

ISO 9001:2000

B.Sc. (Engg.) in Computer Science and Engineering (CSE)



ASIAN UNIVERSITY OF BANGLADESH
Department of Computer Science and Engineering

Programs: B.Sc.(Engg.)in Computer Science and Engineering (CSE)

At a Glance:

The B.Sc. (Engg.) in Computer Science and Engineering program comprises of 24 theoretical courses, including 9 interdisciplinary courses, 14 sessional courses of 1.5 credit hours, basic science courses (13.5 credit hours), major courses (13.5 credit hours), minor courses (9 credit hours), and a thesis/project (6 credit hours).

For a B.Sc. (Engg.) in Computer Science and Engineering degree, a student will have to complete a four-year integrated program with at least 159 credit hours, out of which 93 credit hours are core courses and 24 credit hours are interdisciplinary courses. A student must obtain at least a 'C' grade to pass any individual course. Diploma Engineers will have to complete 132 credit hours to earn the B.Sc. (Engg.) in Computer Science and Engineering degree.

Computer Science and Engineering students will generally take 18 to 27 credit hours per semester. The amount of credit hours will vary from semester to semester.

Fees vary based on the number of courses/credits taken by the student in each semester. The fee for credit courses is Tk. 2,392/- per credit, while non-credit courses are treated as courses of three credit hours. For Diploma Engineers, the fee is Tk. 1,750/- per credit. There is also a miscellaneous fee of Tk. 500/- per semester and a one-time admission fee of Tk. 10000 in the first semester only.

<i>Core Courses</i>		
<i>Compulsory(99 credit hours)</i>		
Course Code	Course Title	Credit
0613-1102	Programming Language and Application I	3
0613-1102S	Programming Language and Application I sessional	1.5
0613-1208	Programming Language and Application II	3
0613-1208S	Programming Language and Application II sessional	1.5
0613-2312	Object-Oriented Programming	3
0613-2312S	Object-Oriented Programming Sessional	1.5
0541-2313	Discrete Mathematics	3
0613-2417	Data Structures	3
0613-2417S	Data Structures Sessional	1.5
0613-2418	Design and Analysis of Algorithms	3
0613-2418S	Design and Analysis of Algorithms Sessional	1.5
0713- 2419	Digital Logic Design	3
	Digital Logic Design Sessional	1.5
0612-3523	Database Management Systems	3
0612-3523S	Database Management Systems Sessional	1.5
0613-3524	Internet Programming	3
0613-3524S	Internet Programming Sessional	1.5
0713-3526	Microprocessors, Interfacing and Low Level programming	3
0713-3526S	Microprocessors, Interfacing and Low Level Programming Sessional	1.5
0713-3629	Computer Architecture	3

0613-3631	Operating System Design	3
0613-3631S	Operating System Design Sessional	1.5
0612- 4523	Distributed Database Management Systems	3
0613-4734	Mobile Application Development	3
0613-4737	Software Engineering	3
0613-4737S	Software Engineering Sessional	1.5
0613-4840	Thesis and Project	6
0612-4841	Computer Communication and Networks	3
0612-4841S	Computer Communication and Networks sessional	1.5
0541-1103	Math I: Differential Calculus and Coordinate Geometry	3
0541-2314	Math II: Integral Calculus and Differential Equation	3
0541-2421	Math III: Complex Variables and Laplace Transforms	3
0541-3527	Math IV: Linear Algebra, Fourier Transform and Statistics	3
0541-1105	Probability & Statistics	3
0541-4851	Numerical Analysis	3
0712-1101	Electrical Circuits I	3
0712-1101S	Electrical Circuits I Sessional	1.5
0712-2304	Electronic Circuits I	3
0712-2304S	Electronic Circuits I Sessional	1.5

Interdisciplinary Courses

0223-1207	Islamic Ethics	3
0314-1103	Comparative Social Systems	3
0411-1103	Financial Accounting I	3
0421-4843	Comparative Legal Systems	2
0231-2100	Bengali Language and Literature	2

0312-2209	Bangladesh Studies	2
0321-1114	Communication Skill	3
0311-2308	Comparative Economic Systems	3
0312-1205	Comparative Political Systems	3

Elective Courses**Majors: any 1 Major(13.5 Credits)****Algorithm and Computation**

0613-4735	3	Compiler Construction
0613-4735S	1.5	Compiler Construction Sessional
0611-4736	3	Computer Graphics
0611-4736S	1.5	Computer Graphics Sessional
0613-4855	3	Graph Theory
0613-4855S	1.5	Graph Theory Sessional
0541-4858	3	Theory of Computing

Signals and Systems

0611-4736	3	Computer Graphics
0611-4736S	1.5	Computer Graphics Sessional
0613-4845	3	Artificial Intelligence and Expert Systems
0613-4845S	1.5	Artificial Intelligence and Expert Systems Sessional
0613-4846	3	Simulation, Modeling and Performance Analysis
0613-4846S	1.5	Simulation, Modeling and Performance Analysis Sessional
0613-4872	3	Parallel and Distributed Computing
0613-4872S	1.5	Parallel and Distributed Computing Sessional

Data Science

0613-4845	3	Artificial Intelligence and Expert Systems
0613-4845S	1.5	Artificial Intelligence and Expert Systems Sessional
0613-4873	3	Digital Image Processing
0613-4873S	1.5	Digital Image Processing Sessional
0613-4874	3	Machine Learning
0613-4874S	1.5	Machine Learning Sessional
0613-4875	3	Data Mining
0613-4875S	1.5	Data Mining Sessional

Software Engineering

0613-4743	3	Software Design and Architecture
0613-4743S	1.5	Software Design and Architecture Sessional
0613-4744	3	Software Quality Assurance and Testing
0613-4744S	1.5	Software Quality Assurance and Testing Sessional
0613-4745	3	Software Project Management
0613-4745S	1.5	Software Project Management Sessional

Networking

0612-4842	3	Wireless and Cellular Communications
0612-4842S	1.5	Wireless and Cellular Communications Sessional
0613-4846	3	Simulation, Modeling and Performance Analysis
0613-4846S	1.5	Simulation, Modeling and Performance Analysis Sessional
0612-4848	3	Cryptography and Network Security
0612-4848S	1.5	Cryptography and Network Security Sessional

Hardware Design

0713-4844	3	VLSI Design
0713-4844S	1.5	VLSI Design Sessional
0713-4866	3	Microcontrollers and Embedded Systems
0713-4866S	1.5	Microcontrollers and Embedded Systems Sessional
0713-4867	3	Robotics
0713-4867S	1.5	Robotics Sessional
0713-4844	3	VLSI Design
0713-4844S	1.5	VLSI Design Sessional

Basic Science Elective (13.5 Credit)

0531-1201	3	Chemistry I
0531-1201S	1.5	Chemistry I Sessional
0531-1202	3	Chemistry II
0531-1202S	1.5	Chemistry II Sessional
0533-1207	3	Physics I
0533-1207S	1,5	Physics I Sessional
0533-2302	3	Physics II
0533-2302S	1.5	Physics II Sessional

Intensive English Language Courses**Compulsory: 4 Courses (non-credit)**

0231-1001	Intensive English Language I
0231-1002	Intensive English Language II
0231-1003	Intensive English Language III
0231-1004	Intensive English Language IV