Study Scheme of UG Programme in "**Mechanical 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	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	0	0	40	40	1 (S/US)
	TPIN-422	Technical competency	0	0	40	40	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**

	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	0	0	40	40	1 (S/US)
2	EAA-521#(#-A/B/C)	Fractional credit course/Extra Academic activity Group A/B/C	0	0	40	40	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
		Total	**17**	**2**	**2**	**21**	**20**
	Semester-V-B						
	EAA-611#(#-A/B/C)	Fractional credit course/Extra Academic activity Group A/B/C	0	0	40	40	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	OEME-621	Open Elective-3	3	0	0	3	3
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	0	0	2	2	1
8	HSMC-602	Technical Communication Lab	0	0	2	2	1
		Total	**17**	**1**	**4**	**22**	**20**

Semester-VI-B							
1	TPID-621	Industrial Training 04 weeks	0	0	40	40	2 (S/US)
2	EAA-621#(#-A/B/C)	Fractional credit course/Extra Academic activity Group A/B/C	0	0	40	40	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	PRME-711	Project Stage I and Seminar	0	0	4	4	2
		Total	**15**	**2**	**6**	**23**	**20**
	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	PRME-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	0	0	40	40	6
2	PRME-721	Project Stage II	0	0	12	12	6
		Total	**0**	**0**	**12**	**12**	**12**

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

Honors courses as per list attached

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

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

Note: Honor degrees in Mechanical Engineering

(1) #Manufacturing Engineering (List of subjects to be offered for honor degree)

Subject Code	Semester	List of Professional Elective	L	T	P	Hrs.	Cr
HPME-611	V	Advance Manufacturing Processes	3	0	0	3	3
HPME-612	V	Advance Manufacturing Processes Lab	0	0	2	2	1
HPME-613	V	Modeling and Simulation	3	0	0	3	3
HPME-614	V	Modeling and Simulation lab	0	0	2	2	1
HPME-621	VI	Tool Design	3	1	0	4	4
HPME-711	VII	Non-Conventional Machining	3	0	0	3	3
HPME-712	VII	Non-Conventional Machining lab	0	0	2	2	1
HPME-721	VIII	Project-Honors			8	8	4

(2) #Welding Technology (List of subjects to be offered for Honor Degree)

Subject Code	Semester	List of Professional Elective	L	T	P	Hrs.	Cr
HPWL-611	V	Advance Welding Processes	3	0	0	3	3
HPWL-612	V	Advance Welding Processes lab	0	0	2	2	1
HPWL-613	V	Welding metallurgy	3	0	0	3	3
HPWL-614	V	Welding metallurgy lab	0	0	2	2	1
HPWL-621	VI	Inspection and testing of welds	3	0	0	3	3
HPWL-622	VI	Inspection and testing of welds lab	0	0	2	2	1
HPWL-711	VII	Design of Welds	3	1	0	4	4
HPWL-721	VIII	Project-Honors			8	8	4

Note: Eligibility criteria will be decided by the institute

(3) #Mechanical Design (List of subjects to be offered for Honor Degree)

Subject Code	Semester	List of Professional Elective	L	T	P	Hrs.	Cr
HPMD-611	V	Mechanical Vibrations	3	0	0	3	3
HPMD-612	V	Mechanical Vibrations Lab	0	0	2	2	1
HPMD-613	V	Modeling and Simulation	3	0	0	3	3
HPMD-614	V	Modeling and Simulation lab	0	0	2	2	1
HPMD-621	VI	Composite Materials and Mechanics	3	1	0	4	4
HPMD-711	VII	Finite Element Method (FEM)	3	0	0	3	3
HPMD-712		Finite Element Method (FEM) Lab	0	0	2	2	1
OR							
HPMD-713	VII	Fracture Mechanics	3	1	0	4	4
HPMD-721	VIII	Project-Honors			8	8	4

(4) #Industrial Engineering (List of subjects to be offered for Honor Degree)

Subject Code	Semester	List of Professional Elective	L	T	P	Hrs.	Cr
HPIE-611	V	Total Quality Management	3	0	0	3	3
HPIE-612	V	Total Quality Management Lab	0	0	2	2	1
HPIE-613	V	Total Project Systems Management	3	0	0	3	3
HPIE-614	V	Total Project Systems Management Lab	0	0	2	2	1
HPIE-621	VI	Decision Support and Expert Systems	3	1	0	4	4
HPIE-711	VII	Logistics & Supply Chain Management	3	1	0	4	4
OR							
HPIE-712	VII	System Waste and Sustainability	3	1	0	4	4
HPIE-721	VIII	Project-Honors			8	8	4

Note: Eligibility criteria will be decided by the institute