Chittagong Independent University (CIU), formerly Independent University, Bangladesh (IUB) Chittagong Campus is now a top ranked UGC and Government approved private university. It started its voyage in 1999. Since then it has been successfully contributing to the higher education sector. The university has three schools and is offering 17 undergraduate programs.

The School of Engineering and Computer Science (SECS) is distinct in nature. The programs of SECS of CIU have been running in parallel with those of SECS of IUB, Dhaka from its inception. Right from day one, SECS has stood for quality, commitment and integrity. The journey has never been silk smooth, but with all its administrators, faculty members and students, SECS is resolute to uphold the spirit and intends to change this society for the better.

**Course Curriculum Standard**

School of Engineering and Computer Science (SECS) has four disciplines, which are Computer Science, Computer Engineering, Electronics and Telecommunication Engineering, Electrical and Electronic Engineering. The course curriculum was developed maintaining the international standard compatible with other renowned universities around the world. CIU students are eligible for transferring credits to recognized universities abroad.

**Prime Location**

CIU is located at Jamal Khan Road. Recently CIU has expanded to a new campus which is well equipped and has the perfect environment to earn knowledge with adequate laboratory facilities for the students to give practical revelation to their respective field of study. We recognize the fact that genuine engineering education requires quality laboratories. School of Engineering features state-of-the-art laboratories for the Electrical, Telecommunication and Computer Science students. SECS also maintains hardware and software libraries, digital and drafting laboratories, Local Area Networking (LAN), Wide Area Networking (WAN), Computing Environment in AIX, OS/400, Windows 2000 Advanced Server and Open source lab. Moreover, every student has his or her e-mail address and internet service with adequate bandwidth for their course management.
SECS Faculties
Faculty and staff comprise a team of experienced, responsible and full-time experts. They are selected through rigid screening process. The full-time faculties and also the adjunct faculties of SECS from reputed public Universities of Chittagong are not only academically highly qualified but also professionally experienced at corporate level.

COURSE SYNOPSIS

Computer Science
Computer Science offered by SECS is the study of processes with applications and techniques for problem solving using computing methods and information technology. The computer science program aims to develop skilled computer scientists with the technical background, interpersonal and communication skills, knowledge and adaptability to contribute to the development of well designed, robust, computer based solutions to a range of problems in business and industry. Excellent career opportunities exist for computer science in business, industry and in government sectors as programmers, system analysts, computer systems and network managers, user support officers and software engineers etc.

Computer Engineering
This is an up-to-date combination of courses from both computer science and Electrical Engineering. This program aims to develop skilled hardware engineers with software credentials processing the technical background, skills and adaptability to chip into the advancement of control systems, Nanotechnologies, robust processing, artificial intelligence and embedded system based solutions to a range of problems in service, business and industry. Graduates in this field develop careers in areas such as advanced manufacturing, telecommunications and electronic system, engineering analysis, maintenance and design, production and operations management, engineering research and development etc.
Electronic and Telecommunication Engineering

Students in this course attain advanced knowledge of telecommunications, network theory and technology with the basics in electronics. Courses are offered in a variety of subfields including network computing, parallel processing, digital signal processing, digital communications, modulation and coding, electromagnetic wave propagation, fiber and integrated optics, lasers, wireless communications, mobile IP, wireless multimedia, DWDM networks, QoS assurance protocols, network design and optimization, telecommunication software, performance of systems, ad-hoc and PCS wireless networks, Network Security and high speed protocol.

Telecom Engineers and IT professionals in our country have a very high level of job satisfaction and are among the best paid professionals.

These professionals deal with the most advanced and up-to-date technologies that are developed around the world.

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Electrical and Electronic Engineering

This degree provides basic knowledge of electrical and electronic engineering principles along with the required supporting knowledge of mathematics, science, computing and engineering fundamentals. Laboratory works are integrated to develop the basic skills needed to perform and design experimental projects, formulate problems and to plan a process for solution taking advantage of diverse technical expertise and skills.

Excellent career opportunities exist for the EEE graduates in business, industry and government sectors as technologists, system engineers, electrical engineers, electronic engineers, network specialists, power engineers, and control engineers etc.

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STATE-OF-THE-ART LAB FACILITIES

SECS has added a large number of lab facilities for the undergraduate engineering students in recent years, including the computer lab, the electronics lab, the communication lab and the electrical lab. These labs are equipped with the most recent equipment and technologies. This will help the students to face the challenges posed by the practical implementation as well. This latest laboratory access will prepare a student to be amongst the few who are fully proficient in integrating hardware and software applications, computer systems, networking, IT and embedded control systems, different electrical machines and electrical power system. It covers challenging and interesting topics. They encompass software as well as internet programming, microcontroller technology, computer game programming, computer networking and security, and computer systems and architecture.
Computer Lab
- This is the only computer lab in Chittagong configured with most updated facilities.
- All computers are equipped with the fast Core 2 Duo processors and very high memory to support all software installation.
- More than 250 fully networked computers.
- Open for the students who can access the internet services at all times.
- Online assignment submission, post news, and current events.
- Prompt access to the CIU digital library.
- All the simulated software installed with MATLAB, MATHCAD, Microwind, Spice, VHDL, and others.

Communication Lab
Communication lab will enable the students to develop their skills and expertise so that they can adapt themselves with the modern world of information system. It enables participation in this fast-expanding field, by equipping a student with skills to handle and manage the technology that is so vital in this sector, namely design, optical communication and other emerging media and technologies.

Available Equipment
- Digital Signal Processing Module.
- GSM Mobile communication trainer.
- CDMA Mobile communication trainer.
- A/D converter.
- Line coder.
- All analog & digital modulator and demodulator.
- Function generator with the DC power supply.
- FDM Multiplexer & De-Multiplexer.
- TDM Multiplexer & De-Multiplexer.
- WDM Multiplexer & De-Multiplexer.
- Second order active filters and RF oscillators.
- Transmitter & Receiver Module.
- Computer controller.
- And many more.

Electronics Lab
Electronics is a field of engineering that deals with the study of the miniaturization of electronic components. It involves the design, fabrication and testing of microcircuits, also known as integrated circuit (IC) chips. These ICs are used extensively in computers, telecommunication equipment, audio-visual products, space equipment and other electronic products. This Lab provides students with a strong foundation in the electronics and microelectronics disciplines.

Available Equipment
- Microprocessor & Microcontroller trainer board.
- Function generators with DC power supply.
- 660 nm Optical fiber transmission Cables.
- Oscilloscope.
- Digital Trainer Board.
- Function generator.
- AC power Supply
- Integrated circuit.
- Digital & Analog Multimeter.
- Basic Trainer board and Bread board.
- DC power supply unit.
- DC power Line cables
- Signal connector.
- And many more.
**Electrical LAB**

Electrical lab will enable the student to develop their skills and expertise so that they can adapt themselves with the modern world of power system and control system. It enables participation in this fast-expanding field, by equipping a student with skills to handle and operate the modern systems more effectively and efficiently.

**Available Equipment**

- D.C. Compound Generator & D.C. Compound Motor Trainer.
- Wound Induction Motor & D.C. Shunt Generator Trainer.
- Synchronous Motor & Synchronous Motor Trainer.
- Automatic Control Systems Trainer.
- PLC Trainer.
- Instrumentation & Process Control Trainer.
- Power Electronics Trainer.
- Electrical Power Systems Trainer.

**Physics Lab**

The physics lab program has an engineering perspective, has experiments that relate to real-world problems or issues, encourages development of experimental design skills, needs careful measurements, utilizes data analysis techniques, involves the comparison of models with experimental data. It also requires students to engage in effective teamwork. The lab curriculum encourages the development of written and oral communication skills, develop skill in leading discussion (presentation of results), encourage lateral thinking and problem solving skills.

- Radiation Probes.
- G M Box, Counters.
- Empty Compartment for Ra-226 Preparation.
- Immersion Heaters.
- Sound Apparatus Boxes.
- Dynamometers, Optical Tables.
- Halogen Lamps.
- Earth-Moon Models.

**Equipment Available**

- AC-Amplifiers.
- Generators.
- Transducers.
- Demountable transformer cores.
- Digital Logic Gates.
- Master-Slave Flipflop.
- Multiplexers.
- Function Generators.
- Dual Trace Oscilloscope etc.

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**SECS Activities**

SECS students are associated with several clubs of CIU for their extracurricular activities. The club which is mostly linked with SECS activities is CIU Science and Engineering Club (iSEC). The SECS activities are divided into following three sectors which are important for a student to enhance his/her knowledge to meet the demand of modern technological world.

**Study Tour**

Study tour is an essential trip for a graduating student. It gives the students abundance of information from practical point of view about what they are learning in the school. SECS arrange several tours for its students to not only gain knowledge but also to relieve themselves from the tedious life of study. The study tours which are arranged on regular basis for our students:

- KAFCO Network System
- GEM Plant at Potenga
- Power Plant of PHP
- Power station of Modunaghat
- Agrabad Radio Station
- Radar Station in Cox's Bazar
- Radio Station in Cox's Bazar
Internship

Internship is the foremost important program for a student who wants to join the corporate world after his/her graduation. SECS give a student the opportunity to do the internship under any reputed organization. The internship ensures a student an image of his/her forthcoming job field. The graduating students of SECS are conducting their internship in leading operators like AKTEL, GRAAMEEN PHONE, WARID, BANGLALINK, CITYCELL, SATEL etc. SECS students are also working with international telecommunication vendors, namely; HAUWAI, LM ERICSSON, NOKIA, SIEMENS, ZTE etc as employees.

Senior Project

Senior project is also an important feature for a student who wants to go for higher study. It assists students to focus on a particular subject to innovate a field. SECS offer the opportunities to do the projects under qualified professors. All kinds of essential facilities are also provided to make the projects successful. The students can do their senior projects under SECS on subjects like Power, Telecommunication, Circuit Designing, Data Networking, wireless Networking and Software Engineering, etc. To conclude, it is worth mentioning that SECS bestows all kinds of conveniences to help a student to build up his/her career and enhance skills to become a competent candidate in the job market.

Campus Employment Program:

Every semester a good number of students get the opportunity to assist teachers in different courses and labs. Besides they are selected to work in library, admission office, Finance and accounts office and American corner.

Library Facilities

CIU library is resourceful, well decorated and organized.

Location, Area and Seating Capacity:

The Library is divided into four units-

- Main library can accommodate adequate number of students.
- There is a separate Reading room.
- A big hall room is allocated for newspaper reading and browsing journals and websites.
- Mathematics and Science corner for School Students.

Collection of Library Material

At present the total collection of books is about 7000, 1150 Audio-Visual Materials, 300 bond journals and a good number of Projects/Thesis reports.

Subscription of journals, Magazine, Newspaper, periodicals

CIU library is the subscriber of 14 daily newspapers and 70 magazines, periodicals/journals. Among these 7 magazines are of foreign origin.

Subscription of E-journals

CIU library is the subscriber of different recognized E-journals through which the students and the faculties have complete access to the E-journals like IEE, SEM, Emerald, JSTOR, HINARI, Oxford, Pro Quest, Springer, University Press and Blackwell Publishing.
iSEC

CIU science and Engineering Club (iSEC) has started its voyage from 2000. Since then the club has been organizing various activities that help the students to broaden their knowledge and to participate in different social activities. It consists of 7 Executive members and all students of SECS are general members. Executive members are selected based on their academic performance and management skills. iSEC members communicate their activities to all other students of CIU. The following activities are usually conducted by iSEC:

Workshop, Seminar and other activities
- The major purpose of this program is to develop the students’ knowledge and analytical skills. The following among many others are worth mentioning.
- Workshop on career prospects in Computer, Telecommunication & Engineering field.
- Workshop on GSM, CDMA and 3G cellular Technologies:
- Workshop on PC Assembly and troubleshooting:
- Workshop on Dynamic Web page Designing:
- CIU-Inter School-College Programming Contest:
- World Cyber Games Contest:
- Math Olympiad:
- Social Activities:

Professional courses
iSEC offers some professional courses at CIU for the School of Engineering and Computer Science students. The professional courses include Oracle and Linux-Operating System to ensure that the students meet the international standard of technology in the market.

School of Engineering and Computer Science

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