

B.Sc. in Electrical & Telecommunication Engineering

Course Duration

The is an open credit program and is designed for four years, but the course duration may vary depending on how many prerequisite courses a student has to undertake. Each year consists of three regular semesters: Spring, Summer & Autumn.

Upon admission, a faculty adviser is assigned to each student for guidance and direction in meeting degree requirements and academic goals.

Degree Requirements

The requirements listed below are the minimum requirements for a Bachelor's degree set by IUB. Students are advised to consider their specific requirements.

For the B.Sc. in ETE degree program, the student must undertake a minimum of 140 credits.

Fee Structure	
Total credit	140
Application fee	Tk. 1000
Admission fee (one time)	Tk. 25,000
Student Activities fees including lab: (per semester)	Tk. 7,000
Tuition per credit	Tk. 6,000

Total (140 Credits)	
University Foundation Courses (41 Credits)	
Communication Skills (9 Credits)	
ENG 101	Listening and Speaking Skills
ENG 102	English Reading Skills
ENG 105	Business English
ENG 106	Advanced English Skills
ENG 201	Introduction to English Literature
*Prerequisite ENG 101 & 102	
*Note: students not exempted from ENG 101 and ENG 102 will have to take ENG 101, ENG 102, and ENG 105	
*Note: students exempted from ENG 101 and ENG 102 will have to take ENG 105, ENG 106, ENG201	
Social Sciences (any two) 6 Credits	
ANT 101	Introduction to Anthropology
SOC 101	Introductory Sociology
HEA 101	Health and Society
ECN 200	Introduction to Economics
CMN 201	Introduction to Communication
SOC 202	Social Psychology

Humanities (any two) 6 Credits	
*BDS109	Bangladesh 1971 through the Lenses
*NCH 101	National Culture and Heritage-I
*BPH 101	Bangladesh Political History
*BLA 101	Bangla Literature & Art
GSG101	Introduction to Global Studies
CHI101	Elementary Chinese I
BNG201	Bangla Literatures
HST 103	History and Civilization
AAT 101	Art and Aesthetics
MUS 101	Music Appreciation
FRN 101	Elementary French
PHL 101	Introduction to Philosophy
PHL 206	Philosophy of Religion
*Any one of the first four is mandatory	
Natural Sciences (7 Credits)	
PHY 111	Physics - I
PHY 121	Physics - II
PHY 121L	Physics Lab
Computer Skills (4 Credits)	
CSC121	Introduction to Computer Programming
CSC121L	Introduction to Computer Programming Lab
Live-In-Field Experience (3 credits)	
LFE 201	Live-in-Field Experience
Numeracy (6 Credits)	
MAT111	Mathematics – I
MAT121	Probability and Statistics for Science and Engineering
ETE Major Courses (84 Credits)	
Mathematics (9 Credits)	
MAT131	Mathematics II
MAT213	Mathematics III
MAT221	Mathematics IV
ETE Core Courses (69 Credits)	

ETE131	Electrical Circuit I
ETE132	Introduction to Materials and Chemistry
ETE211	Electrical Circuit II
ETE211L	Electrical Circuit Lab
ETE221	Electronics I
ETE231	Signals and Systems
ETE232	Digital Logic Design
ETE232L	Digital Logic Design Lab
ETE234	Electronics II
ETE234L	Electronics Lab
ETE236	Object Oriented Programming and Data Structure
ETE311	Communication Engineering I
ETE313	Electromagnetic Fields and Waves
ETE319L	Operating System Lab
ETE318L	Engineering Drawing and Electrical Services Design Lab
ETE321	Computer Networks
ETE321L	Computer Networks Lab
ETE322	Communication Engineering II
ETE322L	Communication Engineering Lab
ETE324	Digital Signal Processing
ETE324L	Digital Signal Processing Lab
ETE325	Microprocessor and Embedded Systems
ETE326L	Sensors and IoT Lab
ETE327	Database Management Systems and Web Application
ETE337	Cryptography and Network Security
ETE336	Network Operating System and Administration
ETE417	Artificial Intelligence
ETE417L	Artificial Intelligence Lab
ETE427	Semiconductor Devices and Integrated Circuits
ETE422	Ethics, Engineering Economics and Project Management
ETE428	Seminar on Leadership and Entrepreneurship for Engineers
Capstone Design Project and Internship (6 credits)	
ETE400A	Final Year Design Project Part A
ETE400B	Final Year Design Project Part B

ETE496	Industry Attachment
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ETE Elective Courses (15 Credits) Prerequisite: Earned Minimum 100 Credits	
Group A: ICT and Cyber Security	
ETE442	Optical Fiber Communications
ETE443	RF and Microwave Engineering
ETE445	Antenna and Wave Propagation
ETE446	Satellite Communications
ETE447	Telecommunication Networks and Switching Systems
ETE455	Wireless Communications
ETE456	Cyber Security and Privacy
ETE457	Internet of Things Technology
Group B: Microelectronics and Nanotechnology	
ETE458	Control Systems
ETE459	Sensor and Instrumentation
ETE464	Nanotechnology
ETE465	Biomedical Signal Processing
ETE429	VLSI Technology and Design
ETE432	Optoelectronics and Photonics
ETE470	Biomedical Instrumentation
ETE471	Electrical Properties of Materials
ETE472	Power Electronics and Drives
Group C: Computer and Software Engineering	
ETE480	Data Structure and Algorithm
ETE481	Software Engineering Concepts
ETE482	Software Project Management
ETE483	Software Testing and Reliability
ETE484	Digital Image Processing
ETE485	Numerical Methods
ETE486	Information System Analysis and Design
Group D: AI and Robotics	
ETE495	Robotics and Mechatronics
ETE491	Computer Vision
ETE492	Data Science and Big Data Analytics

ETE493	Machine Learning and Deep Learning
ETE494	Block Chain and Cryptocurrency
Common Elective Course for Any Group: ETE 495 – Special Topics in ETE (Cr. 3)	

Minor for ETE Students: (15 Cr.)

Students majoring in Electronic and Telecommunication Engineering may choose a minor as any one of the four elective groups by taking at least 15 credits from elective courses. From these 15 credits, students must take at least 9 credits from one group (minor track) and 6 credits from other group(s). They may also choose a minor by taking these 15 credits offered by another department or school.

Degree Programs offered by the EEE department

B.Sc. in Electrical & Electronic Engineering
M.Sc. in Electrical & Electronic Engineering
M.Eng. in Electrical & Electronic Engineering
M.Sc. in Telecommunication Engineering
M.Sc. in Computer Networks & Communications

For further information please contact

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