EAST WEST UNIVERSITY

Undergraduate Catalog 2002-2003

"A meaningful synthesis of eastern culture and values with western thought and innovation"

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EAST WEST UNIVERSITY

Excellence in Education

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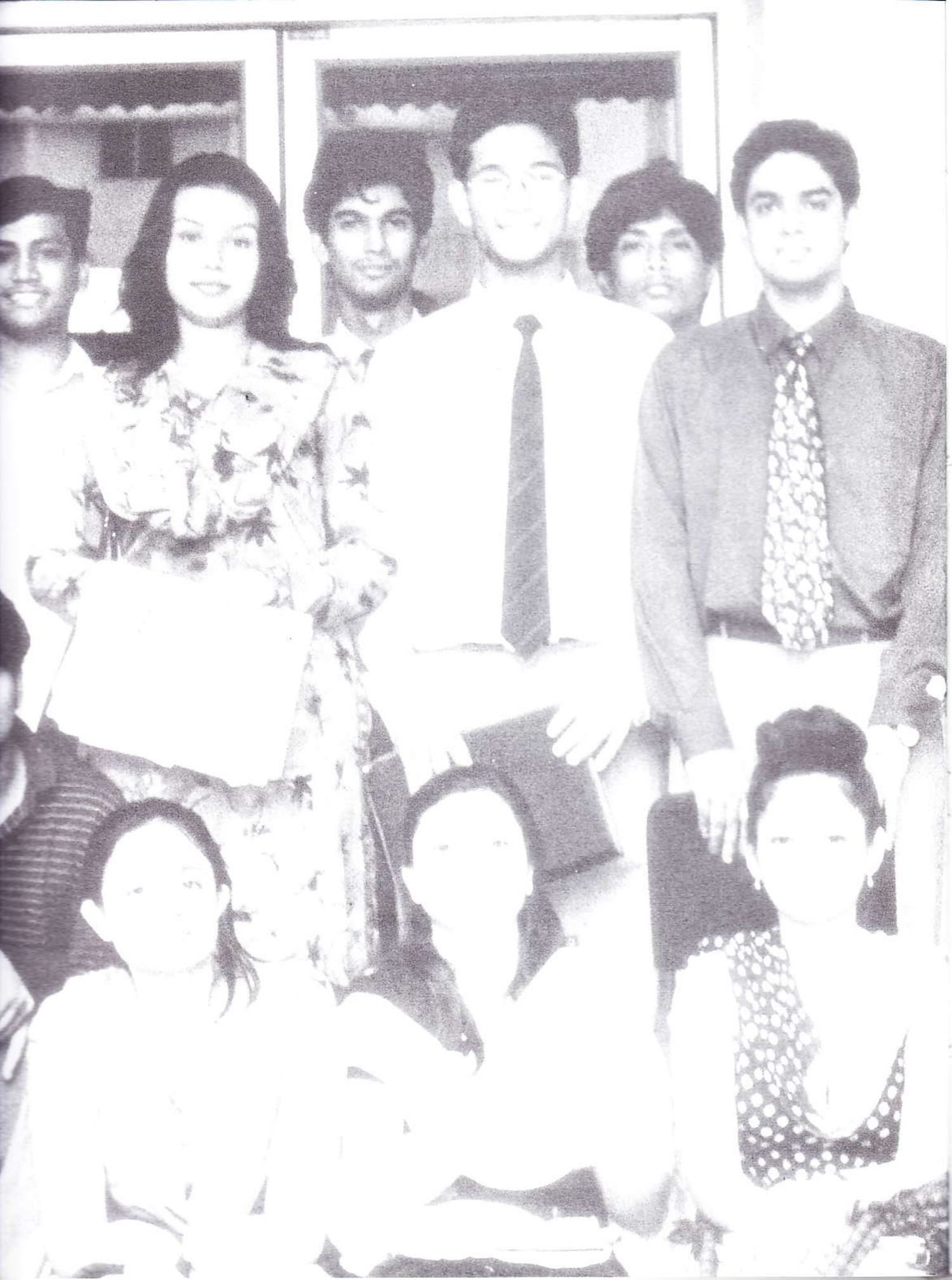

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Mission Statement

In keeping with its name, East West University, rated among the top private universities, endeavors to synthesize eastern culture and values with western thought and innovations. As an institution of higher learning that promotes and inculcates ethical standards, values and norms, East West University (EWU) is committed to the ideals of equal opportunity, transparency, and non-discrimination.

The primary education mission of EWU is to provide, at a reasonable cost, post-secondary education characterized by academic excellence in a range of subjects that are particularly relevant to current and anticipated societal needs. Central to the University's mission is providing students with opportunities, resources and expertise to achieve academic, personal and career goals within a stimulating and supportive environment. EWU is striving not only to maintain high quality in both instruction and research, it is also rendering community service through dissemination of information, organization of training programs and other activities. Sensitive to the needs of its students and staff, EWU is committed to providing a humane, responsive and invigorating atmosphere for productive learning and innovative thinking.

History

The idea of establishing a private university to provide quality education at an affordable cost in Bangladesh was first mooted by a group of prominent academics, business leaders, professionals and education enthusiasts led by Dr. Mohammed Farashuddin. With this end in view, this group formed a non-profit, non-political, charitable organization called **Progoti Foundation for Education and Development (PFED)**. East West University is its first major project. Members of the Board of Directors of East West University are: Mr. Jalaluddin Ahmed, Mr. S.M. Nousher Ali, Mr. Farooque B. Chaudhury, Dr. Rafiqul Huda Chaudhury, Mr. Syed Manzur Elahi, Dr. Mohammed Farashuddin, Mr. Mohammed Zahidul Haque R.Ph., Dr. Saidur Rahman Lasker, Dr. Muhammad A. Mannan, Professor M. Mosleh-Uddin, Mr. Shelley A. Mubdi, Mr. M.A. Mumin, Dr. Khalil Rahman, Mr. H.N. Ashequr Rahman and Mrs. Razia Samad.

After being accorded permission by the Government under the Private University Act (Act 34) of 1992, East West University was launched in 1996. Classes started in September, 1996 with 6 faculty members and 20 students in the present campus of 45, Mohakhali Commercial Area, Dhaka.

Accreditation and Collaboration

East West University has been accredited by the Government of the People's Republic of Bangladesh, and its curricula as well as programs have been approved by the University Grants Commission. The President of the People's Republic of Bangladesh is the Chancellor of EWU. The Vice Chancellor, the Pro-Vice Chancellor, and the Treasurer, are appointees of the President of the country in his capacity as the Chancellor of the University.

East West University has formal collaboration agreements with some leading universities in the USA, among those are:
Pace University (New York)
Suffolk University (Boston)
Southern Illinois University at Carbondale
It has also entered into formal collaboration agreements with a number of other well-known universities in the USA, UK and Australia.

Location

The temporary campus of the university is located at 43 Mohakhali C/A., Dhaka. It consists of 2 (two) six-storied building and two ten-storied buildings. When this is completed EWU will have 89,297 sft. of space in the four adjacent buildings. The campus is situated at the heart of the city and can be easily accessed by all modes of public transportation.

With a view to shifting to its own campus, EWU has purchased 555.75 decimals of land at Mouja Vadham, P.S. Tongi, District – Gazipur. It has also received allotment of 1 (one) bigha of land at Uttara from RAJUK. The plan is to move to its own campus within the time frame provided for in the Private University Act 1992.

From left Dr. Mohammed Farashuddin, Syed Manzur Elahi and H.N. Ashequr Rahman with former President Shahabuddin Ahmed

Degrees Offered

Currently, EWU offers the following four-year Bachelor degrees:

- B.B.A. (Majors in Accounting, Marketing, Finance, Management, International Business, and MIS)
- B.Sc. in Computer Science
- B.Sc. in Computer Science and Engineering
- B.Sc. in Communication & Information Technology
- B.A. in English
- B.S.S. in Economics

In future, four-year Bachelor's degrees will be offered in the following areas :

- Environmental Studies
- Gender Issues
- Health Management
- Law
- Management Information System (MIS)
- Pharmacy
- Population Sciences

EWU has also been successfully running MBA and EMBA programs since 1999. The university is also offering Master degree in Computer Applications (MCA) and MA in English from Fall 2002. English is the medium of instruction and examination for all programs offered by EWU.

Library

East West University library has a collection of over 8000 volumes of books and 30 subscriptions to different journals, magazines and newsletters.

Features:

- Students and faculty members have full access to the library.
- A member of the faculty can borrow related text(s) for a full semester.
- A student can borrow two books at a time for a period of four days.
- Members of the Academic Council enjoy facilities similar to faculty members.
- The Library offers open access to its shelves. Books have a classified shelf arrangement. The library utilizes CDS/ISIS, a software developed by UNESCO, to provide information about the collections of the library.
- Current Awareness Services (CAS) is also provided from time to time to Faculty members and students.
- Currently in the process of automation.

Facts and Figures upto December 2002

Number of Students

Undergraduate	: 1931
Graduate	: 325
Total	: 2256

Number of Faculty Members:

Full-time	: 51
Part-time	: 31
Total	: 82

Number of Officers and Supporting Staff:

Administrative Staff	: 49
Supporting staff	: 37
Total	: 86

Labs and Amenities

EWU provides its student with a clean, spacious and fully air-conditioned campus fitted with modern facilities. All classrooms have overhead projectors for the benefit of both teachers and students. EWU also has four state-of-the-art computer labs, a Digital System Lab and a Physics Lab. In addition, the English Department has a Language Laboratory to facilitate the learning of English.

A Career Counseling Center provides proper guidance to students about their career plans. The center liaisons with prospective employers and arranges internships and part-time jobs for students.

A Software Development Center, catering particularly for the students of the Computer Science and Engineering Department, helps students in software development and in finding on and off campus jobs. A number of leading Multinational Banks, NGOs and Ministry of Bangladesh Government are already using software developed by the students of East West University.

The Medical Center, attended by two full-time doctors, provides health services for everyone in the university.

Recently, Center for Research in Business, Economics and Technology (CERBET) has been set up to facilitate research by faculty members of the university. CERBET is currently doing research work for the World Bank and DFID.

Scholarships

East West University offers merit scholarships and need-based financial assistance to deserving students. Every semester the university distributes at least 5% of its total earnings among 10% or more of its students. This year a total of Tk. 70 lacs have been disbursed as scholarships and financial aid. In order to be able to further support and nurture the middle class merit, particularly from outside the metropolis, the Board of Directors of East West University have set up a fund called "The East West University Medha Lalon Fund" with an initial endowment of Taka one and a half crore.

Co-curricular Activities

In addition to academics, opportunities for other student activities abound. Students participate in different activities the whole year round. The university has a number of clubs to promote various extra-curricular activities.

These include:

The Cultural Club
The Debating Club
The Environmental Society
The Sports Club
The Computer Club
The Photography Club
The English Conversation Club
The Business Club
The MBA Club

EWU Administration

President :	Dr. Mohammed Farashuddin
Treasurer :	Syed Manzur Elahi, M.A. (Economics)
Vice Chancellor :	Syed Manzur Elahi, (Acting)
Pro-Vice Chancellor:	Dr. Syed Ferhat Anwar
Registrar :	Mrs. Firdaus Ali, M.A. (Economics)
Joint Registrar :	Ms. Suraiya Ahmad, M.S. (Education)
Deputy Registrar :	Mr. Sk. Ruhul Amin, B.Com.
Controller of Finance & Accounts :	Mr. Amal Krishna Das, M. Com. A.C.A.
Deputy Librarian :	Mr. Shamsul Alam, M.A. (Library and Information Science)

Dean of Faculties :

Professor Abdul Mannan, M.B.A (Marketing), University of Hawaii, Hawaii, U.S.A.

Chairperson of Departments :

Business Administration :	Mr. S.I. Nusrat A. Chaudhury MS (USSR), MBA (Finance) Keller Graduate School of Management, Chicago, Illinois, U.S.A.
Computer Science & Engineering :	Dr. Md. Mozammel Huq Azad Khan Ph.D. (Computer Science & Engineering,) Bangladesh University of Engineering & Technology.
English :	Dr. Md. Shahidullah Ph.D. (ELT), University of Pune, MA (ELT), Thames Valley University, London DIP TEFL, University of Sydney, Australia
Communication & Information Technology :	Dr. Sultan Ahmad Ph.D. (Demography) Australian National University, Canberra, Australia.
Proctor :	Mr. Kazi Khaled Shams Chisty, MBA Columbia State University, USA.

Admission
Prospective students should obtain an EWU admission form by paying in cash or by sending a bank draft for Taka 300 or US $10 to the Registrar's Office. The student should return the completed application form to the Registrar's Office within the stipulated time. All correspondence and inquiries concerning admission to the University should be addressed to the Registrar's office.

Students seeking admission in EWU must pass an admission test. The date of the test is announced in major daily newspapers. Students are tested on English Language (structure, vocabulary, comprehension and composition) and Basic Mathematics. Those who want to study Computer Science and Engineering and Communication and Information Technology are required to have competence in HSC-level Mathematics, while others are required to have reasonable proficiency in SSC-level Program Mathematics. Those who seek admission in BA (English) program are exempted from the Math Test.

Results of the Admission test are announced within 3 days of the test. A list of successful candidates is posted on the Bulletin Board of the University.

Admission Requirements
Minimum qualifications for admission to undergraduate programs are as follows:

1. At least a second division in SSC and HSC Examinations. or
2. University of London GCE "O" level in five subjects with at least 10 points and "A" Level in two subjects with at least " C" grade or
3. Completed American High School Diploma or equivalent. and
4. Acceptable EWU Admission Test Score.

- Admission Test will be waived for candidates with a minimum score of 1100 in the Scholastic Aptitude Test (SAT) and at least 550 in the Test of English as a foreign language (TOEFL).
- Admission Test will be waived for placeholders of HSC examinations and applicants with 4 As out of 5 "O" level examinations and 2 Bs in "A" level examinations.

Students who have completed a two-year Bachelor's degree from a recognized university can apply for admission into the four-year undergraduate program. However, EWU will consider applications for credit transfer only in cases where previous academic performance meets EWU degree requirements.

Application forms are available for Tk.300 at EWU Accounts Department, 45 Mohakhali, Dhaka 1212. To receive application forms by mail, write to the office of the Registrar along with a bank draft or money order for Tk.300 in favour of East West University. Please print the name and address of the applicant. However, it is preferable to collect application forms personally.

Credit Transfer
Applicants who intend to be admitted into EWU with credit transfer are considered for admission based on the result of the admission test and courses completed at public universities of Bangladesh, North South University, and Independent University of Bangladesh. Credit is generally transferable, provided that course work has been successfully completed and is equivalent to that offered at East West University.

Faculty members evaluate courses already completed according to an established procedure. Courses taken at other institutions may satisfy the core curriculum requirements only if the courses are equivalent to EWU courses approved for the core curriculum and a minimum C grade was earned. Course equivalencies are determined on the basis of contents, prerequisites, writing requirements, and level. Some transfer students may be required to sit for placement examinations to determine eligibility for credit transfer.

Non-Degree Students

Applicants who are currently enrolled in an undergraduate program in a recognized university may apply for admission as non-degree students. Non-degree students may obtain transcripts reflecting credits and grades for the course(s) attended.

Academic Advising

Each student is assigned an academic advisor at the beginning of the academic year who assists the student in defining educational goals to be reached; gives information regarding curricula, and graduate programs; and discusses personal problems the student may have, especially those related to the student's academic progress and plans for subsequent pursuits. Students are expected to schedule appointments with their advisors during pre-registration and at other times throughout the semester as needed.

Students must inform their advisors of any special needs or deficiencies which might affect their academic performance or selection of courses. Students are expected to know academic policies, procedures, and degree requirements, and must remain informed about their progress in meeting these requirements.

Students are encouraged to seek assistance as needed from the advisors and take advantage of student support services provided by the University.

Registration

The Admission Office will notify newly accepted students about the time and place of their registration. Students are responsible for fulfilling all requirements of the degree program in which they have been admitted. They should consult their advisors in planning their course schedules and be familiar with EWU policies and procedures related to registration and graduation requirements for their degrees. **Registration is incomplete until all fees are paid.**

A student can not register after the scheduled date of registration mentioned in the academic calendar except by **special permission of the Dean of Faculties**. To avoid late fees (of taka 500.00) students must register during the scheduled registration period.

Registration for any session of the University is contingent upon eligibility for registration. Thus advance registration, including the payment of tuition and fees, are considered invalid if the student is later declared to be ineligible to register due to scholastic reasons. Detailed information about dates and procedures for advise and registration are shown in each semester's academic calendar of the University **which is available** in the Registrar's Office of EWU.

Students should also be familiar with the following general points about Registration.

1. Registration for a semester is conducted under an academic calendar. Registration starts a week before the start of classes and late registration continues till the second week of classes.

2. Mere attendance does not mean registration in a class, nor will attendance in a class for which a student is not registered be a basis for asking that a program change be approved permitting registration in that class. Students should complete the registration process before classes begin.

3. Enrollment changes to courses can only be made through the processing of an official registration form.

4. After the second week of the semester, the Office of Admissions and Records will process the Official Registration form.

5. Tuition and fees are payable in advance or by installments with prior approval. A student shall not be enrolled or enrollment shall be officially deferred until at least the first installment of tuition and fees have been paid.

6. Students can not drop a course merely by stopping attendance.

7. Students must register for at least 3 (three) courses every semester.

8. Students, who after advising fail to pay their tuition and other fees, will have to pay a fine of 50 percent of the total fees charged for the semester.

Late Registration

A student who seeks to register after the first day of the semester must have the permission of the Dean of Faculties. Those students who are given permission to register late must pay a late registration fee of Tk.500.00

Adding and Dropping Courses

Students who seek to add or drop courses should consult their advisors first. They must also obtain signatures of instructors of relevant courses.

Students may add courses only within the date mentioned in the Academic Calendar, if space is available, with the approval of their academic advisors.

The last day for dropping a course with and without a record entry (i.e. "W") is mentioned in the semester academic calendar.

The instructor may drop students from a course if they fail to attend 80 percent of the scheduled classes. The student must keep the instructors informed regarding absences in classes.

Refund Policy

Applications for withdrawal from the University or from a course after the registration period is over must be made in writing to the Registrar. Merely notifying an instructor will not be sufficient. In cases of authorized withdrawals, and changes in schedule/registration (adds and drops), adjustment of semester tuition and fees will be made as per provisions mentioned in the academic calendar.

No adjustment is authorized for the Admission fee or other assessed fees. Financial assistance will be awarded on the same basis as the adjustment policy.

Withdrawal as a result of serious illness or disabling accident will be subject to review by the University for possible variations from the policy described above. Such events are considered on a case to case basis. No adjustment will be made for a student who is suspended, dismissed, or expelled for breach of discipline.

Tuition and other fees

Fees, presented below, are lower than most of the major private universities of comparable standard in Bangladesh.

The current fee structure is as follows:

1.	Admission Fee (one-time)	Tk. 10,000
2.	Course Fee	Tk. 2,600 per credit hour
3.	Laboratory Fee:	Tk. 1,000 per semester for CSC, CSE and CIT
		Tk. 400 per semester for other departments.
4.	Student Activity Fee	Tk. 200 per semester

Total estimated fees for graduation will be as follows:

Items	BBA	B.Sc.			Liberal Arts	Social Science
		CSC	CSE	CIT	English	Economics
Credits	123	130	143	138	123	123
Admission Fee	10,000	10,000	10,000	10,000	10,000	10,000
Course Fee	3,19,800	3,38,000	3,71,800	3,58,800	3,19,800	3,19,800
Lab Fee	4,800	12,000	12,000	12,000	4,800	4,800
Activity Fee	2,400	2,400	2,400	2,400	2,400	2,400
Total	**3,37,000**	**3,62,400**	**3,96,200**	**3,83,200**	**3,37,000**	**3,37,000**

The University also offers remedial (non-credit) courses in English and Mathematics, for which a fee of Tk. 1200 is charged for one semester only. Passing these remedial courses is a prerequisite for continuing as a student. If a student fails in the remedial courses in the first attempt, he/she will have to pay regular course fees for these courses during subsequent registration.

Students must pay semester fees in full on the day of registration. A late registration fee of Tk. 500.00 is charged from students who register or pay their fees after the regular registration period. Approval to defer payment does not, however, reduce a student's obligation to pay tuition and fees. All dues are expected to be paid before the final examination.

A fee of Tk. 500.00 is charged for official transcript.

A Class in Progress

Merit Scholarship and Financial Aid

According to the provision of the Private University Act, 1992, private universities must provide scholarships to 5 (five) percent of its poor but meritorious students. Since its inception, East West University adopted a policy not to pay any profit or dividend to its sponsor directors but to use a good part of its operating surplus towards nurturing middle class merit. In the last four years, the scholarship and financial aid policy in East West University has evolved as of great encouragement to the meritorious and to the financial income deficient. Benefits have been awarded in the following forms:

1. Merit Scholarships are of two types

(a) A student securing a merit place upto (20th position) in any of the three groups Science, Commerce and Humanities of the immediate past HSC examination conducted by any of the seven boards of the country would be entitled to a full tuition waiver for the next academic year meaning for 30 credits in the next three consecutive semesters. Students with two As or one A plus one B in the most recent 'A' level examination with at least five As in 'O' level without a study break are also entitled to a similar thirty credit full tuition scholarship. With the introduction of the grading system in the HSC examination, A+ students in HSC or two A scorers in 'A' level without any score below B shall be entitled to this type of merit scholarship.

(b) Students securing the top ten percent positions in the immediate past 30 credits in three consecutive semesters at East West University get full tuition waiver scholarship for the next academic year – 30 credits in 3 consecutive semesters.

Effective Spring 2003 two best results in the Admission Test shall be eligible for merit scholarship for year one.

2. Director's Scholarship

Each of the fifteen founder directors of the university shall, at a point of time, award one full tuition waiver scholarship to a student or split this into two for two half tuition waiver scholarships. This is renewable on expiry unless the recipient scholar performs poorly.

3. Financial Aid

(a) **Family Concession**

For a second child of the same parents studying simultaneously at East West University, the second one is entitled a half tuition waiver. The benefit commences on the date of admission of the second child and ceases on the discontinuation of the study of anyone after his/her graduation or for any other reason. This benefit may extend upto the third child of the same parents under the above memtioned conditions.

(b) At the beginning of each semester the university considers, on application in prescribed forms, granting of financial aid to deserving students primarily on need-base consideration but requiring a minimum CGPA. The applicants achieving the minimum prescribed CGPA of 2.50 in the last academic year (10 courses with 30

credits in three consecutive semesters) with demonstrated financial need shall be awarded part of the tuition for the next thirty credits, the actual amount often depends on the number of applicants and availability of funds [5% of tuition revenue net of funds locked for 1(a) and 1(b) but excluding 2]

The following table shows the number of recipients of various scholarship and financial aids in the last four years:

Sl	Particulars	1999		2000		2001		2002	
		No. of Students	Taka	No. of Students	Taka	No. of Students	Taka	No. of Students	Taka
1	Merit Scholarship (EWU Merit List +HSC Place Holders)	20	1,092,000	29	1,262,300	42	1,882,400	50	2,660,650
2	Financial Aid	18	280,200	43	756,600	66	1,551,850	70	1,673,800
3	Half Tuition Waived	17	457,000	33	835,900	47	1,253,200	60	1,543,800
4	Directors Quota	-	-	-	-	4	163,800	16	923,600
5	Special Discount	-	-	-	-	-	-	15	205,100
Total		55	1,829,200	105	2,854,800	159	4,851,250	211	7,006,950
Percentage (%) of Tuition Income		5.00%		5.02%		5.57%		6.02%	

As is evident, the university policy is quite generous in nurturing merit with amounts beyond the 5 percent of tuition income prescribed by the authorities.

It is also worth noting that the university encourages, as a conscious policy, enrolment of mofussil students who are also therefore, beneficiaries of the scholarship and financial aid awards.

4. The Medha Lalon Fund

In order to be able to further the support towards nurturing the middle class merit, particularly from outside the metropolis, the Board of Directors of East West University set up in 2002 a facility called the East West University Medha Lalon Fund with an initial endowment of taka one and a half crore. The Board has already sanctioned an amount of taka one crore from the operating surplus of the university for the year 2002. Five generous persons/organizations have contributed a combined amount of taka twenty-seven and a half lakhs. Some more contributions have been finally committed.

From the annual earnings of the East West University Medha Lalon Fund already deposited in a five year 12 percent per annum Scholarship Deposit Account of Mercantile Bank, need based financial aid would be awarded in the following names:

1	Sujat Ali Mazumder Scholarship	Tk. 35,000 a year
2	Anjuman Ara Begum Scholarship	Tk. 35,000 a year
3	S.M. Sahiruddin Scholarship	Tk. 35,000 a year
4	Rowshan Ara Begum Scholarship	Tk. 35,000 a year
5	Sanuwar Bakht Chaudhury Scholarship	Tk. 35,000 a year
6	Sofia Khatun Scholarship	Tk. 35,000 a year
7	Lutful Bari Md. Munsur Chaudhury Scholarship	Tk. 35,000 a year
8	Shamsunnessa Begum Scholarship	Tk. 35,000 a year

9	Sherifa Chowdhury Scholarship	Tk. 35,000 a year
10	Sherifunnesa Begum Scholarship	Tk. 35,000 a year
11	M. Mahtabuddin Scholarship	Tk. 35,000 a year
12	Chamak Chand Scholarship	Tk. 35,000 a year
13	M. Sujat Ali Scholarship	Tk. 35,000 a year
14	Shakina Khatun Scholarship	Tk. 35,000 a year
15	Mujibur Rahman Lasker Scholarship	Tk. 35,000 a year
16	Khodeza Abu Taher Scholarship	Tk. 35,000 a year
17	Moulvi Muhammad Shamsher Ali Scholarship	Tk. 35,000 a year
18	Momena Khatun Scholarship	Tk. 35,000 a year
19	Hajee Shabuddin Scholarship	Tk. 35,000 a year
20	A.B.M. Ghulam Mohiuddin Scholarship	Tk. 35,000 a year
21	Abu Ahmed Abdul Hafiz Scholarship	Tk. 35,000 a year
22	Syeda Shaher Banu Chaudhurani Scholarship	Tk. 35,000 a year
23	Abdul Kaher Scholarship	Tk. 35,000 a year
24	Habiba Khatun Scholarship	Tk. 35,000 a year
25	Alhajj Abdur Rahman-Begum Walida Rahman Scholarship	Tk. 35,000 a year
26	Justice Nurul Huda-Begum Sufia Huda Scholarship	Tk. 35,000 a year
27	M.A. Haque Scholarship	Tk. 35,000 a year
28	Abdur Rahman Scholarship	Tk. 35,000 a year
29	Abdul Jabbar Scholarship	Tk. 35,000 a year
30	Abdus Samad Scholarship	Tk. 35,000 a year
31.	Dutch Bangla Bank Scholarship	Tk.25,000 a year
32.	Dutch Bangla Bank Scholarship	Tk.25,000 a year
33.	Dutch Bangla Bank Scholarship	Tk.25,000 a year
34.	Suraiya Farashuddin Scholarship	Tk.25,000 a year
35.	Suraiya Farashuddin Scholarship	Tk.25,000 a year
36.	Standard Chartered Bank Scholarship	Tk.25,000 a year
37.	Standard Chartered Bank Scholarship	Tk.25,000 a year
38.	Eakub H. Chowdhury Scholarship	Tk.25,000 a year
39.	Eakub H. Chowdhury Scholarship	Tk.25,000 a year
40.	Mercantile Bank Scholarship	Tk.25,000 a year
41.	Mercantile Bank Scholarship	Tk.25,000 a year

These scholarships are in addition to the usual scholarship/financial aid provided by the university and as described under 1, 2 and 3 above.

The East West University Medha Lalon Fund shall be administered by the Financial Aid Committee of the university. The applications for financial aid at the beginning of each semester shall be processed along with and as per the manner as in 3(b). The recipients will then be ranked in descending order of

need. Higher of the amounts between the Medha Lalon Fund Scholarships or the regular financial aid of the university shall be awarded to the applicants with maximum need. No student of university shall be entitled to benefit from more than one scholarship/financial aid facility at any point of time.

The university shall charge a one percent administration costs on the entire earnings of the East West University Medha Lalon Fund. It shall ensure maintenance of regular accounts of the Medha Lalon Fund and have the same externally audited every year.

The Financial Aid Committee shall keep the donors to the Medha Lalon Fund informed about the operation of the fund on a regular basis. The Committee shall arrange annual meetings of the donors to the East West University Medha Lalon Fund to apprise them of the operating procedure, Scholarship awards and performance of the Scholarship awardees as well as seeking guidance of the donors.

Students at the Digital Lab

Grading and Performance Evaluation

A student may earn five letter grades on the basis of his/her performance in a course. The letter grades A, B, C, and D are considered passing grades. The grade F is the failing grade. The numerical equivalents of the grades are as follows:

Numerical Scores	Letter Grade	Grade Point
97-100	A+	4.00
90 – below 97	A	4.00
87 – below 90	A-	3.70
83 – below 87	B+	3.30
80 – below 83	B	3.00
77 – below 80	B-	2.70
73 – below 77	C+	2.30
70 – below 73	C	2.00
67 – below 70	C-	1.70
63 – below 67	D+	1.30
60 – below 63	D	1.00
below 60	F	0.00
	F* Failure	0.0
	I** Incomplete	0.0
	W** Withdrawal	0.0
	R** Repeat	0.0

* Credits for courses with this grade do not apply towards graduation.

** Credits for courses with these grades do not apply towards graduation and are not used for the calculation of the grade point average.

The exact cut off points for assigning letter grades is at the discretion of individual instructors. The same applies to the assignment of '+' or '–' after a letter grade. This is meant to give more flexibility so that shades of performance can be '+' and '–' distinguished and rewarded with the value of 0.3 grade point by the grades.

Grade Report

Grade reports are recorded and prepared by the Registrar's Office and mailed to guardians soon after the end of each semester. Students are solely responsible for their academic progress and should consult immediately with their academic advisors if their performance is unsatisfactory. Failure to maintain satisfactory progress can lead to the cancellation of financial aid, academic probation, dismissal, or other equally serious consequences.

Grade Point Average (GPA)

A student's grade point average is the numerical value obtained by dividing the total grade points earned by the credits attempted. Only the courses graded A+, A, A-, B+, B, B-, C+, C, C- D+, D, and F are used to determine credits attempted.

In case students repeat courses, GPA and CGPA will be calculated on the basis of the grades obtained at the last attempt of the course(s) only. Grades obtained in course(s) in all examinations will be shown in the grade report.

Moreover, students who complete courses in addition to their normal credit requirements for graduation will inform the Registrar in writing about the courses which s/he intends to declare for consideration towards the requirements for the degree.

Class Equivalence of GPA

EWU students are evaluated on GPA. Comparison of the GPA earned by EWU students to the classes earned by students in other universities in the country is as follows:

GPA 3.00 and above	=	First Class
GPA 2.50 to 2.99	=	Second Class
GPA 2.00 to 2.49	=	Third Class

Incomplete (I)

The "Incomplete" (I) grade may be used in special circumstances. The "Incomplete" may be given only at the end of a semester to a student who has completed all other requirements except appearing at the final examination without further class attendance. The instructor must file with the Registrar an Incomplete Grade Form describing the work to be completed.

The student has the sole responsibility to take the initiative in making up the requirements for the Incomplete as specified by the instructor. If action is not taken within one week of commencement of the next semester, the "I" grade will automatically be converted to "F", otherwise the "I" grade will revert to the tentative final grade (the final grade becomes an "F" if no tentative grade was assigned). In the event where the instructor from whom a student received an incomplete grade is not available, the disposition of the case involving an incomplete grade resides with the Dean of Faculties.

Withdrawal (W)

The grade "Withdrawal" (W) is assigned when a student officially drops a course within the date mentioned in the academic calendar for the semester.

Retake Policy

Students with a grade of "C" and below will be allowed to retake the course only once. In these cases, the better grade of the two attempts will be used to calculate the GPA and CGPA and the other grade will appear as "R" on the grade report.

Students who wish to retake a course must obtain previous written permission of the chairperson of the department concerned. They will have to register for the course again and will be required to pay usual tuition including lab (if applicable) and other fees.

Change of Degree Program

A student who wishes to change his/her major discipline of study has to apply to the Dean of Faculties for permission to do so within the first year (three consecutive semesters) of his/her admission. Once the permission is granted, the student concerned must fulfil the following requirements within six semesters of his/her date of admission. The specific requirements of transfer to a particular major are set out below:

1. **To change to Computer Science and Engineering:**
   The applicant must secure a minimum grade of 'B' in both MAT 101 and CSE 105 within the specified period of time.

2. **To change to Computer Science:**
   The applicant must secure a minimum grade of 'B' in both MAT 101 and CSE 105 within the specified period of time.

3. **To change to BBA:**
   The applicant must secure a minimum grade of 'B' in both BUS 101 and MAT 100 or MAT 110 within the specified period.

4. **To change to English:**
   The applicant must secure a minimum grade of 'B' in both ENG 101 and ENG 102 within the specified period.

5. **To change to Economics:**
   The applicant must secure a minimum grade of 'B' in either MAT 100 or MAT 110 and ECO 101 within the specified period.

6. **To change to CIT:**
   The applicant must secure a minimum grade of 'B' in both MAT 100 and CSE 101 within the specified period.

Alternatively, the applicant may appear in the subsequent admission test and qualify for the department to which (s)he wants to study. For appearing in the subsequent admission test, the applicant must inform the Registrar. A student will be allowed change of department once only.

Semesters: (EWU has 3 semesters in an academic year)

Spring	: January	– April (Fourth Sunday of January)
Summer	: May	– August (Fourth Sunday of May)
Fall	: September	– December (Fourth Sunday of September)

Class Meetings:

Classes are held from Sunday through Thursday. All undergraduate classes meet two times a week for each course. If classes cannot be held due to unavoidable reasons, makeup classes are arranged as follows: classes of Sunday and Tuesday slots are held on Thursday; Sunday and Thursday slots are held on Tuesday; and Tuesday and Thursday slots are held on Sunday; and Monday and Wednesday slots are held on Saturday.

Academic Probation
Student whose CGPA will be between 1 and 2 after the first two semesters will be placed on probation for the next two semesters. If students placed on probation fail to raise their CGPA to at least 2 after the probation period they will face dismissal from the university. If a student's CGPA falls below 2 subsequently, he/she will again be placed on probation.

Academic Dismissal
A student whose CGPA falls below 1 after the first two semesters will be automatically dismissed from the university. Students who fail to raise CGPA to satisfactory levels during the probation period will face dismissal from the university.

Students who fail to pass in remedial courses in two consecutive semesters will also be automatically dismissed from the university.

Once dismissed for scholastic failure, a student is ineligible to enroll in further courses, and re-admission to the University will not also be allowed.

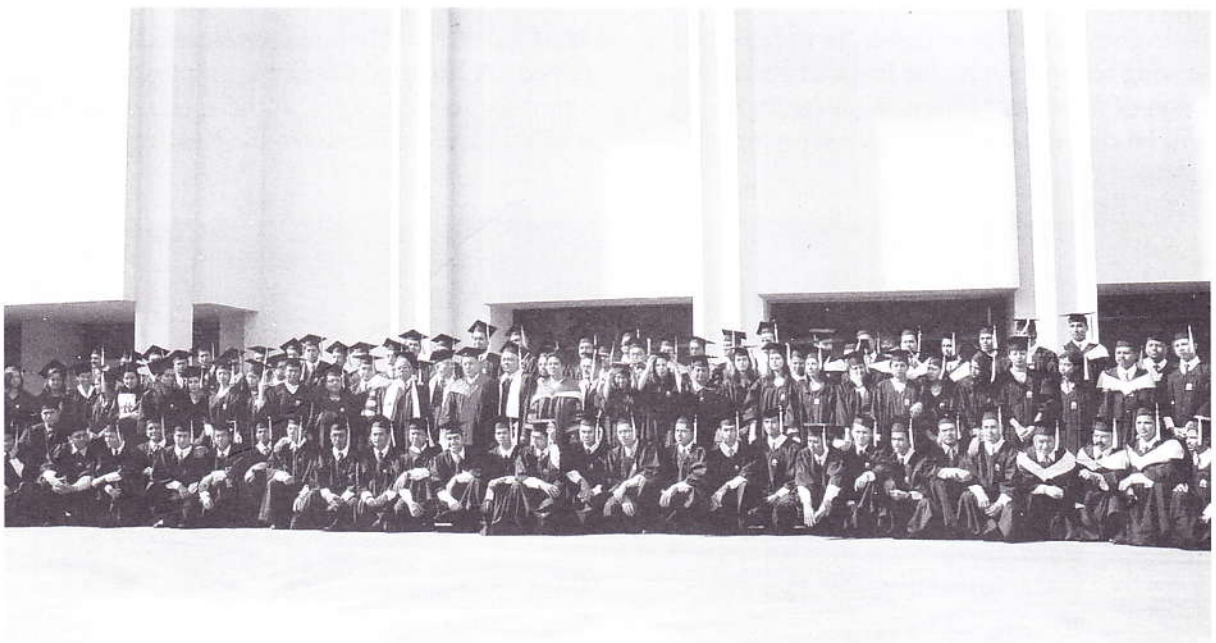
Academic Honesty
There is a policy of zero tolerance on cheating. Any form of cheating such as copying any document or another person's work, seeking or providing help to other students during tests, or adopting any other form of unfairmeans during exams, will constitute grounds for disciplinary action. Instructors are expected to use reasonably practical means of preventing and detecting cheating. Any student found to be cheating will be reported to the Dean of Faculties by the relevant faculty member for disciplinary action.

Leave of Absence
A leave of absence may be granted for upto three semesters to a student in good academic standing (not to those on academic probation or subject to dismissal). A student applying for a leave of absence must give a definite semester for re-registration and must register within three semesters of the date of leaving school. Only one leave of absence can be granted. A leave of absence is granted through the Dean of Faculties office. A student who does not return for re-registration at the specified semester will be classified as "Officially Withdrawn" and must apply for re-admission to the Registrar.

Graduation Requirements for Undergraduate Programs
Meeting the graduation requirements is the student's responsibility. The requirements include:

1. A minimum of 123-143 credits for a bachelor's degree, of which at least half must be earned at EWU in a degree program (residency requirement). Candidates for BA in English, BBA, and BSS in Economics degrees will be required to complete no less than **123** credits, and B.Sc. degree candidates majoring in Computer Science **130** and Computer Science and Engineering **143** credits and those majoring in Communication and Information Technology **139** credits. **Total credit requirement for graduation may change.**
2. Completion of all course requirements for the degree/major.
3. A minimum CGPA of 2 will be required for graduation. The CGPA will be calculated on the basis of grades earned in the last examination of a course, wherever applicable.
4. On completion of all requirements, students must apply to the Registrar stating their intentions that they want to be considered for the award of the Bachelor degree in the relevant discipline.
5. No outstanding financial obligation to EWU.
6. All university properties must have been returned.

Fulfillment of the above conditions does not necessarily mean that a degree will be conferred on the student. The University reserves the right to refuse the awarding of a degree on disciplinary or similar grounds.



The Class of 2002 with former President Professor AQM Badruddoza Chowdhury

Minor Requirements
Undergraduate students are allowed to do a minor. The minor must be from departments other than his/her own. The minimum number of courses to be completed for a minor is 8 (eight). Students intending to do a minor must apply in writing to the Dean of Faculties for permission after completing 50% of courses with a minimum CGPA of 2.50 for his/her base degree. The minimum CGPA must be 2.00 to qualify for a minor.

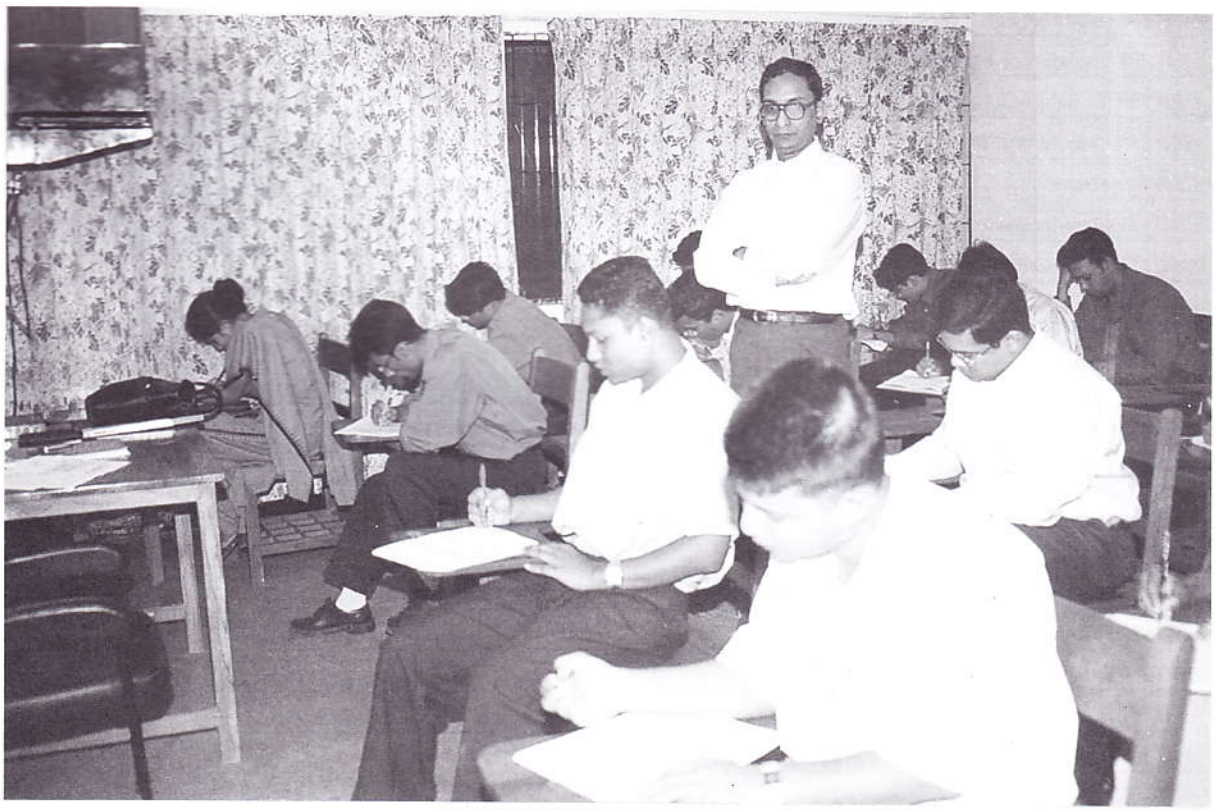
To fulfill minor requirement one should successfully complete the following courses from the area in which s/he intends to do the minor.

Business Administration
Compulsory Courses: ACT 101, MGT 101, MIS 101, MKT 101, ECO 101, and ITB 301 Optional: Any two from the remaining BBA Core and/or Concentration courses.

English
Any eight courses from the Following:
ENG 145, ENG 155, ENG 190, ENG 195, ENG 208, ENG 215, ENG 230, ENG 301 and ENG 345.

Communication and Information Technology
CIT 101, CIT 102, CIT 201, CIT 202, CIT 203, CIT 301, CIT 405, and CIT 406.

Computer Science and Engineering
CSE 105, CSE 107, CSE 205, CSE 207, CSE 245, CSE 275, CSE 301, and CSE 412



Students during an Examination

Bachelor of Arts (BA) in English (ENG)

Minimum Requirement 123 Credits

Course	title	credit	course	Title	credit
General Requirements		**33**	ENG 306	Methodology of Language Teaching	3
Compulsory General Education Courses		**18**	ENG 309	Advanced Reading and Writing	3
BUS 101	Introduction to Business	3	ENG 310	Shakespeare	3
CSE 101	Introduction to Computers I	3	ENG 345	Romantic Poetry	3
ENG 100	Spoken English	3	ENG 420	American Literature (1620-1891)	3
ENG 101	Basic English	3	ENG 438	Literary Criticism	3
ENG 102	Composition and communication skills	3	**Elective Requirements**		**30**
GEN 201	Bangladesh Studies	3	**Students will select ten courses from one of the two concentrations**		
Optional General Education Courses		**15**	**a) Concentration in Literature**		
Choose five courses from			ENG 210	Old and Middle English in Translation	3
CSE 102	Introduction to Computers II	4	ENG 212	Classics in Translation	3
GEN 202	Eastern Culture and Heritage	3	ENG 302	Modern Novels	3
GEN 203	Ecological System and Environment	3	ENG 330	English Prose from Bacon to Lamb	3
GEN 205	Introduction to Psychology	3	ENG 410	Continental Literature	3
GEN 206	Introduction to Sociology	3	ENG 425	American Literature (Modern to Contemporary)	3
GEN 207	Industrial Psychology	3	ENG 430	Cultural Studies	3
GEN 208	Introduction to Philosophy	3	ENG 435	Postcolonial Theory and Literature	3
GEN 209	Social Psychology	3	ENG 440	Literary Theory	3
GEN 210	International Relation	3	ENG 445	Modern Poetry	3
Core Requirements		**60**	ENG 450	Modern Drama	3
ENG 145	Introduction to Linguistics	3	ENG 455	Comparative Literature	3
ENG 151	Advanced Grammar	3	**b) Concentration in Linguistics and ELT**		
ENG 154	English Phonetics and Phonology	3	ENG 204	Concept of ELT	3
ENG 155	Improving Reading and Writing Skills	3	ENG 206	Pragmatics & Discourse Analysis	3
ENG 190	Introduction to Literature	3	ENG 303	Syllabus and Material Design	3
ENG 195	Rhetoric and Prosody	3	ENG 316	English for Specific Purposes	3
ENG 205	History of the English Language	3	ENG 319	Translation Studies	3
ENG 207	Psycholinguistics	3	ENG 335	Teaching Language through Literature.	3
ENG 208	Socio linguistics	3	ENG 412	Techniques of Teaching English Language Skills	3
ENG 215	Seventeenth and Eighteenth Century Poetry	3	ENG 413	Language Testing and Evaluation	3
ENG 220	Victorian Prose and Poetry	3	ENG 414	Research Methodology in ELT	3
ENG 230	Nineteenth Century Novel	3	ENG 415	Language Policy and Planning	3
ENG 301	Elizabethan and Restoration Drama	3	ENG 417	Problems & Prospects of ELT in Bangladesh	3
ENG 305	Linguistic Theories	3	ENG 436	ELT Research Project	3

Bachelor of Business Administration (BBA)

Minimum Requirement 123 Credits

Course	Title	credit
General Requirements		**33**
Compulsory General Education Courses		**24**
BUS 101	Introduction to Business	3
CSE 101	Introduction to Computers I	3
ENG 100	Spoken English	3
ENG 101	Basic English	3
ENG 102	Composition and communication skills	3
GEN 201	Bangladesh Studies	3
MAT 110	Mathematics For Business and Economics I	3
STA 101	Introduction to Statistics	3
Optional General Education Courses		**9**
Choose three courses from		
CSE 102	Introduction to Computers II	4
GEN 202	Eastern Culture and Heritage	3
GEN 203	Ecological System and Environment	3
GEN 204	Western Thought	3
GEN 205	Introduction to Psychology	3
GEN 206	Introduction to Sociology	3
GEN 207	Industrial Psychology	3
GEN 208	Introduction to Philosophy	3
GEN 209	Social Psychology	3
GEN 210	International Relation	3
Core Requirements		**60**
ACT 101	Financial Accounting	3
ACT 201	Management Accounting	3
BUS 231	Business Communication	3
BUS 361	Legal environment of Business	3
ECO 101	Principles of Microeconomics	3
ECO 102	Introduction to Macroeconomics	3
FIN 101	Principles of Finance	3
FIN 201	Business Finance	3
ITB 301	International Business	3
MAT 311	Mathematics for Business and Economics II	3
MGT 101	Principles of Management	3
MGT 251	Organizational Behavior	3
MGT 337	Production Operations Management	3
MGT 409	Human Resources Management	3
MGT 480	Strategic Management	3
MIS 101	Introduction to Management information	3
MIS 305	Enterprise Information System	3
MKT 101	Principles of Marketing	3
MKT 201	Marketing Management	3
STA 327	Statistics For Business And Economics	3
Concentration Requirements		**18**
Students may be allowed to do concentration in two		
a) Concentration in Accounting		
ACT 311	Taxation	3
ACT 411	Intermediate Accounting-I	3
ACT 421	Intermediate Accounting-II	3
ACT 441	Cost Accounting	3
Choose two courses from		
ACT 427	Auditing	3
ACT 430	Accounting Information System	3
ACT 456	Accounting Theory	3
ACT 478	Advanced Accounting	3
b) Concentration in Finance		
FIN 425	Investment Analysis and Management	3
FIN 435	Managerial finance	3
FIN 465	International Financial Management	3
Choose three courses from		
ACT 311	Taxation	3
FIN 335	Financial Institutions and Markets	3

course	Title	credi
FIN 350	Real Estate Finance	3
FIN 380	Management of Commercial Bank	3
FIN 408	Financial Analysis and Control	3
FIN 410	Risk Management and Insurance	3
FIN 450	Cases in Financial Management	3
FIN 475	Option and Future	3
c) Concentration in International Business		
ITB 401	International Operations	3
ITB 428	International Economics	3
ITB 465	International Financial Management	3
Choose three courses from		
ITB 445	International Financial Institution	3
ITB 450	International Business Negotiations	3
ITB 455	Country Risk Analysis	3
ITB 460	International Competitiveness	3
MKT 408	International Marketing	3
d) Concentration in Management		
MGT 402	Management Science	3
MGT 421	Entrepreneurship Development	3
MGT 465	Leadership Management	3
Choose three courses from		
MGT 405	Organizational Development and Change	3
MGT 410	International Labor Management	3
MGT 425	Total Quality Management	3
MGT 437	Small Business Management	3
MGT 448	Managing Globalization	3
e) Concentration in Management Information System		
CSE 105	Structured Programming	4
MIS 402	System Analysis and Design	3
MIS 404	Networking and Operating System	3
MIS 406	Relation Database Management System	3
Choose two courses from		
CSE 107	Object Oriented Programming	4
CSE 301	Database Systems	4
MIS 407	System Integration & Security and Internet	3
MIS 408	Internetworking with TCP/IP & Imple. Exc. Serv.	3
MIS 409	Client/Server Administration	3
MIS 415	Decision Support System	3
MIS 419	E-Commerce and Web Programming	3
f) Concentration in Marketing		
MKT 410	Consumer Behavior	3
MKT 414	Marketing Research	3
Choose four courses from		
MKT 401	Sales Management	3
MKT 405	Promotion Management	3
MKT 408	International Marketing	3
MKT 412	Service Marketing	3
MKT 416	Brand Management	3
MKT 418	Physical Distribution	3
MKT 430	Strategic Marketing	3
Open Electives		**9**
Students must take three 300/400 level courses as open electives to qualify for the BBA degree. Students can choose any 300/400 level course from BA, and/or CSE, and/or CIT, and/or ENG department. Students will not be allowed to take the following two courses as open elective course: CIT 301 (Network Technology) and CIT 403 (Local Area Network). Students must complete relevant prerequisite courses to qualify for enrollment into these open elective courses. Students willing to enroll into open elective courses of other departments must consult with the chairpersons and course instructors concerned.		
Internship/Project Work		**3**
Choose one course from		
BUS 498	Project Work	3
BUS 499	Internship	3

Bachelor of Science (B.Sc.) in Communication and Information Technology (CIT)

Minimum Requirement 138 Credits

Course	Title	credit	course	Title	credit
General Requirements		**30**	CIT 407	Social and Professional Issues in Info. Tech.	3
Compulsory General Education Courses		**24**	CIT 408	Senior Seminar in CIT	3
BUS 101	Introduction to Business	3	CIT 410	Internetworking Protocols and ISP Administration	3
CSE 101	Introduction to Computers I	3	CSE 105	Structured Programming	4
ENG 100	Spoken English	3	CSE 107	Object Oriental Programming	4
ENG 101	Basic English	3	CSE 205	Discrete Mathematics	3
ENG 102	Composition and communication skills	3	CSE 207	Data Structure	4
GEN 201	Bangladesh Studies	3	CSE 245	Algorithms	4
MAT 100	College Mathematics	3	CSE 275	Operating Systems	3
STA 101	Introduction to Statistics	3	CSE 301	Database Systems	4
Optional General Education Courses		**6**	CSE 411	Software Engineering	3
Choose two courses from			MAT 103	Calculus for Information Technology	3
GEN 202	Eastern Culture and Heritage	3	MIS 407	System Integration & Security and Internet	3
GEN 203	Ecological System and Environment	3	**Elective Courses**		**15**
GEN 205	Introduction to Psychology	3	**Choose five courses from**		
GEN 206	Introduction to Sociology	3	CIT 401	Controls of Information	3
GEN 208	Introduction to Philosophy	3	CIT 409	Transmission Systems in Telecommunications	3
GEN 210	International Relation	3	CSE 410	Artificial Intelligence	3
Core Requirements		**90**	CSE 470	Expert Systems	3
CIT 101	Introduction to Communication	3	CSE 480	Web Database Programming	3
CIT 102	Information Technology	3	ECO 101	Principles of Microeconomics	3
CIT 103	Introduction to Telecommunication Systems	3	ECO 102	Introduction to Macroeconomics	3
CIT 104	Electronics for Communication	4	ITB 301	International Business	3
CIT 201	Dynamics of Mass Communication	3	MGT 101	Principles of Management	3
CIT 205	Multimedia and Web Technology	4	MGT 251	Organizational Behavior	3
CIT 301	Network Technology	3	MGT 448	Managing Globalization	3
CIT 302	Wireless and Personal Communications Systems	3	MIS 409	Client/Server Administration	3
CIT 304	Mobile Communication Systems	3	MKT 101	Principles of Marketing	3
CIT 402	Telecommunications Management	3	STA 327	Statistics For Business And Economics	3
CIT 403	Intranet and LAN Technology	4	**Internship/Project Work**		**3**
CIT 404	IT Strategic Planning	3	**Choose one course from**		
CIT405	Web Development and Management	4	CIT 498	Project Work	3
CIT 406	Electronic Commerce	3	CIT 499	Internship	3

Bachelor of Science (B.Sc) in Computer Science (CSC)

Minimum Requirement 130 Credits

Course	Title	Credit	Course	Title	Credit
General Requirements:		**24**	CSE 498	Social and Professional Issues in Computing	3
Compulsory General Education Courses		**15**	MAT 101	Calculus I	3
BUS 101	Introduction to Business	3	MAT 102	Calculus II	3
ENG 100	Spoken English	3	MAT 201	Linear Algebra	3
ENG 101	Basic English	3	STA 101	Introduction to Statistics	3
ENG 102	Composition and Communication skills	3	PHY 101	Physics I	4
GEN 201	Bangladesh Studies	3	PHY 102	Physics II	4
Optional General Education Courses		**9**	**Elective Courses**		**15**
Choose three courses from			**(a) From Computer Science Courses**		
GEN 202	Eastern Culture and Heritage	3	**Choose Three Courses from**		**9**
GEN 203	Ecological System and Environment	3	CSE 401	Information System Analysis and Design	3
GEN 204	Western Thought	3	CSE 413	Automata Theory and Theory of Computations	3
GEN 205	Introduction to Psychology	3	CSE 415	Software Development Project	3
GEN 206	Introduction to Sociology	3	CSE 422	Simulation and Modeling	3
GEN 207	Industrial Psychology	3	CSE 444	Fault Tolerant Computing	3
GEN 208	Introduction to Philosophy	3	CSE 452	Distributed Systems and Algorithms	3
GEN 209	Social Psychology	3	CSE 460	Programming Language Principles	3
GEN 210	International Relation	3	CSE 464	Advanced Database System	3
Core Requirements		**88**	CSE 470	Expert System	3
CSE 105	Structured Programming	4	CSE 474	Pattern Recognition	3
CSE 107	Object Oriented Programming	4	CSE 476	Neural Networks	3
CSE 205	Discrete Mathematics	3	CSE 478	Stochastic Processes	3
CSE 207	Data Structure	4	CSE 480	Web Database Programming	3
CSE 225	Numerical Methods	3	CSE 482	Parallel Computation	3
CSE 245	Algorithms	4	CSE 484	Computational Geometry	3
CSE 252	Basic Electronics	4	**From Non Computer Science/Engineering Courses:**		**6**
CSE 255	Digital Logic Design	4	**(b) Choose Three courses from**		
CSE 275	Operating Systems	3	ACT 101	Financial Accounting	3
CSE 301	Database Systems	4	ECO 101	Principles of Microeconomics	3
CSE 350	Data Communications	3	ECO 102	Introduction to Macroeconomics	3
CSE 360	Computer Architecture	3	FIN 101	Principles of Finance	3
CSE 405	Computer Networks	3	MGT 101	Principles of Management	3
CSE 409	Systems Programming	3	MGT 337	Production Operations Management	3
CSE 410	Artificial Intelligence	3	MIS 101	Introduction to Management information system	3
CSE 411	Software Engineering	3	MKT 101	Principles of Marketing	3
CSE 412	Programming with JAVA	4	MKT 201	Marketing Management	3
CSE 420	Computer Graphics	3	**Internship/Project**		**3**
CSE 430	Compiler Design	3	CSE 499	Internship/Project	3

Bachelor of Science (B.Sc.) in Computer Science and Engineering (CSE)

Minimum Requirement 143 Credits

Course	Title	Credit
General Requirements:		**24**
Compulsory General Education Courses		**15**
BUS 101	Introduction to Business	3
ENG 100	Spoken English	3
ENG 101	Basic English	3
ENG 102	Composition and communication skills	3
GEN 201	Bangladesh Studies	3
Optional General Education Courses		**9**
Choose three courses from		
GEN 202	Eastern Culture and Heritage	3
GEN 203	Ecological System and Environment	3
GEN 204	Western thought	3
GEN 205	Introduction to Psychology	3
GEN 206	Introduction to Sociology	3
GEN 207	Industrial Psychology	3
GEN 208	Introduction to Philosophy	3
GEN 209	Social Psychology	3
GEN 210	International Relation	3
Core Requirements		**101**
CSE 105	Structured Programming	4
CSE 107	Object Oriented Programming	4
CSE 109	Electrical Circuits	4
CSE 205	Discrete Mathematics	3
CSE 207	Data Structure	4
CSE 225	Numerical Methods	3
CSE 245	Algorithms	4
CSE 251	Electronic Devices and Circuits	4
CSE 255	Digital Logic Design	4
CSE 275	Operating Systems	3
CSE 301	Database Systems	4
CSE 350	Data Communications	3
CSE 360	Computer Architecture	3
CSE 370	Electrical Measurement and Instrumentation	4
CSE 380	Digital Electronics	4
CSE 405	Computer Networks	3
CSE 410	Artificial Intelligence	3
CSE 411	Software Engineering	3
CSE 412	Programming with JAVA	4
CSE 430	Compiler Design	3
CSE 442	Microprocessors and Microcomputers	4
CSE 498	Social and Professional Issues in Computing	3
MAT 101	Calculus I	3
MAT 102	Calculus II	3
MAT 201	Linear Algebra	3
MAT 301	Mathematics for Engineers	3
STA 101	Introduction to Statistics	3
PHY 101	Physics I	4
PHY 102	Physics II	4
Elective Courses		**15**
From Computer Science/Engineering Courses:		**9**
Choose three courses from		
CSE 401	Information System Analysis and Design	3
CSE 409	Systems Programming	3
CSE 413	Automata Theory and Theory of Computations	3
CSE 415	Software Development Project	3
CSE 420	Computer Graphics	3
CSE 422	Simulation and Modeling	3
CSE 425	Electrical Technology	3
CSE 432	Digital Signal Processing	3
CSE 434	Digital Image Processing	3
CSE 436	Advanced Computer Architecture	3
CSE 438	Digital Computer Design	3
CSE 444	Fault Tolerant Computing:	3
CSE 452	Distributed Systems and Algorithms	3
CSE 470	Expert Systems	3
CSE 474	Pattern Recognition	3
CSE 476	Neural Networks	3
CSE 478	Stochastic Processes	3
CSE 480	Web Database Programming	3
CSE 482	Parallel Computation	3
CSE 484	Computational Geometry	3
CSE 490	VLSI Design	3
CSE 492	Robotics	3
From Non Computer Science/Engineering Courses:		**6**
Choose two courses from		
ACT 101	Financial Accounting	3
ECO 101	Principles of Microeconomics	3
ECO 102	Introduction to Macroeconomics	3
FIN 101	Principles of Finance	3
MGT 101	Principles of Management	3
MGT 337	Production Operations Management	3
MIS 101	Introduction to Management information system	3
MKT 101	Principles of Marketing	3
MKT 201	Marketing Management	3
Internship/Project		**3**
CSE 499	Internship/Project	3

Bachelor of Social Science (BSS) in Economics (ECO)

Minimum Requirement 123 Credits

Course	Title	credit
General Requirements		**33**
Compulsory General Education Courses		**24**
BUS 101	Introduction to Business	3
CSE 101	Introduction to Computers I	3
ENG 100	Spoken English	3
ENG 101	Basic English	3
ENG 102	Composition and communication skills	3
GEN 201	Bangladesh Studies	3
MAT 110	Mathematics For Business and Economics I	3
STA 101	Introduction to Statistics	3
Optional General Education Courses		**9**
Choose three courses from		
CSE 102	Introduction to Computers II	4
GEN 202	Eastern Culture and Heritage	3
GEN 203	Ecological System and Environment	3
GEN 204	Western thought	3
GEN 205	Introduction to Psychology	3
GEN 206	Introduction to Sociology	3
GEN 207	Industrial Psychology	3
Core Requirements		**60**
ECO 101	Principles of Microeconomics	3
ECO 102	Introduction to Macroeconomics	3
ECO 200	Agricultural Economics	3
ECO 214	Public Sector Economics	3
ECO 260	Environmental & Natural Resource Economics	3
ECO 301	Intermediate Microeconomic Theory	3
ECO 302	Intermediate Macroeconomic Theory	3
ECO 304	Economics of Health	3
ECO 310	Money and Banking:	3
ECO 328	International Trade and Finance.	3
ECO 349	Economics of Development:	3
ECO 360	Socio-Economic Profiles of Bangladesh.	3
ECO 450	Labor Economics	3
ECO 460	Managerial Economics:	3
ECO 465	Basic Econometrics:	3
ECO 475	History of Economic Thought:	3
ECO 480	Urban Economics:	3
ECO 490	Industrial Organization:	3

Course	Title	credit
MAT 201	Linear Algebra	3
MAT 311	Mathematics for Business and Economics II	3
STA 327	Statistics For Business And Economics	3
Concentration Courses		**15**
a) Concentration in Business Economics		
Choose five courses from		
ACT 101	Financial Accounting	3
FIN 425	Investment Analysis and Management	3
FIN 465	International Financial Management	3
ITB 301	International Business	3
MGT 101	Principles of Management	3
MGT 337	Production Operations Management	3
MKT 101	Principles of Marketing	3
MKT 408	International Marketing	3
b) Concentration in Advanced Economic Theory		
Choose five courses from		
ECO 357	Mathematical Economics:	3
ECO 447	Applied Economics	3
ECO 449	Economics of information	3
ECO 467	Advanced Microeconomic Theory:	3
ECO 474	Mathematical Economics II	3
ECO 477	Advanced Macroeconomic Theory:	3
ECO 487	Econometric Methods:	3
MAT 407	Advanced Calculus	3
MAT 470	Real Analysis	3
STA 427	Mathematical Statistics	3
c) Concentration in Trade and Development		
Choose five courses from		
ECO 304	Economics of Health	3
ECO 329	Contemporary Issues in International Economics:	3
ECO 353	Economics of Development in South Asia:	3
ECO 406	International Economic Theory	3
ECO 414	Trade Policy Analysis:	3
ECO 433	Gender & Development:	3
ECO 443	Social Mobilization, Rural Banking and Community Organization	3
FIN 465	International Financial Management	3
Open Electives		**15**
Choose five courses from 300 or 400 levels		

ACT 101: Financial Accounting
Introduction, accounting concept and classified financial statement, Measuring and recording business transaction, Business income and adjusting entries, Completing the accounting cycle, Accouting for merchandising operations, Accounting information systems, Internal control and cash. Accounting for receivables, Inventories, Plant assets, Natural Resources and Intangible assets and accounting principles.
Credits: 3; Prerequisite: BUS 101

ACT 201: Management Accounting
Introduction to management accounting, fundamentals of cost volume analysis and product costing, management reporting and information and decision making, introduction to budgets and standards for planning, control and performance measurement.
Credits: 3; Prerequisite: ACT 101

ACT 311: Taxation
Examines tax entitles, concept of income, deduction of credits, recognition and non-recognition of gains and losses from disposition of property, distributions form and liquidation of the business entity, administration provisions of the tax law, and tax planning.
Credits: 3; Prerequisite: ACT 201

ACT 411: Intermediate Accounting-I
Accounting concepts, principles and theory with an emphasis on the special problems that arise in applying these concepts for external reporting purposes, emphasis on the use of accounting information as a basis for decisions for management, stockholders, creditors, and other users of financial statements and accounting reports.
Credits: 3; Prerequisite: ACT 201

ACT 421: Intermediate Accounting-II
Examines accounting concepts, principles and theory with an emphasis on the special problems that arise in applying concepts of financial accounting for external reporting purposes.
Credits: 3; Prerequisite: ACT 411

ACT 427: Auditing
Surveys the auditing converting issues common to external and internal auditing. Topics included: auditing theory, evidential matter, principles of internal control, sampling, testing and the application of computerized techniques.
Credits: 3; Prerequisite: ACT 421

ACT 430: Accounting Information System
Examines the fundamental of accounting systems design, including system analysis and design techniques, Surveys hardware and software considerations, analyzes accounting applications with fundamental areas of the firm and studies the control of computerized systems in a business environment.
Credits: 3; Prerequisite: ACT 201

ACT 441: Cost Accounting
Use of approaches of cost accounting to enable students to apply costing methods and techniques to assist with special emphasis on standard costs, process costing, joint-product and by-product costing, relevant cost, direct cost, cost-volume-profit relationship and responsibility accounting.
Credits: 3; Prerequisite: ACT 201

ACT 456: Accounting Theory
This course is a study of theoretical framework, elements of financial statements along with their reporting and disclosure with emphasis on recent trends and developments in the agenda and pronouncement of the standard setting bodies (e.g. FASB and IASC). Topics include structure of accounting, their approaches to the formulation of accounting theory, conceptual framework for financial accounting; development of accounting, revenues, expenses, gains, losses, income, assets, liabilities, statement of changes in financial position and their disclosure. Students conduct independent research on financial accounting and reporting issues.
Credits: 3; Prerequisite: ACT 421

ACT 478: Advanced Accounting
A study of detailed knowledge of accounting principles, concepts, techniques to explore more complex accounting problems along with preparing financial reports of organizations for the users explaining the international dimensions of financial accounting and compare different practices. Topics include financial reporting fundamentals, financial reporting and accounting concepts, segment reporting, interim financial reporting, consolidated financial statements with special problems and foreign currency translation.
Credits: 3; Prerequisite: ACT 421

BUS 101: Introduction to Business
This course covers the following topics: business and its importance and need, forms of business ownership, business environment, ethics, international business, fundamentals of management, human resources management, motivation, marketing, financial management and investment, and fundamentals of accounting.
Credits: 3; Prerequisite: None

BUS 231: Business Communication:
Study of communication as a tool of administration and management, practice in writing a wide variety of types and forms of communication, and inclusion of oral and visual with the written to provide and integrate approach.
Credits: 3; Prerequisite: ENG 102

BUS 361: Legal Environment of Business:
An overview of the legal, social and ethical dimensions which influence business with particular attention to the role of law as a control factor of society in the business world .
Credits: 3; Prerequisite: None

BUS 498: Project Work
The coordinating instructor must assign the individual student for a specific topic. The student must submit a proposal at least a semester before he/she actually starts working on this project report.
Credits: 3; Prerequisite: All required courses. Students completing 105 credits may be allowed to enroll in this course with the permission of the chairperson and course instructor.

BUS 499: Internship
This working experience enables students to apply the principles and practices of business in the local setting. This will provide the students with the opportunity to get real life exposure in the contemporary business environment of Bangladesh.
Credits: 3; Prerequisite: All required courses. Students completing 105 credits with a minimum CGPA of 2.5 may be allowed to enroll into this course with the permission of the chairperson and course instructor.

CIT 101: Introduction to Communication
Introduces students to the information age and its significance in our personal and professional lives. Students learn about the process of communication, and explore modern theories relating to the development, functions, and effects of communication. Divided in three parts, the course includes a survey of interpersonal, intra-personal, small-group, verbal, non-verbal, and mass communication; and their audiences and effects from the perspectives of advertising, film, journalism, public relations and radio/television. The concluding part contains discussions on global media issues, concepts, ethics, freedom and controls, and computers/internet/information superhighway in our contemporary society.
Credits: 3; Prerequisite: ENG 102

CIT 102: Information Technology
This course introduces students to an understanding that information is an essential resource for academic excellence, competitiveness in business and industry, scientific progress and national development. After completing the course students are expected to realize that like any other resource, information must also be managed. High quality sources must be located and arrangements must be made for access to timely, accurate, appropriate, and cost-effective information which is not possible without the help of modern cutting edge technology. Students will be skilled in identifying information needs and in accessing, repackaging and presenting information in such a way that it can be utilized in support of the objective of the users.
Credits: 3; Prerequisite: None

CIT 103: Introduction to Telecomunication Systems
The course introduces the students with the electronic communication systems. Description and features of all type of telecommunication system: Telegraph, Telephone, Fax, Wireless communication, Paging, Cellular, Satellite, Microwave, Different types of cable systems, Optical Fiber, Bluetooth, Wireless networking, Internate, Broadband Internate etc. Fundamental concept of signal and noise will be introuced. Requirement of terminal equipment and network equipment will be covered.
Credits: 3; Prerequisite: MAT 103

CIT 104: Electronics for Communication
Fundamental electric concepts and measuring units. D.C. voltage, current, resistance and power. Laws of magnetic fields. Alternating current-instantaneous and R.M.S current, voltage and power, average power for various combinations of R,L, and C circuits, Phasor representation of sinusoidal quantities, Single phase AC circuit analysis. Semiconductors, Junction diode characteristics, Bipolar transistor characteristics, Amplifiers, Different classes of Amplifiers, Darlington pairs, Introduction to oscillators, Filters, Different types of filters, op-amps, Introduction to JFET, MOSFET, NMOS, CMOS, SCR, Triac, Diac, UJT. Lab works based on theory.
Credits: 3+1 = 4; Prerequisite: None

CIT 201: Dynamics of Mass Communication
The course introduces students to an understanding of the forces that make modern mass communications work. It examines the rich history of the media of mass communication, their unique operating procedures, their basic economics and their locations on the information superhighway in the new millenium. Students also study media corollaries like public relations and advertising, and move towards developing issues and concepts that have become increasingly important to us.
Credits: 3; Prerequisite: CIT 101

CIT 205: Multimedia and Web Technology
The course aims at creating foundation knowledge in Multimedia development, and its applicability in the World Wide Web. It covers the fundamental topics of multimedia elements, including text, images, sound, video and animation, in incorporating them into multimedia productions. It introduces hands-on-experience in the use of the latest techniques and professional tools for creating multimedia specifically for the web.
The course also introduces basic concepts of the World Wide Web. The design and creation of web pages using a range of simple tools requiring little programming knowledge are covered. The course will also teach about the tools, applications and techniques of web technology, such as browsers, Telnet and email.
Credits: 3; Prerequisite: CIT 102

CIT 301: Network Technology
Networking is the concept of sharing resources and services. The course is designed to introduce students to the concept of network and network essentials covering areas like networking configurations, models in network computing, network topologies and architectures, network services. A brief idea on network standards on ISO-OSI Model and network programming applications on both Unix and NT network programming applications will be given. Discussion on the principles and techniques of network security and management will include the typical network security applications, such as Pretty Good Privacy (PGP), Simple Network Modeling Protocol v2 (SNMP v2) and Privacy-Enhanced Mail (PEM).
Credits: 3; Prerequisite: CIT 102, CIT 205

CIT 302: Wireless and Personal Communications Systems
This course will help students with overview of wireless and personal communications systems, the market and technology trends and evolution. At the same time, the course will cover basic principles of different kinds of modulation techniques, second and higher generation sellular radio systems; cordless telephone system standards; multiple access system; wireless LAN; medium access control protocols for wireless systems and security and privacy issues for wireless and personal communications systems.
Credits: 3; Prerequisite: CIT 103, CIT 104

CIT 304: Mobile Communication System
This course will describe in details one specific cellular mobile technology. Currenly the GSM system will be described in details. It will include the GSM technology, Frequency and channels in GSM. Radio planning of GSM network, services available from GSM, coding system in GSM, future of GSM system, evolution of Bluetooth & UMTS.
Credits: 3; Prerequisite: CIT 302

CIT 401: Controls of Information
The course attempts to review various rules, regulations, and processes that perennially control the flow of information. The underlying principles of such controls are explained particularly highlighting

how issues have become even more complex in the computer-assisted information age. Besides lectures and discussions, students are encouraged to make presentations based on their own research.
Credits: 3; Prerequisite: CIT 201, CIT302

CIT 402: Telecommunications Management
The course explains the principles of telecommunications network architecture and standards; debate the current status and future directions of telecommunications networks; evaluate the critical planning issues and the options created by new technology; develop a telecommunications network plan and critically analyse the need for culture and social considerations in telecommunications planning.
Credits: 3; Prerequisite: CIT 302

CIT 403: Intranet and LAN Technology
The students will be studying the principles of local area networks, configuration of computer networks, the determination of local area network requirements, standards and procedures, data transmission, transmission media and other local area network techniques. After completion students will have a firm idea about LAN components and different topologies and configurations of LAN. Moreover, the course will stress on understanding about the proper implementation of LAN depending on the expectations of the network system.
Credits: 3; Prerequisite: CIT 301, CSE 275

CIT 404: IT Strategic Planning
This course aims at providing students with an understanding of IT strategic planning in today's global business environment. As most businesses compete in a global environment; a sound IT Strategy is essential to facilitate this. The course will cover key areas of IT strategic planning, background issues in strategic planning, the planning life cycle, the components and management of the strategic plan.
Credits: 3; Prerequisite: CIT 201

CIT 405: Web Page Development and Management
The course will address on how to develop World Wide Web (WWW) and navigate the web. An overview of Hypermedia, Information retrieval, SGML and HTML, elements of web pages, Manipulating text, Use of graphics etc. The structure and genealogy of the Internet will be addressed and a brief idea about Web Page hosting and promotional tools of WWW, Legal and ethical considerations of web-based applications, data security, writing applications for the client end, Communication with server scripts and databases for processing, Issues in platform independent client applications will also be given.
Credits: 3; Prerequisite: CIT 205, CSE 105

CIT 406: Electronic Commerce
The course aims at providing students with an understanding of on-line business in the context of today's global business environment. As most businesses compete in a global environment today, a sound business strategy for on-line business is essential to facilitate this. The course will cover key areas of on-line business, including business to business, business to consumer, internet commerce, EDI, standards, regulation and policy; principles and practices of on-line business security and social and economic issues.
Credits: 3; Prerequisite: CIT 405

CIT 407: Social and professional Issues in Info. Technology
Divided in two parts, the course introduces the students to the laws affecting the mass media and encourages them to explore problem and issues in legal regulation of media content. Ownership, access and accountability. The second part of the course is concerned with the understanding of ethical principles related to the modern media of mass communication. Issues such as truth, honesty, fairness, objectivity and bias, privacy, censorship

and offensive media content are discussed with particular attention to the problems posed by the development of personal computer communication.
Credits: 3; Prerequisite: Senior Standing

CIT 408: Senior Seminar in CIT
Moderated by a team of senior teachers, the course will deal with basic issues, questions, theories and themes central to the multi-disciplinary approach to Communication and Information Technology. The course project will consist of a critique of selected CIT literature and permit students to integrate and synthesize the knowledge they have gained through this multi-disciplinary approach.
Credits: 3; Prerequisite: Senior Standing

CIT 409: Transmission Systems in Telecommunications
This course will provide the students with different kinds of telecommunication transmission systems like: Cable, Microwave, Optical Fiber, Satellite etc. Their basic principles, Requirement, usage will be discussed. Data transmission, multimedia transmission using different kinds of media will be analyzed. Singal processing for digital transmission, Multiplexing and Demultiplexing etc. will be introduced. Capacity of different kinds of Transmission systems will be focused in conjunction with building up information superhighway.
Credits: 3; Prerequisite: CIT 103

CIT 410: Internetworking Protocols and ISP Administration
The course will expand on topics of internetworking protocols covered in previous courses. Practical knowledge will be instilled using laboratory sessions for introducing an example of a current networking protocol, such as TCP/IP. Topics will include network identification, connectivity in heterogeneous environments, fine-tuning and optimizing and server administration.
The course will also provide an introduction to the related applied field of ISP administration. It will cover the various service options made available with the latest advancements in IT. Industry-specific standards will be discussed, particularly those allowed by the local infrastructure. Technology focus will include the various possibilities in the architecture of Information Technology implementation in connecting end users to the Internet backbone. Hardware options, including networking components' specifications, will be discussed. Software and applications topics, such as scripting for server configuration, will also be covered. The course will conclude with a module on the management issues relevant for ISP operation in Bangladesh.
Credits: 3; Prerequisite: CIT 403

CIT 498: Project Work
The coordinating instructor must assign the individual student a specific topic. The student must submit a proposal at least the semester before he/she actually starts working on this project report.
Credits: 3; Prerequisite: All required courses.

CIT 499: Internship
This working experience enables students to apply the principles and practices of communication and information technology in the local setting. This will provide the students with the opportunity to get real life exposure.
Credits: 3; Prerequisite: All required courses. Students completing 105 credits with a mimimum CGPA of 2.5 may be allowed to enroll in this course with the permission of the Chairperson.

CSE 101: Introduction to Computers I
An introduction to the skills, concepts, and capabilities necessary to effectively use information technology, i.e., computers and communication. The skills include standard applications to email,

word processing, and Web search. The concepts include digital representation of information, computer basics and introductory programming. Capabilities include managing complexity, debugging, and dealing unexpected consequences. The course includes lab works based on theory taught.
Credits: 3; Prerequisite: None

CSE 102: Introduction to Computers II
Fundamental of Information Systems, Operating Systems, Programming Languages, Database Systems, Computer Networks, Computer Graphics, HTML/DHTML, Web Design, E-Commerce, Multimedia and other recent development in computing fields. The course includes lab works based on theory taught.
Credits: 3+1=4; Prerequisite: CSE 101

CSE 105: Structured Programming
Introduction to digital Computers. Programming algorithms and flowchart construction. Information representation in digital computers, binary number system, binary arithmetic, binary codes. Writing, debugging and running structured programs using C language: data types, variables, constants, operators and expressions, assignments and type conversion in assignments, control flow, functions and program structure, pointers and arrays, strings, advanced data types, pointer to functions, user defined data types, advanced operators, records, input/output, dynamic variables and linked lists, recursion, and graphics programming. The course includes lab works based on theory taught.
Credits: 3+1=4; Prerequisite: none.

CSE 107: Object Oriented Programming
Concepts of object oriented programming: objects, polymorphism, inheritance. Object oriented programming with C++ language: classes, parameterized constructors, friend functions, multiple inheritance, passing object to functions, arrays of objects, pointer to objects, function and operator overloading, overloading constructor functions, references, inheritance, virtual functions and polymorphism, I/O class library, streams, creating insertors and extractors, formatting I/O, file I/O, dynamic allocation using new and delete, static class members, complex and BCD classes, the message based philosophy. Using C++'s memory model, using VROOMM overlay technology, using command line compiler, compiling multiple file programs. Standard Template Library. Exception handling. Introduction to Java language. The course includes lab works based on theory taught.
Credits: 3+1=4; Prerequisite : CSE 105.

CSE 109: Electrical Circuits
Fundamental electric concepts and measuring units. D. C. voltage, current, resistance and power. Laws of electrical circuits and methods of network analysis. Principles of D. C, measuring apparatus. Laws of magnetic fields and methods of solving simple magnetic circuits. Alternating current – instantaneous and r.m.s current, voltage and power, average power for various combinations of R, L and C circuits, Phasor representation of sinusoidal quantities. Single-phase AC circuit analysis. Introduction to Polyphase circuit analysis. The course includes lab works based on theory taught.
Credits: 3+1=4; Prerequisite: None.

CSE 205: Discrete Mathematics
Mathematical logic: propositional calculus, predicate calculus. Permutations, Combinations and Discrete Probability. Set theory: sets, relations, partial ordered sets, functions. Graph theory: graphs, paths, trees. Recurrence Relations and Recursive Algorithms. Algebraic structures: binary operations, semi groups, groups, permutation groups, rings and fields, lattices.
Credits: 3; Prerequisite: MAT 100.

CSE 207: Data Structure
Data types, abstract data types and data structures. Efficiency of algorithms. Sequential and linked implementation of lists. Linked list and applications. Stacks and Queue and applications. Tree representations and traversals, threaded trees, heaps, binary search tree, AVL tree, B+ tree, digital search tree, Tries. Searching, priority queues, hashing. Graphs, DFS and BFS, shortest path and minimum spanning tree. Garbage collection. Dynamic storage allocation. Internal and external sorting. The course includes lab works based on theory taught.
Credits :3+1=4; Prerequisite :CSE 105, CSE 107.

CSE 225: Numerical Methods
Solution techniques for linear, simultaneous algebraic equations: iterative methods of solution of nonlinear equations, interpolation of curve fitting, numeric integration by interpolative and quadrature methods; numerical solution of ordinary differential equations including initial value eigenvalue problem and boundary value problem, matrices. The course includes lab works based on theory taught.
Credits: 3; Prerequisite: CSE 105, CSE 107.

CSE 245: Algorithms
Techniques for analysis of algorithms. Methods for design of efficient algorithms: divide and conquer, greedy method, dynamic programming, backtracking, branch and bound. Searching and sorting algorithms. Graph algorithms. String manipulation algorithms. Arithmetic algorithms. Number theoretic algorithms. Lower bound theory, NP-hard and NP-complete problems. The course includes lab works based on theory taught.
Credits: 3+1=4; Prerequisite: CSE 105, CSE 107, CSE 207.

CSE 251: Electronic Devices and Circuits
Semiconductors, Junction diode characteristics, Bipolar transistor characteristics, Small-signal low frequency h-parameter model, hybrid pie model. Amplifiers, Darlington pairs. Introduction to oscillators, differential amplifiers. Linear application of op-amp, gain, input and output impedance, offset null adjustment, frequency response and noise. Introduction to JFET, MOSFET, NMOS, and CMOS – biasing and application in switching circuits. SCR, Triac, Diac, UJT: characteristics and applications. Introduction to rectifiers, active filters, regulated power supply, stabilizer and UPS. Basic ideas about IC fabrication technique. The course includes lab works based on theory taught.
Credits : 3+1=4; Prerequisite: CSE 109.

CSE 252: Basic Electronics
Introduction to DC and AC voltage, current and Power, Classification of electrical components: resistors, capacitors and inductors. Ohm law, kirchhoffs Law: KCL, KVL and their limitations. Basic circuit analysis methods: nodal, mesh and modified nodal-analysis. Fundamentals of AC circuits, Transformer, Induction to 3-phase circuit. Semicnductor Materials and PN Junctions, Semiconductor Diodes: Barrier formation in metal-semiconductor junctions, PN homo- and hetero- junction; VI characteristics; Small signal models of diodes; Some Applications of diodes; Special diodes. Bipolar transistor: IV characteristics and small signal models; Transistor biasing; Small signal amplifiers.
Credits: 3+1=4, Prerequisite: None

CSE 255: Digital Logic Design
Review of Binary number system, Boolean algebra, Simplification of Boolean Functions, Logic gates, Combinational Logic, Arithmetic and Comparator Circuits, Encoders and Decoders, Multiplexers and Demultiplexers, Flip-Flops, Sequential Logic, Registers, Counters, Programmable Logic devices. The course includes lab works based on theory taught.
Credits: 3+1=4; Prerequisite: None.

CSE 275: Operating Systems
Principles of operating systems. Process management, memory management, auxiliary storage management and resource allocation. Operating system design and construction techniques. Concurrent programming, operating system kernels, correctness, deadlock, protection, transaction processing, design methodologies, comparative structure of different kinds of operating systems and other topics.
Credits : 3; Prerequisite : CSE 105, CSE 107, CSE 207

CSE 301: Database Systems
Fundamental concepts. System organization and implementation of database systems. Relational, hierarchical and network data models. File organizations and data structures. Query languages, query optimization. Database design. Concurrency control. Security issues evolving distributed database systems. The course includes lab works based on theory taught.
Credits : 3+1=4; Prerequisite : CSE 105, CSE 107.

CSE 350: Data Communications
Principles involved in data communication. Modulation techniques, Pulse Modulation, Pulse amplitude modulation, pulse width modulation, pulse position modulation, pulse code modulation, pulse position modulation, quantization, Delta modulation, TDM, FDM, OOK, FSK, PSK, QPSK. Representation of noises, probability of error for pulse system, concept of channel coding and capacity, asynchronous and synchronous communications. Multiplexers, concentrators and buffers, communication medium, fiber optics.
Credits : 3; Prerequisite : MAT 101, MAT 102, CSE 109, CSE 251.

CSE 360: Computer Architecture
Study of architectural concepts in computer systems. Computer arithmetic and arithmetic logic unit design. Memories, memory hierarchies and dynamic address translation. CPU characteristics, performance factors. Control unit design: hardware and micro-program, microprogramming. Interrupt mechanism. DMA. Pipelining.
Credits : 3; Prerequisite : CSE 255.

CSE 370: Electrical Measurement and Instrumentation
Measurement of resistance, inductance and capacitance. Measurement of conductivity of bulk materials. Cable faults and localization of cable faults. Magnetic measurement, ballistic galvanometers, flux meters. Measurement and separation of iron losses. Illumination measurement. High voltage measurements. Instrumentation amplifiers. Transducers: measurement of strain, pressure, temperature and flow. Measuring instruments: classification. Ammeters, voltmeters and multimeters – extension of instrument ranges. Current and voltage transformers. Measurement of power and energy: wattmeters, watt-hour meters and maximum demand indicators. Measurement of speed, frequency and phase difference. Electronic measuring instruments: Oscilloscope, Digital meters – DMM, VTVM, Q meters. Statistical methods in measurements. The course includes lab works based on theory taught.
Credits: 3+1=4; Prerequisite: CSE 109, CSE 251.

CSE 380: Digital Electronics
Diode logic gates, transistor switches, transistor gates, MOS gates, Logic Families: TTL, ECL, IIL, and CMOS logic with operational details. Propagation delay, product and noise immunity. Open collector and High impedance gates. Electronic circuits for Flip-Flops, counters and register. Memory system, PLAs and PLDs. A/D and D/A converters with applications. S/H circuits. LED. LCD and optically coupled oscillators. Non-linear applications of OP-AMPs. Analog switches. Linear wave shaping: diode wave shaping techniques, clipping and clamping circuits. Comparator circuits,

switching circuits. Pulse transformers, pulse transmission. Pulse generator – monostable, bistable and astable multivibrators. Schmitt trigger. Blocking oscillators and time-base circuits. Timing circuits. Simple voltage sweeps, linear current sweeps. The course includes lab works based on theory taught.
Credits: 3+1=4; Prerequisite: CSE 109, CSE 251, CSE 255.

CSE 401: Information System Analysis and Design
Application Development Policy and Strategies: Planning of Information System, Policy in Information System Development, Strategies for achieving Information System goals. Application System Development Life Cycle: Phases in Application System Development, interrelationship among each phase. Feasibility assessment: problems and needs in Information System Development, preliminary application requirement determination, economic, technical operational and schedule feasibility. Information Requirements Determination: Strategies for obtaining information requirements, techniques for information requirements determination, methods for providing assurance that requirements are correct and complete. Structured System Analysis: Steps in Structured System Analysis, Activity Diagrams and related documentation, data dictionary, problem analysis, structured walk through. System Design Methodology: CheckList Methodology, Process-Oriented Methodology, Application Generator, Structured Design. Program Development and Testing: Structured Programming, Method for Testing.
Credits: 3; Prerequisite: CSE 105, CSE 107, CSE 275, CSE 301.

CSE 405: Computer Networks
Computer network architectures, protocol layers. Transmission media, encoding systems, error detection, multiplexing, switching. Data link, multiple access channel protocols. Network security, privacy. Applications including network management, electronic mail, virtual terminals, URL, HTTP, Multimedia, distributed operating systems. The course includes lab works based on theory taught.
Credits: 3; Prerequisite : CSE 207, CSE 245, CSE 350.

CSE 409: Systems Programming
Differences and similarities in machine organization, central processors. Fundamentals of machine language and addressing. Assembly language programming. Assembler: general design procedure, table processing. Macro language and macroprocessor. Loaders: design of absolute loader and direct link loader. Linkers. Translators.
Credits : 3; Prerequisite : CSE 105, CSE 107.

CSE 410: Artificial Intelligence
Artificial intelligence techniques. Logic: propositional logic, first-order logic, resolution principle. Problem representation: state-space representation, problem-reduction representation. Production system: PS structure, recognition-action cycle, inference directions, blackboard systems, PS implementation. Frame representation: basic structure, inheritance of properties, slot extension, implementation. Relational data model: relational database model, entity and relationship, generalization and aggregation. Search: blind and non-blind searches, depth-first search, breadth-first search, heuristic search, best-first search, optimal search, A search. Implementation complexity. Programming Languages for AI Research: Features of AI programming languages. Major AI programming languages – LISP and PROLOG.
Credits : 3; Prerequisite :CSE 105, CSE 107, CSE 207.

CSE 411: Software Engineering
Software: Its nature and qualities. Software Engineering Principles: Rigor and formality, separation of concerns, modularity, abstraction, Incrementally. The Software Process: Process models, planning, cost estimation and project control, software design. Modularization: structure, representation,

interface and information hiding, design notations. Object-oriented Design: Object paradigm, introduction to a specific object-oriented design technique. Software Specification: Operational specification – semi-formal schemes, asynchronous systems – Petri nets, Descriptive specification – traditional scheme, ER model and logic, introduction to a formal scheme (Z). Software verification, software testing, Software tools and environments.
Credits : 3; Prerequisite : CSE 105, CSE 107, CSE 207, CSE 245, CSE 301.

CSE 412: Programming with JAVA
Java and Internet, Java foundation, Control flow, Abstract classes and packages, Exception Handling, Applets, Web based Java application, Multithreading, Network programming, Graphics, Human-Computer Interactio, Risk and liabilities of Computer based Systems, Future Developments. The course includes lab works based on theory taught.
Credits : 3+1=4; Prerequisite : CSE 105, CSE 107.

CSE 413: Automata Theory and Theory of Computations
Computational models including finite automata, regular expressions, context-free grammars, pushdown automata, Turing machines, and techniques for analyzing them. Languages described by these machines and their properties. Chomsky Hierarchy. Basic computability theory and Church-Turing Thesis. Undecidability, Post correspondence problem. Fundamentals of computational complexity theory. Intractable problem and NP-completeness. Some NP complete problems. Cook's theorem. Approximation algorithms.
Credits : 3; Prerequisite : CSE 207, CSE 245.

CSE 415: Software Development Project
Students will develop large application/database/Internet software(s) with proper documentation as assigned by teacher.
Credits: 3; Prerequisite: CSE 105, CSE 107, CSE 207, CSE 245, CSE 301.

CSE 420: Computer Graphics
Introduction to computer graphics. Graphics I/O devices and types. Graphic software design: Desired functions, Universal Graphic language, display files, Databases for pictorial applications. Graphics Techniques: Point-plotting techniques, Line drawing, Geometric transformations, Windowing and clipping, Raster graphics. Hardware for Computer Graphics: Typical small and large system graphic terminals, Plotters, Graphic Display Processors, Device Independent Graphics Systems. Graphics Software: Simple Graphics Package, Segmented Display Files, Geometric Models, Picture structure. Interactive Graphics: Input techniques, event handling, three-dimensional graphics, curves and surfaces, 3-D transformation. Hidden Surface Problem: Back Face Removal, Hidden-Line removal. Curved Surfaces. The course includes lab works based on theory taught.
Credits : 3; Prerequisite : CSE 105, CSE 107, CSE 207, CSE 245.

CSE 422: Simulation and Modeling
Simulation methods, model building, random number generator, statistical analysis of results, validation and verification techniques. Digital simulation of continuous systems. Simulation and analytical methods for analysis of computer systems and practical problems in business and practice. Introduction to the development of simulation packages.
Credits: 3; Prerequisite: STA 101, CSE 105, CSE 107.

CSE 425: Electrical Technology
Single-phase transformer – equivalent circuits. Three-phase transformers. D.C. generator and motor: operation and characteristics. 3-phase induction motors: types, operations, equivalent circuit,

characteristics, starting. Introduction to 3-phase alternators and synchronous motors. Fractional horsepower motors. The course includes lab works based on theory taught.
Credits : 3; Prerequisite :

CSE 430: Compiler Design
Introduction to Compilers. Lexical analyzer, Regular expression, Non-deterministic finite automata and deterministic finite automata, Context free grammar, Ambiguous grammar, Parsing techniques, Syntax directed translation, type checking. Intermediate code, Symbol table, Data structure for symbol table, Run time storage administration, Error detection and recovery, code optimization, code generation. Use of tools - LEX and YACC. Design of a compiler for a subset of a programming language.
Credits : 3; Prerequisite : CSE 207, CSE 245.

CSE 432: Digital Signal Processing
Discrete time description of signals and systems. Fourier transform of discrete time signals, Discrete Fourier transform. Z-transform. Digital filter structure, Infinite Impulse Response Filter design techniques, Finite Impulse Response Filter design techniques, Finite precision effects, Inverse filtering.
Credits: 3; Prerequisite: MAT 102, MAT 301, CSE 109, CSE 205, CSE 251.

CSE 434: Digital Image Processing
Introduction, Digital Image Fundamentals, Image Transform, Image Enhancement, Image Restoration, Image Compression, Image Segmentation, Representation and Description, Recognition and Interpretation.
Credits: 3; Prerequisite: MAT 301, CSE 420.

CSE 436: Advanced Computer Architecture
Pipelined processor design, Cache memory, Memory system design, Concurrent processors, Vector processors and multiprocessors, Array processors, Parallelism in multiprocessors and Multicomputers, Compute-intensive processors and Multicomputers, Automatic Vectorization, Hypercube systems and Key application, Data flow computation.
Credits: 3; Prerequisite: CSE 275,CSE 355, CSE 360.

CSE 438: Digital Computer Design
Review of MSI logic design, Registers, Counters and Memory units. Register transfer logic, micro-operations, processor logic design, control logic design, micro-Programd control, pipeline and vector processing, computer arithmetic, microcomputer system design: case study.
Credits: 3; Prerequisite: CSE 355, CSE 360.

CSE 442: Microprocessors and Microcomputers
Introduction to different types of microprocessors, Architecture, Instruction Format, Instruction Sets, Opcode, Processor status and Flag registers, Addressing modes, Branching and Looping, Interrupt structures, I/O operation, I/O interfacing, DMA. Programming in Microcomputers. Hardware and Software interfacing in Microcomputer System Design, I/O design and total system design. Microprocessor based system design: Hardware design, building, debugging, testing and linking program modules. Programming EPROM. Multiprocessor configurations: coprocessor configurations, numeric data processor, I/O processors. Advanced Microprogramming: Bit-Slice Microprocessor, Parallelism in Microprocessor. The course includes lab works based on theory thought.
Credits: 3+1=4; Prerequisite: CSE 109, CSE 251, CSE 355, CSE 380.

CSE 444: Fault Tolerant Computing:
Faults and their manifestation, issues, theory, and techniques of reliable systems design, testing, design for testability, self-checking and fail-safe circuits, coding techniques, system-level fault diagnosis, fault-tolerant communication, reliable software design, and evaluation criteria.
Credits : 3; Prerequisite :CSE 255, CSE 360.

CSE 452: Distributed Systems and Algorithms
Formal approaches to distributed computing problems. Topics vary, but typically include models of distributed computing, agreement problems, impossibility results, mutual exclusion protocols, concurrent reading while writing protocols, knowledge analysis of protocols, and distributed algorithms.
Credits : 3; Prerequisite : CSE 245, CSE 275.

CSE 460 : Programming Language Principles
A study of non—imperative programming paradigms such as functional, object-oriented, logic, and constraint programming. Programming language semantics and type theory.
Credits : 3; prerequisite : CSE 301.

CSE 464 : Advance Database System
Introduction to the principles of database management systems. Topics include database system architecture, data models, theory of database, query optimization, concurrency control, crash recovery, and storage strategies.
Credits : 3; prerequisite : CSE 301.

CSE 470: Expert Systems
Basic principles of Expert Systems. Natural Language Processing, Medical diagnostics, Financial design, and Manufacturing planning.
Credits : 3; Prerequisite : CSE 410.

CSE 474: Pattern Recognition
Introduction to pattern recognition. General pattern recognition concepts. Statistical pattern recognition. Supervised learning using parametric and non-parametric approaches. Linear discriminant functions and the discrete and binary feature cases. Unsupervised learning and clustering. Syntactic Pattern Recognition: Syntactic recognition via parsing and other grammars, graphical approach to syntactic pattern recognition, learning via grammatical inference. Neural Pattern Recognition: Neural pattern associators and matrix approaches, unsupervised learning in neural pattern recognition.
Credits : 3; Prerequisite : CSE 410.

CSE 476: Neural Networks
Introduction to neural networks. Neuronal Dynamics: Activation and signals, activation models. Synaptic Dynamics: Unsupervised and supervised learning. Neural network architectures and equlibria.
Credits : 3; Prerequisite : CSE 410.

CSE 478: Stochastic Processes
Probability distribution and expectations, discontinuous probability distributions, continuous probability distributions. Stochastic process. Discrete time Markov chain and continuous time Markov chain. Birth-death process in queuing. Queuing Models.
Credits : 3; Prerequisite : STA 101.

CSE 480: Web Database Programming
Designing an Internet utilizing a range of different technologies. Simplifying the creation and updating web content. Expanding Intranet services by adding client-slide and server-side processing. Interfacing Internet to a database. Querying a database using Cold Fusion.
Credits : 3; Prerequisite : CSE 301, CSE 412.

CSE 482: Parallel Computation
Survey of parallel computing including the processing modes of pipelining, data parallelism, thread parallelism, and task parallelism; algorithmic implications of memory models; shared memory and message passing; hardware implementations; bandwidth and latency; synchronization, consistency, inter-processor communication; programming issues including implicit and explicit parallelism, locality, portability.
Credits : 3; Prerequisite : CSE 245.

CSE 484: Computational Geometry
Problems in computational geometry, worst case complexity of geometric algorithms; expected complexity of geometric algorithms and geometric probability, geometric intersection problems, nearest neighbor searching, point inclusion problems, distance between sets, polygon decomposition, the Voronoi diagram and other planner graph, updating and deleting from geometric structures.
Credits : 3; Prerequisite : CSE 207, CSE 245.

CSE 490: VLSI Design
Introduction to microelectronics and MOS technology, Basic electrical properties and circuit design process of MOS and CMOS circuits, Scaling of MOS circuits, Subsystem design process and layout. Computational elements: Design of an ALU subsystem, Adder, Multipliers, Memory, Registers, and aspects of system timing. Practical aspects of design tools and testability, CMOS design: behavioral description, structural description, physical description and design verification, Introduction to GaAs technology: Ultra-fast VLSI circuits and systems.
Credits: 3; Prerequisite: CSE 109, CSE 251, CSE 255, CSE 380.

CSE 492: Robotics
Robotic manipulation, direct kinematics: the arm equation, inverse kinematics: solving the are equation, workspace analysis and trajectory planning, differential motion and static manipulator dynamics, robot control, task planning.
Credits: 3; Prerequisite: None.

CSE 498: Social and Professional Issues in Computing
History of Computing, Social context of computing, Methods and tools of analysis, Professional and ethical responsibilities, Risks and liabilities of computer-based systems, Intellectual property, Privacy and civil liberties, Computer crime, Economic issues in computing, Philosophical frameworks.
Credits: 3; Prerequisite: None.

CSE 499: Internship/Project
Students will be placed for internship of one semester duration or they will be assigned a project under the supervision of a faculty member. Student must complete the internship/project within one consecutive semesters.
Credits : 3.

ECO 101: Principles of Microeconomics
Introduction to Economic theory . Theory of price: Demand. Theory of price: Supply. Theory of supply: Market Structure & Theory of Distribution . Microeconomic policy in product & factor market.
Credits: 3; Prerequisite: MAT 110 , STA 101

ECO 102: Introduction to Macroeconomics
Macroeconomic is the policy oriented part of economics. Much of our analysis in this endeavor will attempt to reveal how macro- economic variable such national income, unemployment, inflation can be manipulated by government policies. Unlike Microeconomic, hypothesis and results differ substantially in macroeconomic models due to different schools of thought.
Credits: 3; Prerequisite: ECO 101

ECO 200: Agricultural Economics
Introduction of agriculture as an industry; economics of agricultural production, farm management, land economics, rural organization, agricultural credit and finance, agricultural law, agricultural marketing, agrarian reform, agricultural policy, agricultural prices, structure and scope of Bangladesh agricultural sector.
Credits: 3; Prerequisite: ECO 101

ECO 214: Public Sector Economics
The course examines a number of issues in public expenditure theory and taxation. Topics on the expenditure side include the economic rationale for government, provision of public goods, corrective policies to externalities, and cost-benefit analysis. On the taxation side, topics include the question of tax incidence, efficiency effects of taxes and optimal taxation.
Credits: 3; Prerequisite: ECO 101

ECO 260: Environmental & Natural Resource Economics
This course aims at exploring and examining human relationship with environment with special emphasis on Bangladesh. The course surveys the economic, cultural, social, and political aspects of human population dynamics, food resources and hunger, mineral and energy resources, air, land and water pollution, wilderness and wildlife resources, urban and rural land usage, and toxic waste management from environmental and conservation viewpoints. The course makes recommendations and probes possible solutions to contemporary resource and environmental problems of Bangladesh. Current issues important to the environment are stressed in class projects.
Credits: 3; Prerequisite: ECO 101

ECO 301: Intermediate Microeconomic Theory
Theory of choice and its application to consumer and producer behavior, theory of production and cost, output and input markets and their structure, equilibrium and efficiency, introduction to general equilibrium analysis. Special emphasis on perfect & imperfect competetion.
Credits: 3; Prerequisite: ECO 101

ECO 302: Intermediate Macroeconomic Theory
This course introduces the mainstream models in modern macroeconomics-classical models, Keynesian model of consumption and investment analysis; IS-LM models of closed and open economics dealing with unemployment, inflation and interest rates. Analysis of monetary and fiscal policies and their impact on national income, output employment & growth.
Credits: 3; Prerequisite: ECO 102

ECO 304: Economics of Health:
Application of economic concepts and analytical tools to the health service system. Review of empirical studies of demand and supply of health services, behavior of providers in selected developing and developed countries, and relationship of health services to population health levels. Discussion of policy issues relating to financing and resource allocation to the health sector.
Credits: 3; Prerequisite: ECO 101

ECO 310: Money and Banking:
Understanding money, macroeconomic role of money, the role of the banking system in the functioning of monetary policy. Principles of managing commercial banks, efficient loan portfolio management, the history and functions of the central banks.
Credits: 3; Prerequisite: ECO 102, ECO 302

ECO 328: International Trade and Finance.
Review and analysis of international trade models, theories and tools of analysis-classical, neo-classical and alternative theories; international monetary system, its role, importance, structure and future performance; foreign exchange market, balance of payments adjustments.
Credits: 3; Prerequisite: ECO 301 and ECO 302

ECO 329: Contemporary Issues in International Economics:
In depth analysis of selected current issues and policy problems of the international economy including (but not restricted to) the following: new approaches to the theory of international trade, reform of the international monetary systems, role of the General Agreement on Tariffs and Trade and the United Nations Conference on Trade and Development. Problems of stabilization of international commodity markets, and balance of payments problems of Bangladesh and other selected countries.
Credits: 3; Prerequisite: ECO 328 or equivalent

ECO 349: Economics of Development:
Core topics are the nature of underdevelopment, growth theories, dualism, center periphery models & poverty of LDC countries. Process of cumulative causation, population and development, development and environment, foreign assistance, debt, trade are also widely discussed.
Credits: 3; Prerequisite: ECO 101 and ECO 102

ECO 353: Economics of Development in South Asia:
Background and analysis of plans and progress toward economic development in South Asia, their trends in development, economic characteristics of the area and their significance for economic development. Case studies are included on respective countries of South Asia to examine their economic trends & prospects.
Credits: 3; Prerequisite: ECO 101 and ECO 102

ECO 357: Mathematical Economics:
Economic models and equilibrium analysis, linear models and matrix algebra, differentiation and comparative statics, comparative statics of general function models, optimization and equilibrium, exponential and logarithmic functions, multi variable optimization, optimization with equality constraints, economic dynamics and integral calculus.
Credits: 3; Prerequisite: MAT 110, MAT 311

ECO 360: Socio-Economic Profiles of Bangladesh.
It surveys the socioeconomic features and studies of the macroeconomic performance of the economy of Bangladesh within the context of the sociopolitical reality; sectoral development and analysis of the

sectors in a general equilibrium framework; foreign trade and foreign aid; financial institutions and monetary management, fiscal policy, human resource development and the long term performance of Bangladesh economy.
Credits: 3; Prerequisite: ECO 101 and ECO 102

ECO 406: International Economic Theory
This course offers advanced treatment of trade models covered in ECO 328 as well as incorporates new developments in international trade theory. Topics include neo-classical trade theory, industrial-organization based trade models, protection theory, regional integration and economic growth. Special attention on export promotion & import substitution policies of the devoloping economics.
Credits: 3; Prerequisite: ECO 301, ECO 302

ECO 414: Trade Policy Analysis:
Applies the theory of international economics to the problems of policy design for export promotion, import substitution, exchange rate choice and management, foreign indebtedness, capital flow and balance of payments management.
Credits: 3; Prerequisite: ECO 328

ECO 433: Gender & Development:
This course examines gender discrimination & gender equality as it relates to economic development. Topics include: success and failures of NCO activities that directly address women's participation in development, womanization of poverty in under developed countries.
Credits: 3; Prerequisite: ECO 349

ECO 443: Social Mobilization, Rural Banking and Community Organization:
This is aimed at analysing the role of grass root organizations and NGO's in development. Their achievements in activities like micro-credit, education and awareness building is discussed. Field trips are an integral part of this course.
Credits: 3; Prerequisite: ECO 349

ECO 447: Applied Economics:
This course analyses some selected issues in regulation and government intervention and their impacts. Advanced topics of macro & micro economics are included.
Credits: 3; Prerequisite: ECO 301

ECO 449: Economics of information:
Moral hazard, adverse selection in game theoretic models; Individual and social choices under incomplete and imperfect information.
Credits: 3; Prerequisite: ECO 467

ECO 450: Labor Economics:
This course surveys a number of topics in labor economics, including the facts underlying the rising labor participation of women, the effects of legislation such as minimum wages and overtime regulation on wages and employment, the factors that determine wage rates paid to different individuals, and in particular the degree to which observed patterns of wages conform to the predictions of the simple competitive model versus other models of wage determination; the economics of education, discrimination in the labor market, and other selected topics.
Credits: 3; Prerequisite: ECO 301

ECO 460: Managerial Economics:
Scope and nature of managerial optimization, optimization techniques, risk analysis, estimation techniques, demand theory, demand estimation, demand forecasting, production theory and estimation, linear programming, market structure and pricing practice, long run investment decisions, capital budgeting, cost benefit analysis, public sector management.
Credits: 3; Prerequisite: ECO 301

ECO 465: Basic Econometrics:
Main focus is on OLS estimate including: two-variable regression, functional form, multiple regression, rnulticollinearity, heterosecedasticity and autocorrelation, specification errors, dummy variables, lagged variables, identification and systems estimation.
Credits: 3; Prerequisite: STA 327

ECO 467: Advanced Microeconomic Theory:
Advanced treatment of microeconomic concepts. Traditional concepts of theories about production and consumer choice will be discussed with mathematical rigor and special emphasis will be given to market structure, strategic behavior and game theory.
Credits: 3; Prerequisite: ECO 301 and ECO 357

ECO 474: Mathematical Economics II:
Dynamic analysis and its application in economic models : Harrod model, Domar model, Samuelson's multiplier accelerator interaction model. Dynamic Optimization: nature of dynamic optimization. Calculus of variation : Fundamental problem of the calculus of variations-Euler Equation, some special cases & applications of second order conditions, infinite planning horizon, constrained optimization problems, optimal control theory : The mazimum principle, infinite horizon problem, optimal control with constraints
Credits: 3; Prerequisite: MAT 31 1, ECO 301 and ECO 302

ECO 475: History of Economic Thought:
Birth of political economy, laissez faire revolution of Adam Smith, Ricardo to Mill, socialist thought and Marx, neoclassical synthesis ; theory of general equilibrium, welfare economics, Keynesian revolution & Marshall's contribution economic discipline.
Credits: 3; Prerequisite: ECO 101 or ECO 102

ECO 477: Advanced Macroeconomic Theory:
A review of macroeconomic issues, policies and tools. Different schools of macroeconomic thought, long run economic growth, neoclassical and new growth theories. Short run economic fluctuation, modern theories of business cycle, inflation and unemployment. Sectoral analysis, consumption and investment, open economy macroeconomics, macroeconomic issues and problems stemming from Monetarist Counter revolution & Modiglianis life cycle hypothesis.
Credits: 3; Prerequisite: ECO 302, ECO 357

ECO 480: Urban Economics:
Aspects of urban management, location and growth of cities ; system of cities & urban hierarchy, economics of urban management ; management of urban environment ; urban waste management. The structure of the urban government, its fiscal base and linkages with the external sectors : policy issues such as - determination and collection of local taxes, urban enterprise zones, urban land and housing policies, anti-poverty policies and social cost & benefit of externalities.
Credits: 3; Prerequisite: ECO 214

ECO 487: Econometric Methods:
K-variable linear model, OLS Estimators, inference in the OLS model, estimator subject to linear restrictions, dummy variables, multicollinearity, specification error, GLS estimator, heteroskedasticity, autocorrelation maximum likelihood estimators.
Credits: 3; Prerequisite: STA 427, ECO 465

ECO 490: Industrial Organization:
The course revolves around organizational issues such as the structure of markets, theories of ownership, incentives, contracts, coordination using prices, quantities and direction, moral hazard and its organizational consequences, risk sharing and incentive contracts, as well as other property right topics like compensation and motivation within the firm. Additional emphasis will be given on cournot duopoly bertrand model & game theory.
Credits: 3; Prerequisite: ECO 301

ENG 099: Remedial English
This is a Remedial English Program intended for students having difficulties in coping with English as a medium of instruction. The course incorporates components of the basic language skills: Listening, Speaking, Reading and Writing.
Credit: 0; Prerequisite: None

ENG 100: Spoken English
This course is mainly based on speaking. Some listening activities will also be included to stimulate speaking activities. Daily formulaic expression, free conversation and strategies to overcome communicative difficulties, debate, public speaking, formal and informal speaking, questioning techniques, politeness issues, use of social English and euphemistic expressions are the main components.
Credits: 3; Prerequisite: None

ENG 101: Basic English
The course incorporates the following topics: Sentence and the basic components of a sentence, phrases and clauses, Articles, Gerund, Infinitives, Participles, Tenses, Preposition, common errors and how to avoid them, word formation, writing a topic sentence, generating a paragraph, Techniques of paragraph development and reading comprehension with emphasis on scanning skimming, guessing word meaning, understanding long sentences, summarizing etc .
Credits: 3; Prerequisite: ENG 099

ENG 102: Composition and communication skills
The course focuses on generating ideas, drafting, planning, revising, editing and writing further drafts. It covers the following topics: Report writing, Formal letter writing, Summary writing, Generating an essay and Preparing an assignment or a term paper with bibliography, footnotes and appendix.
Credits: 3; Prerequisite: ENG 101

ENG 145: Introduction to Linguistics
The aim of this course is to familiarize students with some basic concepts of Linguistics. The course components are aspects of human language, phonetics & phonology, morphology, syntax, semantics, language & society, language change, brain & language etc.
Credits: 3; Prerequisite: None

ENG 151: Advanced Grammar
The course aims at pointing out differences between the concepts of traditional grammar and modern grammar. It incorporates PS grammar, TG and functional grammar, and covers morphology, problems in defining a word and its class, semantic aspects of modalities and meaning of grammatical categories.
Credits: 3; Prerequisite: ENG 101

ENG 154: English Phonetics and Phonology
The aim of this course is to prepare students to speak English with on acceptable pronunciation and intonation. It includes the description of English consonant and vowel sounds, Phonemic Transcription, Stress Patterns and different functions of intonation.
Credits: 3; Prerequisite: ENG 145

ENG 155: Improving Reading and Writing Skills
This course aims at providing extensive practice in reading and writing skills. It is felt that students need help with extensive, intensive, close and critical reading and with writing coherent and cohesive essays and assignments. The reading component of the course will focus on such aspects as guessing of meaning from context, inferential skills, and interpretative skills, and skills for critical evaluation. The writing part will focus on free writing, organizational skills- using linkers, discourse markers, pronoun referencing, subject-verb agreement, drafting, editing and improving drafts.
Credits: 3; Prerequisite: ENG 102

ENG 190: Introduction to Literature
This course introduces students to different genres/forms of literature, and their different aspects. It will include selections from most of the genres of literature: Prescribed Texts : **Poems**: Andrew Marvell: "To His Coy Mistress"; John Milton: "On His Blindness"; P.B. Shelly: "Ozymandias"; Robert Browning: "Meeting at Night"; Robert Frost: "Stopping by Woods on a Snowy Evening"; **Non-Fiction Prose**: Desmond Morris: Altruistic Behaviour; George Orwell: Politics and the English Language; Short Fiction: The Ant and the Grasshopper; The Invisible Japanese Gentleman; **Novel:** R.K. Narayan: The Guide; **Drama**: J. M. Synge: The Riders to the Sea.
Credits: 3; Prerequisite: None

ENG 195: Rhetoric and Prosody
The course deals with the technicalities of literature. It includes literary terms, figures of speech, rhythm, and metrical patterns and stanza forms among others.
Credits: 3; Prerequisite: None

ENG 204: Concept of ELT
This course introduces students to the nature and scope of English Language Teaching. It covers the theoretical inputs ELT received from Linguistics, Sociology, Psychology and Education for pedagogic and other principles. The course discusses in some detail how ELT derives ideas from Linguistics for defining its content, and from Sociology, Psychology and Education' for deciding about the pedagogic approaches. It outlines the areas ELT covers and discusses the notion of Communicative Competence and, the shifts from 'form' to meaning and skills, and from usage to use in modern language teaching.
Credits: 3; Prerequisite: ENG 145, ENG 207 & ENG 208

ENG 205: History of the English Language
The purpose of this course is to introduce students to the developments in English language. It includes salient features of Old, Middle and Modern English. It also incorporates a comparison

between British and American English, as well as a comparison among some non-native varieties of English such as Indian and African varieties.
Credits: 3; Prerequisite: ENG 145

ENG 206: Pragmatics & Discourse Analysis
This course introduces students to speech act theory, conversational maxims, relevance and implicature, communicative events, modality, cohesion, coherence, frames, presupposition and the pragmatics of politeness, topic change, turn taking, interruptions, conversation structure, clarification, repair, face saving and solidarity. It will also focus on spoken and written discourse analysis, contrastive pragmatics, anthropological perspective and cross-cultural communication. By the end of the course it is expected that students will be able to critically analyze spoken interaction and to evaluate written text with particular reference to context, cohesive ties, topic framework, illocution and inference.
Credits: 3; Pre-requisite: ENG 145 + ENG 154

ENG 207: Psycholinguistics
This course emphasizes on the psychological aspects of language learning. It incorporates Child Language Acquisition, Sound System, Phonology, Syntax, Semantics, Interlanguage Theory, Universal Grammar Theory and Cognitive Theory.
Credits: 3; Prerequisite: ENG 145

ENG 208: Sociolinguistics
The aim of this course is to familiarize students with various aspects of Sociolinguistics. The course includes language varieties and standardization, regional and social dialects, geographical distribution and characteristics of pidgins and creoles, bilingualism, code switching/mixing and sociocultural aspects of multi-lingualism.
Credits: 3; Prerequisite: ENG 145

ENG 210: Old and Middle English in Translation
This course contains epics and poetical pieces written in old and Middle English available in modern English translation. Prescribed Texts : Beowulf; Piers Plowman; Adrian and Bardus; Ceix and Alcelone; Chaucer: Prologue to the Canterbury Tales.
Credits: 3; Prerequisite: ENG 190 + 6 other literature courses

ENG 212: Classics in Translation
The aim of this course is to familiarize students with the ancient classics in the form of Greek and Roman plays and epics in translation. Prescribed Texts: Homer - The Iliad ; Virgil - Aeneid; Aeschylus-Agamemnon; Sophocles - Oedipus Rex ; Euripides- Alcestis ; Aristophanes - Frogs
Credits: 3; Prerequisite: ENG-190 + 4 other literature courses

ENG 215: Seventeenth and Eighteenth Century Poetry
This course includes the major poets of this period. Prescribed Texts: Milton: Paradise Lost Bk. I, Donne: Good Morrow, A Valediction forbidding Mourning, Twickenam Garden, Extasie, Canonization; Dryden : Absalom and Achitophel, Pope: Rape of the Lock, Grey: Elegy Written in a Country Churchyard, Blake: Selectionas from Songs of Innocence and Songs of Experience
Credits: 3; Prerequisite: ENG 190 + ENG 195

ENG 220: Victorian Prose and Poetry
The course seeks to show the changes taking place in society. It consists of novels and poems of the era Writers include Newman, Robert Browning, Tennyson and Mathew Arnold. Prescribed Texts:

Prose: Newman The idea of a University, Chapters V, VI, and VII, Arnold: Culture and Anarchy, Chapters I & II; **Poetry**: Tennyson: " Tithonus"; "The Lady of Shallot"; "Tears, Idle Tears"; "The Lotos Eaters"; Selections from "In Memorium"; Browning: Love Among the Ruins; Fra Lippo Lippi; The Last Ride Together; My Last Duchess; Arnold: Dover Beach; The Scholar Gypsy; Thyrsis
Credits: 3; Prerequisite: ENG 190 + ENG 195 + ENG 345

ENG 230: Nineteenth Century Novel
This course includes the major novelists of the time and their representative works. Prescribed Texts: H. Fielding: Tom Jones; Emile Bronte: Wuthering Heights; Jane Austen : Pride and Prejudice; Charles Dickens : Great Expectations; Thomas Hardy : Tess of the D'Urbervilles
Credits: 3; Prerequisite: ENG 190

ENG 301: Elizabethan and Restoration Drama
Students will not only read plays from the two periods but will gain a perspective on the historical, religious and political background of the ages. Texts will include selections from Thomas Kyd, Christopher Marlowe, William Shakespeare, Ben Jonson, and William Congreve. Prescribed Texts: Thomas Kyd: The Spanish Tragedy; Marlowe: Doctor Faustus; Shakespeare: Twelfth Night; Ben Jonson: The Alchemist; Congrave: The Way of the World
Credits: 3; Prerequisite: ENG 190 + ENG 195

ENG 302: Modern Novels
Students will read a number of English novels of the post World War II era. Writers include D.H. Lawrence, William Golding, George Orwell, Virginia Woolf, James Joyce and Joseph Conrad. Prescribed Texts: D H Lawrence : Sons and Lovers; William Golding: Lord of the Flies; George Orwell: Animal Farm; Virginia Woolf : Mrs. Dalloway; James Joyce: Portrait of the Artist as a Young Man; Joseph Conrad: Heart of Darkness
Credits: 3; Prerequisite: ENG 230

ENG 303: Syllabus and Material Design
The purpose of this course is to introduce students to the different types of syllabus such as grammatical syllabus, structural syllabus, notional-functional syllabus, and communicative syllabus. It introduces some of the fundamental considerations of syllabus design such as needs analysis, setting of goals, defining objectives, deciding about pedagogic approach, selecting, grading and sequencing of items, and recommending testing procedures. The courses also covers the basic considerations in selecting, adopting, and designing materials. Some of the checklists will be consulted for evaluation and a unit of materials will also be evaluated. The course will also include lesson planning and task design.
Credits: 3; Prerequisite: ENG 204 + ENG 306

ENG 305: Linguistic Theories
The course discusses the historical developments of Linguistics as a discipline. The course incorporates theories of Saussure, the descriptivists, the Sapir Whorf hypothesis, Functional Linguistics of Prague School, Noam Chomsky and generative grammar and London school.
Credits: 3; Prerequisite: ENG 145 + ENG 154

ENG 306: Methodology of Language Teaching
The aim of this course is to prepare students as good language teachers by familiarizing them with theoretical and practical aspects of language teaching. The course emphasizes the importance of methodology in language teaching. It critically examines Audiolingual Method, Communicative Method, The Natural Approach, Total Physical Response and Suggestopedia.
Credits: 3; Prerequisite: ENG 145 + 204

ENG 309: Advanced Reading and Writing
Students will be required to study selected literary pieces in order to develop an awareness of the linguistic devices an author employs and the effects they produce. Students will explore different rhetorical modes including narration, description, process, comparison/contrast, classification, cause and effect. The course will also focus on word choice, sentence variety and organization of ideas. Reading will cover such areas as critical reading, finding explicit and implicit relationship between elements of texts, identifying author's attitude and feelings, mood and tone, recognizing bais, interpreting and critically evaluating texts. Writing will focus on style of writing, introducing point of view, using the writer's tone, conventions of referencing and quoting.
Credits: 3; Prerequisite: ENG 155

ENG 310: Shakespeare
The course aims to familiarize students with Shakespeare's craft, technique, use of language and with the rudiments of Shakespearean stage structure through readings of Shakespearean plays and poetry. Texts will include a mixture of Shakespearean tragedy, comedy, history plays, the problem plays and selected sonnets. Prescribed Texts : Macbeth, Othello; Julius Caesar; Twelfth Night; Five Selected Sonnets
Credits: 3; Prerequisite: ENG 301 + at least 8 other courses

ENG 316: English for Specific Purposes
This course aims at introducing students to teaching English for specific purposes such as English for academic purposes, occupational purposes, Engineering, English for business studies etc., so that they can develop themselves as good ESP teachers.
Credits: 3; Prerequisite: ENG 303 + ENG 306

ENG 319: Translation Studies
This course introduces students to the methods and mechanism of translation from vernacular to foreign language or vice versa. This is mostly a practice-based course and so students will be required to choose a book for translation over the semester. A teacher will be closely monitoring their progress and providing guidance. Some relevant reading articles will also be selected for their theoretical grounding so that they can have theoretical knowledge underpinning translation as a skill.
Credits: 3; Pre-requisite: ENG 155 + ENG 309 + at least 5 literature courses

ENG 330: English Prose from Bacon to Lamb
The course consists of prose writings from the Elizabethan age to the Nineteenth Century.It includes selected writings of Bacon, Addison and Steele, Swift, Boswell and Lamb. Prescribed Texts; Bacon: "Of Studies", "Of Great Place", "Of Truth", "Of Friendship"; Addison and Steele: Selections from the Spectators Boswell's Life of Dr. Johnson; Swift: Gulliver's Travels; Charles Lamb: Selections from Essays of Elia.
Credits: 3; Prerequisite: ENG 190

ENG 335: Teaching Language through Literature.
The purpose of this course is to familiarize students with some techniques of using literature for language skills training. The course will discuss some of the ideas both for and against the use of literature in language teaching, and how literature might prove an effective tool for training English listening, speaking, reading and writing skills.
Credits: 3; Prerequisite: ENG 204, +ENG 306

ENG 345: Romantic Poetry
The course includes selections from the Romantic poets. Poets will include Wordsworth, Coleridge, Shelley, Keats and Byron. Prescribed Texts; Wordsworth : "Tintern Abbey"; "Ode on the Intimations of Immortality"; "London 1802"; "The World is too much with Us"; "Three years She Grew in Sun" and Shower"; Coleridge: "The Rime of the Ancient Mariner"; Kubla Khan"; PB Shelly : "Ode to the West Wind", "To a Skylark, Adonais"; Keats: Ode to a Nightingale, : "Ode on a Grecian Urn", "Ode to Autumn", "Ode to Melancholy,On First Looking into Chapman's Homer"; "Byron : Manfred".
Credits: 3; Prerequisite: ENG 215

ENG 410: Continental Literature
The course aims at familiarizing students with some major writers of Continental Literature. It includes works of Flaubert, Tolstory, Bretcht, Pirendello, Baudelaire and Rilke.
Credits: 3; Prerequisite: At least 6 literature courses

ENG 412: Techniques of Teaching English Language Skills
This course aims at familiarizing students with different techniques of teaching listening, speaking, reading and writing skills to help develop their efficiency in teaching English language skills. The course will require students to do practice teaching also.
Credits: 3; Prerequisite: ENG 204 + ENG 207 + ENG 306

ENG 413: Language Testing and Evaluation
This course introduces students to the different types of language tests- placement, diagnostic, proficiency, achievement, norm-referenced and criterion referenced tests. It also discusses some fundamental considerations in language testing such as reliability, validity, (face validity, content validity, construct validity etc.), and administrability. It trains students to evaluate the tests and design reading, writing, speaking and listening tests.
Credits: 3; Prerequisite: ENG 204 + ENG 207 + ENG 306

ENG 414: Research Methodology in ELT
This is an advanced course that aims at introducing students to the approaches and methods of ELT research so that they can understand the problems of English language teaching in Bangladesh and recommend some solutions to those problems. It introduces students to the different areas and different types of ELT research such as qualitative research, quantitative research, experimental research, case studies and action research. It talks about setting a research program, doing literature review, designing research tools which includes tools for questionnaire survey for interviews and classroom observation, data processing and analysis, and presenting the result. It also introduces students to statistical concepts such as central tendency (mean, median, mode), distribution (standard deviation, normal distribution curve etc).
Credits: 3; Prerequisite: ENG 204 +ENG 207 + ENG 303 + ENG 306 & ENG 335

ENG 415: Language Policy and Planning
The purpose of this course is to introduce students to the important issues and considerations in language policy and planning. It considers the nature and function of 'official' languages and the relationships between languages and identity and pluralism – assimilation issues. Students will have to study language policy of some other countries, examine the language policy of Bangladesh and come up with new ideas for planning an effective language policy for Bangladesh.
Credits: 3; Prerequisite: ENG 208

ENG 417: Problems & Prospects of ELT in Bangladesh
This course provides an overview of the present state of ELT in Bangladesh and seeks to help students find out the means to resolve it. It closely examines classroom methodology, curriculum and testing across primary, secondary and higher secondary levels of English teaching and learning. Students will also be made familiar with some ELT projects like PERC, ELTIP and American Peace Corps initiative for the improvement of English language teaching and learning in Bangladesh.
Credits: 3; Prerequisite: ENG 208

ENG 420: American Literature (1620-1891)
The course covers the earliest writings in American literature starting from the colonial period to the 19th century. Writers include Nathaniel Hawthorne, Henry Wadsworth Longfellow, Henry David Thoreau, Henry James, Mark Twain and Whitman. Prescribed Texts: Melville: Billy Budd; M. Twain: Tom Swayer; N. Hawthorne: The Scarlet Letter; H .W. Thoreau: Walden; Whitman: Song of Myself; "When Lilacs Last in the Dooryard Bloomed"; Henry James: Portrait of a Lady.
Credits: 3; Prerequisite: ENG 190 + at least 6 other literature courses

ENG 425: American Literature (Modern to Contemporary)
The course will introduce students to the themes, ideas, and values prevalent in American literature of post World War II to contemporary times. Writers will include Robert Frost, Eugene O'Neill Earnest Hemingway,and Emily Dickinson. Prescribed Texts; Robert Frost: Selected poems from the Norton Anthology; Dickinson: Selected Poems from the Norton Anthology; Eugene O'Neil: Long Day's Journey into Night, Morning becomes Electra; Hemingway: The Sun also Rises
Credits: 3; Prerequisite: ENG 420+ at least 8 other literature courses.

ENG 430: Cultural Studies
The course will deal with writings on cultura from older times to modern cultural studies. Writers include Mathew Arnold, Simon During, Roland Barthes, Stuart Hall, Cornel West and Edward Said.
Credits: 3; Prerequisite: Completion of at least 8 literature courses

ENG 435: Postcolonial Theory and Literature
Students will interrogate the category of postcolonial theory and literature to discern the pitfalls of using such a broad terminology. They will also enquire into the different forms of literature and writing that can be encompased within this category. Theory and Literature texts will include selections from Leela Gandhi, Edward Said, Homi Bhabha, Sara Suleri, Gayatri Spivak, Chandra Mohanty Talpade,Salman Rushdie. Chinua Achebe, R.K. Narayan, Meena Alexander and Bharati Mukherjee.
Credits: 3; Prerequisite: Completion of at least 12 literature courses

ENG 436: ELT Research Project
The purpose of this course is to give some practical training in doing ELT research. Students do a mini research project in any one of the following areas under a teacher's guidance: a) Needs analysis b) Designing a communicative syllabus. c) Evaluating a syllabus d) Evaluating materials and designing materials. e) Evaluating teaching. f) Evaluating tests and designing reading, writing, speaking and listening tests g) Learner's learning style preferences h) Learner's beliefs and expectations.
Credits: 3; Prerequisite: ENG 414

ENG 438: Literary Criticism
This course introduces students to some of the fundamental ideas of literary criticism. It examines the different views about literature. Prescribed Texts; Aristotle: Poetics; Johnson: "Preface to

Shakespeare"; Dryden: "An Essay on Dramatic Poesie"; Wordsworth: "Preface to Lyrical Ballads"; Arnold: The Study of Poetry.
Credits: 3; Prerequisite: Completion of at least 10 literature courses

ENG 440: Literary Theory
The aim of this course is to familiarize students with different literary theories. The course includes selected works of Freud, Cleanth Brooks, E M Forster, M H Abrams, R Barthes, William Wordsworth, Fish, Said, Kora Kaplan and T S Eliot.
Credits: 3; Prerequisite: ENG 438 + 12 other literature courses

ENG 445: Modern Poetry
Students will deal with the complexities of modernism and related issues. Poets include T S Eliot, W.B. Yeats,Ted Hughes, Sylvia Plath, Dylan Thomas and W.H. Auden. Prescribed Texts; W. B. Yeats: "Sailing to Byzantium"; "Wild Swan at the Coole"; "The Second Coming"; "An Irish Seaman foresees his death"; "Easter 1916". T.S.Eliot: "Love Song of J.Alfred Prufrock"; Portrait of a Lady; The Waste Land. W. H. Auden: Selections from The Norton Anthology, Ted Hughes: Selections from the Norton Anthology, Sylvia Plath: Selected Poems, Dylan Thomas: Selected Poems.
Credits: 3; Prerequisite: ENG 220+ at least 7 other literature courses

ENG 450: Modern Drama
In this course students will be familiarized with modern drama. Writers include G. B. Shaw, J. M. Synge, Samuel Beckett, George Osborne and Harold Pinter. Prescribed Texts; G.B. Shaw: Man and Superman; J.M.Synge: Playboy of the Western World; Samuel Becket: Waiting for Godot; George Osborne: Look Back in Anger; Harold Pinter: Birthday Party
Credits: 3; Prerequisite: ENG 301 & ENG 310

ENG 455: Comparative Literature
This course includes non-English writers like R K Narayan, V S Naipaul, Arundhuti Roy, Chinua Achebe, Wole Soyinka, Naquib Mahfuz, and Nadine Gordimer.
Credits: 3; Prerequisite: Completion of at least 12 literature courses

FIN 101: Principles of Finance
Study of issuance, distribution and purchase of financial claims including the topics of financial management, financial investments and financial markets.
Credits: 3; Prerequisite: STA 101, MAT 110

FIN 201: Business Finance
The principle problems of managing the financial operations of an enterprise. Emphasis upon analysis and solution of problems pertaining policy decisions.
Credits: 3; Prerequisite: FIN 101

FIN 335: Financial Institutions and Markets
An understanding of money and capital markets and financial instruments traded in these market and the discussion of major financial institutions are the major focus of the course.
Credits: 3; Prerequisite: ECO 102 FIN 201

FIN 350: Real Estate Finance
Focuses on theory and practice in real estate, with social, legal and economic implication. Topics of this course are administration of real estate mortgage, source and uses of mortgage funds, permanent and secondary financing and an overview of lease financing.
Credits: 3; Prerequisite: FIN 201

FIN 380: Management of Commercial Bank
This course is designed to provide the students with tools and techniques to manage commercial banks. the content of the course included: performance evaluation of a bank, asset-liability management, management of various kinds of risks, such as interest rate risks, and fund management and investment management.
Credits: 3; Prerequisite: FIN 201

FIN 408: Financial Analysis and Control
This course offers techniques for analyzing income statement and balance sheet of a firm. On the basis of the analysis, managers are to detect the deviation on difference of financial performance. It also focuses on the managerial applications of financial statement analysis of a firm and implements their results as a means of control.
Credits: 3; Prerequisite: ACT201, FIN 201

FIN 410: Risk Management and Insurance
Examines the management of non-speculative risks in the business enterprise with emphasis on insurance as a tool. Topics included are concept of risk and insurance, risk analysis, treatment of risk control and financing, analysis of risk contracts in the areas of life, health, property and liability insurance.
Credits: 3; Prerequisite: FIN 201

FIN 425: Investment Analysis and Management
Survey of the problems and procedure of investment analysis and management. Types of investment risks, analysis of investment problems regarding the corporation as well as individuals.
Credits: 3; Prerequisite: FIN 201, MAT311, STA327

FIN 435: Managerial Finance
Examines in details the investment, financing and dividend policies of a corporation and their inter-relatedness. Topics included discussion of a debt policy, debt about dividend puzzle, interaction between investment and financing decisions and market for corporate control.
Credits: 3; Prerequisite: FIN 201

FIN 450: Cases in Financial Management
This course would provide the opportunity to learn the real tool through analyzing the real cases in the real world set up. This will increase the horizon of student's thinking process about financial matters in depth. Case studies affecting the financial policies and position of the business unit, analysis of the financial problems, determination of alternatives and managerial decision making.
Credits: 3; Prerequisite: FIN 201

FIN/ITB 465: International Financial Management
Analyzing the form and tools of international financial transactions at an advanced level. Topics included are managing exchange rate, capital raising and investment decisions through international financial markets and other related issues.
Credits: 3; Prerequisite: FIN 201

FIN 475: Option and Future
Study of modern concepts and issues in financial options and futures markets. Emphasis on risk management in financial institutions and applications in corporate finance and fund management.
Credits: 3; Prerequisite: FIN 425

GEN 201: Bangladesh Studies
This course attempts to introduce the students to the basic socio-economic, cultural, historical, political , administrative and historical features of Bangladesh. The course also aims to encourage the critical thinking of the students to write short papers on issues associated with development and governance in Bangladesh.
Credits: 3; Prerequisite: ENG 102

GEN 202: Eastern Culture and Heritage
The objective of this course is to introduce students to the culture and civilization of eastern part of the world. The specific objective is to make the students familiar with the major races, religious philosophy, cultural heritage and scholars of this region.
Credits: 3; Prerequisite: None

GEN 203: Ecological System and Environment
Topics include : Environment science, input reduction, population bomb, resources, ecology and population, abundance control, community diversity, energy flow, type of species, demography, resource management, biodiversity, pollution , controlling pollution, water pollution, air pollution, ethics.
Credits: 3; Prerequisite: None

GEN 204: Western Thought
The aim of this course is to introduce students with some masterpieces of Western literature. The course includes selections from William Shakespeare, Charles Dickens, Anthon Chekov, Guy de Mupassant, Robert Frost and T.S.Eliot.
Credits: 3; Prerequisite: None

GEN 205: Introduction to Psychology
The objective of this course is to provide knowledge about the basic concepts and principles of psychology pertaining to real-life problems. The course will familize students with the funamental processes that occur within organism-biological basis of behaviour, perception, motivation, emotion, learning, memory and forgetting and also to the social perspective-social perception and social forces that act upon the individual.
Credits: 3; Prerequisite: ENG 099 or equivalent

GEN 206: Introduction to Sociology
The objective of this course is to introduce students to key societal concepts, primary social institutions, social structure and stratification, religion and so on. They will also be familiar with the methods and different techniques of social research.
Credits: 3; Prerequisite: None

GEN 207: Industrial Psychology
The objective of this courses is to provide knowledge about human behavior in those aspects of life that are related to the production, distribution and use of the goods and services of our civilization. This course will also help to the application of pertinent information about human behavior to the solution of human problems in the industrial context.
Credits: 3; Prerequisite: ENG 099 or equivalent

GEN 208: Introduction to Philosophy
Topics include: Definition of philosophy, function of philosophy, relation of philosophy to religion & science, methods of philosophy, theories of the origin of knowledge, criterion of truth, nature of mind, theories of mind body relationship, the problem of value, nature, scope and utility of ethics.
Credits: 3; Prerequisite: None

GEN 209: Social Psychology
Topics include: Introduction, socialization, social perception, attitude, communication, interpersonal attraction . social influence, mass communication and collective behavior.
Credits: 3; Prerequisite: None

GEN 210: International Relation
Topics include: Fundamental theories of international politcs, Elements of national power and prestige, Treaty of Versailles4 and the turmoil in Europe. Beginning of the Cold War (1945-1952). kennedy and the "Flexible Response"(1960-1963). Root cause of Arab-Israeli conflict. Nixon – Kissinger and the Triangular Diplomacy (1970-1974) . Carter and the "Human Rights" foreign policy. American Foreign Policy (1980-1990). Bangladesh in post Cold War World order(1992-present).Major Civilization of the World (Universal or local). War and peace in post – Cold War World. Theoretical concepts of Diplomacy.
Credits: 3; Prerequisite: ENG 102

ITB 301: International Business
Analyses the major business management functions of international business environment, organizational policies, and strategies of multinational companies, industrial relations and control policies.
Credits: 3; Prerequisite: MGT 101, MKT 101, ECO 102

ITB 401: International Operations
Emphasis on the factors influencing marketing to and within foreign countries and the alternative methods of operations open to international firms.
Credits: 3; Prerequisite: ITB 301

ITB 428: International Economics
This course provides students with an understanding of international payments, balance of payments and foreign exchange markets, alternative international monetary arrangements and adjustments. This course will examine trade theory and policy and trade problems in multinational companies or in specific countries.
Credits: 3; Prerequisite: ECO 102,ITB 301

ITB 445: International Financial Institution
The course attempts to provide greater understanding of foreign exchange market and its intricacies with international trade. Major topics will include balance of payments, exchange rate regimes, Spot market, Forward market, BP curve, J-curve and the practices of IMF, World Bank, ADB, IDB, and other multilateral institutions.
Credits: 3; Prerequisite: ECO 102, ITB 301, FIN 201

ITB 450: International Business Negotiations
This course deals with the development of the conflict resolution, negotiating in the International context, mediation in International conflict, adjudication: International arbitral tribunals and courts,

social-psychological dimensions of International conflict, Interactive conflict resolution, and contributions of training to International conflict resolution.
Credits: 3; Prerequisite: ITB 301, ECO 102

ITB 455: Country Risk Analysis
This course provides framework for identification and analysis of economic and political issues of a country to assess the risk factors of that particular country. Topics include demographic trends, social issues, cultural knowledge through case analysis that will help students to develop skills necessary to identify, assess and deal with issues of risks and uncertainty in various countries.
Credits: 3; Prerequisite: ECO 102, ITB 301

ITB 460: International Competitiveness
How a country competes in the world is the crucial factor in determining that country's ability to benefit from international trade in to-day's global economy. This course offers a complete and proper understanding of the meaning of International competitiveness, analyzes the implications it holds for an economy's progress, examines how it may be pursued and sustained at both the sectoral level (firms and industries) and the national level (strategic objectives). It would offer pertinent policy guidelines and prescriptions for how a nation can achieve and maintain international competitiveness in order to sustain the long-term prosperity of its industries, and hence the overall pace of economic growth.
Credits: 3; Prerequisite: ITB 301, ECO 102

ITB/FIN 465: International Financial Management
Analyzing the form and tools of international financial transactions at an advanced level. Topics included are managing exchange rate, capital raising and investment decisions through international financial markets and other related issues.
Credits: 3; Prerequisite: FIN 201, ITB 301

MAT 100: College Mathematics
Number System: Concept on binary, octal, decimal and hexadecimal number systems. Conversion of number of base 10 into number of base 2, 8 and 16. Conversion of number of base 2, 8 and 16 into number of base 10. Binary arithmetic: Addition and subtraction of two binary numbers. Multiplication and division of two binary numbers. 1's compliment, 2's compliment, Subtraction using 1's compliment and 2's compliment. Real numbers: Basic concepts on real numbers. Set operations: Union of sets, Intersection of sets, Compliment of sets. Formation of Venn diagram. Function and relations: Domain, Range. Function, inverse function. Exponential and Logarithmic function. System of linear equations: Determinant: Minor and Cofactors. Cramer's rule. Homogeneous linear system. Fundamental principal of counting: Permutation, Combination. Binomial Theorem: Expansion of power of binomial: Binomial theorem, Binomial series. Vector Algebra: Addition and Subtraction. Dot and Cross multiplication. Calculus: Differentiation: Concept on derivatives, differentiability and continuity. Techniques of differentiation. Derivatives of Trigonometric, Logarithmic, Exponential and Hyperbolic functions. Chain rule. Implicit differentiation. Integration: Indefinite integral. Integral by substitution. Definite integral. Graph plotting: Straight line, Parabola, Hyperbola, Ellipse, Circle.
Credits: 3. Prerequisite: None.

MAT 101: Calculus I
Limits and Continuity: Basic concept on limits and continuity, Evaluation of limits and continuity of functions. Application of Differential Calculus: Increase, Decrease and Concavity of functions, Relative extrema; First and second derivative tests, Absolute Maxima and Minima, Newton's Method, Rolle's Theorem; Mean-Value Theorem. Application of Integral Calculus: Rectilinear motion;

Average value, Area between two curves, Volumes by Slicing; Disk and Washers, Volumes by Cylindrical shells, Length of plane curve, Area of a surface of revolution. Partial Derivatives: Functions of two or more variables, Limits and continuity, Partial derivatives, Differentiability and Chain rules, Euler's Theorem on homogeneous functions. Vector Calculus: Vector field, Line integral.
Credits: 3; Prerequisite: MAT 100.

MAT 102: Calculus II
Multiple integrals: Double integrals over rectangular regions over nonrectangular regions, Double integrals over nonrectangular regions, Triple integrals, Change of variables in multiple integrals; Jacobians. Fourier series: Basic concepts on periodic functions, Trigonometric series, Fourier Series. The Fourier Cosine and Sine series. Differential equations: Derivation of Ordinary Differential Equation by eliminating arbitrary constants, Equations of first order and first degree: Variables separable, Homogeneous Differential Equations, Linear Differential Equations, Equations Reducible to Linear Equations and Exact Differential Equations, Linear Differential Equations of second and higher orders: Auxiliary equations having distinct real roots, equal real roots and imaginary roots, Equations having the form $f(D)y=X(x)$ where X is of the form e^{ax} (a constant), $sin\ ax$ or $cos\ ax$ (a constant) and X^m (m constant). Partial Differential equations: Derivation of Partial differential Equation by eliminating arbitrary constants, Derivation of Partial differential Equation by eliminating arbitrary function, Solution of a Partial Differential Equation of first order (Lagrange's Equation). Vector Calculus: Independence of Path; Conservative Vector Fields, Green's Theorem, Surface Integrals.
Credits: 3; Prerequisite: MAT 100, MAT 101.

MAT 103: Calculus for information Technology
Limits and continuity: Basic concept on limits and continuity. Application of Differential calculus: Increase and decrease function, first and second derivative tests. Application of integral calculus: Average value, Area between two curves. Multiple Integrals: Double integrals over rectangular regions over regions over nonrectangular regions, Triple integrals. Fourier series: Fourier Cosine and sine series. Differential equations: equations of first order and first degree: Variable, Homogeneous differential equations, Linear differential equations of second and higher orders. Derivation of partial differential equation by elimination arbitrary constants, Solution of a partial differential equation of first orders (LaGrange's Equation).
Credits: 3; Prerequisite: MAT 100

MAT 110: Mathematics For Business and Economics I
Topics include: Set, liner equations and inequalities in one variable, quadratic equations, Cartesian coordinate system and straight lines, function, linear and quadratic functions, exponential and logarithmic functions, system of liner equations, matrices, permutation and combination, binomial theorem, arithmetic and geometric progression.
Credits: 3; Prerequisite: MAT 099

MAT 201: Linear Algebra
Systems of Linear equations and Matrices: Introduction to systems of Linear Equations, Gaussian Elimination, Matrices and Matrix operations. Inverses; Rules of Matrix Arithmetic. Elementary Matrices and a method for finding inverse of a matrix. Further results on systems of equations and invertibility. Diagonal, Triangular, and Symmetric Matrices. Determinants: Basic concept on determinant, Evaluating determinants by row reduction, Properties of the determinant function. Cofactor expansion; Cramer's Rule. General vector space: Real vector space, Subspace. Linear independence, Basis and dimension. Row Space, Column Space, and Nullspace. Rank and Nullity. Eigenvalues and eigenfunctions: Concepts on Eigenvalues and eigenfunctions, Diagonalization,

Orthogonal Diagonalization. Linear Transformation: General Linear Transformations, Kernel and Range, Inverse Linear Transformations, Matrices of general Linear Transformations. LU-Decompositions.
Credits: 3; Prerequisite: MAT 100.

MAT 301: Mathematics for Engineers
Laplace Transform: Definition of Laplace Transform, Laplace Transform of different functions, Inverse Laplace Transform, convolution, evaluation of improper integrals by Laplace Transforms. Solution of differential equation by Laplace Transforms. Fourier Series: Review of Fourier Series, Convergence of Fourier Series, Fourier Integral. Complex Variables: Complex number system, General functions of a complex variable. Limits and continuity of a function of complex variable. Complex differentiation and the Cuchy-Riemann equations. Infinite series. Convergence and uniform convergence. Line integral of a complex function. Cauchy integral formula. Liouville's theorem. Taylor's and Laurent's theorem. Singular points. Residue, Cauchy's residue theorem.
Credits: 3; Prerequisite: MAT 101, MAT 102

MAT 311: Mathematics for Business and Economics II
Topics include: Economic and business models, functions, limits and continuity, concept of derivative, rules of differentiation and integration, and their use. Constrained optimization with lagrangian multiplier, partial derivatives. Theory is pesented informally and techniques are related to polynomials, logarithmic and exponential functions.
Credits: 3; Prerequisite: MAT 110, ECO 102

MAT 407: Advanced Calculus
Vector differential equations, constant coefficient equations, first-order systems, linear systems.
Credits: 3; Prerequisite: MAT 311

MAT 470: Real Analysis
Real and complex number system, basic topology, numerical sequence and series, continuity, differentiation, Rieman-Stieltjes integral, sequence and series of functions.
Credits: 3; Prerequisite: MAT 407

MGT 101: Principles of Management
This course introduces the students with basic management concepts, theories and models in effective management and decision making process. It provides an overall conceptual framework that can be used to understand how a manger can influence in the field of management. Particularly it will review and discuss for better understanding the basics of planning, organizing, controlling, interpersonal relations and leadership/management role in the managerial environment of today.
Credits: 3; Prerequisite: BUS 101,ENG 101

MGT 251: Organizational Behavior
Understanding the behavior of employees in organizations, particular attention to motivation to the individuals to join and perform in organizations and to employee satisfaction with element strategies to modify employee motivation and satisfaction.
Credits: 3; Prerequisite: MGT 101

MGT 337: Production Operations Management
Topics include: Introduction to production management, consideration of major problems of the production area, and the use of quantitative methods for solving them .
Credits: 3; Prerequisite: MAT 110, STA 101

MGT 402: Management Science
Survey of the current literature in Management Science examines principles and practices of scientific management. Selected topics in this course include: MBO, quantitative methods, markov decision problems, simulation and queuing theory.
Credits: 3; Prerequisite: STA 327

MGT 405: Organizational Development and Change
Provides an understanding of basics of organizational development, organizational renewal and change, intervention process. The objective of this course is to provide students with an integrated and comprehensive view of the field of organizational development.
Credits: 3; Prerequisite: MGT 251

MGT 409: Human Resources Management
This course covers factors in organizational performances, motivation and performance, HR planning; job design and staffing development and appraisal, compensation and reward, employee projection and representation and the future of HRM.
Credits: 3; Prerequisite: MGT 101

MGT 410: International Labor Management
This couse provides an overview of the history and development of labor relations, the structure of union organizations, and process of negotiations and contract administration . Topics include the study of labor management in development market economics, international bargaining, ethics and employee relations. This course is a balanced approach from international or management viewpoint and an analysis from a behavioral, institutional and economic perspective.
Credits: 3; Prerequisite: BUS 361

MGT 421: Entrepreneurship Development
This course starts with the evaluation of the available business opportunities. Then it discusses the marketing strategies, financing, controlling process the leagl responsibilities. It concludes with some tips for the future applications and shows the students the need for a business plan.
Credits: 3; Prerequisite: MGT 101

MGT 425: Total Quality Management
Examines major issues of TQM principles and theories. Topics include Demings, Jurans, Crrosby's TQM principles, JIT, HRM, Leadership theories, Quality and operaional research.
Credits: 3; Prerequisite: MGT 101

MGT 437: Small Business Management
Managing small firms is a multidisciplinary activity. Planning activity binds all other activities together. Besides planning the course covers topics, such as: setting up, business basics, finance, control and the growing business.
Credits: 3; Prerequisite: MGT 101

MGT 448: Managing Globalization
This course contains topics on organizational strategy : for global competitive advantage ; management dynamics : structuring, staffing, & sharing values ; and cases regarding global management. This course also covers cultural and behavioral aspects of globalization, functional aspects of globalization and socio-ethical issues relating global management.
Credits: 3; Prerequisite: ITB 301, MGT 101

MGT 465: Leadership Management
This program responds to the leadership development needs of government and non-government organizations. This program provides a means by which students may discover and refine abilities fundamental to effective leadership.
Credits: 3; Prerequisite: MGT 251

MGT 480: Strategic Management
Analysis of policy formulation and implementation from a company wide stand point. Emphasis on integration of knowledge and approaches across functional areas, both endogenous factors, which affect company policy and the role of the firm in the society.
Credits: 3; Prerequisite: All required courses/99 Credits

MIS 101: Introduction to Management Information System
Introduction to the components of the management information system and their integration for managerial control and decision support. Major functional applications and impacts of information technology on individual and society.
Credits: 3; Prerequisite: CSE 101

MIS 305: Enterprise Information System
The aim of this course is to focus on the different perspectives of Information Technology Management and its changes in the 21st century. It will prepare the students to face the MIS challenges of the new millennium. This course includes different technological matters such as e-business models, value creation and group focusing by using technology. It also includes extended enterprise concept in creating value from different computer based decision making approaches and virtual business concept. Different communication challenges from network perspective are also included. Electronic commerce imperative, MIS dilemmas for managers, unintended consequences of information technology, privacy in the age of the Internet, the global network organization of the future, its transformation, and business education will also be covered.
Credits: 3; Prerequisite: MIS 101

MIS 402: System Analysis and Design
Essential steps in developing a management information system, Including P-3 preliminary planning, designing, feasibility analysis, implementation schedule, and post implementation review of the systems which familiarizes students with methodology and techniques.
Credits: 3; Prerequisite: MIS 101,MIS 305

MIS 404: Networking and Operating System
The logical and physical design and implementation of computer network. The framework of layered architecture, different protocols, cable types and connectors, network naming and security, wide area networks, network trouble shooting, file systems of Microsoft NT, installing, fault tolerance, WINNT resources, remote access, performance monitor, file systems of UNIX, basic commands, editors, and shell scripts.
Credits: 3; Prerequisite: MIS 101, MIS 305

MIS 406: Relation Database Management System
The logical and physical design of database using computerized tools. Topic include - query optimization, DDL, DML, DCL, keys, joins, triggers, standard SQL functions e.g. count, nvl, sum, order and group by, snap shots, clusters, table space, etc. A great deal of emphasis will be given to query writing using the PL/SQL ; forms and report will be created by using different front end tools.
Credits: 3; Prerequisite: CSE 301, MIS 101, MIS 305

MIS 407: System Integration & Security and Internet
Business and system specification, existing hardware and software platform, file system of different operating systems, integration features of different systems including hardware and software, security features of different hardware and software, history and current management of internet, engines, internet services, electronic business and business promotion, internet software development and security.
Credits: 3; Prerequisite: MIS 101, MIS 305

MIS 408: Internetworking with TCP/IP and Implementing Exchange Server
Introduction to TCP/IP, identifying machine with IP routing, IP address resolution, host name resolution, Net BIOS name resolution, DHCP, WING, internet working, browing, connetivity in heterogeneous environments, SNMP services, fine tuning and optimization, trouble shooting, and administration of exchange server.
Credits: 3; Prerequisite: MIS 404

MIS 409: Client/Server Administration
Domain model in the enterprise, server managing, uses (local and global) management, resource management, server and client, internet services, internet work routing, system performance, network monitoring, and server and client trouble shooting.
Credits: 3; Prerequisite: MIS 404

MIS 415: Decision Support System
This course focuses on the fundamentals of decision support system, its tools and implications in present decision making process.
Credits: 3; Prerequisite: MIS 406

MIS 419: E-Commerce and Web Programming
This course focuses on recognizing and explaining electronic business process and identifying and recommending Internet and E-Commerce. Topics include implementation of and conducting E-Business and managing Web: the global and local market, business to business, Web application, corporate Web server management, legal considerations, Electronic Payment Systems (EPS), role of the bank in E-commerce, business model for E-commerce. It covers Web technology comprehensively.
Credits: 3; Prerequisite: MIS 406

MKT 101: Principles of Marketing
Principle of marketing course is designed to give the students an interesting and decision oriented approach to the study of basic marketing concepts and practice. This course provides an integration of marketing activities of the firm into a system, which includes basically product, price, promotion and place.
Credits: 3; Prerequisite: BUS 101

MKT 201: Marketing Management
Management of the firm's marketing function within a dynamic operating environment. Includes study of such function as product development, promotion, channel, selection, logistics and market research.
Credits: 3; Prerequisite: MKT 101

MKT 401: Sales Management
Analysis of the management of the sales effort within the marketing system. Philosophies, concepts, and judgement criteria of the sales function in relationship to the total marketing program.
Credits: 3; Prerequisite: MKT 201

MKT 405: Promotion Management
The role of promotional activities in the firms marketing function. Topics included advertising, personal selling, sales promotion and publicity. The relationship of consumer behavior to the area of promotion.
Credits: 3; Prerequisite: MKT 201

MKT 408: International Marketing
Analysis of international operations. Emphasis on the factors influencing marketing to and within foreign countries and the alternative methods of operations open to international firms.
Credits: 3; Prerequisite: ITB 301, MKT 201

MKT 410: Consumer Behavior
Examines underlying psychological, sociological, and economic factors, which influence consumer behavior. Studies and impact of marketing activities on society, consumerism, and legislation affecting the market place.
Credits: 3; Prerequisite: MKT 201

MKT 412: Service Marketing
Characteristics of service industries and organizations, pre-sales and post-sales activities and marketing people in service marketing. The service marketing mix major store and non-store retailing. Managing services quality, productivity, relationships and service marketing etc.
Credits: 3; Prerequisite: MKT 201

MKT 414: Marketing Research
The basic procedures and theories appropriate to solving various types of marketing problems in the context of business organization and decision models.
Credits: 3; Prerequisite: STA 101, MKT 201

MKT 416: Brand Management
The focus of this course is on formulating and implementing complete marketing programs for successful brand management. The main objective is to provide an in-depth understanding of the role of brands in marketing consumer and industrial goods/services. The course also deals with the key responsibilities of a brand manager and provides the students also with some of the quantitative tools that are helpful to brand managers in analyzing customers and competitors and guiding them in their strategic and tactical decisions.

Definition of brand, the nature and evolution of branding, brand image, positioning and repositioning brands, building and measuring brand equity, pricing and promoting brands, brand strategy and brand plans, global branding, protecting the brand.
Credits: 3; Prerequisite: MKT201

MKT 418: Physical Distribution
Integration of physical distribution activities of the firm into a system. Transportation and location as elements of the system. Inventories and service as constrains upon the system. Planning, operation and management of the system.
Credits: 3; Prerequisite: MKT 201

MKT 430: Strategic Marketing
The course discusses marketing strategy, defining and analyzing markets, marketing segmentation, analyzing competition, market targeting and positioning strategies, product portfolio strategy, implementation, and other relevant topics.
Credits: 3; Prerequisite: STA 101, MKT 201

PHY 101: Physics I
Force and Motion: Newton's Laws of Motion, Kinetic Energy and Work, Potential Energy and Conservation of Energy. Gravitation: Newton's Law of Gravitation, Kepler's Laws, Orbits and Energy. Oscillations: Simple Harmonic Motion, The Force Law for Simple Harmonic Motion, Forced Oscillation and Resonance. Waves: Transverse and Longitudinal Waves, Wavelength and Frequency, The Speed of a Traveling Wave, Interference of Waves, Phasors, Standing Waves and Resonance, Sound Waves, The Speed of Sound, Traveling Sound Waves, Interference, Intensity and Sound Level, The Doppler Effect. Temperature and Heat: The Zeroth Law of Thermodynamics, Thermal Expansion, The First Law of Thermodynamics, Heat Transfer Mechanisms, The Kinetic Theory of Gases, Entropy and the Second Law of Thermodynamics.
Credits: 3+1=4; Prerequisite: MAT 100

PHY 102: Physics II
Electric Charge, Coulomb's Law. The Electric Field: Electric Field Lines, The Electric Field Lines Due to a Point Charge, The Electric Field Lines Due to an Electric Dipole, The Electric Field Lines Due to a Line of Charge, The Electric Field Lines Due to a Charged Disk. Gauss's Law: Gauss's Law in Cylindrical, Planar and Spherical Symmetries. Electric Potential: Equipotential Surfaces, Potential Due to an Electric Dipole. Capacitance: Capacitors in Parallel and Series, Capacitors with a Dielectric. Electric Current, Current Density, Resistance and Resistivity, Ohm's Law. The Magnetic Field, Ampere's Law, Solenoids and Torroids. Faraday's Law of Induction, Alternating Currents, Maxwell's Equations. Polarization, Reflection and Refraction, Total Internal Reflection, Polarization by Reflection. Interference: Young's Interference Experiment, Coherence, Interference from Thin Films, Michelson's Interferometer. Diffraction and the Wave Theory of Light, Diffraction Gratings, X-ray Diffraction. Light Waves and Photons, The Photoelectric Effect, Electrons and Matter Waves, Schrodinger's Equation. Lasers and Laser Light. Insulators, Metals and Semiconductors, Doped Semiconductors, The p-n Junction, LED, The Transistor. The course includes lab works based on theory taught.
Credits: 3+1=4; Prerequisite: MAT 101, PHY 101

STA 101: Introduction to Statistics
Definition and Scope of Statistics, Variables, Levels of Measurements, Qualitative and Quantitative Data, Population and Sample, Construction of Table, Frequency Distribution, Graphical Presentation of Data: Bar Diagram, Pie Diagram, Line Diagram, Frequency polygon, Histogram, Cumulative Frequency Polygon, Scatter Diagrams, Measures of Central Tendency: Arithmetic Mean, Median, Mode, Geometric Mean, Related Positional Measures: Quartile, Percentile and Decile, Measures of Dispersion: Range, Mean Deviation, Variance, Standard Deviation, Skewness and Kurtosis, Basic Concepts of Probability, Probability Laws, Independence, Conditional Probability and Mathematical Expectations, Bayes Theorem, Basic Concepts of Discrete and Continuous Probability Distributions: Binomial, Hypergeometric, Poisson and Normal Distributions, Simple Correlation and Regression.
Credits: 3; Prerequisite: MAT 100.

STA 327: Statistics For Business and Economics
Introduction to modern theory and methodology of statistics in areas of economics and business. Topics include: sampling theory and methodology of sampling distributions and hypothesis testing, contingency tables, multiple regression, analysis of variance, decision theory, index number and time series analysis.
Credits: 3; Prerequisite: MAT 311,STA 101

Library

At present the Library has more than 7000 volumes of books. It subscribes to thirty journals, magazines and newsletters.

a) Students and Faculty members have full access to the library.

b) A student can borrow two books at a time for a period of four days.

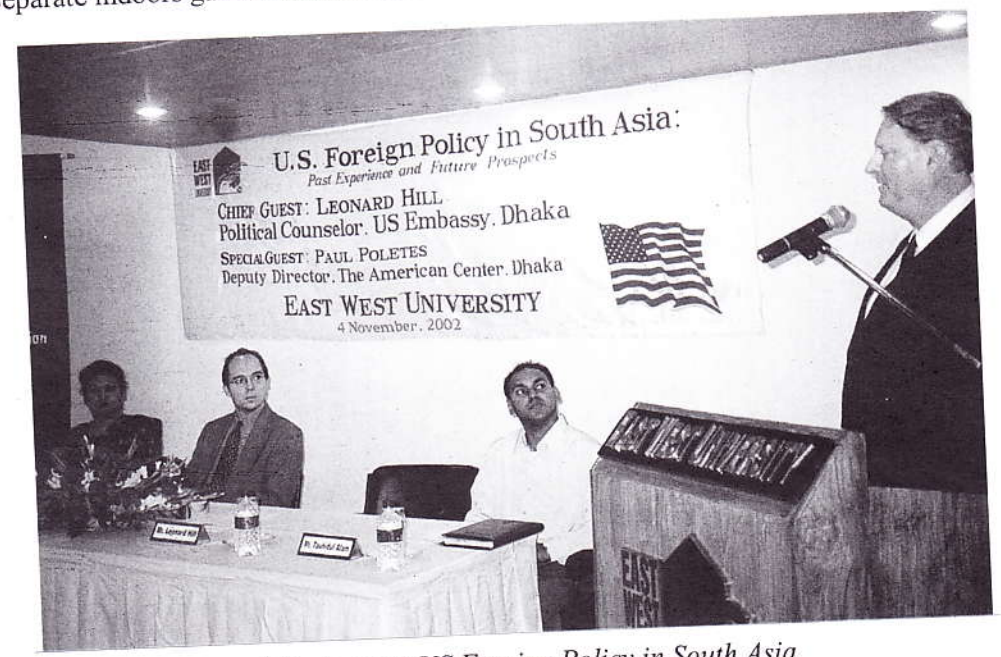
c) Members of the Academic Council enjoy facilities similar to Faculty members.

d) The Library offers open access to its shelves. Books have a classified shelf arrangement. The Library utilizes CDS/ISIS and software developed by UNESCO, to provide information about the collections of the Library.

e) Current Awareness Services (CAS) are also provided from time to time to Faculty members and students.

Students in the Library

(i) Classes are held in clean and spacious air-conditioned rooms.
(ii) Well-equipped Computer Labs consisting of more than one hundred work stations.
(iii) Digital Lab for Computer Science and Engineering
(iv) A Language Lab for proficiency in English
(v) Free e-mail and Internet access
(vi) Medical Centre
(vii) Card phone
(viii) Prayer room
(ix) Cafeteria
(x) Study room and
(xi) Separate indoors game facilities room with coloured TV for male and female students.



A Seminar on US Foreign Policy in South Asia

Student Clubs

East West University is dedicated to the all-round education of its students. This objective is achieved through various student activity clubs:

The Cultural Club
The Debating Club
The Environmental Society
The Sports Club
The Computer Club
The Photography Club
The English Conversation Club
The Business Club
The MBA Club

General Conduct

East West University is committed to maintaining proper academic environment in its premises. Students are expected, as enlightened members of the society, to be of good moral character and decent conduct. They should observe the general rules of discipline, honesty, punctuality and respect for the rights of others within the premises. Willful violation of these general rules seriously disturbs the academic environment and undermines the efforts of the university to impart high quality education.

A. Academic Misconduct

i) Cheating at the examination by any method or means.
ii) Helping other students to cheat at the examinations.
iii) Reproducing the work of others as one's own work.
iv) Fabrication or the falsification of any information with the intent to deceive.
v) Forgery, alteration, or misuse of university documents, records and identity cards.

B. Social Misconduct

i) Abusive or disorderly conduct.
ii) Sexual harassment.
iii) Physical assault in any form.
iv) Direct and indirect threat of violence.
v) Verbal, mental, and physical harassment.
vi) Participation in any activity that may disrupt any function of the university

C. Property Damage

i) Willful damage or destruction of the university property.

D. Dangers to Health and Safety

i) Smoking inside university buildings.
ii) Possession or use of alcoholic drinks and drugs.
iii) Possession of sharp weapons and firearms.

E. Disobedience to lawful authority

i) Disobedience, interference, resistance or failure to comply with the direction of an authorized university personnel on duty.
ii) Unauthorized entry.

F. Theft

i) Theft or misappropriation of university funds and materials.
ii) Possession of stolen university property.

G. Penalties

The following are the representative types of penalties and sanctions that may be imposed on a student for violating the code of conduct of the university.

i) Warning in the form of written or verbal notice.
ii) Cancellation of the examination and/or an assignment.
iii) Expulsion for one or more semesters.
iv) Expulsion from the university.

H. Disciplinary Procedure

A Discipline Committee of the University examines the allegations of misconduct, takes evidence from both sides, and recommends penalties to be imposed on the student found guilty.

Discipline Committee

Any act of indiscipline, offence, or grievance committed by a student may be reported to the Proctor of EWU in writing by a student or staff/faculty for necessary action.

A Discipline Committee will act independently to ascertain facts and submit a report of the findings with recommendations for necessary action.

Student Identification Cards

All students will receive photo identification cards with their students number. Students must display their ID cards when on campus. This is required for their own safety and the protection of the campus from unauthorized visitors. These cards will be used for various purposes such as entering campus, attending classes, using the library, and in accessing computers in computer labs.

Transition Course in Progress

Faculty

Faculty members are chosen through a rigorous selection process. Applications are first scrutinized at the department level, and then processed through an Appointment Committee of the University.

Acting on the recommendations of the Appointment Committee, the Board finally appoints Faculty members.

At the moment about 80% of the Faculty members of East West University work full time.
List of Faculty Members:

Professor

Dr. Syed Ferhat Anwar, M.Sc. (Biochemistry), MBA (Marketing), DUT, and Ph.D.

Mr. Abdul Mannan, M.Com (Management), University of Dhaka, MBA (Marketing), University of Hawaii, Hawaii, U.S.A.

Dr. Sultan Ahmad, M.Sc. (Statistics), Rajshahi University, Ph.D., (Demography) Australian National University, Canberra, Australia.

Dr. Mohammad Musa, MSS (Economics) University of Dhaka, MBA (Finance), University of Wisconsin-Madison, Ph.D., (Finance), University of Wisconsin-Milwaukee.

Dr. Md. Mozammel Huq Azad Khan, M.Sc. Engg. (Computer Engineering) Bangladesh University of Engineering and Technology, Ph.D., (Computer Science & Engineering) Bangladesh University of Engineering & Technology.

Dr. Md. Shahidullah, MA (ELT), Thames Valley University, London, DIP TEFL, University of Sydney, Australia, Ph.D., (ELT), University of Pune.

Dr. Mohammad Huzzot Ali Pramanik, M.Sc. (Physics) University of Rajshahi, Ph.D. Imperial College London University.

Dr. Mohamed Ruhul Amin, M.Sc. in Physics, Jahangirnagar University and Ph.D. in Appl. Math., University of St. Andrews, UK.

Dr. M. Saleh Uddin, M.A. (Economics) Chittagong University, M.A. in Economics, Thammasat University, Bangkok, Ph.D. (Economics) University of Malaya, Kuala Lumpur.

Dr. Md. Abdul Hye, M.Com. in Accounting, University of Dhaka, Ph.D. University of Dhaka.

Dr. Rebecca Sultana, M.A. (English Literature) Chittagong University, M.A. (American Literature) University of Texas at Dallas. Ph.D., (Postcolonial Theory and Literature) Taxas Christian University, Fort Worth, Texas, USA.

Dr. Abu Saleh Abdun Noor, M.Sc. in Mathematics, Rajshahi University, Ph.D., The Flinders University of South Australia, Adelaide, Australia.

Associate Professor

Dr. A.H.M. Asaduzzaman, Ph.D. (Computer Science), Kiev Polytechnic Institute, Kiev, Ukraine MS (Computer Engineering) L'VOV Polytechnic Institute, Ukraine. (On leave)

Mr. Asit Roy Choudhury,Post-graduate Diploma in TESL/TEFL University of Wales, U.K.

Mr. Ershadul H. Chowdhury, M.Sc. (Computer Engineering), Texas A & M University College Station, USA . B.Sc. (E.E). BUET, Dhaka.

Mr. S.I. Nusrat A. Chaudhury, MS (USSR), MBA (Finance) Keller Graduate School of Management, Chicago Illinois, U.S.A.

Dr. Tanbir Ahmed Chowdhury, Ph.D. (Financial Management & Quantitative Techniques), Pune University, Poona, India.

Mr. Syed Akhter Hossain, M.Sc (Applied Physics & Electronics), Rajshahi University.

Assistant Professor

Mr. Kazi Khaled Shams Chisty, MBA Columbia State University, USA.

Dr. Golam Ahmed Faruqui,Ph.D., (Finance) La Salle University, Mandeville, LA 70470.

Mr. Harunur Rashid Khan, M. A (Applied Linguistics), Victoria University of Wellington, New Zealand, Post Graduate Diploma in TESOL, University of Canberra, Australia, MA (English Literature) Jahangirnagar University.

Mr. Md. Mujibur Rahman Khan, B.Sc (Computer Science & Engineering), Khulna University, Khulna.

Mr. S.S.M Sadrul Huda, Master of Science, Leisure & Environment, Wageninjen, Agricultural University, The Netherlands.

Senior Lecturer

Mr. Tauhid Ul Alam, B.A and M.A (Economics), California State University, Sacramento, U.S.A.

Mr. Raihan Chowdhury, Master's of Information Technology, University of Canberra, Canberra, Australia.

Mr. Ehsan Hasib, M.Sc. Minnesota State University, Mankato, USA.

Ms. Anindita Paul, M.Sc.(Mathematics), Jahangirnagar University.

Ms. Jahida Gulshan, M.Sc.(Statistics), University of Dhaka.

Ms. Sharmin Kabir, M.Sc. (Mathematics), University of Dhaka.

Ms. Masrufa Ayesha Nusrat, M.A in English studies, University of Nottingham, UK.

Dr. Afroza Hossain, MS (Psychology) University of Dhaka.

Mr. Md. Shahidul Islam M.Sc. Engineering communication & Media Engineering , University of Applied Science Offenburg, Germany.

Lecturer

Ms. Roksana Khurshid, M.S.S. (Anthropology), University of Dhaka. (on leave)

Mr. Feroz Ahmed, MBA, (IBA) University of Dhaka. (On leave)

Ms. Farzana Akhter, M.A. (English), University of Dhaka.

Ms. Papia Ferdousei, M Sc. (Statistics), University of Dhaka.

Ms. Rubina I Ahmed, MBA, Independent University, Bangladesh.

Ms. Touhida Tasnima, M.S.S, (Public Administration), University of Dhaka.

Mr. Mirza Mohammad Mamun Sadat, MA (Applied Linguistics and ELT), University of Dhaka..

Ms. Afrin Zeenat, B.A.(Hons.), B.A. Aligarh University, India, M.A. University of Dhaka.

Mr. Md. Nawab Yousuf Ali, M.Sc, L'vov Polytechnic Institute, L'vov Ukraine, USSR.

Ms. Sharmin Naaz, M.S.S (Sociology), University of Dhaka..

Mr. M. M. Waliullah, B.Sc. in Computer Science, East West University, Dhaka.
Mr. Taskeed Jabid, B.Sc. in Computer Science, East West University, Dhaka.

Mr. Manzur Ashraf , B.Sc in Computer Science and Engineering, Bangladesh University of Engineering & Technology (BUET), Dhaka, Bangladesh.

Mr. Kazi Khaled Al-Zahid, B.Sc. Engineering in Computer Science & Engineering, Bangladesh University of Engineering & Technology (BUET). Dhaka.

Mr. Alok Das, M.A. (Applied Linguistics & English Language Teaching), University of Dhaka.

Mr. Tanvir Hasan Malik, M.A. (English Literature & Language), Jahangirnagar University.

Mr. Muhammed Shafiqul Islam, M.Sc. (Physics) University of Dhaka.

Mr. Kazi Zamir Uddin Ahmed, B.Sc. Engineering (Electrical & Electronics) Bangladesh University of Engineering and Technology.

Mr. Akeed Ahmed Pavel, B.Sc. Engineering (Electrical & Electronics) Bangladesh University of Engineering and Technology.

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Mr. Zubair Shams Noman, B.Sc. in Computer Science, St. Cloud State University, St. Cloud, MN.

Mohammad Khairul Hasan, B.Sc. in Computer Science and Engineering, Bangladesh University of Engineering and Technology (BUET).

Adjunct Faculty

Dr. Mohammad Kaykobad , Professor, Computer Science & Engineering Department, Bangladesh University of Engineering and Technology.

Dr. M. Abdus Sobhan, Professor, Computer Science & Engineering Department, Rajshahi University, Executive Director Bangladesh Computer Council.

Dr. Fakrul Alam, MA (Simon Fraser), Ph.D. (University of British Columbia), Canada.

Dr. Farruk Ahmed, Ph.D. (Electronic & Electrical Engineering), Salford, U.K.

Dr. Md. Ziaulhaq Mamun, Ph.D. (Urban Development Planning), Asian Institute of Technology, Bangkok, Thailand.

Dr. Md. Golam Dastagir, (Lecturer)Ph.D. Philosophy and Religion, University of Hull England, UK.

Mr. Fazluz Zaman, (Lecturer) Master in International Business, University of Wollongong, Sydney, Executive Masters in Business Administration, Deemed University , Lucknow India (Dhaka Campus)

Dr. Sheikh Abdus Salam, (Professor) Bachalor of Law, University of Dhaka.

Mr. Sheikh Hafizur Rahman Karzon, (Senior Lecturer) LL.M University of Dhaka.

Ms. Maliha Shahjahan,(Lecturer) B.Sc. Engineering (Electrical & Electronics) Bangladesh University of Engineering and Technology.

Mr. Nahid Hasan Khan, (Assistant professor) M.Com Accounting, University of Dhaka.

Dr. A. A. Mahboob Uddin Chowdhury, (Associate Professor) Masters of Economics, Nagoya University, Japan.

Mr. Arifur Rahman Khan, (Lecturer) M.Com Accounting, University of Dhaka.

Major Md . Shakhawat Hossain, (Lecturer) Masters in Business Administration, East West University. Dhaka.

Dr. Mohammad Amin, M.S. & Ph.D. in Electrical and Computer Engineering, Marquette University, Milwaukee, Wisconsin, USA.

Honorary Full Time Faculty

Dr. Mohammed Farashuddin, Ph.D (Economics) Boston University USA, MA (Economics) Boston University, MA (Economics) University of Dhaka.

Convocation 2002

Academic Council

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2.	Pro-Vice Chancellor East West University	Member
3.	Dean of Faculties East West University	Member
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14.	Dr. M. Saleh Uddin Professor East West University	Member

15.	Dr. Abdul Hye Professor East West University	Member
16.	Dr. Md. Huzzot Ali Pramanik Professor East West University	Member
17.	Dr. Mohamed Ruhul Amin Professor East West University	Member
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19.	Co-ordinator, EMBA/MBA Program East West University	Member
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21.	Dr. M.A. Mannan Professor of Management, University of Dhaka.	Member
22.	Dr. Md. Zafar Iqbal Professor, Dept. of Computer Science Shahjalal University of Science and Technology, Sylhet	Member
23.	Dr. Nurur Rahman Professor Institute of Business Administration University of Dhaka.	Member
24.	Dr. Ali Asgar Professor, Department of Physics BUET, Dhaka	Member
25.	Dr. Syed Manzoorul Islam Professor of English, University of Dhaka.	Member
26.	Dr. Mohammad Kaykobad Professor Computer Science, BUET, Dhaka	Member
27.	Mr. S.M. Kamal President, BASIS, Dhaka	Member

28. Dr. Zarina Rahman Khan — Member
Professor Dept. of Public Administration
University of Dhaka.

29. Mrs. Niloufer Manzur — Member
Chairperson, Sunbeams School

Joint Registrar, East West University will act as secretary.

EWU Job Fair 2002

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    Dhaka, Bangladesh &
    Former State Minister &
    Member of Parliament

15. Mrs. Razia Samad
    Director
    Sea Resources Group of Companies
    Bangladesh

Non-Discrimination
East West University believes that every type of discrimination, whether social or cultural, whether based on race, gender, color, social condition, language or religion, is to be overcome and eradicated.

Disclaimer
The content of this catalogue is subject to change without notice. Every student accepted for registration in the University shall be deemed to have agreed to such deletions, revisions or addition whether made before or after his/her acceptance.

East West University does not accept any responsibility for loss or damage suffered or incurred by any student as a result of suspension or termination of services owing to strikes, lockouts, riots, weather, or any other cause beyond reasonable control of the University.

Students at the Cafeteria


EAST WEST UNIVERSITY
FIRST CONVOCATION 2002
EAST WEST UNIVERSITY
2 JANUARY 2002
FIRST CONVOCATION
EAST WEST UNIVERSITY
2 JANUARY 2002
EAST WEST UNIVERSITY-Prothom Alo
Student Quiz Winners Draw
Software

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