

# LAMRIN TECH SKILLS UNIVERSITY PUNJAB

University School of Engineering and Technology (USET)

**STUDY SCHEME** | B.Tech Electrical Engineering (Smart & Sustainable Power Engineering)

## PROGRAMME DETAILS

<b>Programme Name</b>	B.Tech Electrical Engineering (Smart & Sustainable Power Engineering)
<b>Industry Partner</b>	Powered by L&T (Larsen & Toubro)
<b>School</b>	University School of Engineering and Technology (USET)
<b>Batch</b>	2025-2028 (Lateral Entry)
<b>Duration</b>	3 Years (6 Semesters)
<b>Admission Year</b>	2025

### Semester III — Second Year

S.No.	Course Name
1	Network Analysis and Synthesis
2	Digital System Design using Verilog
3	Electrical Machines-I
4	OH and UG Power Transmission Engineering
5	Microprocessor and Cyber Physical Systems for Industrial Applications
6	Digital System Design using Verilog Lab
7	Microprocessor and Cyber Physical Systems for Industrial Applications Lab
8	Electrical Machines-I Laboratory
9	Professional Ethics and Civic Morals

### Semester IV — Second Year

S.No.	Course Name
1	Applied Industrial IoT
2	Applied Industrial IoT Lab
3	High Voltage Engineering
4	Electrical Machines-II
5	Power Systems Analysis
6	Measurements and Instrumentation
7	Professional Elective-I
8	Power Systems Analysis Laboratory
9	Electrical Machines-II Laboratory
10	Personality Development Workshop-I
11	Open Elective-I (Online Certification Course through MOOC, SWAYAM etc.)

**Note:** Training will be imparted in the Industry at the end of 4th Semester for Four (04) weeks minimum duration.

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

# LAMRIN TECH SKILLS UNIVERSITY PUNJAB

University School of Engineering and Technology (USET)

**STUDY SCHEME** | B.Tech Electrical Engineering (Smart & Sustainable Power Engineering)

## Semester V — Third Year

S.No.	Course Name
1	Renewable Energy and Power Evacuation
2	Automatic Control Systems
3	Power Electronics and Drives
4	Professional Elective-II
5	Utilization of Electrical Energy
6	Power Generation and Economics
7	Control Systems Laboratory
8	Power Electronics and Drives Laboratory
9	Industrial Training with Project

## Semester VI — Third Year

S.No.	Course Name
1	Special Electrical Machines
2	Professional Elective-III
3	Smart Grid Technologies and Infrastructure
4	Practitioner's Approach to Power System Protection and Switchgear
5	EHVAC and HVDC Transmission System
6	Protection and Switchgear Laboratory
7	Special Electrical Machines and Drives Lab
8	Personality Development Workshop-II
9	Project Work
10	Open Elective-II (Online Certification Course through MOOC, SWAYAM etc.)

❑ **After Completion of 3rd Year — B.Sc. in Electrical Engineering (Smart & Sustainable Power Engineering)**

# LAMRIN TECH SKILLS UNIVERSITY PUNJAB

University School of Engineering and Technology (USET)

**STUDY SCHEME** | B.Tech Electrical Engineering (Smart & Sustainable Power 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

☐ **After Completion of 4th Year — B.Tech Degree in Electrical Engineering (Smart & Sustainable Power Engineering)**

## PROFESSIONAL ELECTIVES — COURSE OPTIONS

### Professional Elective-I (Semester IV)

S.No.	Course Name
1	Electrical Drives
2	Power System Dynamics and Control
3	Wind and Solar Energy Systems

### Professional Elective-II (Semester V)

S.No.	Course Name
1	Electric and Hybrid Vehicle
2	Power System Reliability
3	Flexible AC Transmissions

### Professional Elective-III (Semester VI)

S.No.	Course Name
1	Satellite Communication
2	Sensor Technology and Instrumentation
3	Line-Commutated and Active PWM Rectifiers
4	Energy Efficient Systems

---

# LAMRIN TECH SKILLS UNIVERSITY PUNJAB

University School of Engineering and Technology (USET)

**STUDY SCHEME** | B.Tech Electrical Engineering (Smart & Sustainable Power Engineering)

---

## PROGRAMME EXIT MILESTONES

- ◆ After Year 2 (Semesters III & IV) → UG Diploma in Electrical Engineering
- ◆ After Year 3 (Semesters V & VI) → B.Sc. in Electrical Engineering (Smart & Sustainable Power Engineering)
- ◆ After Year 4 (Semesters VII & VIII) → B.Tech Degree in Electrical Engineering (Smart & Sustainable Power Engineering)

*Lamrin Tech Skills University Punjab | [www.ltsu.ac.in](http://www.ltsu.ac.in) | [info@ltsu.ac.in](mailto:info@ltsu.ac.in)*