



UNIVERSITY OF ASIA PACIFIC

*Department of*  
**Electrical &  
Electronic Engineering**

# PROSPECTUS



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UNIVERSITY OF ASIA PACIFIC

# Department of Electrical and Electronic Engineering (EEE)

## Prospectus (Undergraduate Program)

8th Edition October, 2018

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# PREFACE

University of Asia Pacific (UAP), established in 1996, has clearly defined mission and vision. This mission undertakes to provide quality education and produce qualified graduates to fulfill the present and future needs of the country. UAP is continuously striving to make education available to more and more students. With this aim, the Department of Electrical & Electronic Engineering (EEE) has started its journey back in the year 2004 at the UAP. University Grants Commission (UGC) has accorded permission to UAP to open the Department of EEE after reviewing the faculty strength, accommodation and library facilities.

The discipline of Electrical & Electronic Engineering is an old and established one. To meet the demands of this expanding and exciting branch of engineering, UAP has introduced Curricula, which have been approved by the University Grants Commission (UGC). The prescribed curricula take the students through basics of Electrical Engineering in the first year, Electronics and Computers in the second year, Digital Signal Processing, Communication and Power system analysis in the third year, VLSI, Mobile Cellular Communication and Power Plant Engineering in the fourth year. The Curricula also include study of English, Mathematics, Accounting, Managements and computer skills to make the graduates fully developed for the real world needs. The graduates of the Department of EEE from UAP can expect fulfilling and rewarding career in the coming years. Job opportunities for the graduates exist in industries engaged in product development and manufacturing, Power Generation, Transmission and Distributions, State Telephone and Communication authorities, Mobile Phone Companies, Biomedical fields, Military works, IC design and Manufacturing houses and related Research and Development cells. It is not enough for the university to provide a high quality teaching and instruction environment for its students, it is also essential that the student taking these course realize that they will not only be the standard bearers of the university, but also at the forefront of technology with great expectation from the peers and the populace to deliver what is expected from a quality engineer. This realization gives the students that they will use their stay at this university to equip themselves with necessary skills to shine in life and make the university proud.

The number of students of the department is increasing in every semester and at present the department has more than 700 students. At present the department consists of a large number of well qualified and experienced faculty members. Further addition is expected in the near future. The journey to become an eminent place of learning is inspiring and exciting. The whole faculty body shares these excitements and is working to make the department truly a center of excellence.

October, 2018

**Dr. Tapan Kumar Chakraborty**  
Professor and Head,  
Department of EEE



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A low-angle photograph of a modern, multi-story building with a curved facade and large windows. The building is light-colored with blue-tinted glass. A bare tree branch is visible on the left side. The sky is blue with some clouds. Another building is visible in the background on the right.

# **UNIVERSITY OF ASIA PACIFIC**





# INTRODUCTION

A government approved private university established by the University of Asia Pacific Foundation (UAPF). University of Asia Pacific (UAP) was established in 1996 as a private university under the Private University act 1992, with a vision to enhance the opportunities for higher education in Bangladesh. The curriculum of UAP has been approved by the University Grants Commission (UGC) of the Government of Bangladesh. The University started its operation in 1996 and offered four years bachelor degree programs in Computer Science and Engineering and Business Administration.

UAP, sponsored by UAPF, a non-profit, non-commercial foundation based in Dhaka, Bangladesh. The principal aim of the foundation is to promote human and social development through improved educational opportunities, innovative educational programs relevant to the needs of an emerging society and to develop skills, know-how and awareness of the youth through appropriate institutional grooming. The foundation has been established by a group of eminent educationists, industrialists, and administrators who share the same vision and social commitments. UAP is the first project of the foundation aimed at realizing these noble goals.

The main objective of UAP is to provide high quality education at tertiary level relevant to the demands of a highly dynamic academia in Bangladesh. The courses and curricula are designed to enable and equip a student to enter into the national and international job market or pursue higher academic and professional goals with a solid academic foundation. The sole objective of the university is not to make the students pass the exams only. The university equips its students with the means to become productive members of the community and continue the practice of continuous learning to become 'future leaders' & useful members of the society.



## UAP MISSION

UAP mission is to offer best possible education to our young generation. Towards the mission, UAP continues to develop a sustained culture of ascending to a top-tier of vibrant academic environment; maintain and foster well qualified faculty, provide adequate research support for cutting-edge research in-house and in collaboration with national and international peers; update curricula to keep up with advancing trend in science and technology, use state-of-the-art best practices in teaching-learning and modern facilities in laboratories and libraries; and provide other supports in aid to students' becoming competent graduates with their potential fully realized and personality well-developed for joining the global forces in making the future of society in a changing world.

## UAP VISION

UAP holds steadfastly its passion to do better and better in fulfilling our young generation's needs and aspirations for a caring and quality education in casting their future career and become a desirable destination for an identity.

# UNIVERSITY ADMINISTRATION

## VICE CHANCELLOR

National Prof.  
Dr. Jamilur Reza Choudhury

Ph.D., University of Southampton  
Doctor of Engineering (Honoris Causa), Manchester University, UK  
M. Sc. Engineering, University of Southampton  
B. Sc. Engineering (Civil), BUET  
Fellow, Bangladesh Computer Society  
Fellow, Bangladesh Academy of Sciences  
Fellow, Institution of Engineers (Bangladesh)



## PRO VICE CHANCELLOR

Prof. Dr. M. R. Kabir

Ph.D., Catholic University of Leuven, Belgium  
Post Graduate Diploma, Anna University, India  
M. Sc. Engineering, BUET  
B. Sc. Engineering (Civil), University of Roorkee, India  
Fellow, Institution of Engineers (Bangladesh)  
Fellow, Bangladesh Computer Society



## TREASURER

Air Commodore Ishfaq Ilahi Choudhury (Retd.)

## REGISTRAR

Mr. Sarwar R Chowdhury



# SCHOOLS AND DEPARTMENTS

## **School of Engineering**

Department of Civil Engineering  
Department of Computer Science and Engineering  
Department of Electrical and Electronic Engineering

## **School of Humanities and Social Sciences**

Department of English

## **School of Environmental Sciences and Design**

Department of Architecture

## **School of Science**

Department of Basic Sciences & Humanities

## **School of Law**

Department of Law and Human Rights

## **School of Business**

Department of Business Administration

## **School of Medicine**

Department of Pharmacy

## **Undergraduate Studies**

Currently, UAP is offering following undergraduate programs:

- Architecture
- Business Administration
- Civil Engineering
- Computer Science and Engineering
- Electrical and Electronic Engineering
- English
- Law and Human Rights
- Pharmacy

Other than Architecture, all the programs are four-year long. Architecture is a five year program. At UAP, all the academic programs are conducted on semester basis. There are two semesters of 18 weeks each - Fall and Spring in each year. At present, the University has over 5000 students, with a sufficient number of faculty members engaged in different departments on full time basis. Besides, a good number of renowned academicians of different disciplines are involved in teaching on part time basis. The faculty is a blend of senior teachers with wide experience both at home and abroad and young teachers with fresh and innovative ideas.





## Postgraduate Studies

The Department of Business Administration is presently offering an Executive MBA program in conjunction with US/Australian Universities. It is a full time program comprised of 60 credit hours spread over two years.

The Department of Pharmacy offers Masters Program in Pharmaceutical Technology (MS. in Pharm. Tech.). It is a full time program of 24 credits having one- year duration.

Similarly, the Department of Computer Science and Engineering currently offers Masters in Computer Science and Masters in Computer Science and Engineering. This department is also planning to offer Masters in Computer Applications in recent future.

The Department of Civil Engineering also offers Masters in Civil Engineering.

The Department of Electrical & Electronic Engineering is in the process of starting postgraduate program in the very near future which will offer Masters degree on various field of Electrical and Electronic Engineering.



## ACADEMIC COUNCIL

Academic council is the highest academic body of the University. It is chaired by the Vice Chancellor of UAP and comprises of the departmental Heads, Deans and eminent academicians of the country.

## THE CAMPUS

UAP Administration Accounts Section Controller of Examinations Admission Office UAP Central Library	UAP City Campus 74/A, Green Road Dhaka-1215
Dept. of Pharmacy Dept. of EEE Dept. of CSE Dept. of Architecture Dept. of Basic Sciences & Humanities Dept. of English Dept. of Civil Engineering	UAP City Campus 74/A, Green Road Dhaka-1215
Dept. of Business Administration Dept. of Law & Human Rights	R H Center, House # 74/B/1, Green Road, Dhaka-1215.

## RESOURCES

### Library

The University has a fairly well stocked central library located at the top floor of its city campus. Adequate facilities exist with a large number of text books, reference books (currently more than 20,000), journals, periodicals for study in the reading room of the library in a quite and congenial environment. A number of local daily newspapers and international news magazines are also subscribed for the benefit of students. The

library is being enriched day by day. Students can borrow books from the library. There is also CD library for the students. In addition to the central library, some departments have their own seminar libraries. In the seminar library books and technical journals relevant to the respective disciplines are available.

### Laboratory

UAP provide laboratory facilities for the students of respective departments. The laboratories are self-sufficient and rich in instruments and other facilities to carry out sessional/practical classes for different courses. Other than sessional / practical classes, the faculty of UAP conduct their research work in these laboratories also.

### Website, Internet and Wi-fi Facility

University of Asia Pacific provides high-speed Internet facilities to all its students. All the computers of labs and other places of each department of UAP are connected under a network with high-speed Internet access. Moreover, Wi-fi facility is available throughout the campus which provides Internet access to all the students, faculties and staff.

UAP has a well organized website ([www.uap-bd.edu](http://www.uap-bd.edu)) that contains important and relevant information regarding different program, admission, faculty members, ongoing research, exam dates and routine etc. which is updated frequently. Each student is given an individual email account at [uap-bd.edu](mailto:uap-bd.edu) domain that recognizes the UAP students. Moreover, each student and faculty member has access to a on-line database management system([www.uap.orbund.com](http://www.uap.orbund.com)) which keep track of all the academic record of the student. Each student has an account on that platform which provides all the information regarding their academic progress.

### Other Facilities

The university of Asia Pacific has an well rounded auditorium equipped with highly sophisticated amenities. Moreover, the University has a well-equipped Medical Center for medical consultation, free of cost for all students. The University also has its own canteen which provides hygienic foods at reasonable cost for the students, faculty and staffs. In near future, the University plans to provide transport facilities for students and also to provide residential facility, especially for female students.

## FOREIGN ACADEMIC AND TECHNICAL COLLABORATIONS

With increasing globalization of education, particularly at the university level, there is a strong compulsion to promote interaction, especially with institution of higher education in the industrial countries. Such interaction provides access to ever-changing scenarios of modern education delivery system and the most up-to-date innovative developments in teaching-learning methodology. Recognizing this imperative, UAP has already initiated a number of collaborative programs with universities in the USA, Australia and Canada.

An agreement between the University of Baltimore, USA and The University of Asia Pacific has already been signed to collaborate in a joint undergraduate studies program in Business Administration. The objective of this program is to offer a collaboration baccalaureate degree to students of UAP through a course of studies pursued at UAP and in the USA at the University of Baltimore.

An exchange program and academic cooperation agreement has been signed with Virginia Polytechnic Institute (VPI) and State University (SU), USA, which provides the opportunity to exchange of students and visits of faculty members between UAP and VPI, SU, transfer of credits for courses taken by UAP students and undertake joint research programs and joint supervision. Under the agreement, UAP students may pursue their studies as exchange students or seek transfer to VPI and SU after studying two years at UAP. Similar agreements for academic collaboration had been undertaken with South Dakota School of Mines and Technology (SDSMT) in the USA and University of Western Sydney and University of Canberra in Australia. An exchange program and academic cooperation agreement has already been signed with Griffith College Dublin, Ireland. Recently, another MOU has been signed with Purdue University Calumet, USA, to provide for an exchange of faculties and students and other collaborations.

Discussions are continuing with few other universities in Australia, Canada, UK and USA. It is expected that the arrangement for credit transfer, technical collaboration etc., with some of them will be finalized in near future.





A high-angle photograph of a large group of students on a paved surface. The students are arranged to form four large, stylized letters: 'E', 'E', 'E', and 'E', each made of a line of people. The letters are positioned around a central white rectangular area that contains text. The students are wearing various casual clothing, and the ground is a light-colored pavement with some white square markings.

DEPARTMENT OF

**ELECTRICAL  
AND  
ELECTRONIC ENGINEERING**



## VISION

The vision of Electrical and Electronic Engineering Department at University of Asia Pacific is to reach at an educational excellence in full compliance to the international standards of quality assurance. The Department will produce quality graduates capable of taking the challenges of the rapidly changing field of Electrical and Electronic Engineering as well as capable of making significant contribution to individual and societal empowerment.

The Department of EEE started its journey by offering undergraduate program in Electrical and Electronic Engineering (EEE) in 2004. Currently, the Department awards Bachelor of Science degree in Electrical and Electronic Engineering (EEE). Following a bi-semester system, it requires minimum 8 semesters to complete B. Sc. in Electrical and Electronic Engineering (EEE).

Since its commencement the department is producing quality graduates every year. In 2015, 152 students and in 2016, 114 have earned their B. Sc. degree. Since the inception in 2004, the department has produced 929 graduates. In 2014, the department was accredited by the Board of Accreditation for Engineering and Technical Education (BAETE), Bangladesh. As a result, the graduates from the department of EEE, UAP can become a member of Institution of Engineers, Bangladesh (IEB).

## MISSION

The mission of the Department of Electrical and Electronic Engineering at University of Asia Pacific is to provide quality education at affordable cost in the areas of Electrical and Electronic Engineering so as to enhance the competitiveness of our graduates in the job market and contribute to the economic, scientific, and social development of the country. The department will maintain a positive academic environment that promotes excellence in learning and research through constructive interaction between students, faculty, industry, and community. The department will utilize the available resources to instill latest technical knowledge and research capabilities, to encourage critical thinking, problem solving skills, and ethical responsibility and to develop students' verbal and written communication skills.

# ACHIEVEMENTS

## BAETE ACCREDITATION

Accredited since 2014

The Board of Accreditation for Engineering and Technical Education (BAETE), Bangladesh empowered by IEB conducts the accreditation process and ensures the quality of engineering programs of the universities of Bangladesh. The objective of accreditation provided by BAETE is to assure for creating the necessary environment for the graduates so they can acquire quality education with national as well as international standards. Besides, it helps for arranging a framework to the existing programs for continuous improvement with the help of evaluation and feedback. Department of Electrical and Electronic Engineering has received the certificate of Accreditation from the Engineering Institute of Bangladesh (IEB) for the undergraduate program in 2014. The B.Sc. in EEE program is again renewed in 2018 after rigorous investigation by the experts from BAETE.



## IQAC ASSESSMENT

'Very Good' score from visiting EPRT team

Under the Higher Education Quality Enhancement Project (HEQEP), the program offered by EEE department is reviewed by a panel of external members including an foreign expert. During this evaluation period, the members assessed both academic and co-curricular activities of the department under nine areas of quality assurance such as Governance, Curriculum Design and Review, Physical Facilities, Admission Progress and Achievements, Teaching and Learning, Assessment of Student Performance, Student Support Services, Staff and facilities, Research And Extension and Process Management for continual improvement. After a rigorous evaluation process the department of EEE was judged by the external review team as "Very Good".



# ACHIEVEMENTS

## CHAMPION AND FIRST RUNNER-UP

Power & Energy Hackathon 2017

Department of EEE obtained the "Champions" and the "1st Runner Up position" in a national competition titled 'Power and Energy Hackathon 2017' organized by Ministry of Power, Energy and Mineral resources. The event was inaugurated by Honorable State Minister, Nasrul Hamid (MP), as the Chief Guest at International Convention City Bashundhara (ICCB) on 20th April, 2017. Teams of the Department of EEE were the only team who won two consecutive prizes in the entire competition. As many as 390 teams and 49 information technology teams from universities, industries and professionals have registered for the "Power & Energy Hackathon 2017" competition. Out of the total, some 152 teams with around 800 participants were selected to manufacture their prototype in 36 hours' efforts. From our University of Asia Pacific, faculties from the Department of EEE participated this competition with two teams "Mastermind" and "Hack 4 life" to find innovative and most feasible solutions for two big challenges out of seven tasks.



# ACHIEVEMENTS



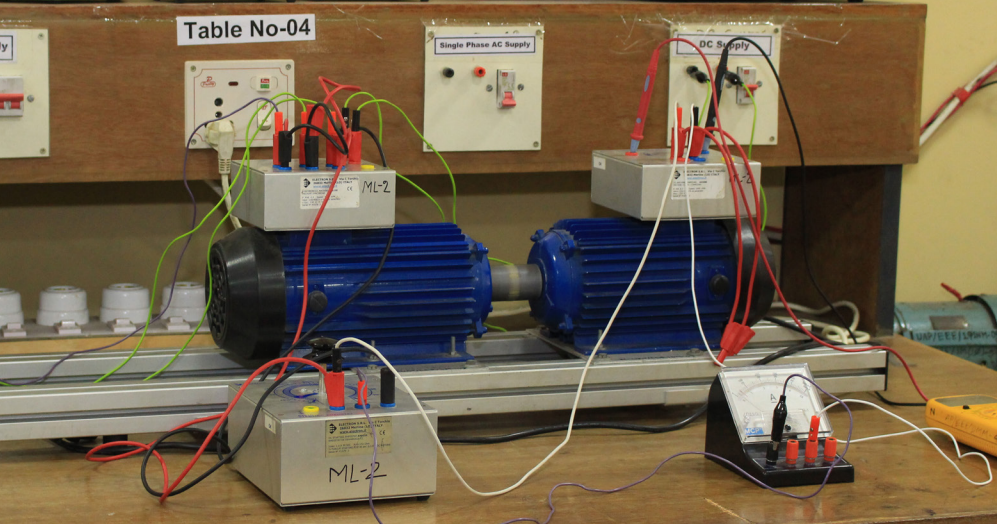
Faculty and students from EEE department participated with a project in the title "Performance enhancement of solar system by wrapping paper reflection" which was nominated for award after the final round of the big event of "National Power and Energy Week" arranged by Ministry of Power, Energy and Mineral Resources (MPEMR) in the venue of International convention city of Bashundhara. This Project secured a place among the 10 –top notch projects .



"Indomitable aspirations of Youths can place the Bangladesh into a better position" highlighting this spirit into main theme a competition arranged by Ministry of Power , Energy and Mineral Resources (MPEMR), Bangladesh. From our Department of EEE, UAP an idea in the title of "Smart Charging station for Electric Vehicles (EVs) using Solar Power" was submitted in this competition and after the final round this idea was selected for award among the 10 best selections and as a token of reward the core mentor behind this Project , Mr. Muhammad Ahad Rahman Miah , Assistant Professor , EEE, UAP was handed over the certificate.







## ELECTRICAL MACHINE LAB I & II

The Electrical Machine Laboratory-I & II are the two labs housed in two different Lab rooms at the fifth floor of the UAP City Campus. The Electrical Machine Laboratories are well equipped with state of the art equipments for all the lab classes related of electrical machines and other special machines. Both single phase and three phase lines are available in this lab to study and operate various types of motors and generators.

## FACILITIES LABORATORIES



## COMPUTER LAB

The Department of EEE has its own computer laboratory which is equipped with more than 30 of modern desktop computers. All the available computers are comprised of latest specifications and are frequently updated. All the computers are connected with a high speed Internet and provides additional browsing facilities for the students. Moreover, all the relevant software for the students of EEE are available on all of the computers to be used by the students and faculties. The department of EEE employed one Lab assistant and one Lab attendant who are always available for the smooth operation of the lab.

## ELECTRONICS LAB AND DLD LAB

Electronics Lab and Digital Logic Design (DLD) Lab are two separate Labs housed in a single room at 5th floor of the UAP City Campus. DLD Lab has a huge resource of digital and analog ICs and other electronic components like IC tester etc. This laboratory has a number of highly sophisticated modern equipments. Power Electronics Laboratory is equipped with power electronics training kits, modern Oscilloscope, DC power supply, signal generator, trainer board and highly-configured PC. This lab is used for designing various electrical and electronic circuits and study the behavioral characteristics of the different electrical and electronic projects.



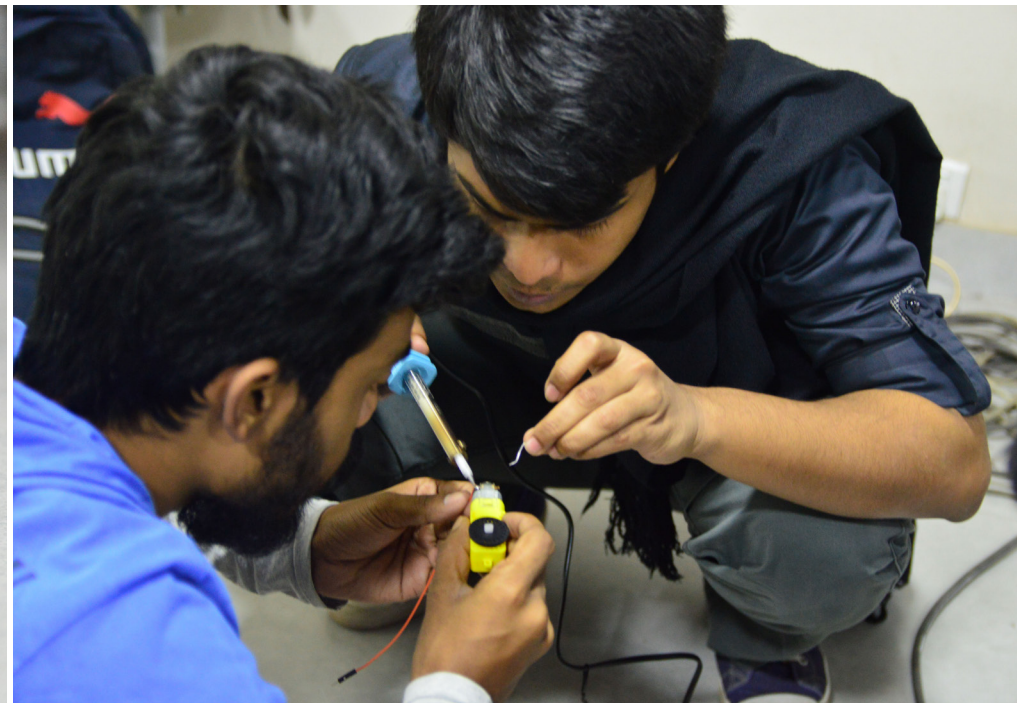
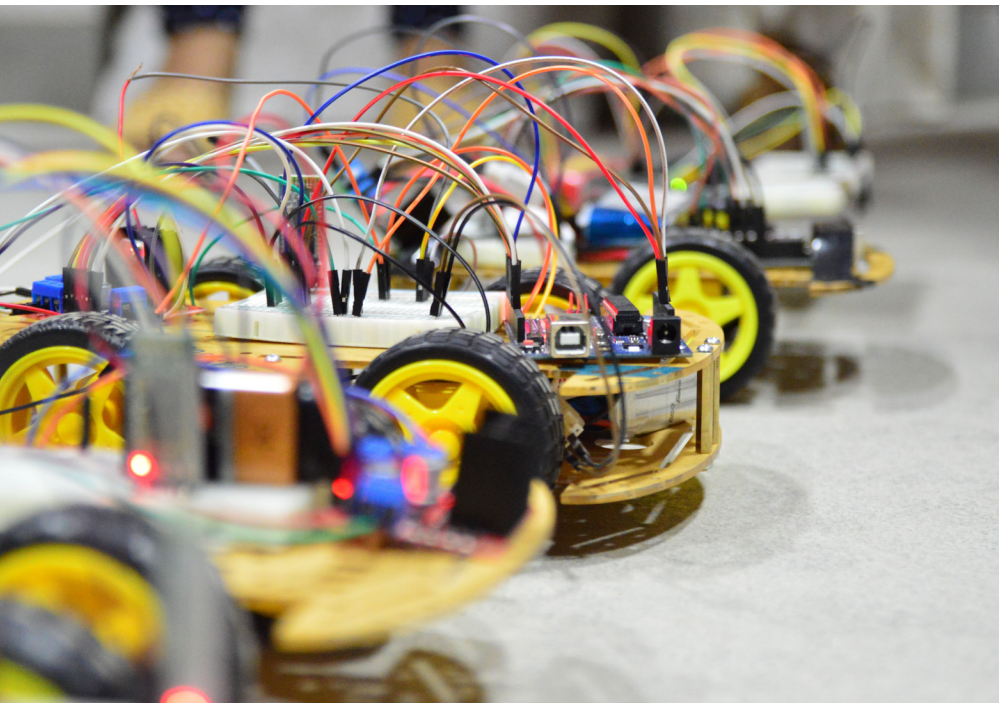
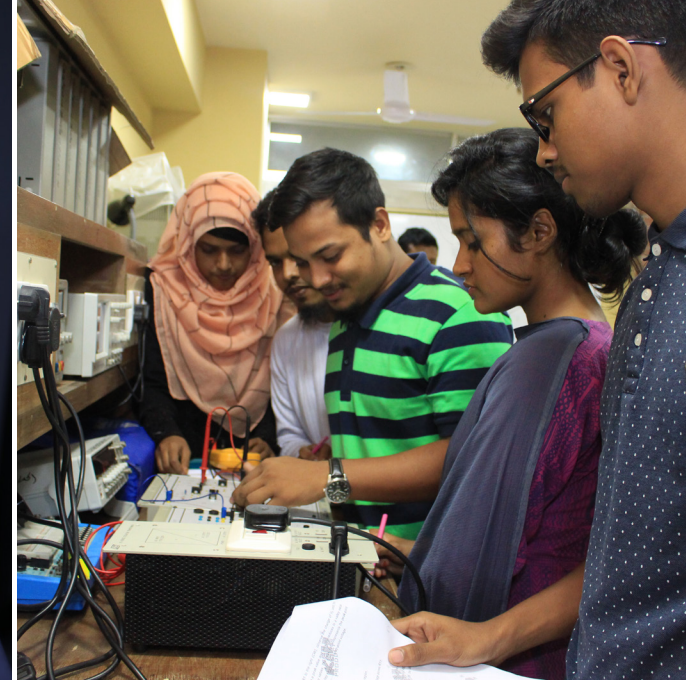
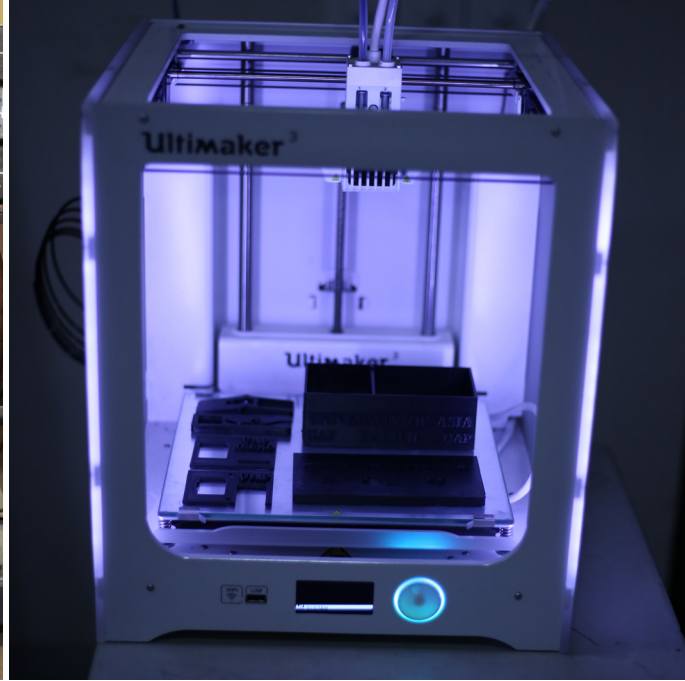
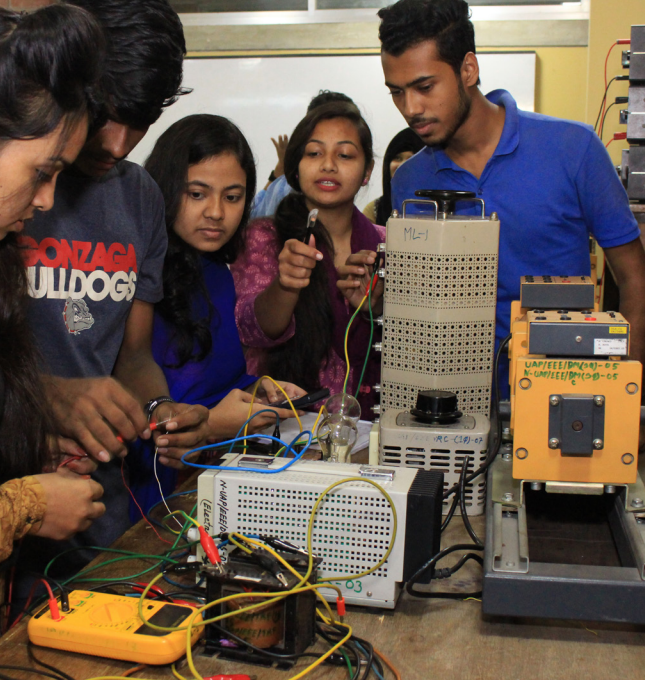
## FACILITIES LABORATORIES

## ELECTRICAL CIRCUIT LAB I

Electrical Circuit Laboratory is located at the 5th floor of the UAP City Campus. This lab has sufficient number of necessary electrical components including resistors, capacitors, inductors, transformers, variacs etc. Moreover, the lab is furnished with the state of the art equipments such as digital oscilloscopes, D.C. power supplies, signal generators, trainer boards and high-configured desktop computers. The purpose of this lab is to design and test various electrical circuits phenomenon. Moreover, this lab is also used to study the behavioral characteristics of the different electrical elements.









## FACILITIES LABORATORIES

### POWER ELECTRONICS AND MICROPROCESSOR LAB

Power Electronics Lab and Microprocessor Lab are two different labs housed in a single room at 5th floor of UAP city campus. In this lab, students can design and implement different systems starting from small digital circuits to 8-bit microprocessor. Microprocessor Lab has a number of 8086 microprocessor kits and other necessary accessories. Moreover, the lab also has a number of microcontroller based trainer boards such as Arduino Mega and Arduino Uno. In this lab, students can acquire the technical know-how of microprocessors and its peripherals. This lab has full-fledged five equipment set-ups so that five groups of students can carry out any digital and interfacing experiment and project simultaneously.

### MICROWAVE COMMUNICATION AND MEASUREMENT LAB

Measurement Lab and Microwave Lab are equipped with adequate Analog Communication Trainer Kits and Digital Communication Trainer Kits. These are used to perform a number of experiments on analog and digital telecommunication systems. It is also equipped with sufficient number of Analog and Digital Oscilloscopes, Power Supplies, Trainer Boards and Personal Computers. In this well equipped lab, students can study various types of analog and digital signal modulation techniques, Demodulation, Multiplexing and De-multiplexing. They can perform the experiments related to different types of active filtering of Signals, processing the Signal using appropriate DACs and ADCs. Microwave lab is equipped with sufficient number of Dual Beam Oscilloscopes, power supplies, digital and analog trainer boards and personal computers. In this well equipped lab, students can study various types of antennas and determine the radiation pattern, polarization, variation of field strength etc. The antenna trainer kit of this lab consists of various types of antennas such as dipole antenna, monopole antenna, Yagi-Uda antenna, microstrip antenna, biconical antenna, rhombus antenna, discone antenna, helix antenna etc. Thus sufficient equipments are available for students to experimentally determine, develop and test original antenna system configurations. Moreover, students can perform the experiments related to different types of waveguide, solid state oscillator, klystron oscillator, tee, directional coupler etc.

## ELECTRICAL CIRCUIT LAB-II

Electrical and Electronic Circuit Laboratory-II is located at 5th floor of UAP city campus which is equipped with modern Oscilloscope, DC power supply, signal generator, trainer board, high-configured desktop computers. This lab also has sufficient number of necessary electrical and electronic components including ICs (Digital and Analog), resistors, capacitors, inductors, transformers, variacs etc. This lab is used to design various electrical and electronic circuits, study the behavioral characteristics of the different electrical and electronic projects. This lab has full-fledged five equipment set-ups so that five groups of students can carry on any electronic and electrical experiment and project simultaneously.

## SIMULATION LABORATORY FOR VLSI, DSP & NUMERICAL ANALYSIS

Simulation Lab of EEE Department is located at 6th floor of the UAP City Campus. This Lab is an advanced Laboratory equipped with latest and expensive computers with highest configuration available in the market. 25 computers having Intel Core i-7 processors and best quality displays are available in this lab to implement the simulations. Micro Wind and DSCH software simulations are used for VLSI sessional and MATLAB simulation for Digital Signal Processing (DSP) labs. Also other relevant softwares are available for simulation and experiments. In addition, to perform some lab experiments in DSP, portable modules of MIDAS are available. These equipments help the students to learn Languages in machine level and to analyze and study different signals. EEE department is planning to procure more equipment such as Signal Analyzer, Computer based DSO card and other equipments to update this laboratory.

## PROJECT LAB

Project Laboratory is housed at 5th floor of the UAP City Campus. In fact it is a portion of Electronics and Power Electronics Lab room dedicated for the fourth year thesis/Project works. This Lab also helps the EEE Project Club to conduct different project works of different level of students. Remarkable Project works will be stored in this Lab for future demonstration or further development. This Lab is equipped with necessary equipments and PCs to help project works.

## FACILITIES LABORATORIES

## CONTROL SYSTEM & BIOMEDICAL LAB

Control System Lab and Biomedical Lab are two different Labs housed in a single room at fifth floor of the UAP City Campus. Control Lab contains adequate equipments and modules essential for Control System Engineering. The Control Systems Laboratory is equipped for study of electrical and electromechanical systems both experimental and simulation based using MATLAB and PSpice. D.C. motors and servo-amplifiers are available to implement position and velocity control systems. Equivalent modules of Analog computer are available as components of control systems.

Biomedical Lab is equipped with necessary metering arrangement to measure various biomedical electronics parameters. All of these three labs can be used to study the behavioral characteristics of the relevant electrical and electronic projects.



# ACTIVITIES

## CLUBS

Institute of Electrical and Electronics Engineers (IEEE) is the world's largest technical professional organization for the benefit of Humanity with more than 423000 members from 160 countries around the world.

IEEE UAP SB was formed on December 2015. Its main objective is to motivate the students to devote their studies and work for the betterment of the humanity. The activities of IEEE UAP SB conducts workshops and seminars on interesting topics, arranges study tours, organizes different other programs so that students can reach out other students and faculties from other universities for their need. Also IEEE UAP SB wants to engage students to work in team, critical thinking, get ready for future corporate work, taking responsibilities, growing leadership among students.

IEEE UAP SB also have IEEE Women In Engineering Affinity Group Student Branch (IEEE WIE AG) for women members to encourage them to come forward and express themselves with the world technology and global communications. Our women members are trying to motivate female members to involve themselves in many activities.

**IEEE UNIVERSITY OF ASIA PACIFIC  
STUDENT BRANCH  
(UAP SB)**







# ACTIVITIES

## CLUBS

The goal of this club is to promote and develop individual interests in various sports and recreational activities. In addition to the development of specific skills, Sport Club is designed to be a learning experience for its members and through involvement in leadership, responsibility, decision-making, public relations, organization, and fiscal management. It is determined to uphold the name and fame of the EEE department as well as UAP by promoting the excellence of the students in different sports competitions. This club also helps to develop the skills of the students in teamwork, critical thinking, quick decision-making and prompt logical response to arguments. The activities of this club include arranging at least one intradepartmental sports competition in an academic year on regular basis. This club is the authority in selecting the participants from the EEE department for UAP sports competitions or any sports event outside the university. The Club also arranges training for the participants of both indoor and outdoor games if required.

## SPORTS CLUB





# ACTIVITIES

# CLUBS

## CULTURAL CLUB

University is the highest seat of learning. A university student is to learn socio-interaction, etiquette, exercise tolerance towards the opinions of others and as a whole promote the intellectual ability beyond the domain of his/her main study. Apart from the rigorous engineering subjects, extracurricular activities like Cultural programs will broaden students' minds and enhance their worth appreciating qualities that will ultimately express the excellence of the EEE department in particular and the UAP in general.

With a pragmatic view to encouraging extracurricular activities, creating and sustaining a congenial environment for such activities, the EEE department of the UAP has formed the EEE Cultural Club(EEEC). The prime objective of the EEE Cultural Club is to uphold the name and fame of the university by promoting the excellence of the students in cultural activities and also to promote the cultural spirit and social etiquette among the students and develop the skills of the students in stage performance, speaking for or against a motion by articulating their respective views. Developing the skills of the students by the means of teamwork, critical thinking, quick decision-making and prompt logical response to arguments are also in its list. Thus this club will enhance student's ability to defend and prove their ideas through reasoning, improvising and presence of mind and exercise the tolerance towards the arguments of others, pave the way for being interested all the more in their study by surmounting the monotony of the rigorous engineering subjects.

Whenever a national event is to be observed on behalf of the UAPCC, the EEE Cultural Club represents the department. The Activities of this club include arranging the Orientation program on behalf of the department in every semester, arranging workshops or training programs on cultural activities to enhance the relevant talents of the student members. It also arranges various cultural programs during different festivals. This club selects cultural participants from the EEE department for competitions to be held both inside/outside the university

## DEBATE CLUB

The Debate club of EEE (EEEDC) aims to promote the culture of debating on the campus and provides a platform to bring all the debaters together. EEEDC promotes the art and skill of debating, to popularize public speaking, to train members in the art of reasoning and sharpening the skills of their logical thinking, to develop self-efficacy and confidence and to enhance the general knowledge base.

The club is open for all the students of the department. Any student cherishes to be argumentative, rational and presentable on way of turning to be a person with challenging career and strong personality. Members of the club meet up on regular basis and conduct mock debates with an aim of establishing a strong debating culture on campus. The best debaters selected from club participate in Inter- departmental and national competitions.







# ACTIVITIES

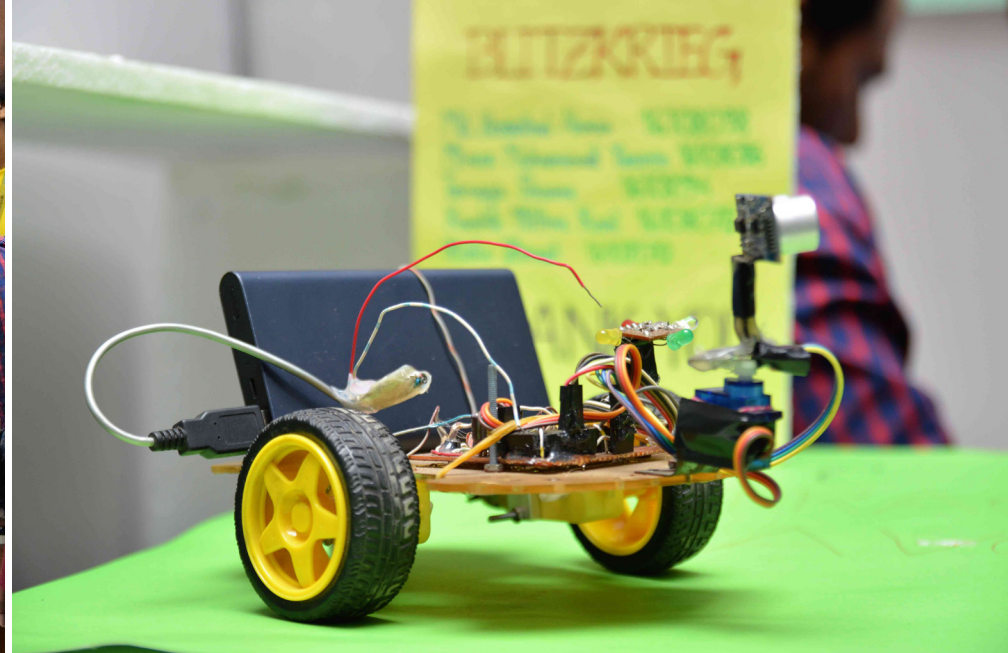
# CLUBS

## ELECTRICAL & ELECTRONIC PROJECT CLUB

In recent years, a number of projects by the students of EEE Department won positions and prizes at different national level inter University Project competitions held at Institution of Engineers, Bangladesh (IEB), BUET and Dhaka University. Those projects were closely patronized by the Project club.

This club is headed by one faculty member as convener, one senior student as secretary and 3-4 students as executive members. The aim of this club is to encourage the students to undertake interesting project work related to electrical and electronic engineering. It arranges exhibition of projects created by the students and prizes are awarded to the outstanding projects contending the best work in the competition. There is dedicated Lab facilities for this club named 'Project Lab'. Other laboratory facilities, the cost of raw-materials, component and apparatus required for the projects are provided by the EEE department. This club also organizes seminars, technical talks on relevant topics. Besides, it also publishes technical journals / magazines each year. It helps the students and the faculty members of the department to improve their capabilities in writing technical papers, articles etc. thereby, increasing their knowledge in the field of engineering, research and publication.







# ACTIVITIES

## STUDY TOURS/INDUSTRIAL VISITS

Beside various extra-curricular and co-curricular activities under different clubs, Department of EEE also arranges a number of study tours and Industrial visits to different places of the country. A faculty member is assigned to ensure the smooth operation of the tour in each semester. The objective of these tours is to increase industrial affiliation of the Department as well as to help students to gain knowledge from real fields. These tours help students to see the applications of the knowledge they gain in class rooms and they become familiar with their potential future work places.

Third year and fourth year students of different batches of the Department have visited Kaptaihydro electric power plant, Shomvuganj RPCL combined cycle power plant, Summit Narayanganj Dual fuel power plant, Grid Substations in Rampura and Cox's Bazar, Electro group:EM power, Energypac etc. in different years





University of Asia Pacific

ইউনিভার্সিটি  
অফ এশিয়া...



Purbo Rajabazar  
Jame Mosque

পূর্ব রাজাবাজার  
জামে মসজিদ



Samorita Hospital

শমরিতা হাসপাতাল



Sonargaon University

সোনারগাঁও  
ইউনিভার্সিটি



Star Cineplex

স্টার  
সিনেপ্লেক্স



Kawran Bazar

কাওরান বাজার  
বাস স্টপ







**DR. TAPAN KUMAR  
CHAKRABORTY**

Head, EEE

Ph.D ( Kanazawa University, Japan);  
M. Engg (University of Roorkee, India);

Email: tkc@uap-bd.edu

# FACULTY PROFESSOR

Dr. Tapan Kumar Chakraborty received his Bachelor of Science in Electrical and Electronic Engineering degree from Bangladesh University of Engineering and Technology, Dhaka in 1984. He completed the M. Engg degree in Electrical Engineering at the University of Roorkee, India in 1988. He obtained his Ph. D degree in Electrical and computer Engineering from Kanazawa University, Japan in 1998. He served as lecturer, assistant professor, associate professor and professor in the department of Electrical and Electronic Engineering at Dhaka University of Engineering and Technology from October, 1988 to May, 2005. He served as the professor and chairman in the department of Electrical and Computer Engineering at the Presidency University, Dhaka from May, 2005 to September, 2016. From October, 2007 to May, 2015, he served as the Dean of the School of Engineering at Presidency University, Dhaka. In September, 2016, he joined the department of Electrical and Electronic Engineering as a professor at the University of Asia Pacific, Dhaka. He has over thirty research papers to his credit in various journals and conferences of national and international repute.

His fields of interests are electronic materials and devices, phase change memory, electronic circuits and power electronics. He is a Fellow of the Institution of Engineers, Bangladesh and a member of the IEEE.

# FACULTY

## PROFESSOR

Dr. Kazi Mohiuddin Ahmed is an international standard faculty member and maintained a brilliant career both in Local and foreign Universities. He obtained his M.Sc. Engg. (Elect) degree in 1978 from 'Electrical Engineering Institute of Communications', Russia and his Ph.D. degree in 1983 from University of Newcastle, Australia. Before joining the University of Asia Pacific (UAP), Dr. Mohiuddin was a Professor in AIT, Thailand where he served from 1996 to 2013. Before this, he also served in Dept. of EEE of BUET from 1984 to 1997 and in Department of Applied Physics & Electronics of Dhaka University for a short period. At the beginning of his career, he also served as a professional Engineer in Atomic Energy Commission, Dhaka from 1978 to 1980.

In his long teaching career, Dr. Mohiuddin directly supervised 13 Ph.D. theses and 140 Masters' theses in AIT, Thailand and 7 Masters' theses in BUET. Besides, He served as member in more than 200 other Masters Examination Committees and 20 Ph.D. Examinations Committees. He also served as External Examiner in many Ph.D. and Masters' theses for universities in Thailand, Malaysia, India and Australia.

He is member of more than 10 prestigious scientific and professional societies and was a chair of IEEE Communications Society, Thailand Chapter.

His subjects of interest are Wireless Systems and Networks, Multiple Access Techniques & Protocols, Disaster Warning and Post-disaster Communications, Applications of ICT in Sustainable Development, Mobile Communications, Satellite Communications and Signal Processing.

He authored one book by IEEE Publications, one book chapter by John Wiley, About 60 papers in peer-reviewed Journals and more than 130 peer-reviewed papers in international and national conferences.



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**Dr. Abdul Matin Patwari**

Ph.D (University of Sheffield, UK)

M.A. (University of California, Berkeley,  
CA, USA)

M.S.(Texas A&M University-College  
Station, TX, USA)

# FACULTY

## PROFESSOR EMERITUS

Abdul Matin Patwari served as the vice-chancellor of University of Asia Pacific from 2004 to 2012. Currently, he is a Professor Emeritus of Department of Electrical and Electronic Engineering. He earned his bachelor's degree in Electrical Engineering from Ahsanullah Engineering College in 1956. He received his master's in Electrical Engineering from Texas A&M University in 1961 and M.A in Mathematics from the University of California, Berkeley, CA, USA in 1963. He completed his Ph.D. in Electrical Engineering from University of Sheffield, UK in 1967. He was a full-time Visiting Professor at California State University, Pomona, USA from 1980 to 1982 and also a Visiting Professor, Purdue University, West Lafayette, in USA between 2000 and 2002. Due to his excellent achievements he is regarded as one of the most accomplished academicians of Bangladesh.

Moreover, He was the Director General & Chief Executive, ICTVTR/IIT (now IUT, OIC), Board Bazar, Gazipur from 1987 to 1999. He acted as Commonwealth Staff fellow and Visiting Professor, Univ. New Castle Upon Tyne (1973-74). He Served as Hon. CE, Council Member, IEB for a long time and Vice-President. He also Served as Council Member, (BAS) Bangladesh Academy of Sciences; Member in National Council for Science and Technology (1977-87); Served as Chairman, Electronics Committee, GOB; Chairman, Bangladesh National Coal Committee, GOB (2007-08); Member, GOB, Bangladesh Open University, 1995-97; Member, Commonwealth Society of Bangladesh; Member, Executive Committee, Association of Commonwealth Universities, 2011-12.

He has more than eighty publications in reputed referred journals of home and abroad in the areas of Antennas and Propagation, Communication, Computers, Solid State Devices, Engineering and Technology Education and Academic Administration.

# FACULTY

## ASSOCIATE PROFESSOR

Mr. G. R. Ahmed Jamal obtained his B.Sc. and M.Sc degree in Electrical & Electronic Engineering (EEE) from Bangladesh University of Engineering and Technology (BUET) in 2003 and 2012, respectively. He is now pursuing his Ph.D degree in same institute on Carbon nanotube and graphene based nano-technology. He started his teaching career in October, 2003 as a Lecturer in Department of Information and Communication Engineering (ICE) of Southeast University where he served till November, 2009. He then joined in Department of EEE of Primeasia University as an Assistant Professor and served there for two years. In November, 2012 he joined in Department of EEE of University of Asia Pacific as an Assistant Professor. In his 15 years long teaching career, he taught almost all undergraduate courses in the field of Electronics and Communication. He received local and foreign training on teaching pedagogy and secured his name in the list of Quality Assurance Experts in Higher education sector published by UGC, Bangladesh. At the beginning of his career, he also gained professional experience as a maintenance Engineer in 'Western Health Care Ltd', Tejgaon. His current research interest includes Carbon Nanotubes, Graphene, Nanostructure based Photovoltaic cells, Renewable energy and Cellular mobile communication. He bears a number of Journal and conference publications in these fields.

Mr. A.H.M. Zadidul Karim obtained his B.Sc. Engineering degree from Ahsanullah University of Science and Technology (AUST) in 2004. He has completed his Masters degree from Bangladesh University of Engineering and Technology (BUET). His postgraduate thesis title was "Detection of abnormality in ECG using of chaotic attractor". He is now pursuing his Ph.D degree in BUET on Biomedical Signals. His current research interests are Detection and Classification of Multiclass Epileptic Seizures of EEG Signals, Analysis and different Modification of the Empirical Mode Decomposition method of the Heart rate Extraction from the motion artifact PHOTOPLETHYSMOGRAPHY (PPG) signals. He teaches theoretical & sessional courses like Digital Signal Processing, Digital Electronics, Power Station, Biomedical Electronics, and Electrical Machines. Apart from teaching he is working as an assistant proctor of EEE department. He is working as the Head of Self-Assessment Committee (SAC). He is one of the advisors of IEEE student branch. He is a member of IEEE and also working as a project coordinator of (EMBS) IEEE, Bangladesh section. He is the convener of UAP Cricket Club and senior member of UAP Football Club, UAP indoor sports and Basket Ball Club. He has several publications in Biomedical Signal Processing, Image Processing, Security System, Renewable Energy and Digital Signal Processing.



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# FACULTY



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**Salma Nazia Rahman, Assistant Professor**

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Ms. Salma Nazia Rahman obtained her B.Sc. Engineering degree with Honors (securing First Position) from Rajshahi University of Engineering and Technology (RUET) in 2006. In her bachelor degree, she was awarded Board of Governor (BOG) Gold Medal (University Gold Medal) for securing the highest distinctions in undergraduate studies. She has completed her M. Sc. engineering degree in Electrical and Electronic Engineering (EEE) from Bangladesh University of Engineering and Technology (BUET). Her postgraduate thesis title was, "Improvement of Power Factor and Total Harmonic Distortion of Input Current for a Valley Fill Electronic Ballast". She teaches theoretical & sessional courses like Power Station, Digital Signal Processing, Electronic Circuit II, Digital Electronics, Electrical circuits. Her current research interests are Power Factor improvement and reduction of total harmonic distortion of a VF electronic ballast, Power electronics, Control system.



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**Muhammad Towhidur Rahman, Assistant Professor**

🎓 M.S. in Biomedical Physics and Technology, DU, B.Sc. in EEE, AUST

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After completion of graduation from Ahsanullah University of Science and Technology Mr. Rahman has been serving the department of Electrical and Electronic Engineering since 2008. Since then he has conducted several courses. e.g. Control Systems I, Biomedical Electronics etc. He likes to work with MS Excel, MATLAB and COMSOL. His current research interests include signal processing of Electrocardiogram, Body Impedance Imaging, Magnetic Resonance Imaging and Integrated Diagnostic Imaging modalities. The motto of Mr. Muhammad Towhidur Rahman is to improve the socio-economic situation by ensuring proper and cheaper engineering support in health and medical care sector of Bangladesh.



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**M. Abdullah Al-Amin, Assistant Professor**

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Mr. M. Abdullah Al -Amin completed his graduation from Ahsanullah University of Science and Technology in 2008 with First Class Honors (Merit position-1st). His undergraduate dissertation title was "Performance Analysis of a WDM Optical Transmission System." His subjects of interest are Electrical Circuits, Signals and Systems, Power system and Communication.

# FACULTY



## **Dr. Tasnia Hossain, Assistant Professor**

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Dr. Tasnia Hossain completed her B.Sc and M.Sc in Applied Physics Electronics and Communication Engineering from University of Dhaka, Bangladesh in 2004 and 2006, respectively. She then completed her Ph.D degree from CNRS-CRHEA, University of Nice SA, France in 2012. She joined UAP in October 2014 as an assistant professor at the department of Electrical and Electronic Engineering. In 2013, she has worked in Hamdard University Bangladesh as an assistant professor in EEE department and also worked as a part time faculty in North South University. Her PhD thesis was focused on the stress and strain analysis of thick layer of group III- nitride materials grown on the patterned silicon substrate. Currently she is working on Plasmonic nanoparticles for solar cell. Her Research interest includes, Group-III Nitride semiconductors, Bulk and thin layer of semiconductor hetero-epitaxy, Stress and strain analysis of bulk and thin layer, Simulation, modeling, Thin film photovoltaic (PV) materials and Plasmonic solar cell.



## **Dr. Mahmudul Alam, Assistant Professor**

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Dr. Mahmudul Alam completed his B.Sc and M.Sc in Computing Device Design and Technology from Southwestern State University, Russia in 2008 and 2010, respectively. He then took his Ph.D degree from the same university in 2013. He joined at UAP in October 2014 as an assistant professor in the department of Electrical and Electronic Engineering. His PhD dissertation title was 'Preparation and investigation of Nanostructured Hybrid Materials InSb-MnSb with high critical temperatures'. His research focused on 'Spintronics' and currently he is also interested in different types of measurement devices. He attended a number of conferences in Russia and France. His main research area is Physics of semiconductors. He bears a number of journal and conference papers in this field.



## **Md. Sazzadur Rahman, Assistant Professor**

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Mr. Md. Sazzadur Rahman has completed his B.Sc degree in EEE from BUET 2009. He has been awarded with the BUET dean list scholarship for couple of times in his undergraduate level. His undergraduate thesis was, "Analytical Expression of the Effective Surface Recombination Velocity,  $S_{eff}$  for an n-n+-metal structure". Some part of the thesis has also been published in conferences. His main research interest is on semiconductor devices, material science and digital communication. He is a member of IEEE, EDS.



# FACULTY



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## **Md. Masum Howlader, Assistant Professor**

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Mr. Md. Masum Howlader received his Dual M.Sc. degree in Smart Electrical Networks and Systems (SENSE) for Kungliga Tekniska Högskolan (KTH) – Sweden and Karlsruhe Institute of Technology (KIT)-Germany in 2014, funded by KIC – InnoEnergy, organ of European union. He started his teaching career in January, 2010 in the Department of Electrical and Electronic Engineering (EEE) of University of Asia Pacific. He also worked as an adjunct guest faculty in East West University (EWU) and Part time faculty in World University of Bangladesh. Mr. Howlader is also actively engaged in individual and collaborative research, establishing a distinctive spirit of research and disseminating results through regular publications in journals and proceedings. His current field of research is modeling a prototype of three terminal HVDC connections in PSCAD to study the wave propagation of potential gradient through transmission line at severe fault condition.



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## **Muhammad Ahad Rahman Miah, Assistant Professor**

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Muhammad Ahad Rahman Miah completed his B. Sc. in Electrical and Electronic Engineering (EEE) from University of Asia Pacific with Honors (securing first position) in 2010. In his bachelor degree, he was awarded Vice-chancellor's Gold Medal for securing the highest distinctions in Undergraduate studies. He obtained his M. Engineering in Energy from Asian Institute of Technology (AIT), Thailand. He was awarded Her Majesty the Queen Scholarship of Thailand for his Graduate studies at AIT. His research interest includes Power systems, Smart Grids, Renewable Energy, Energy Conversion and Management and Energy auditing.



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## **Md. Moshir Rahman Sourov, Assistant Professor**

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Mr. Md. Moshir Rahman Sourov obtained his M.Sc. degree in Electrical and Electronic Engineering (EEE) from Islamic University of Technology (IUT), OIC, Dhaka, Bangladesh in 2015. His graduation thesis titled "A Modified Approach for Reducing Peak to Average Power Ratio in OFDM Systems". He completed his B.Sc. Engineering degree with Honors (Securing First Position) from University of Asia Pacific (UAP) in 2011. He was awarded Vice-Chancellors Gold Medal for securing the highest distinctions in undergraduate studies in his bachelor degree. His subjects of interest are Digital Electronics, VLSI Design and Telecommunication Engineering.

# FACULTY



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## **Manobendu Sarker, Assistant Professor**

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Manobendu Sarker obtained his M.Sc. degree in Electrical and Electronic Engineering (EEE) from Bangladesh University of Engineering and Technology (BUET), Bangladesh in 2017. He completed his B.Sc. degree with Honors (Securing Third Position) from Rajshahi University of Engineering and Technology (RUET), Bangladesh in 2010. He joined in University of Asia Pacific (UAP), Bangladesh in 2011. His research interest mainly focuses on wireless communications and networking. He has several publications in different international IEEE conferences and journals.



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## **Mohammad Rokonuzzaman, Assistant Professor**

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Mohammad Rokonuzzaman completed his master's degree from Aalto University, Finland in Space Science and Technology with the specialization in Space Robotics. Prior to this, he completed his Bachelor's degree in Electrical and Electronic Engineering from Islamic University of Technology, Bangladesh. He received 'Erasmus Mundus' scholarship from European Commission during his master's study and also received OIC scholarship during his bachelor's study. At UAP, he teaches Microprocessor and Interfacing, Computer Programming, and other related subjects. His research interest mainly includes robotics, machine learning and predictive control. His current focus is to design predictive controller for non-linear robotic systems using stochastic optimization and simulated dynamics.



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## **Dr. MD Shahrukh Adnan Khan, Assistant Professor**

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Dr. MD Shahrukh Adnan Khan graduated from University of Nottingham Malaysia Campus in the year of 201. He was awarded with "Student of the Year" in 2011 and later obtained his PhD degree in 2016 from the same University with Dean's Scholarship. He achieved MIET certificate from IET (UK) in 2018. Currently, he is earning CPD hours for Professional Engineering (CEng). He was actively involved in teaching as Research Assistant at University of Nottingham during 2011-2016. His current interest lies on Renewable Energy, Electrical Machines, RTS and Optical Fibre. He is the Editor of Journal of Vehicle Information and Communication Systems (Scopus, Inderscience, UK) and a reviewer in Journal of Exergy (Scopus) and IET Journal of Renewable Power Generation (Scopus and Thomson Reuter). He has over 35 publications in high quality peer reviewed Journals and Conferences. He is a member of IEEE, IET, IEB and life-fellow in NDSC & Nottingham Alumni



# FACULTY



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**Shaikh Rashedur Rahman, Assistant Professor**

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Shaikh Rashedur Rahman obtained his M.Sc. degree in Electrical and Electronic Engineering (EEE) from Islamic University of Technology (IUT), OIC, Dhaka, Bangladesh in 2016. He completed his B.Sc. degree with Honors (Securing First Position) from University of Asia Pacific (UAP) in 2012. He was awarded Chancellor's Gold Medal for securing the highest distinctions among all departments in undergraduate studies in his bachelor degree. He is now pursuing his Ph.D. degree in BUET on Power System. He started his teaching career in November, 2012 as a Lecturer in department of EEE of University of Asia Pacific. In April, 2017 he joined as an Assistant Professor in EEE department of same university. His research interests are Power System, Renewable Energy, Digital Electronics and Solid State Device. He has several publications in different international journals and conferences.



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**Tanima Tasmin Chowdhury, Assistant Professor**

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Tanima Tasmin Chowdhury completed her B.Sc degree in Electrical and Electronic Engineering (EEE) from Bangladesh University of Engineering and Technology (BUET) in 2013. She obtained Dean's list award and University merit scholarship for all four years and secured merit position 10th out of 174 students in her undergraduate. Her undergraduate thesis was on analytical modeling of SOI gate-four transistor and currently doing her research in biomedical signal processing. Her other research interests include renewable energy technologies and semiconductor device modeling.



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**Khandaker Sultan Mahmood, Assistant Professor**

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Mr. Khandaker Sultan Mahmood has obtained his B. Sc Engineering in Electrical and Electronic Engineering with honors from Islamic University of Technology (IUT) in 2011. He has been with the university since April 2012. His undergrad thesis topic was "Efficient designing of min-sum algorithm of low density parity check codes" He is currently working on adopting various efficient decoding algorithms for min-sum decoding for low density parity check codes. His area of interest also includes power electronics, power engineering and control system.

# FACULTY



## **Mirza Mursalin Iqbal, Assistant Professor**

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Mirza Mursalin Iqbal obtained his M.Sc. degree in Power Engineering from Technical University of Munich in July, 2015. He completed his B.Sc. degree with Honors (securing Fifth Position) from Islamic University of Technology in November, 2010. He is now working as an Assistant Professor in the EEE department at UAP. His research interests are Renewable Energy sources, Power Systems, Power system Protection and Power Electronics. He has published research papers in different international journals.



## **Ibrahim Ibn Alam, Assistant Professor**

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Md. Ibrahim Ibne Alam has obtained his B.Sc. and M.Sc. degree in Electrical and Electronic Engineering (EEE) from Bangladesh University of Engineering and Technology (BUET), Dhaka, Bangladesh in 2014 and 2017 respectively. He secured Honors in both his Undergraduate and Graduate Degree. He has been with the university since April 2018. His undergraduate thesis title was "Performance analysis of a wireless communication system with selective receive diversity under the influence of Rayleigh & Rician fading". His M.Sc. thesis title was "A Novel MAC Protocol with TDMA based EM Control Channel for Underwater Sensor Networks". His research interests include Wireless MAC Protocol, Image Processing, Speech Processing, Machine learning and coding for security and data compression. He is a member of IEB. He has several publications in different international journals and conferences.



## **Dr. Tishna Sabrina, Assistant Professor**

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Dr. Tishna Sabrina received her B.Sc. Engg (Hons) in Electrical and Electronics Engineering from Bangladesh University of Engineering and Technology, Dhaka, Bangladesh in 2005. She then worked as a Telecommunication engineer for 4 years at Aktel (currently operating as Robi) from 2005-2009. In year 2014, she achieved her PhD degree from Monash University, Australia. Her PhD dissertation title was, "Privacy Preservation without Compromising Data Integrity." Some part of her thesis has been published in peer-reviewed conferences. She is currently working as an Assistant Professor in University of Asia Pacific. Her research interests include Participatory Sensing, Communication Engineering, Telecommunications, Wireless communication, Electronic Voting, Security and Privacy.



# FACULTY



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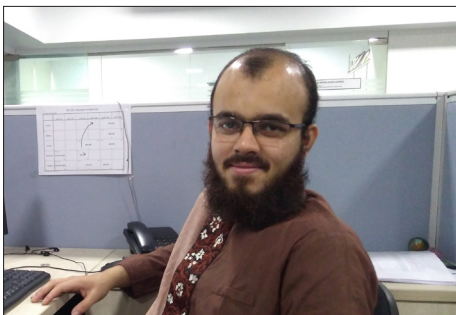
## **Md. Khairul Alam, Lecturer**

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Md. Khairul Alam obtained his B.Sc. Engineering degree from University of Asia Pacific (UAP) with First Class Honors in 2010. He is doing his Masters degree in Islamic University of Technology (IUT). His current research interests are Internet of Things (IoT), Artificial Intelligence (AI), Machine Learning and Wearable Electronics.



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## **Md. Abdullah Al Mahmud, Lecturer**

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Md. Abdullah Al Mahmud obtained his B.Sc. Engineering degree from University of Asia Pacific (UAP) in 2013. His undergraduate thesis title was "Study on Brain Tumor Detection using MR Images ". His current research interests are Detection and extraction of tumor in various parts of human body, Biomedical Image processing, Telecommunication, Wireless communication.



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## **Sakhawat Hossen Rakib, Lecturer**

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Sakhawat Hossen Rakib completed his B.Sc. degree with Honors (Securing First Position) from University of Asia Pacific (UAP) in 2015. He is now pursuing his M.Sc. degree in Islamic University of Technology(IUT). His undergraduate thesis was "Development of 3D printed Myoelectric Prosthetic Hand for upper limb amputees". Currently he is working on "Smart grid development for smart city". He has extensive research experience in Biomedical Instrumentation, Embedded systems, Human Machine Interface, mobile computing, modeling, scheduling, planning, and simulations of large discrete event dynamic systems with applications to manufacturing systems, computer networks and RFID applications, Biometric Systems, modeling and control of robots and mechatronics, and neural networks.

# FACULTY



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**Kazi Mahtab Kadir, Lecturer**

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Kazi Mahtab Kadir obtained his Master's degree in Electrical Engineering (EE) from University of Houston (UH), Houston, TX, USA in 2013. He completed his B.Sc. degree in Electrical and Electronic Engineering with Honors (securing 11th position out of 69 students) from Islamic University of Technology (IUT) in 2010. His undergraduate thesis was titled "Integrated Smart Power Management for Home Appliances". He was also awarded Academic competitive scholarship waiver, Electrical Engineering graduate studies scholarship and the Texas Public Educational Grant during his Master's degree at University of Houston. After graduation he worked in the US oil & gas industry in the field of maintenance and project engineering for approximately 2 years before joining UAP. His research interests include Electronics, Micro-controllers – FPGA and Signal Processing.



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**Farhana Akter Mou, Lecturer**

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Ms. Farhana Akter Mou completed her B.Sc. degree with Honors (Securing First Position) from University of Asia Pacific (UAP) in 2016. Her undergraduate thesis title was "Identification of Premature Ventricular Contraction (PVC) of Electrocardiogram Using Statistical Tools and Non-Linear Analysis". She is now pursuing her M.Sc. degree in Electrical and Electronic Engineering (EEE) from Islamic University of Technology (IUT), OIC, Dhaka, Bangladesh. Her subjects of interests are Biomedical Engineering, Digital Signal Processing, Electrical & Electronic Circuits and Digital Communications.



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**Md Tanbir Hoq, Lecturer**

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Md Tanbir Hoq has obtained B.Sc. in Electrical & Electronic Engineering from Islamic University of Technology (IUT), later he completed his double master degree in Smart Electrical Network and Systems from KU Leuven, Belgium and KTH, Sweden. He worked with ABB High Voltage Cables for his M.Sc. thesis on HVDC cable insulation. Upon graduation he worked for ABB, KTH and FMTP Power AB before returning to Bangladesh. His research interest includes power system, substation automation, dielectric properties of electrical insulation, IEC 61850 and energy management.



# FACULTY



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Md. Abdullah-Al-Kaiser has obtained his B.Sc. degree in Electrical and Electronic Engineering (EEE) from Bangladesh University of Engineering and Technology (BUET), Dhaka, Bangladesh in 2017. He secured 8th position out of 194 students of his department. His undergraduate thesis title was "Ambipolar Study and Structural Characterization of Tunnel Field Effect Transistor". His research interests include Analog IC design, Analog and mixed signal IC design, Digital electronics, 2D material, Device physics, Device analytical modeling and simulation.



**Shahnewaz Ahmed, Lecturer**

🎓 B.Sc. (EEE, BUET)

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Shahnewaz Ahmed has obtained his B.Sc. degree in Electrical and Electronic Engineering (EEE) from Bangladesh University of Engineering and Technology (BUET), Dhaka, Bangladesh in September of 2017. He secured 8th position in the graduating class of 214 students of his department. His undergraduate thesis title was "Electronic Properties of Type II SnS-GeSe Hetero-bilayer: A First Principle Study". His research interests include electronic, optical, transport and topological properties of material, Quantum information, Quantum computation, Nano photonics, and application of machine learning in condensed matter simulation.



**A.N.M. Nafiz Abeer, Lecturer**

🎓 B.Sc. (EEE, BUET)

✉ nafizabeer2012@gmail.com

A. N. M. Nafiz Abeer has obtained his B.Sc. degree in Electrical and Electronic Engineering (EEE) from Bangladesh University of Engineering and Technology (BUET), Dhaka, Bangladesh in September of 2017. He secured 10th position in the graduating class of 214 students of his department. His undergraduate thesis title was "Direction of Arrival Estimation in Noisy and Reverberant Environments: Deep Neural Network Approach". His research interests include image processing, biomedical signal processing, machine learning, and computer vision..

# FACULTY



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**Mr. Shoaib Mahmud, Lecturer**

🎓 B.Sc. (EEE, BUET)

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Shoaib Mahmud has obtained his B.Sc. degree in Electrical and Electronic Engineering (EEE) from Bangladesh University of Engineering and Technology (BUET), Dhaka, Bangladesh in 2017. He secured 11th position out of 214 students of his department. His undergraduate thesis title was “Quantum Mechanical Self Consistent Simulation and Analytical Modeling for C-V Characterization of High-K Gate AlInN/AlN/GaN MOS-HEMT Structure Featuring Negative Capacitance in AlInN Layer”. His research interests include simulation & quantum modeling of Nano devices, optoelectronic properties of 2D materials and photovoltaic cell.



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**Md. Faizul Bari, Lecturer**

🎓 B.Sc. (EEE, BUET)

✉ faizul@uap-bd.edu

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Md. Faizul Bari completed his B. Sc. in Electrical and Electronic Engineering from BUET in 2017, securing 19th position. He received dean's list awards for all levels and university merit awards several times. His undergraduate thesis topic was “An InAs-based Dual-Pocket Double-Gate Hetero-Gate-Dielectric Tunnel FET with low Subthreshold Swing and Improved On/Off Ratio”. Right after graduation, he joined Neural Semiconductor Limited, a VLSI design hub in Bangladesh. He has more than one year of experience in Analog and Mixed Signal IP designs along with DFT and Digital circuitry designs. Currently, he is enrolled in M. Sc. at BUET, performing thesis on “Nature-inspired photonic structures and their applications”. His main research interests are on Photonic structures and devices, Semiconductor devices, Analog and Mixed-Signal designs, Hardware security and IP designs for Neural Networks.



# FACULTY

## ON STUDY LEAVE

**Molla Shahadat  
Hossain Lipu**

National University of  
Malaysia

**Mr. Anwarul Azim**

Temple University, USA

**Sohrab Hasan  
Nizami,**

Macquarie University,  
Australia

**Anas Syed**

Vrije University of  
Brussels, Belgium

**Khalid Ibne  
Masood**

Oregon State University,  
USA

**Ummee Tania  
Ahmed**

University of  
Queensland, Australia

**Shahinur Rahman**

Florida International  
University, USA

**Md. Ibrahim Khalil**

Rochester Institute  
of Technology, USA

**Fatima Tuz Zohora**

Rochester Institute of  
Technology, USA

**Trisha Chakraborty**

University of Maryland,  
College Park, USA

**Zahid Hasan**

Boston University, USA

**Arafat Mahmud**

University of New  
South Wales, Australia.

# GUEST FACULTY

**Dr. MD Ehsan**

Professor, ME Department,  
BUET, Dhaka

**Dr. Alope Kumar  
Majumder**

Professor, ME Department,  
BUET, Dhaka

**Dr. Nikhil Ranjan Dhar**

Professor, IPE department,  
BUET, Dhaka

**Dr. Ferdous Sarwar**

Associate Professor, IPE  
department,  
BUET, Dhaka

**Dr. Mohammad Nasim  
Hasan**

Associate Professor,  
ME Department,  
BUET, Dhaka

**B. D. Rahmatullah**

Consultant, UNDP and  
Ex-DG, Power cell



# ACADEMIC STAFF



**Md. Rahamat Ullah**  
Senior Administrative Officer



**Md. Kamruzzaman**  
Assistant Admin Officer



**Md. Mozammel Haque**  
Lab Assistant,  
Electrical & Electronic Circuit  
Laboratory



**Golam Kibrea Khan**  
Lab Assistant,  
Electronics and Digital Logic  
Design Laboratory



**Md. Al Amin**  
Lab Assistant,  
Electrical Circuit-I  
Laboratory



**Md. Abdul Mojib**  
Lab Assistant,  
Power Electronics, Micro-  
wave and Communication  
Laboratory



**Md. Mosarof Hossain**  
Lab Assistant,  
Machine Laboratory-II



**Md. Abdul Wahab**  
Lab Assistant,  
Machine Laboratory-I



**Nirab Parvez**  
Lab Assistant,  
Simulation Laboratory



**Md. Shamsul Akram**  
Lab Assistant,  
Electrical Circuit-I Labo-  
ratory

# UNDERGRADUATE COURSES

## SUMMARY

The undergraduate students of different years of the Department of Electrical and Electronic Engineering have to follow the course schedule given below. The letter prefix in any course number indicates the discipline/subject offering the course viz. ENG for English Language, HSS for Humanities and Social Science, Business, Management Studies, Language etc., PHY for Physics, MTH for Mathematics, ME for Mechanical Engineering and EEE for Electrical and Electronic Engineering. The first digit in the number indicates the year/level for which the course is intended; the second digit is assigned by the department and the last digit, if odd, indicates a theory course and if even, indicates a laboratory course.

### Core Courses

#### First Year First Semester

Course No.	Course Title	Credits
HSS 101	English	3.0
HSS 111	Bangladesh Studies	4.0
PHY 101	Physics I	3.0
MTH 101	Differential and Integral Calculus	4.0
EEE 101	Electrical Circuits I	3.0
PHY 102	Physics I Sessional	1.5
EEE 102	Electrical Circuits I Sessional	1.5
HSS 102	English Language Sessional	1.0
<b>Total:</b>		<b>21.0</b>

#### First Year Second Semester

Course No.	Course Title	Credits
PHY 103	Physics II	2.0
MTH 103	Differential Equations and Matrix	3.0
EEE 103	Electrical Circuits II	4.0
EEE 105	Computer Programming	3.0
ECN 101	Economics	2.0
EEE 104	Electrical Circuits II Sessional	1.5
EEE 106	Computer Programming Sessional	1.5
CE 100	Engineering Drawing Sessional	1.5

**Total: 18.5**

#### Second Year First Semester

Course No.	Course Title	Credits
ACN 201	Accounting	2.0
MTH 201	Coordinate Geometry and Vector Analysis	3.0
EEE 201	Electronic Circuits I	3.0
EEE 203	Electrical Machines I	3.0
ME 201	Fundamentals of Mechanical Engineering	3.0
EEE 202	Electronic Circuits I Sessional	1.5
EEE 204	Electrical Machines I Sessional	1.5

**Total: 17.0**



## Second Year Second Semester

Course No.	Course Title	Credits
MTH 203	Transformations and Partial Differential Equation	3.0
EEE 205	Electronic Circuits II	3.0
EEE 207	Electrical Machines II	3.0
EEE 209	Digital Electronics	4.0
EEE 200	Electrical Design and Drafting Sessional	1.5
EEE 206	Electronic Circuits II Sessional	1.5
EEE 208	Electrical Machines II Sessional	1.5
EEE 210	Digital Electronics Sessional	1.5

**Total: 19.0**

## Third Year Second Semester

Course No.	Course Title	Credits
HSS 303	Business Communication	2.0
EEE 309	Communication Engineering Fundamentals	3.0
EEE 311	Digital Signal Processing I	3.0
EEE 313	Microprocessor and Interfacing	3.0
EEE 317	Control Systems I	3.0
EEE 310	Communication Engineering Fundamentals Sessional	1.5
EEE 312	Digital Signal Processing I Sessional	1.5
EEE 314	Microprocessor and Interfacing Sessional	1.5
EEE 318	Control Systems I Sessional	1.5

**Total: 20.0**

## Third Year First Semester

Course No.	Course Title	Credits
MTH 301	Probability and Statistics; Complex Variable and Harmonics	4.0
EEE 301	Power System Analysis I	3.0
EEE 303	Signals and Linear Systems	3.0
EEE 305	Electromagnetic Fields and Waves	3.0
EEE 307	Electrical Engineering Materials	3.0
EEE 300	Electronic Shop Sessional	1.5
EEE 302	Power System Analysis I Sessional	1.5

**Total: 19.0**

## Fourth Year First Semester

Course No.	Course Title	Credits
IMG 401	Industrial and Operational Management	2.0
EEE 401	Energy Conversion and Special Machines	3.0
EEE ....	Interdisciplinary Option	3.0
EEE .....	Option I	3.0
EEE .....	Option II	3.0
EEE 400	Project/Thesis	2.0
EEE ....	Interdisciplinary Option Sessional	1.5
EEE.....	Option II Sessional	1.5

**Total: 19.0**

## Fourth Year Second Semester

Course No.	Course Title	Credits
EEE 403	Power Electronics	3.0
EEE ....	Option III	3.0
EEE .....	Option IV	3.0
EEE .....	Option V	3.0
EEE 400	Project/Thesis	4.0
EEE 404	Power Electronics Sessional	1.5
EEE ....	Option IV Sessional	1.5

**Total: 19.0**

**Grand Total Credits: 152.5**

## Optional Courses

### Interdisciplinary Option

Course No.	Course Title	Credits
EEE 451	Control System II	3.00
EEE 453	Numerical Methods	3.00
EEE 455	Biomedical Electronics	3.00
EEE 457	Measurement and Instrumentation	3.00

### Interdisciplinary Option Sessional

Course No.	Course Title	Credits
EEE 452	Control System II Sessional	1.50
EEE 454	Numerical Methods Sessional	1.50
EEE 456	Biomedical Electronics Sessional	1.50
EEE 458	Measurement and Instrumentation Sessional	1.50

### Option I

Course No.	Course Title	Credits
EEE 411	Power Station Engineering	3.00
EEE 421	Analog Integrated Circuits	3.00
EEE 431	Digital Signal Processing II	3.00
EEE 441	Advanced Logic Design	3.00

### Option II

Course No.	Course Title	Credits
EEE 413	Power System Analysis II	3.00
EEE 423	VLSI Design I	3.00
EEE 433	Microwave Engineering	3.00
EEE 443	Microprocessor System Design	3.00



### Option II Sessional

Course No.	Course Title	Credits
EEE 414	Power System Analysis II Sessional	1.50
EEE 424	VLSI Design I Sessional	1.50
EEE 434	Microwave Engineering Sessional	1.50
EEE 444	Microprocessor System Design Sessional	1.50

### Option III

Course No.	Course Title	Credits
EEE 415	Power System Reliability	3.00
EEE 425	SolidState Devices	3.00
EEE 435	Optical Fiber Communication	3.00
EEE 445	Computer Architecture	3.00

### Option IV

Course No.	Course Title	Credits
EEE 417	Power System Protection	3.00
EEE 427	VLSI Design II	3.00
EEE 437	Telecommunication Engineering	3.00
CSE 447	Computer Networking	3.00

### Option IV Sessional

Course No.	Course Title	Credits
EEE 418	Power System Protection Sessional	1.50
EEE 428	VLSI Design II Sessional	1.50
EEE 438	Telecommunication Engineering Sessional	1.50
CSE 448	Computer Networking Sessional	1.50

### Option V

Course No.	Course Title	Credits
EEE 419	Power System Operation and Control	3.00
EEE 429	Opto-electronics	3.00
EEE 439	Mobile Cellular Communication	3.00
EEE 449	Multimedia and Internet	3.00

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