

LAMRIN TECH SKILLS UNIVERSITY PUNJAB

University School of Engineering and Technology (USET)

STUDY SCHEME | B.Tech Mechanical Engineering (Digital Manufacturing using AI & CPS)

PROGRAMME DETAILS

Programme Name	B.Tech Mechanical Engineering (Digital Manufacturing using AI & CPS)
Industry Partner	Powered by L&T (Larsen & Toubro)
School	University School of Engineering and Technology (USET)
Batch	2025-2028 (Lateral Entry)
Duration	3 Years (6 Semesters)
Admission Year	2025

Semester III — Second Year

S.No.	Course Name
1	Strength of Material
2	Metrology and Measurements
3	Graphics, Geometric Tolerances & Drawing in Manufacturing
4	Material Science Engineering
5	Manufacturing Processes II
6	Professional Ethics & Civics Morals
7	Strength of Material Lab
8	Material Science Engineering Lab
9	Manufacturing Processes Lab

Semester IV — Second Year

S.No.	Course Name
1	Theory of Machine
2	Fluid Mechanics and Fluid Machinery
3	Applied Thermodynamics
4	Computer Integrated Manufacturing
5	Technology and Processes in Heavy Manufacturing
6	Theory of Machine Lab
7	Fluid Mechanics and Fluid Machinery Lab
8	Applied Thermodynamics Lab
9	Computer Integrated Manufacturing Lab
10	Personality Development Workshop-I
11	Open Elective-I (Online Certification Course through MOOC, SWAYAM etc.)

Note: Training will be imparted in the Institution/Industry at the end of 4th Semester for Four (04) weeks duration (Minimum 30 hours per week). Industrial tour will also form part of this training.

□ **After Completion of 2nd Year — Diploma in Mechanical Engineering**

LAMRIN TECH SKILLS UNIVERSITY PUNJAB

University School of Engineering and Technology (USET)

STUDY SCHEME | B.Tech Mechanical Engineering (Digital Manufacturing using AI & CPS)

Semester V — Third Year

S.No.	Course Name
1	Digital Technologies with CPS, IIoT & Cloud in Manufacturing
2	Cognitive Manufacturing — Artificial Intelligence & Machine Vision
3	Heat Transfer
4	Machine Design
5	Automobile Engineering
6	Heat Transfer Lab
7	Machine Design Lab
8	Automobile Engineering Lab
9	Industrial Training with Project

Semester VI — Third Year

S.No.	Course Name
1	Refrigeration & Air Conditioning
2	Mechanical Vibration
3	Additive Manufacturing
4	Collaborative Robotics in Manufacturing with AI, ML & IIoT
5	Professional Elective-I
6	Refrigeration & Air Conditioning Lab
7	Project Work
8	Personality Development Workshop-II
9	Open Elective-II (Online Certification Course through MOOC, SWAYAM etc.)

After Completion of 3rd Year — B.Sc. in Mechanical Engineering

Semester VII — Fourth Year

S.No.	Course Name
1	On Job Training / On Job Deployment

Semester VIII — Fourth Year

S.No.	Course Name
1	On Job Training / On Job Deployment

LAMRIN TECH SKILLS UNIVERSITY PUNJAB
University School of Engineering and Technology (USET)
STUDY SCHEME | B.Tech Mechanical Engineering (Digital Manufacturing using AI & CPS)

□ After Completion of 4th Year — B.Tech Degree in Mechanical Engineering (Digital Manufacturing using AI & CPS)

Professional Elective-I — Course Options

S.No.	Elective Course Name
1	Non-Traditional Machining
2	Internal Combustion Engine
3	Solar Energy
4	Mechatronics
5	Total Quality Management
6	Non-Conventional Energy Resources
7	Robotics
8	Drone Technology
9	Electric Vehicle
10	Product Engineering
11	Smart Materials

PROGRAMME EXIT MILESTONES

- ◆ After Year 2 (Semesters III & IV) → Diploma in Mechanical Engineering
- ◆ After Year 3 (Semesters V & VI) → B.Sc. in Mechanical Engineering
- ◆ After Year 4 (Semesters VII & VIII) → B.Tech Degree in Mechanical Engineering (Digital Manufacturing using AI & CPS)

Lamrin Tech Skills University Punjab | www.ltsu.ac.in | info@ltsu.ac.in