

# B.Sc. in Computer Science and Engineering

Semester 1		18.5 Cr.
Code	Course Title	Credit
CSE0613111	Structured Programming Language	3.0
CSE0613112	Structured Programming Language Lab	1.5
MATH0541111	Differential and Integral Calculus	3.0
CHEM0531175	Engineering Chemistry	3.0
GED0232111	Communicative English	3.0
GED0232112	Communicative English Lab	1.0
PHY0533111	Engineering Physics	3.0
PHY0533112	Engineering Physics Lab	1.0
Semester 2		19.0 Cr.
CSE0613121	Object Oriented Programming Language	3.0
CSE0613122	Object Oriented Programming Language Lab	1.5
CSE0541123	Discrete Mathematics	3.0
EEE0713121	Fundamental of Electrical Engineering	3.0
EEE0713122	Fundamental of Electrical Engineering Lab	1.0
MATH0541121	Ordinary and Partial Differential Equations	3.0
ME0715122	Engineering Drawing	1.0
CSE0613124	Web Application Design Lab	1.5
GED***	General Education (Any one)	2.0
Semester 3		20.0 Cr.
CSE0613211	Data Structures and Algorithms I	3.0
CSE0613212	Data Structures and Algorithms I Lab	1.5
CSE0611215	Digital Logic Design	3.0
CSE0611216	Digital Logic Design Lab	1.0
CSE0612215	Database Management System	3.0
CSE0612216	Database Management System Lab	1.5
MATH0541211	Coordinate Geometry, Linear Algebra and Vector Analysis	3.0
EEE0714211	Electronic Devices and Circuits	3.0
EEE0714212	Electronic Devices and Circuits Lab	1.0
Semester 4		19.0 Cr.
CSE0613221	Data Structures and Algorithms II	3.0
CSE0613222	Data Structures and Algorithms II Lab	1.5
CSE0612223	Data Communication	3.0
CSE0613225	Software Engineering and System Analysis	3.0
CSE0613226	Software Engineering and System Analysis Lab	1.5
CSE0541227	Numerical Methods and Analysis	3.0
MATH0541221	Complex Variables, Fourier Analysis and Laplace Transform	3.0
CSE***	Elective I	1.0
Semester 5		20.5 Cr.
CSE0613311	Artificial Intelligence	3.0
CSE0613312	Artificial Intelligence Lab	1.0
CSE0612313	Computer Networks	3.0
CSE0612314	Computer Networks Lab	1.0
CSE0613316	Software Project Design and Development Lab	1.5
CSE0611317	Computer Architecture	3.0
CSE0611319	Theory of Computation	2.0
MATH0542313	Probability and Statistics	3.0
GED***	General Education (Any one)	2.0
CSE***	Elective I	1.0
Semester 6		20.5 Cr.
CSE0613321	Compiler	3.0
CSE0613322	Compiler Lab	1.0
CSE0611323	Microprocessors, Microcontrollers and Assembly Language	3.0
CSE0611324	Microprocessors, Microcontrollers and Assembly Language Lab	1.0
CSE0612325	Cyber Security	3.0
CSE0612326	Cyber Security Lab	1.0
CSE0611327	Computer Graphics & Multimedia	3.0
CSE0611328	Computer Graphics & Multimedia Lab	1.5
CSE***	Specialization Course 1	3.0
CSE***	Specialization Course 1 Lab	1.0
Semester 7		20.5 Cr.
CSE0611411	Operating Systems	3.0
CSE0611412	Operating Systems Lab	1.0
CSE0613414	Scientific Research & Methodologies Lab	1.0
CSE0611416	Simulation & Modeling Lab	1.0
CSE0613400	Thesis/CAPSTONE Project	4.5
CSE***	Elective II	3.0
CSE***	Elective II Lab	1.0
CSE***	Specialization Course 2	3.0
CSE***	Specialization Course 2 Lab	1.0
GED***	General Education (Any one)	2.0
Semester 8		6.0 Cr.
CSE***	Elective I	1.0
CSE***	Specialization Course 3	3.0
CSE***	Specialization Course 3 Lab	1.0
CSE0613416	Industrial Attachment	1.0
Total		144.0

General Education Courses (Any Four Courses)			
Code	Course Title	T	L
GED0232111	Communicative English	3	1
GED0411311	Financial & Managerial Accounting	2	
GED0311313	Engineering Economics	2	
GED0413321	Industrial and Operation Management	2	
GED0421323	Business Law	2	
GED 0222119	History of Emergence of Bangladesh	2	
GED0222121	Bangladesh Studies: History and Culture	2	
GED0232117	Bangla Language	2	
GED0223421	Professional Ethics and Communication for Engineering	2	

Elective I (Any Three Courses)			
CSE0613204	Advanced Problem-Solving Strategies Lab		1
CSE0613208	Internet Programming Lab		1
CSE0611302	Prototype and User Experience Design Lab		1
CSE0611304	Linux Programming Lab		1
CSE0619492	Technical Writings and Presentation Lab		1
CSE0613494	Software Project Management Lab		1

Elective II (Any One Course)			
Code	Course Title	T	L
CSE0612401	Internet of Things	3.0	1
CSE0612403	Foundation of Data Science	3.0	1
CSE0613405	Mobile Application Development	3.0	1
CSE0613407	Geographical Information Systems & Applications	3.0	1
CSE0619489	Advanced Technology used in Computer Science	3.0	1
CSE0612497	Graph Theory	3.0	1

## Specialization Groups (Any Three Courses)

A student will select a Specialization group. From that group s/he will choose three courses from the selected group.

Intelligent Systems			
Code	Course Title	T	L
CSE0611431	Machine Learning	3.0	1
CSE0611433	Pattern Recognition	3.0	1
CSE0611435	Computer Vision	3.0	1
CSE0611437	Digital Image Processing	3.0	1
CSE0612439	Information Retrieval	3.0	1
CSE0611451	Neural Networks	3.0	1
CSE0611453	Theory of Fuzzy Systems	3.0	1
CSE0612455	Data Mining & Warehouse	3.0	1
CSE0612457	Big Data Analytics	3.0	1
CSE0611459	Bioinformatics & Computational Biology	3.0	1

Software Engineering			
Code	Course Title	T	L
CSE0613441	Software Requirements Specification and Analysis	3.0	1
CSE0613443	Software Project Management	3.0	1
CSE0613445	Software Testing & Quality Assurance	3.0	1
CSE0613447	Software Security and Maintenance	3.0	1
CSE0612449	Enterprise Resource Planning & Content Management System	3.0	1
CSE0612495	Innovation Management and Entrepreneurship	3.0	1
CSE0612451	Software Measurement and Metrics	3.0	1
CSE0612453	Software Architecture and Design	3.0	1

Networks & Security			
Code	Course Title	T	L
CSE0612461	Satellite Communications	3.0	1
CSE0612463	Telecommunication Systems Engineering	3.0	1
CSE0612465	Mobile & Wireless Networks	3.0	1
CSE0612467	Optical Fiber Communications	3.0	1
CSE0612469	Computer Data & Network Security	3.0	1
CSE0612471	Cloud Computing and Distributed System	3.0	1
CSE0612475	Cryptography	3.0	1
CSE0612477	Digital Signal Processing	3.0	1
CSE0612479	Network Operations and Management	3.0	1

Systems and Hardware			
Code	Course Title	T	L
CSE0611473	Real-time Control Systems	3.0	1
CSE0619481	Robotics	3.0	1
CSE0611483	Human Computer Interaction	3.0	1
CSE0611485	Embedded Systems	3.0	1
CSE0619487	VLSI	3.0	1

## UNIVERSITY OF INFORMATION TECHNOLOGY & SCIENCES

Permanent Campus: Holding 153 (Old 190), Road- 05, Baridhara J Block (Near Baridhara Diplomatic Zone), South Nayanagar, Vatara, Dhaka-1212

☎ 09678-008487 📠 01713-487709, 01939-915209, 01914-240649, 01844-043870  
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Govt. & UGC Approved

# UITs

An initiative of PHP Family

University of Information Technology & Sciences

Future will be better than this past

The Department of Computer Science and Engineering (CSE) has been established in 2005. It has a growing, dynamic, research-oriented faculty who take great pride in their longstanding record of excellence in teaching. The department of CSE offers a 4-years program of Bachelor of Science in CSE. It is a 144 credits program requiring about four years to complete the undergraduate objective.

The vision of the department of CSE is to scaffold the next generation engineers and scientists in a student-centered learning environment to reach digital fluency in Computer Science and Engineering. The challenge is to make the students competent, skilled leader in the wake of the ever-changing and challenging global work environment of the 21<sup>st</sup> century.

## Scholarship & Waiver policy

100%

A+ in all subject in SSC & HSC (Conditions apply)  
For the rest 50%

40%

For GPA 10 in SSC & HSC  
For GPA 9.0 in SSC & Diploma

30%

For GPA 9.5 in SSC & HSC  
For GPA 8.5 in SSC & Diploma

20%

For GPA 9.0 in SSC & HSC  
For GPA 8.0 in SSC & Diploma

15%

For GPA 8.5 in SSC & HSC  
For GPA 7.5 in SSC & Diploma

10%

For GPA 8.0 in SSC & HSC  
For GPA 7.0 in SSC & Diploma

75%

For physically challenged students

20%

For Siblings

Up to  
100%  
Scholarships

20%

For Spouses

✔ Sufi Mizanur Rahman Foundation Scholarship Fund  
(For meritorious students suffering from financial hardship)

✔ Hon'ble Chairman/BoT/Vice Chancellor's Scholarship

✔ Ratnagarbha Tahmina Rahman Scholarship Fund  
(Based on semester results)

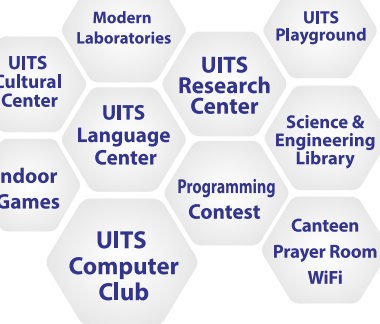
\* Terms and conditions apply

Permanent Campus  
with World Class  
Facilities

Transportation  
Facilities

Quality  
Education  
at  
**Affordable**  
Cost

Full-Time &  
Highly Qualified  
Faculty Members  
with Foreign  
Degrees.



## B.Sc.in CSE

Total 144 Credits | 6 Months Semester

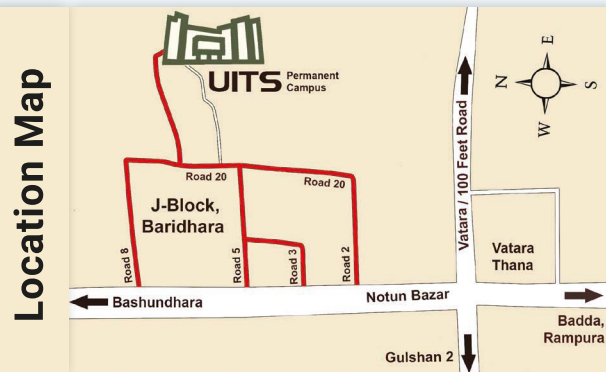
Streams	Theory	Lab
Non-Engineering Skill Courses	9	1
Basic Science and Mathematics	21	2
Core Courses	62	24.5
Elective Courses		
Elective - I		3
Elective - II	3	1
Specialization Courses	9	3
Industrial Attachment		1
CAPSTONE Project		4.5
<b>Total</b>	<b>104</b>	<b>40</b>

### Admission Eligibility

- According to the UGC rules applicants must have at least 2nd Division or GPA 2.5 in Both SSC and HSC (or equivalent). If there is any GPA 2.00 in SSC/HSC (or equivalent) then the total GPA must have to be GPA 6.00.
- For O level & A level, at least for 5 subjects in O level and 2 subjects in A level, the applicants must have GPA 4.00 or B Grade in 4 subjects & GPA 3.5/C Grade on the other 3 subjects.
- For Freedom Fighters children the total GPA may be considered as 5.00 for each applicant.

### Total Cost

Admission Fees (One time)	BDT
Admission form	1,000
Admission Fee	15,000
Student Welfare	200
<b>Other Fees (Per Semester)</b>	<b>6,000</b>
Including Library Fee, Laboratory Fee, Transport Fee and Co-curriculum Fee.	
For HSC/equivalent Student	BDT
Tuition Fees (per credit)	3,500
Total Tuition Fees (144 Credits)	5,04,000
<b>Total Program Cost</b>	<b>5,68,200</b>



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