ULAB
UNIVERSITY OF THE FUTURE

BSc IN ELECTRICAL AND ELECTRONIC ENGINEERING

EEE

Why Choose ULAB?

At ULAB, you will find more than just a university - you will discover a community that inspires you to dream big, think critically, explore ideas, and create change.

Rooted in the **liberal arts tradition, ULAB believes that the best ideas humanity has produced belong to everyone, not to any single discipline.** We encourage students to look beyond disciplinary boundaries, connect knowledge across fields, and understand the world from multiple perspectives. Learning is not simply about acquiring information; it is about asking questions, challenging assumptions, solving problems, and discovering new possibilities.

At ULAB, learning is active, collaborative, and connected to the real world. Through discussion, inquiry, research, hands-on projects, and experiential learning, students take ownership of their education and develop the ability to think independently. We prepare graduates not only for careers, but also for lifelong learning, responsible citizenship, and meaningful contributions to society.

With 5,500+ students and a growing global alumni network, ULAB combines intellectual exploration with a strong commitment to sustainability, inclusion, and positive social impact.

Our commitment to innovation and impact has earned international recognition:

- **World University Rankings for Innovation (WURI) 2026:** Ranked **36th globally and 1st in Bangladesh,** placing ULAB among the world's top 40 innovative universities.
- **Times Higher Education (THE) Sustainability Impact Ratings 2026:** Ranked in the **801–1000 global band and 12th among all universities in Bangladesh**, reflecting its contributions to the United Nations Sustainable Development Goals.
- **QS World University Rankings: Asia 2026:** Ranked in the **1001–1100 band in Asia.**
- **ISO 9001:2015 certification:** Reflecting ULAB's commitment to quality management and continuous improvement.

All of this comes together on our green campus—a lively, welcoming space where curiosity is encouraged, diverse perspectives meet, and learning extends beyond the classroom.

At ULAB, we don't just teach students what to think. We help them learn how to think, connect ideas, and make a difference.

1. Why Choose the EEE Program at ULAB?

The Electrical and Electronic Engineering (EEE) program at ULAB prepares you to design, innovate, and lead in the rapidly evolving world of energy, electronics, and communication technologies.

Here's why you should choose EEE at ULAB:

- Jobs in EEE is predicted to grow 8% yearly making it the most in demand subject in the era of AI
- Industry oriented curriculum to prepare graduates for Artificial Intelligence (AI) Infrastructure Boom, Semiconductor & Microchip race, Renewable Energy & Electric Vehicles (EVs) integration and IoT & embedded systems deployment.
- Internships and job opportunities with tech partners.
- Strong co-curricular and extra-curricular development initiatives and congenial environment within departments for capability enhancement
- Well connected alumni network and long-standing legacy in the local and international job field and in higher studies abroad.
- Each student receives personalized guidance from a faculty advisor to ensure academic and career success.
- Small class sizes, teamwork-driven projects, and a culture of collaboration and innovation.
- Outcome-Based Education aligned with global standards, ULAB EEE department was one of the pioneers in receiving the BAETE accreditation and currently in the process of applying for renewal.

2. Career and Job Prospects for EEE Graduates

Technology and energy systems are the backbone of modern civilization, and EEE graduates are the architects behind this transformation. As a ULAB EEE graduate, you will be prepared to work in industries ranging from power generation to advanced electronics, or even to innovate as an entrepreneur.

Career paths include:

Power & Energy Engineer
Design and manage systems in power plants, renewable energy projects, and smart grids.

Semiconductor & Microelectronics Specialist
Work in chip design, VLSI, and nanotechnology.

Electronics Design Engineer
Develop circuits, embedded systems, and consumer electronics.

Electrical Safety & Compliance Officer
Ensure safe, reliable, and regulatory-compliant electrical systems.

AI Engineer / Data Scientist
Apply machine learning and data analytics to optimize power systems, electronics, and smart grids.

Researcher / Academic
Advance knowledge in materials science, renewable energy, or quantum electronics.

Telecommunication Engineer
Build and optimize communication networks, from 5G to satellite systems.

Entrepreneur / Innovator
Launch startups in IoT devices, renewable energy solutions, or smart appliances.

Automation & Control Engineer
Innovate in robotics, industrial automation, and intelligent manufacturing.

Higher Studies and Global Opportunities:

ULAB's international collaborations and partnerships offer graduates pathways to pursue **MS and PhD programs** at top universities worldwide.

Employability Strengths (Why ULAB Graduates Get Jobs):

- **Industry-aligned curriculum:** Courses designed to meet modern engineering and technology demands.
- **Hands-on laboratory training:** State-of-the-art labs for power systems, electronics, and communication engineering.
- **Internships & industry partnerships:** Opportunities with leading power companies, telecoms, and tech firms.
- **Soft skills development:** Training in teamwork, leadership, and communication alongside technical expertise.
- **Portfolio-based learning:** Students graduate with demonstrable projects, from renewable energy prototypes to IoT devices.
- **Global accreditation & recognition:** BAETE accreditation validates competence for both local and international employers.

These strengths make ULAB graduates highly employable in Bangladesh and abroad.

Destinations for higher studies and careers include:

USA & Canada: Advanced research in renewable energy, microelectronics, and AI-driven power systems.

Australia: Opportunities in sustainable energy engineering and smart grid technologies.

Japan & Korea: Cutting-edge semiconductor, robotics, and telecommunication research.

Germany & Europe: Strong prospects in renewable energy, automotive electronics, and industrial automation.

ULAB's partnerships with institutions such as Macquarie University (Australia), University of Portsmouth (UK), Universiti Kebangsaan Malaysia, Van Lang University (Vietnam) and so on create exchange programs, joint research, and global exposure.

Our alumni leading the way:

Mr Mafizul Islam, Data Engineer, United Nations HQ

Mr Sharvy Ahmed, Software Engineer, Toptal, USA

Mohammad Sakib, Lecturer, Department of ECE, Institute of Science Trade and Technology, affiliated with the National University.

3. Program Information at a Glance

The program offers a Bachelor of Science in Electrical and Electronic Engineering (B.Sc. in EEE) with a duration of 4 years (12 trimesters) and 140 credits, including EEE core courses, specialised electives, General Education courses, and a Final Year Capstone Project.

Course Distribution:

Course Category	Credits	Remarks
General Education Courses (GED)	24	8 Theory
Major Core Courses	62	16 Theory + 14 Lab
Major Elective Courses	14	4 Theory + 2 Lab
Interdisciplinary Courses	4	1 Theory + 1 Lab
Optional/Minor*	9	3 Theory
Basic Science: Physics and Chemistry	11	3 Theory + 2 Lab
Mathematics and Statistics	12	4 Theory
Final Year Capstone Project	4	1 Course
Total	**140**	**40 Theory + 19 Lab**

Cost of the Program:

Credit Hours	Per Credit Fee	Total Cost
5,000 Taka	**140**	**7,71,500 Taka** (Including all other costs)

*EEE Students will receive 20% special waiver on tuition fees.

4. Department Facilities

- **Modern Labs:** Well-equipped labs for Electronics, Control Systems, VLSI, Power Systems, and Electrical Machines.
- **Research Support:** Students use MATLAB, Power World Simulator, Cadence Virtuoso, PSpice, and have full IEEE Access for research papers.
- **Innovation & Projects:** The department organizes hardware projects, circuit design contests, and technical showcases.
- **Career & Industry Links:** Opportunities for internships, training, and industrial visits in both the power sector and the VLSI/semiconductor sector.
- **Mentorship & Guidance:** Faculty support students in academics, projects, and career planning.
- **Technical Facilities:** High-speed internet, updated computers, and licensed engineering software are available.

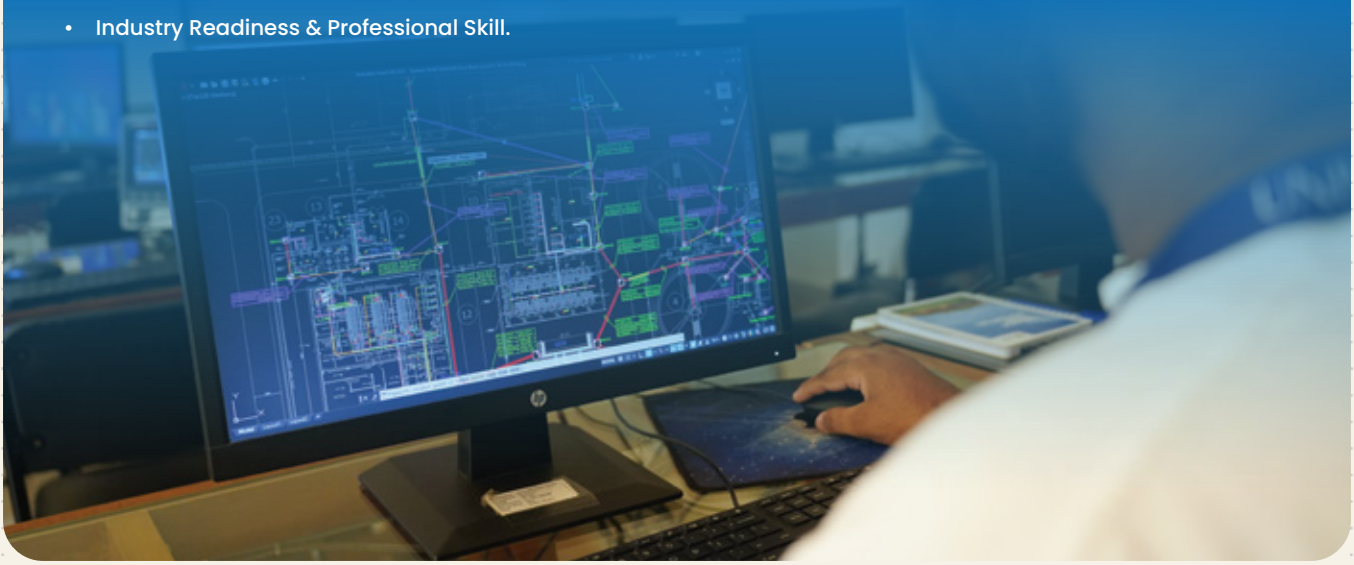
5. Faculty Strength

- Faculty members hold Master's and PhD degrees from renowned international universities.
- Strong Research background with active research in Power Systems, Electronics, Machine Learning, IoT, Renewable Energy, and Smart Technologies.
- Strong industry and academic experience.
- Dedicated student mentoring through academic advising.
- Two world's top 2 percent scientists in the department, providing opportunities for quality research experience and international exposure for the students.

6. Core Competencies

The EEE Department at ULAB equips students with strong technical and professional skills grounded in modern engineering practice, advanced research, and hands-on laboratory experience. Students graduate with the ability to apply theoretical knowledge to solve real-world engineering challenges across diverse fields. Core competencies include:

- Electrical Power & Smart Grid Technologies
- Electronics, VLSI & Hardware Systems
- Communication, Signal & Image Processing
- Internet of Things (IoT) & Emerging Technologies
- Research & Innovation Skills
- Industry Readiness & Professional Skill.



7. Major Milestones of the Program

FIRST YEAR Foundational Milestones

- Build strong fundamentals in Circuit Theory and Basic Electronics.
- Learn core mathematical tools such as Calculus and Linear Algebra.
- Understand electrical measurements, lab safety, and basic instrumentation.

MIDDLE YEAR Intermediate Milestones

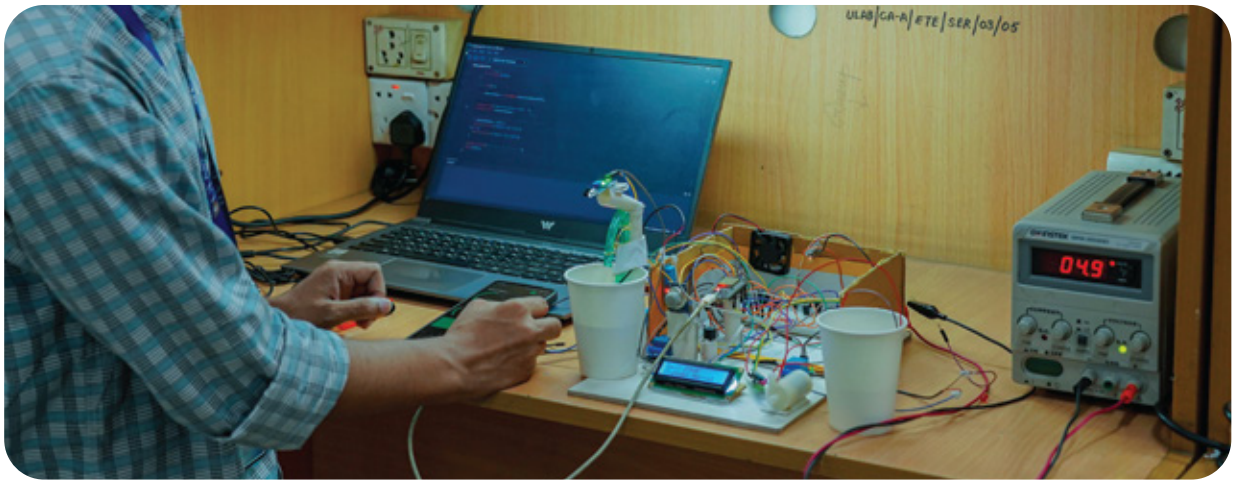
- Gain proficiency in Electrical Machines, Power Systems, and Control Systems.
- Develop skills in analog/digital electronics and VLSI basics.
- Learn simulation tools such as MATLAB/Simulink, Power World Simulator, and Cadence Virtuoso.
- Complete the first major hardware or simulation-based project.

FINAL YEAR Advanced & Capstone Milestones

- Take specialized electives in Power Systems, Control, Electronics, or VLSI.
- Participate in industry-focused training or industrial visits in the energy or semiconductor sector.
- Undertake a Capstone Project demonstrating engineering design and problem-solving skills.

8. Global Connections and Opportunities

- **International and national research partnerships** in power systems, electronics, and renewable energy.
- **Student participation** in global engineering conferences, design competitions, and innovation challenges.
- **Alumni pursuing higher studies** in reputed universities across the USA, Canada, Australia, Japan, Germany and Europe.
- **Integration of global trends** such as Python programming for data analytics, smart grids, renewable energy, robotics, and semiconductor technologies into the curriculum.
- **Cross-disciplinary learning and online international exchange programs** supported by ULAB's global partnerships and Erasmus+ initiatives.



Scholarship & Financial Aid

- Up to 100% Waiver for strong results, siblings, employees' wards, science, or female students upon meeting the requirements.
- Prestigious Named Scholarships with full tuition and stipend for the study duration.
- VC and Dean Honor Lists with full tuition waivers.
- Support for Talent & Need for artists, athletes, freedom fighters' children, remote areas, and hardship aid.

Student Life at ULAB

- **Green Campus – Learn where it's fresh!**
  A spacious, leafy campus in Mohammadpur that gives you room to think, breathe, and thrive.
- **Modern Classrooms – Cool, connected, and collaborative!**
  Fully air-conditioned, Wi-Fi enabled, and designed for interactive learning.
- **IoT & Computer Labs – Tech that takes you further!**
  One of the first private universities in Bangladesh with its very own IoT Lab.
- **Library Resources – Fuel your curiosity!**
  Over 100,000 print and digital resources, global journals, daily news, and cozy study spaces to keep your brain buzzing.
- **Clubs & Events – Find your vibe, join your tribe!**
  From sustainability to adventure, literature to business—there's always something happening, and a club just for you.
- **Cafeteria & Lounges – Where friends and ideas meet!**
  Grab a bite, brainstorm with your team, or just relax between classes.
- **Shuttle Service – Easy rides, happy vibes!**
  Safe and affordable transport connecting campus to Dhanmondi, Mirpur 12, and beyond.

At ULAB, your student life is more than just classes—it's a mix of learning, fun, and friendships that last a lifetime.

Guideline for Online Application

Application Link:
https://oam.ulab.edu.bd/

Step 1	Choose your desired program and click **"Apply".**
Step 2	Click on the tab **"Proceed to Apply"**.
Step 3	Fill out the **"ULAB Admission Sign-up Form"** by providing the required information & click **"Create Account"**.
Step 4	Check the email account used during sign-up (Inbox or Spam) for the account activation message.
Step 5	Follow the instructions in the email to activate your account.
Step 6	Log in with your registered email and complete the application form with accurate information.
Step 7	After filling out the form, review it by clicking **"Preview"**, then click **"Submit"**.
Step 8	Confirm your payment through **bKash**.
Step 9	Download your **Admit Card**.

Undergraduate Admission Requirements:

- A Minimum GPA 2.50 in both SSC and HSC examinations or equivalent, or at least one GPA of 2.00 but an aggregate GPA of 6.00 in SSC and HSC, or
- O'Levels in 5 subjects with a minimum GPA of 2.50 & A'Level in 2 Subjects with a minimum GPA of 2.00 (scale A=5, B=4, C=3, D=2, E=1), or
- Sons/daughters of freedom fighters with an aggregate GPA of 5.00 in SSC &HSC, or
- International Baccalaureate (IB)/American High School Diploma.
- Students with science background in HSC or equivalent Examinations are allowed to get admission in science, technology and engineering programs.

Note:

- Acceptable score in the ULAB Admission Test.
- Admission test is waived for candidates with minimum score of 1100 in SAT (Math + Critical Reading)
- Admission will be revoked at any time if any certificate or educational information submitted during the admission process is found to be false or incomplete.

Admission Test Q&A Sample

Kindly visit the following links to review the sample Q&A.

Undergraduate: https://admissions.ulab.edu.bd/undergraduate-programs/undergraduate-sample-question

Want to talk to our admission team?

Book an online counseling session: https://shorturl.at/zBpdt
Call: 01730082197 | 01713091936 | 01714161613
Email: admissions@ulab.edu.bd

Important Links:

For tuition and fees: https://admissions.ulab.edu.bd/tuition-fees/
For scholarships: https://admissions.ulab.edu.bd/scholarships-aid/
For Admission Merit Scholarship: https://admissions.ulab.edu.bd/sites/default/files/uploads/2025/11/09/UIAB-Admission-Merit-Scholarship-policy.pdf
For program information, please visit: https://eee.ulab.edu.bd/