

General Education (GED) Courses (10 courses/30 credits)

GED Core (7 Courses / 21 credits)

All students are required to complete the following core GED courses within the first four terms.

ENG 101	Basic English & Learning Skills
ENG 102	Fundamentals of English I
ENG 103	Fundamental of English II
GED 100	Bangladesh Studies
GED 101	Bangla Bhasha
CSE 101	Introduction to Computer Studies
GED 201	World Civilization

GED Electives (3 courses / 9 credits)

GED Elective offerings will vary from term to term. The three electives will be spread over terms 5, 6 and 7. Students will have to choose from the courses offered in a particular term.

CSE Major Core Courses (24 courses / 79 credits)

Mathematics and Statistics

Code	Title	Credits
MAT 101	Differential and Integral Calculus	3
MAT 102	Co-ordinate Geometry and Linear Algebra	3
MAT 201	Differential Equation and Numerical Analysis	3
MAT 203	Mathematical Methods	3
STA 206	Statistics and Probability	3

Physics and Electronics

Code	Title	Credits
PHY 101	Physics I	3
ETE 202	Electronic Devices and Circuits I	3
ETE 203	Electronic Devices and Circuits I LAB	1
ETE 204	Digital Electronics	3
ETE 205	Digital Electronics LAB	1

CSE Core Courses

Code	Title	Credits
CSE 103	Structured Programming	3
CSE 104	Structured Programming LAB	1
CSE 201	Object Oriented Programming	3
CSE 202	Object Oriented Programming LAB	1
CSE 203	Computer Organization and Architecture	3
CSE 204	Operating Systems	3
CSE 205	Discrete Mathematics	3
CSE 207	Data Structures	3
CSE 208	Data Structures LAB	1

Code	Title	Credits
CSE 303	Database Management System	3
CSE 305	Algorithms	3
CSE 306	Algorithms LAB	1
CSE 307	Microprocessor and Interfacing	3
CSE 309	Data Communication and Computer Networks	3
CSE 401	System Analysis and Design	3
CSE 404	Software Engineering	3
CSE 410	Artificial Intelligence	3
CSE 412	Programming with Java	3
CSE 413	Programming with Java LAB	1
CSE 417	Automata and Theory of Computation	3
CSE 480	Web Technology	3

Major Elective Courses (Any 4 courses / 12 credits)

Code	Title	Credits
CSE 402	Wireless and Mobile Computing	3
CSE 403	E-Commerce	3
CSE 405	Computer Graphics	3
CSE 406	Embedded Systems Design	3
CSE 407	Database Management System-II	3
CSE 408	Computer Modeling and Simulation	3
CSE 409	Advanced Programming Languages	3
CSE 411	Compiler Design	3
CSE 414	Software Quality Assurance and Testing	3
CSE 415	Visual Programming	3
CSE 416	NET Programming using C#	3
CSE 418	Routers and Routing Basics	3
CSE 419	Management Information System	3
CSE 421	WAN Technology	3
CSE 422	Systems Programming	3
CSE 423	Advanced Computer Architecture	3
CSE 424	Parallel Programming	3
CSE 425	Peripherals and Interfacing	3
CSE 426	Advanced Computer Networking	3
CSE 427	Multimedia Design and Development	3
CSE 428	Enterprise System Design and Development	3
CSE 429	Digital Image Processing	3
CSE 430	Neural networks and Pattern Recognition	3
CSE 431	Computational Geometry	3
CSE 432	Introduction to Quantum Computer	3
CSE 433	Computer Security	3
CSE 434	Pattern Recognition	3
CSE 435	Bioinformatics	3
CSE 436	Introduction to Robotics	3
CSE 440	Human Computer Interaction	3
CSE 438	Smart Phone Application Development	3

Code	Title	Credits
CSE 447	VLSI Design	3
CSE 498	Social and Professional Issues in Computing	3
ETE 315	Digital Signal Processing	3
ETE 463	Optical Fiber Communication	3

Project/Thesis

Students will have to complete either project or thesis as part of their degree program and as per the policy defined above.

Optional/Minor (5 course/ 15 credits) *

Students may obtain a minor in a separate field by completing any 5 additional courses in that field. Instead of doing a minor, students may choose 5 optional courses from outside the department. If students from other departments wish to obtain a minor in the CSE Department, they must complete the compulsory courses and any 4 courses from the rest.

Compulsory

CSE 103	Structured Programming	3
CSE 104	Structured Programming LAB	1

Any Four

CSE 303	Database Management System	3
CSE 311	Automated office Management	3
CSE 403	E-Commerce	3
CSE 406	Embedded Systems Design	3
CSE 412 &		
CSE 413	Programming with Java & Lab	4
CSE 416	NET Programming using C#	3
CSE 417	Automata and Theory of Computation	3
CSE 419	Management Information System	3
CSE 427	Multimedia Design and Development	3
CSE 428	Enterprise System Design and Development	3
CSE 429	Digital Image Processing	3
CSE 447	VLSI Design	3
CSE 480	Web Technology	3

*NOTE: Not all courses will be available every term. The Computer Science and Engineering Department reserves the right to add, drop or substitute individual courses, subject to review from academic authorities.

Associate Organizations



Bachelor of Science Computer Science And Engineering

Computer Science and Engineering (CSE) department is the largest engineering department of University of Liberal Arts Bangladesh. CSE specializes in all major areas of computational problem solving. It is committed to producing graduates who are true engineers and systematic problem solvers.

CSE is the best-placed department to take advantages of the IT boom in Bangladesh and around the world. We contribute to the development of the cutting edge technologies that have positive social implications. We endorse a curriculum based on theoretical knowledge as well as research and project oriented applied skills that have close ties to societal welfare and industries. The department offers a platform for fundamental knowledge generation relevant to information and technologies. As a pragmatic department, we practice active learning as we believe this discipline cannot be excelled in just by mere theoretical understanding. The aim is to produce creative thinkers who are apt to bridging the gap between society and technology disseminating the liberal arts values of ULAB. The program has received IEB's accreditation in 2017.

Vision:

To produce highly competent graduates who will become leaders in Computer Science and Engineering.

Mission:

- To prepare our students to meet high standard of excellence for professional career advancement.
- To create and disseminate new knowledge through basic and applied research in the field of Computer Science and Engineering.
- To build strong relationship between industry and academia, eliminating the gap.

Faculty Strength

Eight (08) full-time PhD faculty members are serving in the department.

Fees And Scholarships

Tuition fee is payable in two installments in each term. Scholarship is based on average GPA of HSC and SSC (4.5 or above). Female students will get 10% discount in addition. Siblings/spouse student will get additional 40% discount.

Admission Requisites

- Copies of HSC and SSC / A and O level transcripts and results
- Testimonials if certificate is not received
- Freedom fighter's certificate for the eligible
- Recommendation from the Admission committee

Graduation Requirements

Type of Courses	Num. of Courses	Credits
General Education Courses	10	30
Major Core	24	79
Major Elective	4	12
Project/Thesis	1	4
Optional/Minor	5	15
Total	44	140



Name	Designation	Area of Interest
Professor H.M. Jahirul Haque, PhD (KNURE, Ukraine)	Vice Chancellor & Dean of SSE	Education management, Technology and learning and teaching
A.K.M. Muzahidul Islam, PhD (NITech, Japan)	Associate Professor and Head (Acting)	Wireless Communication, Healthcare, IoT, Machine Learning
Sazzad Hossain, PhD (PSU, Oregon, USA)	Professor	Quantum computer and Quantum algorithms, Natural Computing, Artificial Intelligence, Big Data Analytics, Social Computing, Human Computer Interaction, IoT
Mohammad Shorif Uddin, PhD (Kyoto Institute of Technology, Japan)	Adviser and Adjunct Professor	Artificial Intelligence, Image Processing, Signal Processing
Mohammad Shahriar Rahman, PhD (JAIST, Japan)	Associate Professor	Applied Cryptography, Blockchain, Cyber Security and IoT
Abul Kalam Al Azad, PhD (University of Exeter, UK)	Associate Professor	Theoretical Neuroscience, Dynamical Systems, Pattern Recognition, Complex system
T. M. Abul Kalam Azad, PhD (Ongoing) (JU, Bangladesh)	Assistant Professor	Computational Fluid Dynamics
Furhana Sarkar, PhD (University of Southampton, Southampton, UK)	Assistant Professor	Data Analytics, Technology enhanced learning, Linked Data, Open Data, Student retention and Healthcare
Saugata Bose (University of Pune, India)	Assistant Professor	Machine Learning and Data Mining
Nafes Manzoor, PhD (UTM, Malaysia)	Assistant Professor	Wireless Networks and Protocols, Cognitive Radio Networks, Machine Learning, Smart City, IoT and Signal Processing
Anowarul Abeidin (LUT, Finland)	Senior Lecturer	IoT, Machine Learning
Bijan Paul (SUST, Bangladesh)	Senior Lecturer	Vehicular Ad-hoc Network, Wireless Sensor Network, Natural Language Processing and Human Computer Interaction
Khan Ragib Mahmud (KTH Royal Institute of Technology, Sweden)	Lecturer	Image Analysis and Computer Vision, Machine Learning, Computational Aerodynamics, High End Particle Simulation and Modeling
Shahed Khan (UA at Birmingham, Alabama, USA)	Lecturer	Healthcare, Machine Learning and Modeling and Simulation



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School of Science & Engineering UNIVERSITY OF LIBERAL ARTS BANGLADESH

<https://sse.ulab.edu.bd/cse/>



- IEB Accredited Program
- Ministry of ICT funded research project
- Winner in the IEEE Region 10 (Asia Pacific) HTC Hackathon
- Winner of National Hackathon for women
- State-of-the-art IoT Lab, under Hi-Tech Park Authority, run by DataSoft and financed by World Bank

SIGN UP!

ULAB's Department of Computer Science and Engineering (CSE) aims to raise the bar of the country's computing education. So that, graduates can compete in the ICT industries worldwide and leave their mark successfully.

COMPUTER SCIENCE AND ENGINEERING

