

SCHOOL OF ENGINEERING AND TECHNOLOGY
SRI PADMAVATI MAHILAVISVAIDYALAYAM
(WOMEN'S UNIVERSITY), TIRUPATI



Accredited by NAAC with 'A' Grade

List of Courses Offered (B.Tech (ME), Minors, Honors) and Prerequisites

Department of Mechanical Engineering

Effective from 2020-21

List of Courses – Professional Core

S.No.	Course Code	Course Title	Credits	Year - Semester	Prerequisites	Year - Semester
1	20MET01	Basic Thermodynamics	3	II-I	20BST03– Engineering Physics	I-I
2	20MET02	Engineering Mechanics	4	II-I	---	---
3	20MET03	Material Science and Metallurgy	3	II-I	---	---
4	20MET04	Machine Tools & Manufacturing Technology	3	II-I	---	---
5	20MET05	Design of Machine Members – I	3	II-II	---	---
6	20MET06	Applied Thermodynamics	3	II-II	20MET01 – Basic Thermodynamics	II-I
7	20MET07	Strength of Materials	3	II-II	20MET02 – Engineering Mechanics	II-I
8	20MET08	Fluid Mechanics & Hydraulic Machinery	3	II-II	---	---
9	20MET09	Design of Machine Members – II	3	III-I	20MET05 – Design of Machine Members – I	II-II
10	20MET10	Heat Transfer	4	III-I	---	---
11	20MET11	Kinematics of Machinery	3	III-I	20MET02 – Engineering Mechanics	II-I
12	20MET12	Dynamics of Machinery	4	III-II	20MET11 – Kinematics of Machinery	III-I
13	20MET13	Operations Research	4	III-II	---	---
14	20MET14	Mechanical Measurement & Metrology	3	III-II	20MET04 – Machine Tools & Manufacturing Technology	II-I
15	20MET15	CAD/CAM	3	IV-I	---	---

List of Courses – Professional Electives

S.No.	Course Code	Course Title	Credits	Year - Semester	Prerequisites	Year - Semester
16	20MET18	Non Conventional Energy Sources	3	III-I	20MET10 – Heat Transfer	III-I
17	20MET19	Refrigeration & Air conditioning	3	III-I	20MET01 – Basic Thermodynamics	II-I
18	20MET20	Fuels Combustion and Environment	3	III-I	20MET06 – Applied Thermodynamics	II-II
19	20MET21	Gas Turbines and jet propulsion	3	III-I	---	---
20	20MET23	Robotics	3	III-I	---	---
21	20MET24	Automation in Manufacturing	3	III-I	---	---
22	20MET25	Mechanical Vibrations	3	III-I	---	---
23	20MET26	Modern Manufacturing Methods	3	III-I	---	---
24	20MET27	Finite Element Method	3	IV-I	---	---
25	20MET28	Composite Materials	3	IV-I	---	---
26	20MEP14	Design Thinking	3	IV-I	---	---
27	20MET 29	Design for assembly and Manufacturing Fundamentals	3	IV-I	---	---
28	20BST10	Design and Management of Small Enterprise	3	IV-I	---	---
29	20MET30	Operations Management	3	IV-I	20MEP13 – Operations Research	III-II
30	20MET31	Non-linear Programming	3	IV-I	---	---
31	20MET32	Work Study	3	IV-I	---	---

List of Courses – Open Electives

S.No.	Course Code	Course Title	Credits	Year - Semester	Prerequisites	Year - Semester
32	20MET33	Power Plant Engineering	3	III-II	20MET10 – Heat Transfer	III-I
33	20MET34	Plant layout and Design	3	III-II	20MET01 – Basic Thermodynamics	II-I
34	20MET35	Energy conservation and Management	3	III-II	20MET06 – Applied Thermodynamics	II-II
35	20MEP13	Engineering Projects In Community Services	3	III-II	---	---
36	20MET36	Time and Motion Study	3	III-II	---	---
37	20MET37	Nano Technology	3	III-II	---	---
38	20MET38	Total Quality Management	3	IV-I	---	---
39	20MET39	Supply Chain Management	3	IV-I	---	---

List of Practical Courses

S.No.	Course Code	Course Title	Credits	Year - Semester	Prerequisites	Year - Semester
1	20MEP01	Engineering Graphics	3	I-II	---	---
2	20MEP02	Advanced Engineering Graphics	3	II-I	19MEP01- Engineering Graphics	I-II
3	20MEP03	Workshop and Manufacturing Practices	2	I-I	---	---
4	20MEP04	Manufacturing Technology Lab	1	II-I	---	---
5	20MEP06	Thermal Engineering Lab	1	II-II	---	---
6	20MEP07	Strength of Materials & Material Science Lab	1	II-II	---	---
7	20MEP08	Fluid Mechanics & Hydraulic Machinery Lab	1	III-I	---	---
8	20MEP09	Heat Transfer Lab	1	III-I	---	---
9	20MEP10	Computer Aided Machine Drawing	3	III-II	---	---
10	20MEP11	Machine Tools and Metrology Lab	1	III-II	---	---
11	20MEP12	Machine Dynamics & Mechanical Measurements Lab	1	IV-I	---	---

List of Skill Oriented Courses

S.No.	Course Code	Course Title	Credits	Year - Semester	Prerequisites	Year - Semester
1	20MES01	AUTOCAD 2D&3D Design	2	II - I	---	---
2	20MES02	MATLAB	2	II - II	---	---
3	20BSS01	Effective Communication skills	2	III - I	---	---
4	20MES03	Solid Works	2	III - II	---	---
5	20MES04	FEA Software	2	IV - I	---	---
6	20MES05	FUSION360	2	III - II	---	---
7	20MES04	FEA Software	2	IV - I	---	---
8	20CST13	Machine Learning	2	III-I	---	---
9	20CST27	Artificial Intelligence	2	III - II	---	---
10	20MES07	CNC Part Programming	2	III - II	---	---
11	20MES08	Robot Programming	2	IV - I	---	---

List of Courses in Minor Degree Programme

S.No.	Course Code	Course Title	Credits	Year - Semester	Prerequisites	Year - Semester
1	20METM01	Mechanical Engineering Design	4	II - II	---	---
2	20METM02	Basics of Thermal Engineering	4	II - II	---	---
3	20METM03	Manufacturing Technology	4	III - I	---	---
4	20METM04	Production Planning and control	4	III - II	20MEP13 – Operations Research	III-II
5	20METM05	Renewable Energy Technologies	4	IV - I	---	---

List of Courses in Honors Degree Programme

S.No.	Course Code	Course Title	Credits	Year - Semester	Prerequisites	Year - Semester
1	20METH01	Fracture Mechanics	4	II - II	---	---
2	20BSTH01	Advanced Engineering Mathematics	4	III - I	---	---
3	20MEMH01	Mandatory MOOCs	2	III - I	---	---
4	20METH02	Advanced Fluid Mechanics	4	III - II	---	---
5	20METH03	Metal Forming Processes	3	III - II	---	---
6	20METH04	Tool Design	3	IV - I	---	---
7	20METH05	Total Quality Management & Reliability	3	III - II	---	---
8	20METH06	Production And Operations Management	3	IV - I	---	---
9	20METH07	Mechanics of Composite Materials	3	III - II	---	---
10	20METH08	Tribological Systems Design	3	IV - I	---	---
11	20METH09	Advanced IC Engines & Automobile Engineering	3	III - II	---	---
12	20METH10	Turbo Machinery	3	IV - I	---	---
13	20METH11	Smart Manufacturing	3	III - II	---	---
14	20METH12	Additive Manufacturing	3	IV - I	---	---