



FAREAST INTERNATIONAL UNIVERSITY

PROPOSED CURRICULUM AND SYLLABUS FOR BACHELOR OF COMPUTER SCIENCE & ENGINEERING (B.Sc. IN CSE)

**DEGREE TITLE: BACHELOR OF COMPUTER SCIENCE &
ENGINEERING(B.Sc. IN CSE)**

**DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING
FAREAST INTERNATIONAL UNIVERSITY**

HOUSE-87, ROAD-06, BLOCK-C, BANANI, DHAKA

CURRICULAM

INTRODUCTION

Bangladesh is progressing rapidly in technical education for producing technical personnel in the field of Computer, Web site Design and Software & Network Management. To maintain a good quality of education in these fields Fareast International University decided to open the faculty of Computer Science & Engineering. Presently Fareast International University is opening the four years undergraduate (B. Sc. In CSE) program of Computer Science & Engineering department with the aim to provide quality IT education, because the number of institution offering IT education is not sufficient enough for fulfilling the needs and aspiration of the society. We belief that through the quality education of IT will be able to create the appropriate educational atmosphere for the development of IT education in Bangladesh.

FIU FACILITIES

- Experienced and qualified full-time and part-time teaching faculty.
- Provide affordable but high quality education.
- Provide services and resources to promote student learning, retention and academic success.
- Promote economic development through research, collaboration and technological innovation.
- Educate a citizenry capable of living and working effectively in a global environment.
- Tuition waiver based on merit and concession for sibling/spouse.
- Modern web-based central library.
- Evening/holiday classes for diploma holders.
- Fully air-conditioned class room.
- Multimedia teaching facility
- State-of-the-art Computer Lab.
- LAN, High-speed broadband Internet, Wi-Fi campus.
- International standard syllabus.
- Guidance and Counseling services.
- Classrooms with Internet Connection and Multimedia Projector.
- 24 hours Internet Access
- Computer Lab.
- EEE Lab.
- Friendly and exciting campus life.
- Free from politics and session jam.
- Linkage with universities abroad.
- Career guidance with practical& job placement at home and abroad.
- Easy & affordable communication with all sections of metropolitan Dhaka and neighboring areas.

ADMISSION REQUIREMENT:

Students entering the Bachelor of Computer Science & Engineering program for a B. Sc. In CSE degree, must have completed SSC and HSC with Science or equivalent level of education such as O'Level (Five subjects including Physics, Chemistry and Mathematics) and A'Level (with three major subjects -Physics, Chemistry & Mathematics) or Polytechnic Diploma in a related programs (CSE/EEE/CSIT) and must have good grades.

- The students with S.S.C. and H.S.C. background must have at least 2nd Division in both the exams separately.
- The students with S.S.C. and H.S.C. under CGPA system must have at least a minimum CGPA of 2.50 in both the exams separately.
- The students with O-Level and A-Level must have an average grade of B.
- The students with Diploma must have at least a CGP A of 2.50

If an applicant doesn't meet these requirements, she/he will not be accepted for Admission.

COURSE WAIVER:

Considering some of the course content/outline courses under taken during the previous degree/diploma the grade point of waiver.

TRANSFER OF CREDIT HOURS

For transferring the credit hours for a student desires to admit in the department the maximum limit of credit hours considered shall be less than fifty percent of the whole(156 credits). In this case the transferred subjects and grades should be considered after the approval of the advisor and the Equivalent committee.

BASIC STRUCTURE:

The total credit requirement for the degree of Bachelor of Computer Science & Engineering(B.Sc. in CSE) is 156 credits. A regular student should take about 15 credits per semester. Depending on the student's academic standing and the advisor's recommendation a student may take maximum 20 credits and minimum 9 credits for any semester. Considering the even distribution of the credits the length of study for the degree Bachelor of Computer Science & Engineering(B.Sc. in CSE) is recommended to be 4 years (12 semesters).However if any student fails to earn 156 credits in 4 years he/she may allowed 3 years to complete the degree. If any student again fails to complete 7 years he may apply to the Academic council for special permission.

STATUS OF THE STUDENT

The status of a student shall be determine by the cumulative credit hour earn by the student. Following table-2 expresses the status of a student:

Table-1

Cumulative Credit Hour	Registered/ Completed	Status of a Student	Cumulative Credit Hour	Registered/ Completed	Status of a Student
14	Registered	1 year 1 semester	106.5	Completed	3 year 3 semester
14	Completed	1 year 2 semester	120	Completed	4 year 1 semester
27.5	Completed	1 year 3 semester	131.5	Completed	4 year 2 semester
39.5	Completed	2 year 1 semester	142.5	Completed	4 year 3 semester
54	Completed	2 year 2 semester			
67.5	Completed	2 year 3 semester			
81	Completed	3 year 1 semester			
93	Completed	3 year 2 semester			

ACADEMIC CALENDER

According to academic calendar there are three semesters semester 1(Spring), semester 2(Summer), semester 3(Fall) in a year (52 weeks). Semester 1 and semester 3 containing 17 weeks (lecture-14 weeks and jury, exam, checking of scripts, result short vacation etc. 3 weeks) and the semester 2 containing 18 weeks(lecture-12 weeks and jury, exam, checking of scripts, result, long vacation etc. 6 weeks).

Table-3

SEMESTER 1 (Spring)	Lecture Jury, Exam, Checking of Scripts , Result, Vacation	14 weeks , 3 weeks,	Total-17 weeks
SEMESTER2 (Summer)	Lecture Jury, Exam, Checking of Scripts Result, Vacation	12 weeks, 6 weeks,	Total-18 weeks
SEMESTER 3 (Fall)	Lecture Jury, Exam, Checking of Scripts , Result, Vacation	14 weeks 3 weeks,	Total-17 weeks
			Total-52 weeks

COURSE NUMBERING

For expressing the course code (both CSE and non-CSE) of courses 3 digits are used.. The first digit refers the year, the second digit refers the semester and the third digit refers the serial number of the course offered in the department.

ASSESSMENT OF SESSIONAL COURSES

Several projects will be completed in each semester. The class projects will be assessed by the studio teachers. Jury will be arranged for the final project only of each semester.

THESIS PROJECT

The final design project undertaken by students of 4th year 2nd semester in partial fulfillment of the requirement of the Degree of Bachelor of Computer Science & Engineering(B.Sc. in CSE) is termed as Thesis Project. Each student needs to defend his/her thesis project in a Final Jury who will decide the acceptability of the thesis. Also, a student needs to acquire at least 40% of the assigned 12 credits. The thesis/project enables students to fully articulate their concepts and understanding of Computer as a discipline. It provides them the scope to reflect on understanding of the pattern of life, culture, and the sense of history. At the same time the thesis/ projects enable the examiners to assess the maturity, competence and the ability of the students, to handle projects independently.

The student prepares and submits a thesis/project proposal for approval of the department. The Design should reflect a minimum standard of professional competence. The design is supported by a report which draws upon the existing body of knowledge, and rationalizes the parameters and standards of design, and defines the programmers.

Faculty of Engineering
Department of Computer Science & Engineering

Sequence of Courses in Computer & Engineering (CSE) Program

1st Semester

Course name	Pre-Requisite	Credit
Fundamentals of Computer science	None	3
Fundamentals of Computer science Lab	None	1
Fundamental English	None	3
Physics I	None	3
Physics I Lab	None	1.5
Electrical circuit I	None	3
Electrical circuit I Sessional	None	1

Total Credit: 15.50

2nd Semester

Course name	Pre-Requisite	Credit
Structured Programming	None	3
Structured Programming Lab	None	1.5
Analytical Geometry	None	3
Physics II	PHY 1115	3
Physics II Lab	PHY 1116	1.5
Composition and Communications Skills	ENG 1111	3

Total Credit: 15

3rd Semester

Course name	Pre-Requisite	Credit
Object Oriented Programming	CSE 1201	3
Object Oriented Programming Lab	CSE 1202	1.5
Data Structure	CSE 1101	3
Data Structure Lab	CSE 1102	1.5
Calculus I	MATH H 1112	3

Total Credit: 12.00

4th Semester

Course name	Pre-Requisite	Credit
Algorithms	CSE 1303	3
Algorithms Lab	CSE 1304	1.5
Discrete Mathematics	CSE 1101	3
Electronics Circuit I	EEE 1111	3
Electronics Circuit I Sessional	EEE 1112	1
Differential equation I	MAT 1211	3

Total Credit: 14.50

5th Semester

Course name	Pre-Requisite	Credit
Digital Logic Design	CSE 1303	3
Digital Logic Design Lab	CSE 1304	1.5
Mathematical Methods	MATH 2212	3
Operating Systems	2101	3
Operating Systems Lab	2102	1.5

Total Credit: 12.00

6th Semester

Course name	Pre-Requisite	Credit
System Analysis & Design	None	3
System Analysis & Design Lab	None	1.5
Computer Networking	CSE 2201	3
Computer Networking Lab	CSE 2202	1.5
Database Management Systems	CSE 2203	3
Database Management Systems Lab	CSE 2204	1.5

Total Credit: 13.50

7th Semester

Course name	Pre-Requisite	Credit
Software Engineering	CSE 2301	3
Object Oriented Analysis & Design	CSE 1301	3
Object Oriented Analysis & Design Lab	CSE 1302	1.5
Artificial Intelligence	CSE 2101	3
Artificial Intelligence Lab	CSE 2102	1.5

Total Credit: 12.00

8th Semester

Course name	Pre-Requisite	Credit
Data Communication	CSE 2303	3
Neural Network and Fuzzy Logic	CSE 3105	3
Neural Network and Fuzzy Logic Lab	CSE 3106	1.5
Simulation and Modeling	CSE 3101	3
Principles of Accounting	None	3

Total Credit: 13.50

9th Semester

Course name	Pre-Requisite	Credit
Computer Graphics	None	3
Computer Graphics Lab	CSE 1202	1.5
Digital Signal Processing	None	3
Principles of Management	None	3

Total Credit: 10.50

10th Semester

Course name	Pre-Requisite	Credit
Web Programming & E-Commerce	None	3
Web Programming & E-Commerce Lab	None	1.5
Theory of Computing	CSE 1313	3
Microprocessor and Interfacing	None	3
Microprocessor and Interfacing Lab	None	1

Total Credit: 11.50

11th Semester

Course name	Pre-Requisite	Credit
Computer Organization & Architecture	CSE 2201	3
Computer Organization & Architecture Lab	CSE 2202	1.5
VLSI Technology		3
VLSI Technology Lab		1
Distributed System	CSE 2203	3
Cellular Mobile Telecommunication Engineering	CSE 2303	3

Total Credit: 14.50

12th Semester

Course name	Pre-Requisite	Credit
Graph Theory	CSE 4102	3
Image Processing	CSE 3301	3
Image Processing Lab	CSE 3302	1.5
Industrial Internship/Project Work	All	4

Total Credit: 11.50