

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	MCCH-401	Environment 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	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	Indian Constitution	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					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	OE**-611	Open Elective-1	3	0	0	3	3
4	OE**-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
4	HPWL-622	Inspection and testing of welds lab	0	0	2	2	1
5	OE**-621	Open Elective-3	3	0	0	3	3
6	OE**-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	OE**-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

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