-712A	Non Conventional Energy Resources
PEME-712B	Flexible manufacturing System(FMS)
PEME-712C	Supply Chain Management

PEME-721	Professional Elective- 5
PEME-721A	Cryogenic Engineering
PEME-721B	Industrial Automation
PEME-721C	Quality Engineering

PEME-722	Professional Elective- 6
PEME-722A	Robotics
PEME-722B	Energy Auditing
PEME-722C	Safety Engineering
PEME-722D	Work study and ergonomics

as

