MILITARY INSTITUTE OF SCIENCE AND TECHNOLOGY, BANGLADESH

TECHNOLOGY FOR ADVANCEMENT

PROSPECTUS 2023

UNDER GRADUATION

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IMPORTANT INSTRUCTIONS

1. Major Academic Schedule (For Level-1 Only)- Tentetive

- Term 1 (Spring Term) Class starts: 30 April 2023.
- Term 1 Final Examination: 27 August 2023.
- Term 2 (Fall Term) Class starts: 17 September 2023.
- Term 2 Final Examination: 14 January 2024.

2. Class Attendance

- Collegiate: Attendance 85% and above. Shall attend examination without fine.
- Non-Collegiate (NC): Attendance 75% to 84.99%. Can attend examination with fines.
- Dis-Collegiate (DC): Attendance below 70%. Cannot appear the examination. Need to re-take the course in the next suitable Term / year.

3. Term Registration Fee

- Pay all Registration fees in time. Else you will have to pay penalty.
- Students are not allowed to attend classes without paying registration fees.

4. Admission Cancellation

- Within 2 Weeks of Academic Class: Full payment refund except Security Money (25,0000 Tk).
- After 2 Weeks: No refund.
- Please do not deprive another student the opportunity of becoming and Engineer to by pulling out and leaving the seat vacant.

5. Uniform

- Students are NOT allowed in the campus without uniform.
- Please get your uniform in time from the Tailor Shop.

6. Exam Policy

- A student completes his/her graduation within 4 years in MIST. However, maximum duration for graduation is 6 academic years for Engineering and 7 years for Architecture degree.
- The minimum CGPA requirement for obtaining a Bachelor's Degree is 2.20. Failure to achieve this grade in two consecutive levels will lead to withdrawal from MIST.
- Any student achieving grading below 'B+', may appear the improvement examination of that course.
- Highest grade of Improvement/Supplementary examination will be 'B+'.
- Student is allowed to register for a maximum of two theory courses (Failed/Improvement) in Supplementary-I and maximum of one theory course (Failed/Improvement) in Supplementary-II.
- One student is allowed to appear at Improvement exam in 6 (six) courses in his whole graduation period.
- Read MIST Exam Policy very carefully.

7. Zero Tolerance

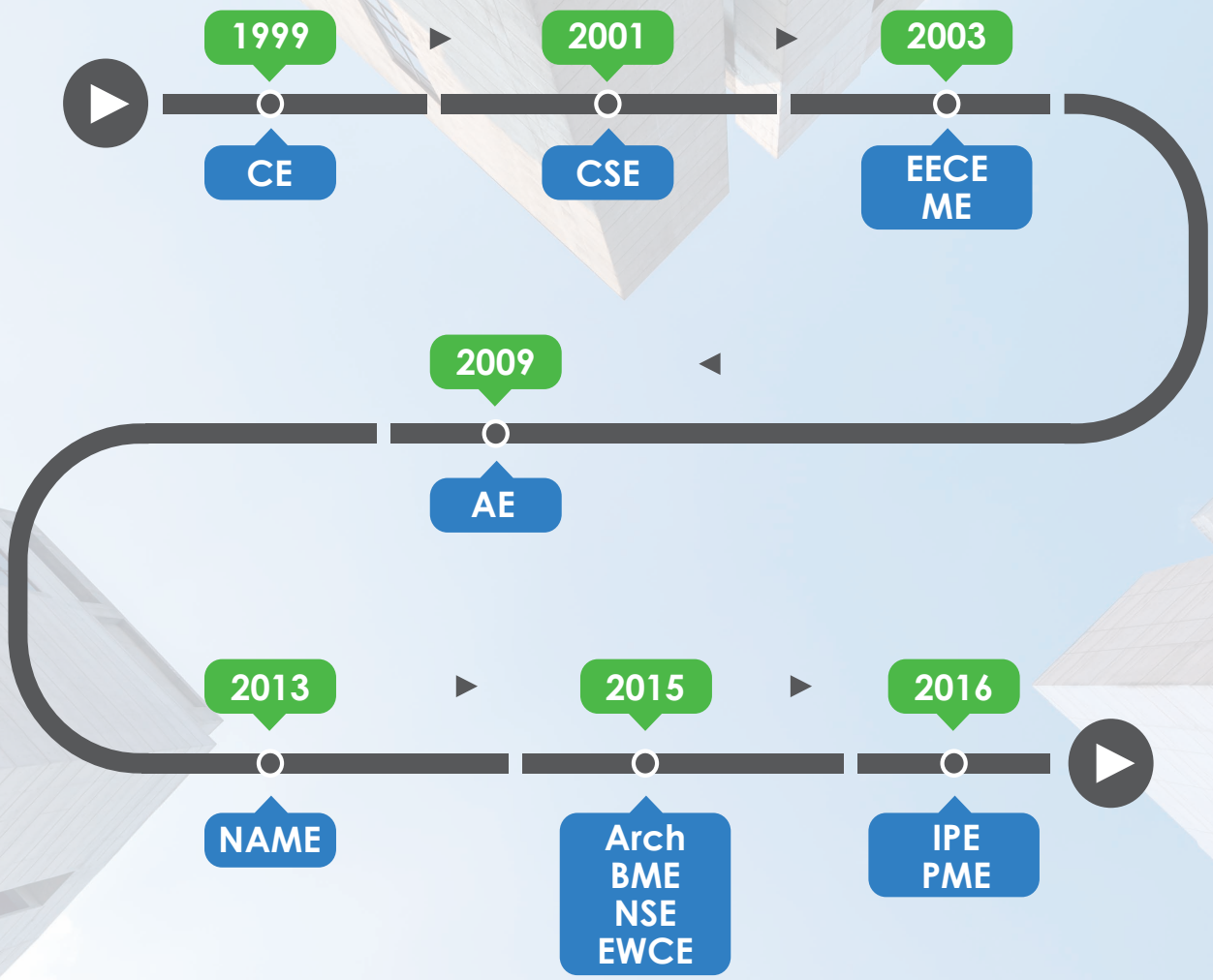
- MIST shows Zero Tolerance to Drugs, Ragging, Copying, Religious Extremism, Sexual Harassment and Eve-teasing.

ABOUT MIST

Military Institute of Science and Technology (MIST) is the pioneer technical institute of Bangladesh Armed Forces. It is purely a government educational institution focusing only engineering education and research. Head of the institution is Commandant who is a Major General from Bangladesh Army. MIST started its journey on 19 April 1998. It was the visionary dream of the Honorable Prime Minister of the People's Republic of Bangladesh Sheikh Hasina to establish this institute. MIST is located on the northwest part of Dhaka City at Mirpur Cantonment. Mirpur Cantonment is well known as the 'Education Village' of Bangladesh Armed Forces.

First Academic Program of MIST was launched on 31 January 1999 with the maiden batch of Civil Engineering (CE).

Various Engineering Disciplines with Year of Operation

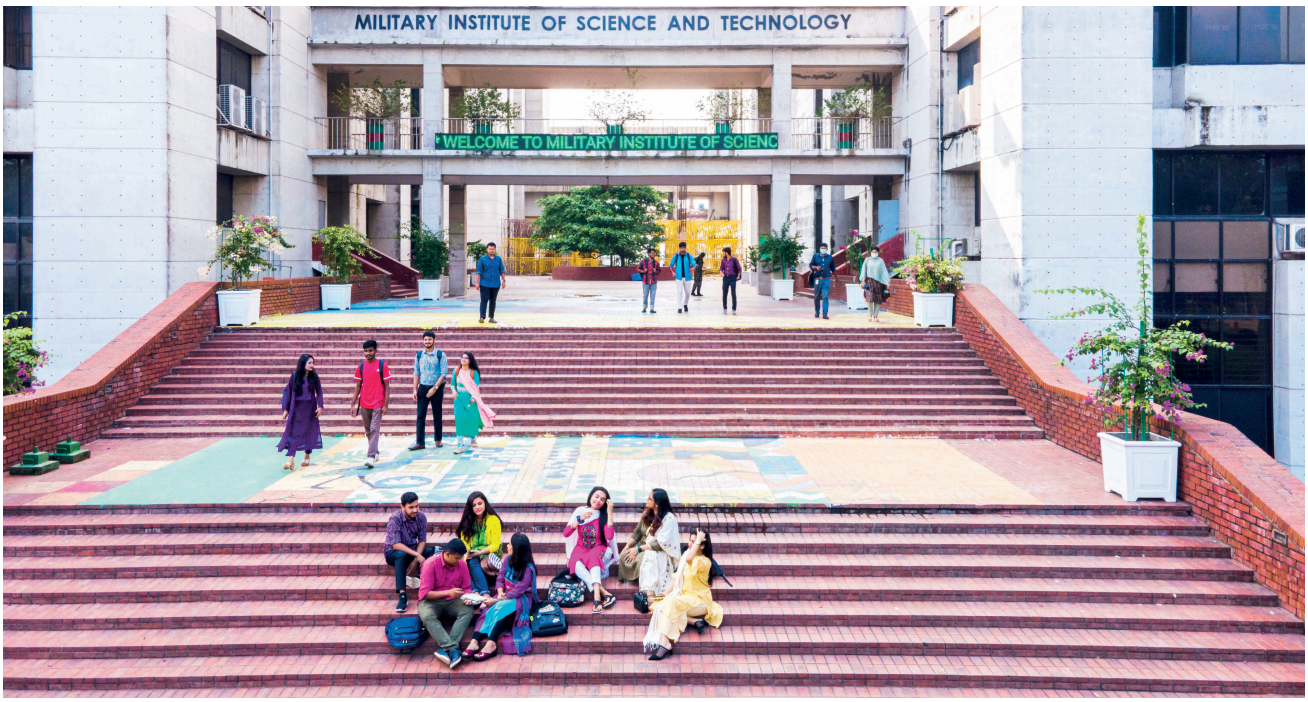


CE - Civil Engineering
CSE - Computer Science and Engineering
EECE - Electrical, Electronic and Communication Engineering
ME - Mechanical Engineering
AE - Aeronautical Engineering
NAME - Naval Architecture and Marine Engineering
Arch - Architecture
BME - Biomedical Engineering
NSE - Nuclear Science and Engineering
EWCE - Environmental, Water Resources and Coastal Engineering
IPE - Industrial and Production Engineering
PME - Petroleum and Mining Engineering

MIST also offers Ph.D / M.Sc / M Engg under CE, CSE, EECE, ME, AE, NAME, NSE, BME departments and Ph.D / M. Phil under Physics, Chemistry and Mathematics departments.

"As an institution", MIST is already on a steady stride upholding its motto **'Technology for Advancement'** and remains committed to contributing to the wider spectrum of national educational arena. It plays a significant role in the development of human resources and is gradually pursuing to achieve its goal as **'Centre of Excellence'**.

Foreign students were admitted for the first time in session 2008-09. Since then, total ten students from various countries have graduated from MIST. MIST envisages creating facilities for military as well as civil students from home and abroad dedicated to pursuing standard curriculum leading to graduation and post-graduation degrees. MIST offers scholarship and stipends to the students for their outstanding results. So far a total of 5604 students have graduated from this institute. The graduates are proving their worth in higher studies and professional assignments both in home and abroad with dignity and efficiency. At present, MIST has total 2417 students out of which 83% being non-military students.



ATTRIBUTES OF MIST

- ✓ Rigorous admission and selection process for best possible screening
- ✓ Interactive sessions in the classroom
- ✓ Regular guest lectures and educational visits
- ✓ Tradition of timeliness, commitment and uninterrupted curriculum
- ✓ Well thought-out and continuous feedback and assessment system
- ✓ Effective teaching through innovative method
- ✓ Industrial attachment for on-the-job training
- ✓ Emphasis on code of conduct and dress code
- ✓ Focus to develop students as good human with all possible attributes of a successful leader
- ✓ Tranquil, pollution free and secure campus life

OBJECTIVES

- ✓ To establish a prestigious academic institute for studies in different fields of engineering and technology for military and non-military students of home and abroad at graduate and post graduate levels
- ✓ To organize courses on military science, technology and management in various arena of interest
- ✓ To hold examinations and confer certificates of diplomas/degrees, other academic distinctions to persons who have persuaded a course of study and have passed examinations conducted by the institute
- ✓ To confer research degrees, award fellowship, scholarship, exhibition, prizes, medals and honorary degrees to persons who have carried out research works under conditions as prescribed in the MIST regulations
- ✓ To establish teaching divisions (Div), departments, centres, faculties etc. and to make necessary arrangements for their maintenance/management/ administration
- ✓ To make provisions for advisory, research and consultation service including supervision, material testing and to enter into suitable agreement with any persons/ organizations for these purposes
- ✓ To co-operate with Universities/ Technical Institutions (both military and non-military) including memorandum of understanding (MoU) at home and abroad, in the manner and purpose as the institute may determine
- ✓ To do such other acts, related to above-mentioned objectives, as may be required in order to expand the objectives of the institute

CAPABILITIES

- ✓ To conduct under-graduate programmes leading to B.Sc. Engineering Degrees in the following disciplines:
  - ❖ Civil Engineering (CE)
  - ❖ Computer Science and Engineering (CSE)
  - ❖ Electrical, Electronic and Communication Engineering (EECE)
  - ❖ Mechanical Engineering (ME)
  - ❖ Aeronautical Engineering (AE)
  - ❖ Naval Architecture and Marine Engineering (NAME)
  - ❖ Bachelor of Architecture (B. Arch)
  - ❖ Biomedical Engineering (BME)
  - ❖ Nuclear Science and Engineering (NSE)
  - ❖ Environmental, Water Resources and Coastal Engineering (EWCE)
  - ❖ Industrial and Production Engineering (IPE)
  - ❖ Petroleum and Mining Engineering (PME)
- ✓ To conduct post graduate programmes (masters and PhD)
- ✓ To conduct diploma and certificate programmes in all the degree awarding disciplines
- ✓ To conduct research and professional advanced programmes / courses for Armed Forces in different fields of Military Science & Technology as requirement arises

AFFILIATION

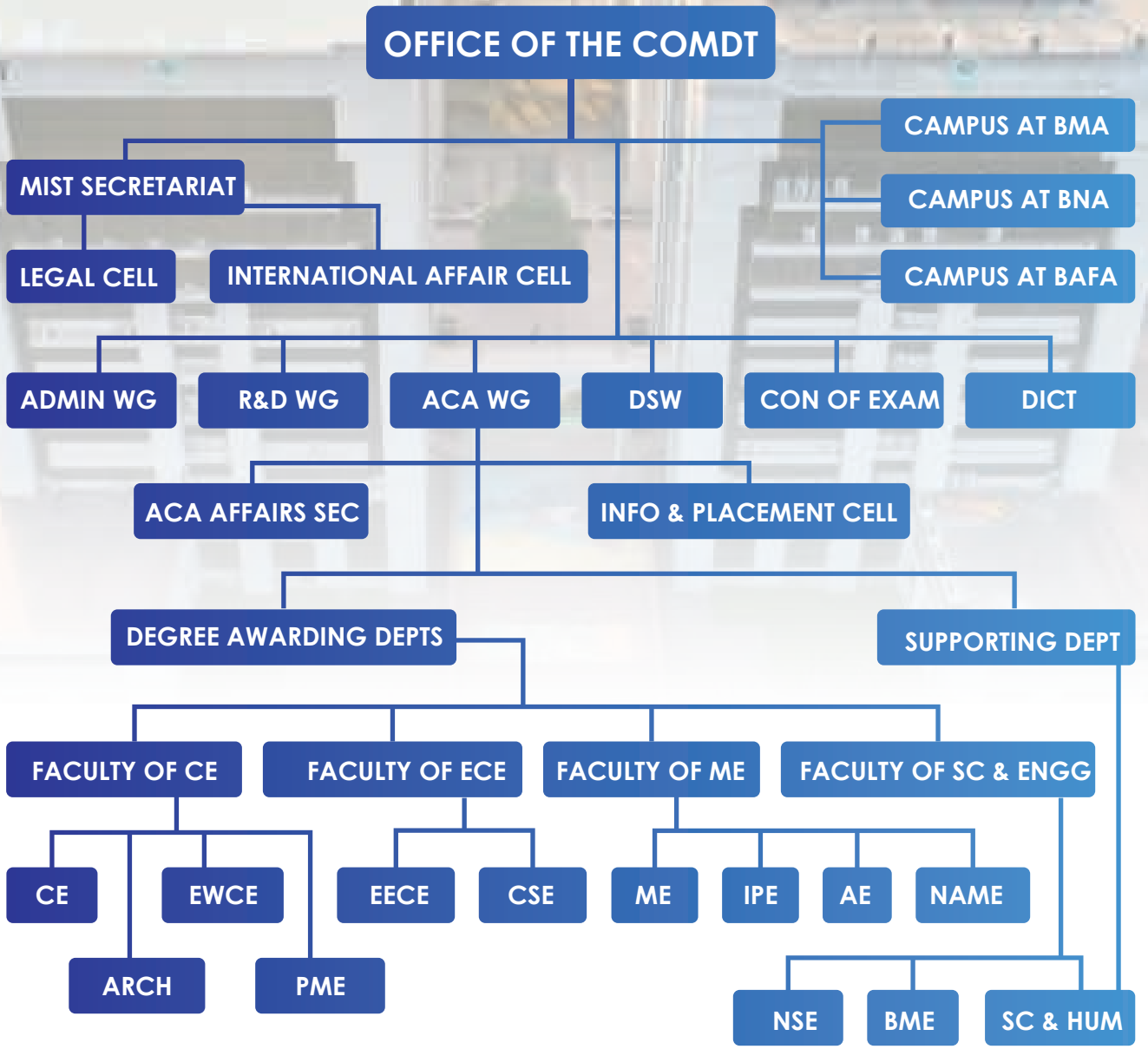
All academic programs of MIST are affiliated with Bangladesh University of Professionals (BUP). All examinations are conducted as per the schedule approved by the same university. BUP also approves the results and awards certificates amongst the qualified students.

OUTCOME BASED EDUCATION (OBE)

In its quest of reaching international level of accreditation, MIST has already adopted the Outcome Based Education (OBE) as per Washington Accord (An international accreditation agreement for professional engineering academic degrees between the bodies responsible for accreditation in its signatory countries, established in 1989, till date 20 countries are full signatories). Bangladesh represented by Board of Accreditation for Engineering and Technical Education (BAETE) has a provisional signatory status of Washington Accord. OBE is an educational theme based on each part of an educational system around goals (outcomes). By the end of the educational experience, each student should have achieved the goal. It is expected that graduates will be more relevant to industry and other stakeholders due to OBE system. Five programs of MIST, i.e. CE, EECE, ME, CSE and AE have already applied for accreditation as per OBE to BAETE. Process is going on. It is expected more than one program will get accreditation as per OBE system this year.

ORGANOGRAM

MILITARY INSTITUTE OF SCIENCE AND TECHNOLOGY, BANGLADESH



FACULTIES AND DEPARTMENTS

At present MIST has 12 B.Sc engineering degree awarding departments under 04 faculties.

Faculty of Civil Engineering (FCE):

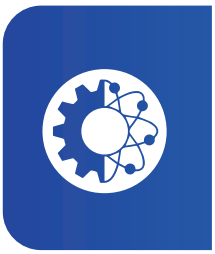
- Civil Engineering (CE)
- Architecture (Arch)
- Environmental, Water Resources and Coastal Engineering (EWCE)
- Petroleum and Mining Engineering (PME)

Faculty of Electrical and Computer Engineering (FECE):

- Computer Science and Engineering (CSE)
- Electrical, Electronic and Communication Engineering (EECE)

Faculty of Mechanical Engineering (FME):

- Mechanical Engineering (ME)
- Aeronautical Engineering (AE)
- Naval Architecture and Marine Engineering (NAME)
- Industrial and Production Engineering (IPE)



Faculty of Science and Engineering (FSE):

- Biomedical Engineering (BME)
- Nuclear Science and Engineering (NSE)
- Department of Science (Mathematics, Physics, Chemistry) and Humanities (Only Post Graduate)

FACULTY OF
CIVIL ENGINEERING (FCE)

Civil Engineering (CE) Department

The CE Department of MIST, standing on the four pillars of morale: fundamentals, innovation, excellence and advancements. It holds the glory of being the pioneer department of MIST. The department of CE produces next-generation top-notch engineers and leaders for the nation. Since its commencement in 1999 with only 40 military students, 983 students have graduated from this department. Presently 351 students are enrolled in the undergraduate program of this department. It is the first ever department of MIST to receive the accreditation from the Board of Accreditation for Engineering and Technical Education (BAETE) in 2008. This department has again pioneered the Post Graduate program by introducing the MSc/M.Engg and PhD in 2012 and 2013, respectively. This department is enriched with highly experienced and disciplined teaching staffs. At present, 36 faculties are serving in this department. This department highly promotes interactive learning and collective class-environment which help the students become more engrossed in employing themselves with the subject-matter and develop their depth of knowledge in engineering education. This department also contributes to the country's infrastructural development. Many important construction works, projects and professional vetting works in the field of structural, geotechnical, transportation and environmental engineering are carried out with the consultancy service of this department. All-in-all, within a very short span of time, the CE department of MIST has spread its outreach throughout the nation and is playing a vital role in building an ingenious society enriched with engineering transcendence and revolution.

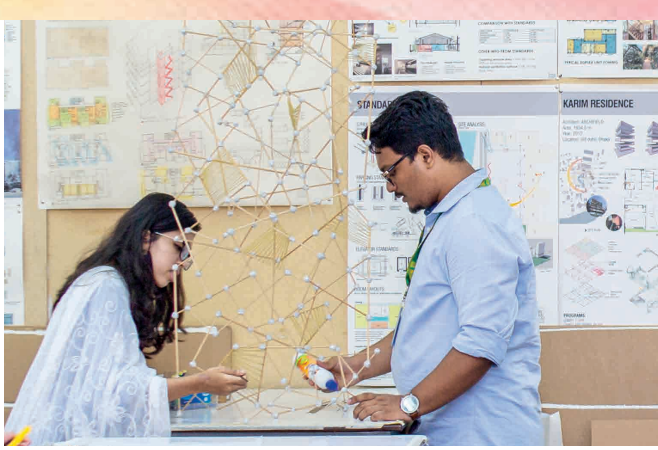
With highly motivated faculty members, the research environment in the CE department is dynamic and collaborative. Expert members in their respective fields are playing key roles in developing students' knowledge and skills. With over 250 conference papers and 200 journal publications since 2020, students and faculties of CE department are actively present in the CE research arena, having a global footprint to include countries like the USA, Canada, Singapore, India to name a few. Besides, collaboration research with BUET-JIDPUS and many consultancy projects were done successfully. CE department signed MoU with WaterAid Bangladesh in 2015 for promoting urban rainwater harvesting and Ohio State University, USA in 2016 for the higher education program and joint research work. In February 2021, MIST signed MoU with Lakehead University, Canada.

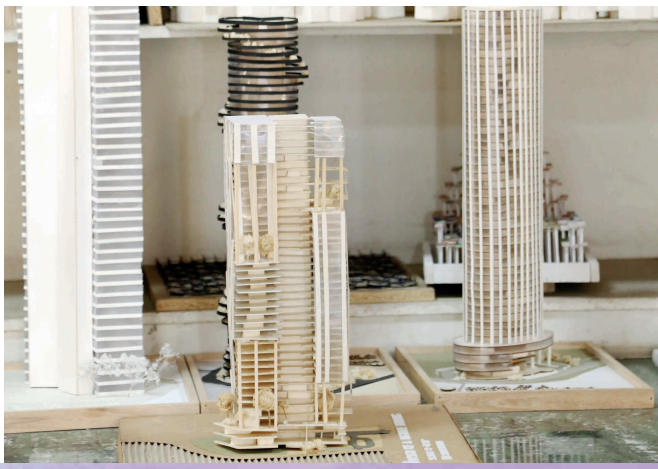
Architecture (Arch) Department

The Department of Architecture in MIST started its journey in 2015. The department aims to educate and develop the future professional architects with advanced knowledge, technical competence, design skill and complex-problem solving ability steered by core values of critical thinking, intellectual curiosity, discipline and ethics. In this respect, it offers a learning environment that involves the students to nurture their intellectual ability, expand the knowledge horizon, develop high technical competence and design skill that they can apply in education, profession and life.

Students can avail the facilities to work collaboratively with tutors, internal and external practitioners, theorists and designers in order to enhance their skills and build knowledge. The studios of the department are equipped with all modern amenities and the department is in its way to augment Lab facilities including Architectural Design Lab, Building Technology Lab, Photography & Digital Image Lab, Design Communication & Visualization Lab, Model Making Lab, Urban & Landscape Design Lab, Heritage Conservation & Rebuilding Lab and Environmental Design Lab. Along with the consistent academic activities, other co-curricular programs such as exhibition, seminar, design charrette, workshop, guest lecture, excursion etc. are arranged by the department regularly.

The department is equipped with highly qualified faculty. The faculty contains members with Doctorate and Masters titles from reputed foreign and local universities and a very good combination of experienced and young energetic members. Moreover, there is a very strong Advisory Committee that supports the department by monitoring and evaluating the academic activities regularly and helps to maintain the standard. The committee is comprised of renowned members from the academia, profession and concerned professional bodies. Industrial Training is organized by the department to get the students familiarized with the professional practice. This training program is also organized and monitored by the Industrial Advisory Committee which is composed of prominent architects as well as academicians.





Environmental, Water Resources and Coastal Engineering (EWCE) Department

In line with the ongoing expansion policy of MIST, Environmental, Water Resources, and Coastal Engineering (EWCE) department is a newly introduced degree awarding department, starting its journey from January 2015 session. The department has currently initiated undergraduate degree program and subsequently will go for further enlarging its arena to post graduate degree programs. Concern about environment is a global issue and environmental issues related to large scale civil engineering projects need further special attention in order to minimize the adverse impact on surrounding environment. For Bangladesh, managing the vast water resources for its optimum benefit is vital for overall livelihood of the people. The long stretched coastal zones also offer excellent opportunities to extract maximum output. More so, the unique and dynamic nature of the coastal belt needs special study and extensive research for sustaining any future project along the coastal line. Combining all mentioned above, an all-embracing study and research work on water resources, costal zones and its relevancy on the overall environment is a call of the hour. Realizing this importance and with a view to contribute in uplifting the socio-economic condition of the country, MIST took the bold step to produce experts in these very specialized fields. It is expected that relevant and all-encompassing studies and researches by this newly introduced department will reduce much of the existing 'knowledge and understanding gap' in those fields.

This department is enriched with highly experienced and disciplined teaching staffs. This department promotes interactive learning and collective class-environment which helps the students become more engrossed in employing themselves with the subject-matter and develop their depth of knowledge in engineering education. In addition, the programs emphasizing on engineering science and design, provide students with ample opportunity to put their knowledge into practice by solving real-world problems under the guidance of our readily approachable faculty members. This department also contributes in the country's development projects. All-in-all, within a very short span of time, the EWCE department of MIST has spread its outreach throughout the nation and is playing a vital role in building an ingenious society enriched with engineering transcendence and revolution.

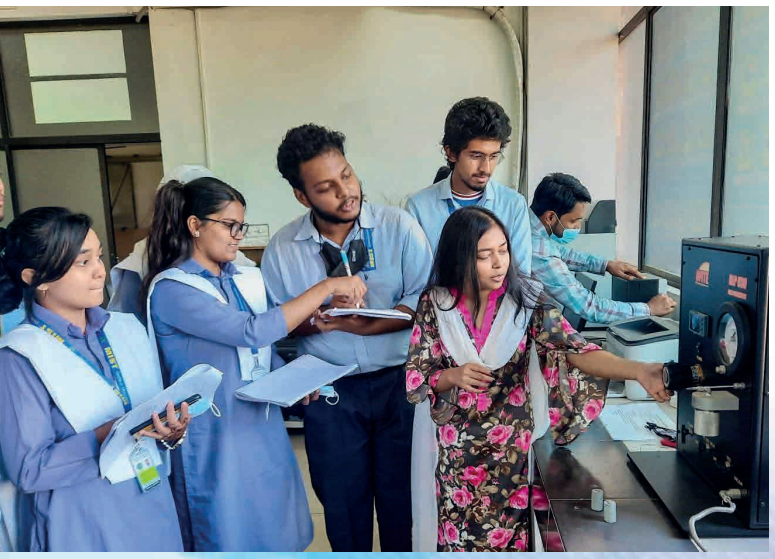
Petroleum and Mining Engineering (PME) Department

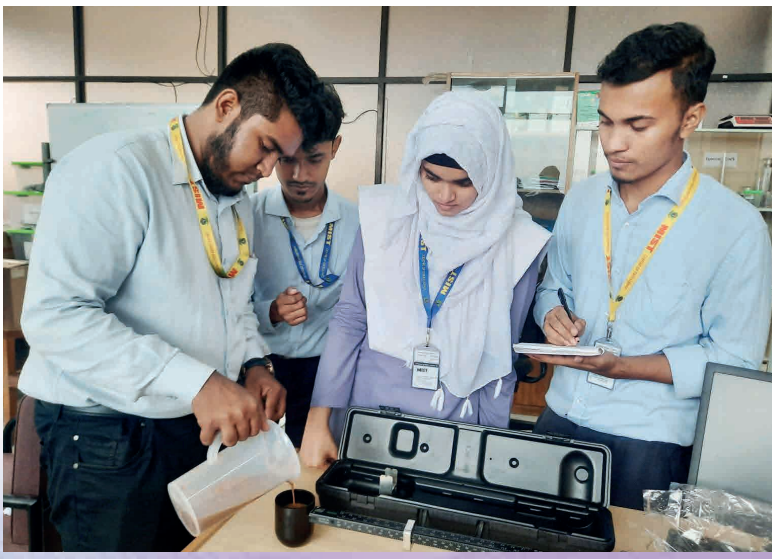
The Department of Petroleum and Mining Engineering (PME) offers Bachelor of Science in Petroleum and Mining Engineering which is one of the top university level programs among the engineering universities in Bangladesh. The Department of Petroleum and Mining Engineering started it's academic work from 3 February 2016 with the objective to produce qualified personnel in the field of Petroleum and Mining Engineering, skilled enough to exploit the resources in sustainable manner in national and international context.

The mission of the department of Petroleum and Mining Engineering is to guide all efforts aiming to build, sustain, incorporate, convey and apply Petroleum and Mining Engineering knowledge, and to augment the human resources of these disciplines and thus to ensure an energy-secure future for the nation, that balances environmental impact and affordable energy supply. To foster an environment in which students learn to think, conduct, research, apply knowledge and achieve success in a diverse and changing global economy, and to guide the students to develop themselves as professionals with high ethical and moral values.

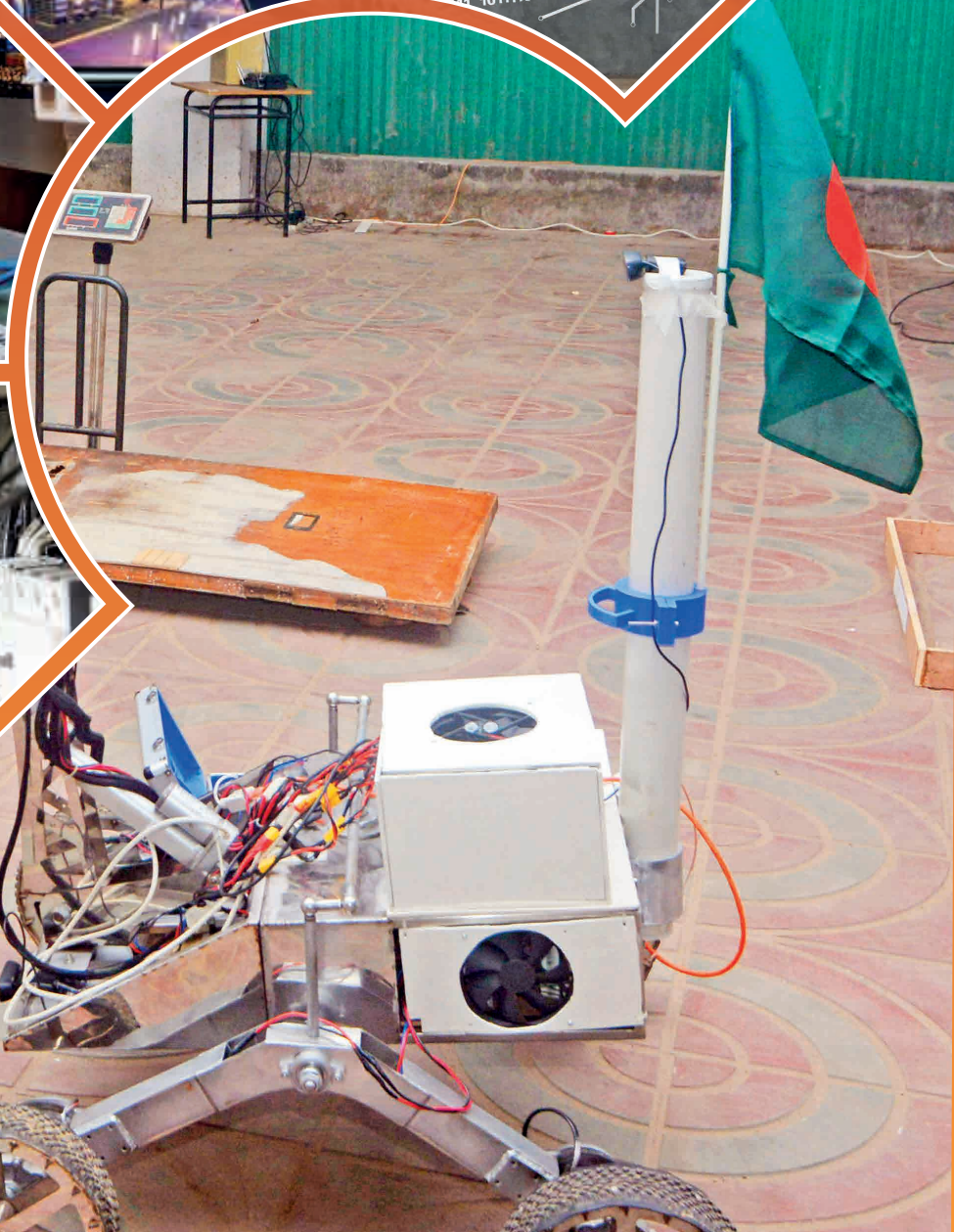
To fulfill this mission, the PME department committed to pursue excellence in Reservoir Engineering, Production Engineering, Well Drilling and Completions, Integrated Reservoir Characterization, Fit-for-purpose Reservoir Management Techniques, Rock Mechanics, Mining System, Mine Instrumentation and Machineries, Minerals Processing, Mining Survey, Mine Ventilation and Environmental Engineering considering sustainable resource engineering.

The department of Petroleum and Mining Engineering intends to be nationally and internationally recognized through education and research programs in both Petroleum and Mining discipline. The vision is to enrich national and global energy industry by applying fundamental engineering and scientific knowledge accompanied by latest innovation into industry applications.

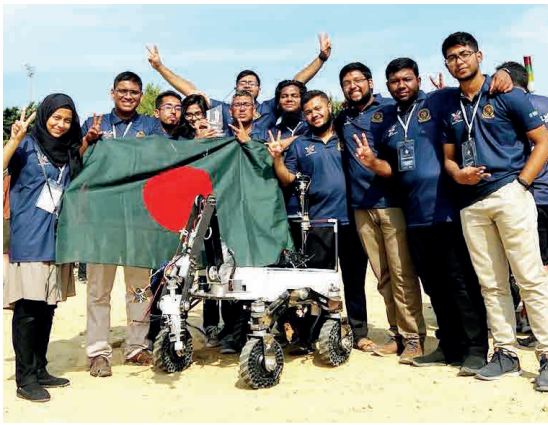


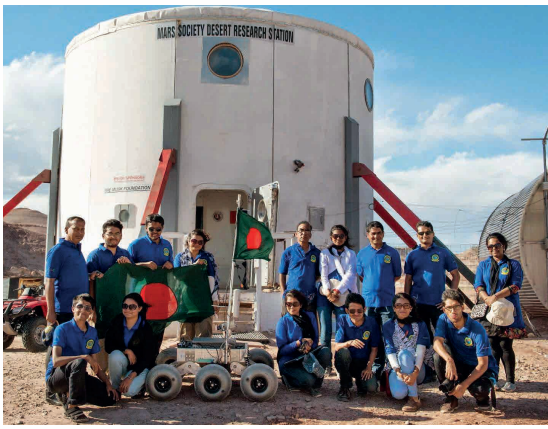


FACULTY OF ELECTRICAL AND COMPUTER ENGINEERING (FECE)



Computer Science and Engineering (CSE) Department

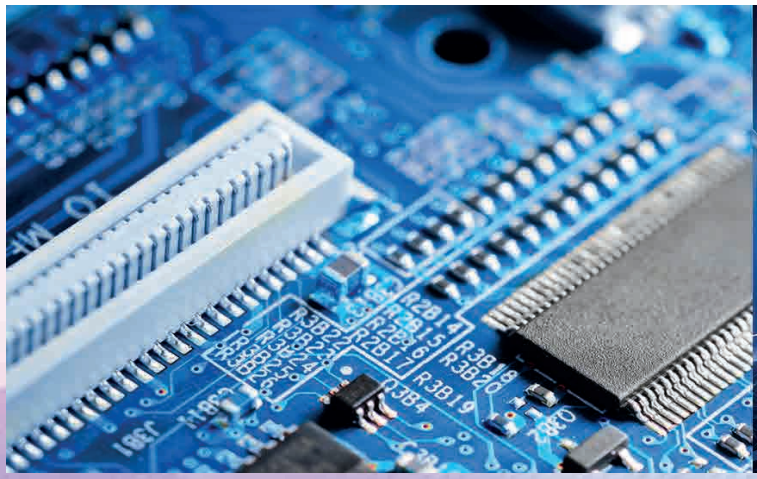




Department of Computer Science & Engineering (CSE) was established in the academic session 2000-2001 as CSIT. From a modest beginning, offering undergraduate B.Sc program to only military students, the dept has now evolved as one of the largest departments at MIST. The department of CSE now offers B.Sc program at the undergraduate level, M.Sc, M.Engg, and doctorate in philosophy (PhD) degree at the post graduate level.

The department boasts of highly qualified faculties, along with state of the art learning infrastructure which provides an ideal platform for students to hone in their skills in the field of computer science. The department provides an ideal environment for the students to specialize in contemporary fields of Computer Science including Artificial Intelligence, Robotics, Machine Learning, Computer Vision and Pattern Recognition, Data Analytics, Network & Data Security to name a few. The department also collaborates with both the industry and Government departments and agencies to establish a leadership for both stake holders which are especially beneficial for students.

The department of CSE draws its strength from the experienced pool of highly professional faculties. The faculties are drawn in from diverse nationalities, diverse prior professional exposure (Military, Industry, Academia), diverse educational qualification and background and thus provide large areas of expertise for students to benefit. Based on requirements, domain specialists are also drawn from other educational institutes like BUET and also from the industry.



Electrical, Electronic and Communication Engineering (EECE) Department

The foundation of EECE department was laid in 2003. It is functioning under the faculty of Electrical and Computer Engineering. The department is offering both undergraduate and postgraduate programs on M.Sc., M Engg and PhD. The department is subdivided into three major areas: Power, Electronics and Communication in the graduate and undergraduate curriculum. At present this department is served by a group of competent, qualified faculty members along with several renowned professors from BUET as guest faculty. Around 302 undergraduate and 100 postgraduate students are currently studying in the department. It offers a diverse education experience with a focus on traditional areas as well as emerging areas. The faculty members are always engaged in numerous research areas including satellite navigation space engineering, VLSI, optoelectronics, properties of materials, compound semiconductor devices, radar detection and tracking, optical fiber communication, free space optical communication, wired and wireless communication, renewable energy and thin film technology. At present, there are 34 faculty members in the department. The department frequently arranges international conferences, seminars and project competitions to enhance the knowledge of the students. The students of this department participate in various national and international competitions throughout the year. Under this department, MIST Robotics Club (MRC) and IEEE Student Branch are performing in the national and international platform. The department got accreditation from BAETE in September 2010. Post graduate program under this department has started functioning since October 2013.

FACULTY OF MECHANICAL ENGINEERING (FME)

Mechanical Engineering (ME) Department

Mechanical Engineering Department of MIST has commenced its journey since January 2003. Till now 849 students have graduated & serving the nation with great excellence.

Department of Mechanical Engineering aims to provide high quality Mechanical Engineering education and contribute to the era of 4th Industrial Revolution.

A long list of advanced courses has been added through regular review of the process to keep pace with dynamic technologies.

The faculty of Mechanical Engineering Department are also involved in a wide range of projects in order to provide feasible solution to industrial problem and establish an integrated relation between theoretical & practical knowledge.

Besides academic activities, students of this department are regularly participating in various robotics, engineering, sports and cultural competitions as part of co and extra-curricular activities with great success & uplifting the glory of department.

Aeronautical Engineering (AE) Department

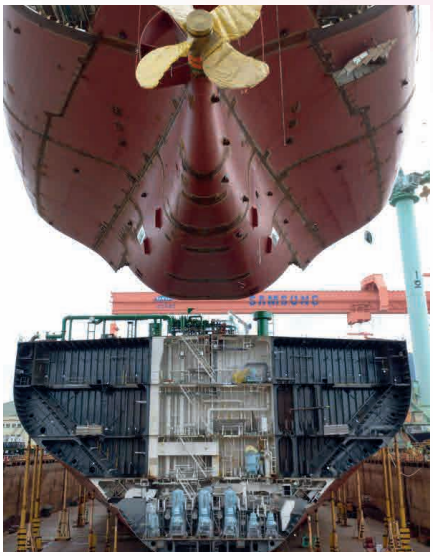
Aeronautical Engineering (AE) department of MIST has started its journey from 1st February 2009. The department is currently offering B.Sc, M.Sc and PhD in AE program. The department has 02 major divisions: Aerospace and Avionics. Currently the department is running its 14th batch with a total of 186 students (including 2 foreign students) in four levels, alongside successful graduation of 10 batches of 547 students. Total 22 faculty members, including 02 Indian Air Force officers, specialized from different backgrounds (both civil & military) are serving in this department.

A significant number of AE graduates are pursuing higher studies abroad in USA, Europe, Canada and other parts of the world. In professional fields, AE Graduates are employed in Airlines, Corporate Sectors, Public Sectors and Armed Forces both in home and abroad.

AE department has participated and won in many international competitions like NASA Lunabotics Mining Competition (USA), DBF Competition (USA), SAE Aero-design competition (USA), Future Flight Design etc. The Department organizes different enlightening workshops and short courses regularly.

The Board of Accreditation for Engineering & Technical Education (BAETE) under IEB approved Aeronautical Engineering program of MIST in 2016 and subsequently renewed in 2022.

Naval Architecture and Marine Engineering (NAME) Department



Divine blessings of 1,10,000 sq km exclusive economic zone, 712 km coast lines and 700 rivers necessitate Bangladesh to have close relation to shipping and shipbuilding. Moreover, the government of Bangladesh has declared shipbuilding as "The Thrust" sector for national economic development and industrialization. Thus, with the aim to produce human resources qualified with design, construction, repair and maintenance of ships and offshore structures, Department of Naval Architecture and Marine Engineering at MIST started its journey with undergraduate program in the academic session 2012-2013. The department has also started postgraduate program i.e. M.Sc. (Engg), M. Engg, and Ph.D. from the year 2019-2020.

Graduates in this field of study have actually dual degrees. In one way these graduates are naval architects and another way they are marine engineers. Curriculum of the department provides insight to design, to build, to operate and to maintain vessels which move just above, on or under the sea. These include tankers, container ships, passenger ferries, battleships, aircraft carriers, submarines, drilling platforms, hovercraft, yachts, and many other kinds of vessels.

So far total 188 students graduated from NAME department. Due to versatility of the field of study, the graduates could successfully grab the opportunity of wide range of employment and research at home and abroad. A good number of graduates of this department are working in various government and private organizations. like; Bangladesh Shipping Corporation (BSC), Bangladesh Inland Water Transport Authority (BIWTA), Department of Shipping (DOS), Various port authorities, shipyards etc.

Industrial and Production Engineering (IPE) Department

Industrial and Production Engineering (IPE) department has been established in 2016 under the faculty of Mechanical Engineering to develop much needed professionals required for the growth of modern industries. The focus of the undergraduate program in IPE is manufacturing, quality, process design, productivity improvement and management to meet the emerging technical needs of the modern industries. Education in IPE is very much leaned to practical situations as such the relationship of the department with the industries will be strengthened through their involvement in curriculum development and various programs like seminars, visits and student projects. The department of IPE aims not only to produce efficient engineers, but also well-educated conscientious leaders who can contribute to the development of the country through ameliorating our industries.

The cogitated and improvised under-graduate course of Industrial and Production Engineering emphasizes on manufacturing and improvement of productivity, thus students will learn trends of dynamics and control and hence develop a sound knowledge about overall industrial production and management. They will also learn to analyze the emerging technical trends of the industry.

FACULTY OF
SCIENCE AND ENGINEERING (FSE)

Biomedical Engineering (BME) Department

The Department of Biomedical Engineering began its journey in February 2015, with the first undergrad Biomedical Engineers in Bangladesh. BME aims to improve human health by applying engineering principles and methods to medical problems. With the high demand for Biomedical Engineering in the country and abroad, students have versatile means for career development after completing the degree. Today, biomedical engineers are employed in industry, hospitals, research and development labs, government regulatory agencies, etc. Life-saving devices like cardiac pacemakers, defibrillators, artificial kidneys, blood oxygenators, prosthetic hearts, and implants, etc., along with the commonly known medical equipment as CAT, PET, MRI, functional NMR, potential mapping, CT scan, X-ray machine, etc. all are the products of this discipline.

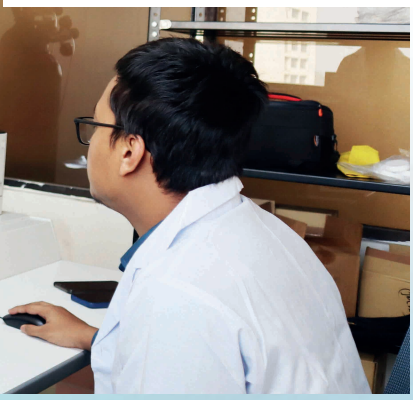
The undergraduate program in BME provides a strong foundation in the basic sciences, mathematics, engineering, and life sciences. With eight new state-of-the-art laboratories in the new tower building of MIST, the program offers the choice of specialization in one of the four tracks: Instrumentation, Regenerative Medicine, Imaging, and Biomechanics and Rehabilitation Engineering. This field of Biomedical Engineering seeks to close the gap between engineering and medicine, combining the plan and problem-solving aptitudes of designing with medical and biological sciences to develop healthcare treatment, including diagnosis, observing, and therapy.

Nuclear Science and Engineering (NSE) Department

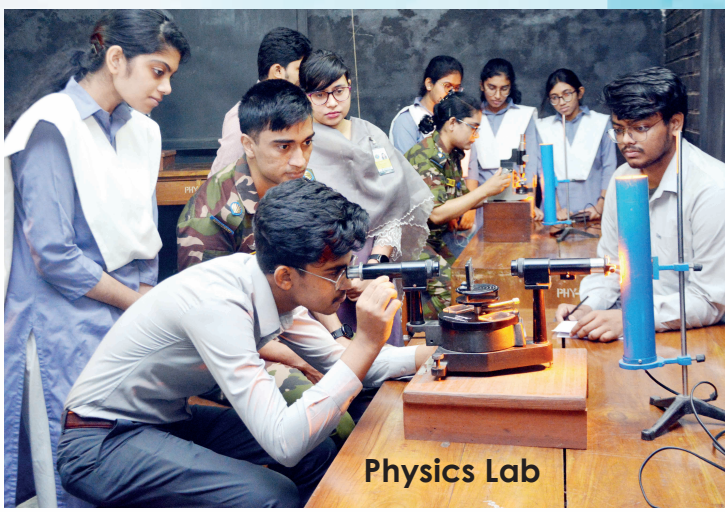
To meet the challenges of the twenty-first century and advance Bangladesh in line with the government's aim for clean energy, the role of Nuclear Science and Engineering department will be vital. Bangladesh is now making gradual progress towards incorporating the usage of nuclear technology in producing power, medicine, industrial, and agricultural products, among other things. The country has long felt the need for professionals to take care of the nuclear infrastructure, nuclear power plant components, nuclear fuel, and other radioactive materials, particularly for power generation and healthcare diagnostics, as well as to integrate the most recent technology effectively for quality citizen services. The foundation of nuclear education is a result of this endeavor to suit the necessities of the time.

To realize novel and advantageous applications of nuclear science and technology is one of the main objectives of the Nuclear Science and Engineering (NSE) Department. Our students will learn about contemporary nuclear techniques and their uses in fields like radiation therapy, medical imaging, contraband detection, and nuclear security and safety. Our nuclear engineers are working for nuclear power plants, other power companies, nuclear medicine institutes, research facilities, and international governmental regulatory organizations.

These considerations led to the establishment of the NSE Department in 2014, and the first academic year at the Military Institute of Science and Technology (MIST) began on February 5th, 2015. The first batch had 40 undergraduate students. MSc, MEngg, and PhD programs have also begun at the NSE Department as of the October 2015 session.



Science and Humanities (Sc & Hum) Department


Physics Lab

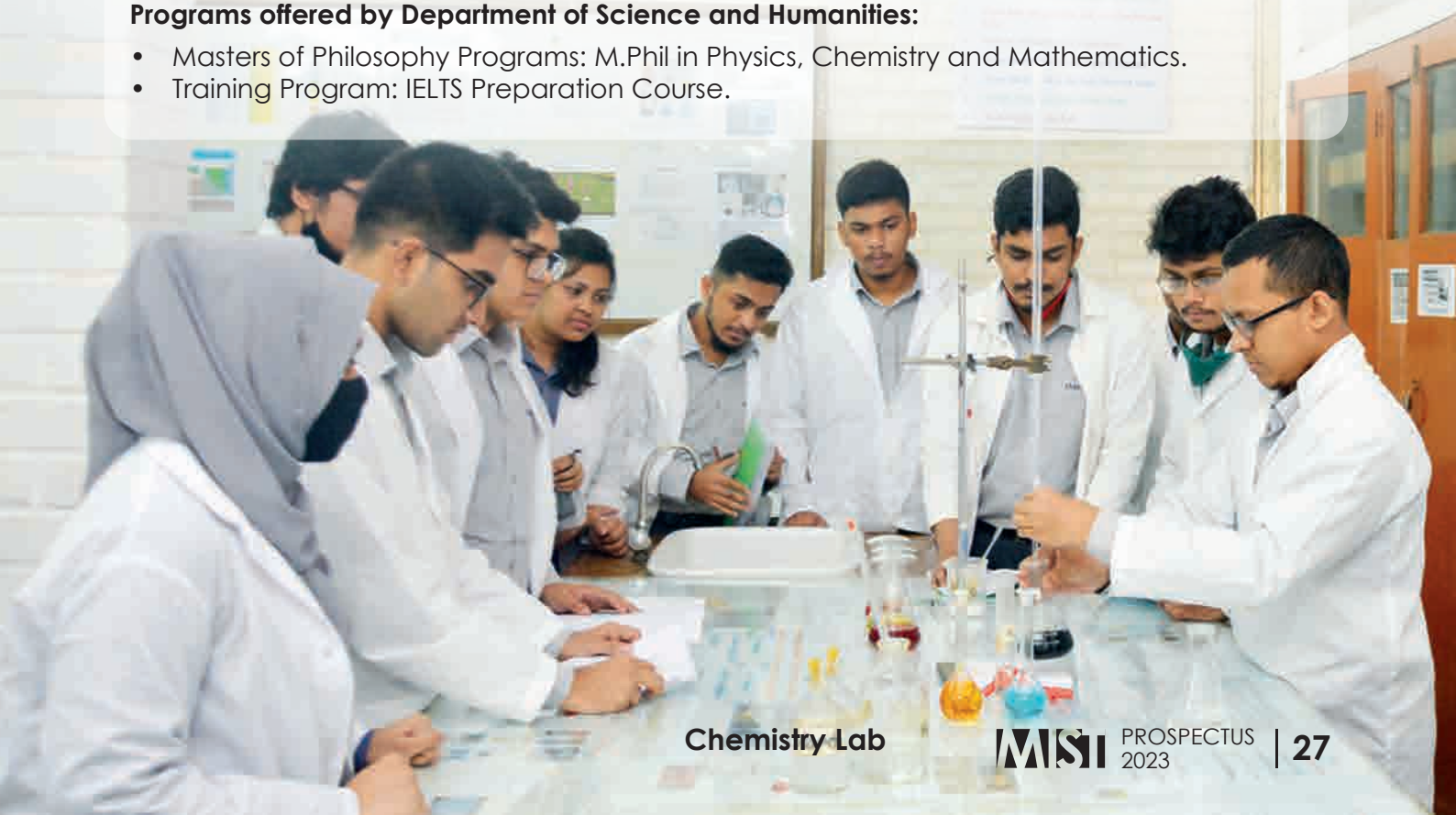
The Department of Science and Humanities began its journey on April 19, 1998, with the establishment of MIST. This department has historically played a crucial role in developing the foundation of science and humanities for future engineers. The department primarily offers the basic undergraduate courses essential for engineering education along with the successive arrangement of extra-curricular activities including seminars, Math Olympiads, Annual Debating Competition, IELTS preparation course, workshop on OBE and cultural programs. The science and humanities department is not only concerned with fundamental education but also promotes research to remain updated with modern science.The M.Philprogram in mathematics, physics, and chemistry has been running simultaneously with the undergraduate curriculum since the October 2014 session.

The mission of the Department of Science and Humanities is:

- To provide the fundamental knowledge in applied science to all engineering students of MIST
- To develop an advanced teaching-learning environment for exploring science and its application in the field of engineering and technology
- To provide fundamental knowledge on economics, accounting, sociology and Bangladesh studies to apprehend ethical aspects of engineering education
- To strengthen English communication skills of all students
- To facilitate research work for the development in the field of engineering

Programs offered by Department of Science and Humanities:

- Masters of Philosophy Programs: M.Phil in Physics, Chemistry and Mathematics.
- Training Program: IELTS Preparation Course.


Chemistry Lab

REGULATORY BODIES

Council of MIST

Chairman:

Honourable Minister, Ministry of Education, Government of the People's Republic of Bangladesh

Vice Chairmen:

Chief of Army Staff, Bangladesh Army
Chief of Naval Staff, Bangladesh Navy
Chief of Air Staff, Bangladesh Air Force

Members:

- Principal Staff Officer, Armed Forces Division (AFD)
- Secretary, Ministry of Defence (MOD)
- Vice Chancellor (VC), Bangladesh University of Professionals (BUP)
- Engineer in Chief (E in C), Army Headquarters (AHQ)
- Commandant, MIST
- Commandant, Bangladesh Military Academy (BMA)
- Commandant, Bangladesh Naval Academy (BNA)
- Commandant, Bangladesh Air Force Academy (BAFA)
- Representative of the VC (Prof eqvt), Faculty of Science, Dhaka University (DU)
- Representative of the VC (Prof eqvt), Bangladesh University of Engineering and Technology (BUET)
- All Deans of Faculty (CE, ECE, ME, and Sc & Engg), MIST
- Representative of the Ministry of Education
- Representative of the Ministry of Finance
- Representative of the Ministry of Science and Technology

Secretary:

Colonel Staff, MIST

REGULATORY BODIES

Governing Body of MIST

Chairman:

E in C, Bangladesh Army / Commandant, MIST (As per seniority)

Vice Chairman:

E in C, Bangladesh Army / Commandant, MIST (As per seniority)

Members:

- Representative of the VC, Faculty of Science, DU
- Representative of the VC, BUET
- Representative of the VC, BUP
- Dean / Senior Instructor appointed by Commandant BMA / Commandant MIST
- Dean / Senior Instructor appointed by Commandant BNA / Commandant MIST
- Dean / Senior Instructor appointed by Commandant BAFA / Commandant MIST
- Director General, Training Directorate, AFD
- Director, Military Training, Bangladesh Army
- Director, Naval Training, Bangladesh Navy
- Director, Air Training, Bangladesh Air Force
- All Deans of Faculty (CE, ECE, ME, and Sc & Engg), MIST
- Director, Research & Development (R&D), MIST
- Director Administration, MIST
- Representative of MOD
- Representative of Ministry of Education
- Representative of Ministry of Finance
- Representative of Ministry of Post, Telecommunication and Information Technology

Member Secretary:

Colonel Staff, MIST

REGULATORY BODIES

Academic Council of MIST

Chairman:

Commandant, MIST

Members:

- Representative of the VC, Faculty of Science, DU
- Representative of the VC of BUET
- Representative of the VC of BUP
- All Deans of Faculty (CE, ECE, ME, and Sc & Engg), MIST
- Representative of Commandant, Engineering Faculty, BMA
- Representative of Commandant, Engineering Faculty, BNA
- Representative of Commandant, Engineering Faculty, BAFA
- Director, Research & Development (R&D), MIST
- Heads of all Departments, MIST
- Colonel Staff, MIST
- Controller of Exam, MIST
- One professor from each faculty, MIST (nominated by faculty dean)
- Representative of Training Directorate, AFD
- Representative of Military Training Directorate, AHQ
- Representative of Naval Training Directorate, NHQ
- Representative of Air Training Directorate, Air HQ
- Representative of MOD
- Representative of Ministry of Education

Member Secretary:

General Staff Officer Grade-1 (Academic), MIST

RESEARCH AND DEVELOPMENT WING (R&D)

INTRODUCTION

In the organogram of MIST, the R&D Wing is entrusted with the task of supporting the Academic Wing that conducts not only basic and applied research but also development activities. Beside the technical education, MIST kept the provision for research and development. From the academic perspective, research is 'the systematic investigation into and study of materials, sources, etc. in order to establish facts and reach new conclusions' (Concise Oxford Dictionary). On the other hand, development means the innovative and creative adaptation of information and knowledge for a new purpose, thereby creating new information.

VISION

To promote and coordinate research, extension and development services of the various departments and faculties including testing and consultation.

MISSION

To publish various periodicals, maintain MIST archives, and arrange research-oriented seminars/ meetings within/ outside MIST.

CAPABILITIES

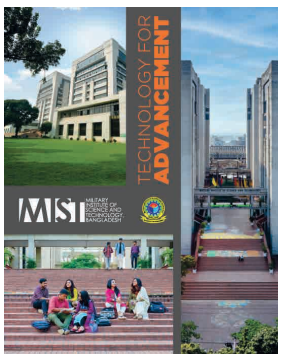
- To promote research and development services including testing and consultation.
- To make relations with outside agencies on matters of research and development.
- To provide budget and accounts for research, testing and consultation.
- To compose and publish research reports, bulletins, periodicals, journals, newsletter, diary, calendar, prospectus, brochure etc.
- To supervise and control the central workshop of MIST and the central library.
- To supervise and control the affairs of Reproduction and Printing Division of MIST.

DIVISIONS IN R&D WING

a. Archive, Research, Standardization, Testing & Consultancy (ARSTC) Cell
b. Publication & Reproduction (P&R) Cell
c. Photo & ID Cell
d. Central Library
e. Research Division

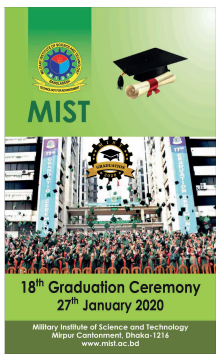
Journal

Newsletter



Brochure

Graduation Magazine



Graduation Brochure

OVERVIEW OF CENTRAL LIBRARY

Central Library was established in 1999. The Central Library of the Military Institute of Science and Technology (MIST) can also be hailed as the heart of the Institute. It aims to provide quality knowledge and useful resources to the users of the Institute. The library is well-organized in terms of its presently available resources. The library plans to incorporate more advanced technology in its functioning in the near future. The MIST Central Library is committed to serving the institution and society. The library follows the Open Access System. In order to the academic and research needs of the faculty, research, scholars, students, and staff officers. The library of MIST is the collection of knowledge and built up a blanched and rich collection in Science and Technology. It is an open library system for the student of MIST, which provides a rich collection of e-resources, books, including journals, newsletters, thesis works, and CDs. Student ID cards stand as a library card. The student can borrow any unlimited textbook from the library for 6 months and 5 other reference books for 30 days. At present, the library has more than 61,000 books, 9.8 Million(+) online resources, 1,800CDs, 2,200thesis papers, and repository items about 500(+). We have two big study halls; users can study with their own reading materials or can borrow reading materials for study purposes and reading room sitting capacity of more than 150. The book stock is arranged in a classified sequence based on the Dewey Decimal systems (DDC), and the great majority of volumes in the library are on open shelves, available for borrowing. MIST Central Library has an "Integrated Library System" using open source software Koha, Dspace, VuFind, and Drupal; and now the systems are fully operational i.e., students are now getting the modern facilities. The library has a well-equipped browsing corner through which the students and faculty can browse the internet, access our subscribed e Journals, check plagiarism and grammarly that they require. MIST central library has Sheikh Russel Angeena. Those who are interested or know about Sheikh Russel they can borrow books. There are two group discussion rooms available in the MIST central library. The rooms have a capacity of 6 persons located on the library 1st Floor. One team should be a minimum of two and a maximum of six members. There are two group discussion rooms available in MIST central library. The Reference section of the MIST central library contains information-dense resources, such as encyclopedias, dictionaries, and reference handbooks. The reference shelves are separate from the other shelves.

Service

The following services are being rendered from the Central Library, MIST. All registered members of the library users are take holders of these services.

a. Circulation Service
b. Web OPAC Facility
c. E-Resources Retrieval Facility
d. Current Awareness Services of newly acquired books and other resources.
e. Reference / Information Service
f. Email & SMS Alert Service
g. Reading Facilities
h. Book Issue Facilities for Long & Short time.
i. Access to E-Book and E-Journals
j. Audio-Visual Material issue Facilities
k. Photocopy Services
l. Browsing & printing facilities through Cyber Centre
m. Wi-Fi Service
n. Reading facilities of Thesis paper, Journal, Magazine, and Newspaper
o. Plagiarism Checking Facilities

Library Timing:

Ser	Day	Time
1	Sunday-Thursday	0800-2200
2	Saturday	1700-2200

Note: *1. During Preparatory Leave Library Remains Open Friday & Saturday 0800-2200*
2. Closed of Government Holidays.

Loan Policy:

Books are normally issued on loan from the library against the individual borrower's card. Following procedures will be followed in respect of issuing books/reading materials on loan:

a. Issue of Textbooks: Textbooks/précis may be issued on loan to the students/instructors for the whole duration of each term. After completion of each term, books are to be returned. Minimum 1/2copies of every title of books can be reserved in MIST Central Library.

b. Issue of Books other Than Textbooks:

1. New books will not be issued before those are classified/ catalogued (LMS database).
2. Normally not more than 5 books are issued at a time. The normal loan period for books is 30 days. Reference books will be preserved unlimited as per as it is feasible. The students/teachers in any discipline may borrow any number of books as per their requirement for the whole term/semester.
3. Members are required to see each book borrowed on the book issued by the library staff.
4. Books are liable to be withdrawn before the date if required for any special purpose.
5. When a student or permanent staff leaves MIST permanently, he/she will be required to take a clearance certificate from Assistant Librarian and Librarian.
6. All books will be issued through a prescribed library management system (LMS) of the MIST central library.
7. If the authority feels the necessity of deposing books/publications in the library, an individual borrower has to deposit issued books/publications immediately.

Print Version

Web Version

ABOUT MIJST

MIST International Journal of Science and Technology (MIJST), published biannually (June and December), is a peer-reviewed open-access journal of the Military Institute of Science and Technology (MIST). This journal is a continuation of the 'MIST Journal of Science and Technology', published by MIST, under ISSN 1999-2009 from 2009 to 2011, ISSN 2224-2007 since 2012 & E-ISSN 2707-7365 since 2020.

MIJST publishes original research findings as regular papers, review papers (by invitation). The Journal provides a platform for Engineers, Researchers, Academicians and Practitioners who are highly motivated in contributing to the Engineering, Science and Technology and Applied Sciences disciplines. MIJST welcomes contributions that address solutions to the specific challenges of the developing world.

DIRECTORATE OF STUDENTS' WELFARE (DSW)

The Directorate of Students' Welfare (DSW) began its journey from 15 June 2016 with the vision of excellence in the provision of administrative leadership and counseling services to students at the Institute; and the promotion of educational and administrative support to all structures of the Institute. The mission of this wing is to provide leadership, social, extracurricular and academic counseling programs to all students. The Directorate of Students' Welfare also seeks to challenge students to become responsible and productive citizens of the society and to support the Institute`s educational and administrative goals. DSW wing currently offers various opportunities to the students of MIST to enhance their cognitive skills and overall knowledge via arranging different competitions, seminars, workshops and career advisory programs.

With its excellent professional competency, DSW wing is working relentlessly for the welfare of the students. Additionally, DSW wing also facilitates necessary financial aid to the students by processing stipends in different categories. As such, many students have been able to continue incessant study at MIST. Moreover, DSW wing also patronizes all the clubs run by the students and monitors their activities for attending the creativity among the students. One of the most important activities of the DSW wing is mentoring Alumni activities. Furthermore, DSW wing is always open to all students of MIST regarding any difficulties at any time.

Facilities provided by DSW Wing:

a. **Stipend.** MIST provides stipend facilities to the students. Other than level 1, students of all levels have the opportunity to apply for stipend based on their academic result and financial condition. To render educational support to the students for their uninterrupted study, parents' economic condition is assessed under 19 different categories. A board of officers headed by the director of the students' welfare select the students and the percentage of stipend.

b. **Counseling Service.** MIST has counseling service for the students under a qualified and professional counselor. The counselor of DSW wing works actively with the students and uses a variety of skilled interventions and thereby offers both psychological and emotional support. It helps the students to develop insight into their situation and helps them build better personal resources with greater resilience. Besides the particular cases, online workshop sessions are conducted on mental health related issues for the students where they are benefitted by developing practical skills like assertiveness, relaxation techniques and resilience building.

c. MIST Student Welfare Fund. MIST has a Student Welfare Fund which operates with the objective of making financial assistance available for meeting the welfare needs of the students. The elected representatives among the students run the welfare fund which is monitored by the DSW wing. The sources of the student welfare fund are:

(1) Voluntary contribution from the students
(2) Contribution from the alumni
(3) Contribution from the MIST authority and Faculty
(4) Voluntary contribution from other sources

The DR's shall discuss and decides upon the applications submitted by the student seeking financial support from Students Welfare Fund which will be finally approved by the director of DSW wing.

d. Club Facilities and Campus Hour. MIST offers 16 different clubs for the students to join and get the opportunity to show their creativity. This also gives a breathing space to the students from monotonous study. Students have the freedom to select and join more than one club from the following categories. To add variety and flavor, students of all levels also organize campus hour at regular intervals.

(1) MIST Computer Club
(2) MIST Career Club
(3) MIST Debating Society
(4) MIST Drama and Film Society Club
(5) MIST Einthoven Club
(6) MIST Innovation Club
(7) MIST Aeronautics & Astronautics Club
(8) MIST Environment Club
(9) MIST Literature and Cultural Club
(10) MIST Photographic Society
(11) MIST Robotics Club
(12) MOTO MIST Automotive Club
(13) MIST Readers Club
(14) MIST Cyber Security Club
(15) MIST Nuclear Engineering Club
(16) MIST Math Club

e. Residential Facilities. MIST provides a good environment and facility of residence for the students who are from different parts of the country and abroad at bare minimum expense. At this moment MIST has an enthralling hall named "Osmany Hall". The eight-storey reinforced concrete facility has a male and a female complex where 524 male and female students can be

accommodated. The Male Wing has one extension accommodating 110 students, in total 634 students (male and female) can be housed at the residential facilities of Osmany Hall.

f. **Sports Facilities.** Sports help to develop physical fitness and mental well-being. MIST motivates and facilitates students both in indoor and outdoor sports. The institute has well equipped facilities for both indoor and outdoor games, like Cricket, Football, Basketball, Table Tennis, Chess, Carrom etc. Every year the institute hosts Inter Department Basketball, Football, Volleyball and Cricket Competition. Sports refreshes minds, as a result, students can concentrate and focus on education in a sound mind.

g. **Record Cell.** MIST was established in 1998 and DSW wing started its operation in 2016. The need for a record cell has been observed since the beginning of DSW wing operation. As a result, the activities of the record cell started in 2021. All the information and discipline related issues of all the students of MIST are preserved here. Testimonial/character certificate is issued from DSW wing.

h. **Placement Centre.** Every year MIST organizes fairs for its students for job prospects. The Directorate of Students' Welfare oversees these events as part of career counseling. This ceremony is held every year at the time of graduation. At these events, representatives of various national and international organizations come to collect the students' CVs and take the written test / Viva according to their recruitment policy. While these events are primarily focused on graduating students, other students are also benefited in this regard.

DSW Wing is planning to start "Placement Center" which will assist suitable employment for the students. The center serves to bring together graduate students and recruiters who might not normally have a connection. The office makes every effort' to ensure that eligible students and alumni are provided with career opportunities that best suit their needs and skills.

MIST Cafeteria

FACILITIES AND SERVICES

Class Room MIST has adequate number of air conditioned classroom with multimedia facilities.

Accommodation MIST, in principle is a residential institute. The residential hall with all modern facilities is named 'Osmany Hall' can accommodate 935 students (male 551 and female 384). Each room has internet facilities. Students are provided with well-furnished accommodation.

Medical Support MIST Medical Centre has residential physician, medical staff and equipment. MIST Medical centre provides required medicine and other necessary support as prescribed by the Medical Officer. Civil students are sent to Kurmitola General Hospital for better treatment.

Transport MIST provides bus services for the students. The buses move in nine routes: MIST to Shahbag, MIST to Abdullahpur, MIST to Azimpur and MIST to Dhaka Cantonment (Jahangir Gate). A student is charged with 1500 BDT per year as transport charge.

MIST IT Centre IT Centre provides internet browsing facilities to students and faculties.

Cafeteria Cafeteria provides different types of cuisine at reasonable price.

Fitness Centre Fitness Centre provides ample opportunities for the students to keep their body and mind fit.

Sports and Recreation MIST has adequate facilities for both indoor and outdoor games including table tennis, badminton, football, and cricket. Students can also enjoy a wide variety of athletic pursuits. Besides picnics and cultural competition, celebration of national days are also arranged regularly in a befitting manner.

MIST Career Club MIST career club was established in June 2016. Each year it organizes career festival in collaboration with different institutions and organizations. Last year MIST Career Fest was held on13th August 2016 with the assistance of BD jobs.com.

MIST Innovation Club With the noble purpose of branding MIST in the field of advanced science and technology in Bangladesh, MIST Innovation Club (MIC) has commenced its journey on 12 February 2020. This club thrives to create a platform to inspire the students of MIST in achieving technical and also soft skills to build innovative products or solutions that will represent MIST to the nation. Our eminent maxim is to "Innovate to Serve".

MIST Photographic Society MIST photographic society "FOCUS" started its journey in April 2015. It organizes workshop, seminar, exhibition and short course on photography etc. periodically.

MIST Drama and Film Club To promote the art and culture of Bengali heritage, MIST Drama Club was initiated in 2015. It organizes different types of Drama on various occasions.

MIST Literature & Cultural Club MIST Literature and Cultural Club was formed in 2014 to create various opportunities to practice art and culture via organizing various workshops, events etc. MIST Literature and Cultural Club believes technology and creativity do not contradict each other,rather both of them contribute to proper manifestation of a student. To uphold this belief, MIST Literature and Cultural Club has gloriously trodden its way far by inspiring and involving the students.

MIST Computer Club Computer Club arranges various workshops and competitions regarding different programming languages and also conducts club activities on regular basis.

MIST Aeronautics and Astronautics Club (MAAC) MIST Aeronautics and Astronautics Club is supervised by the Department of Aeronautical Engineering. Its aim is to spread knowledge of aeronautics and astronautics among the enthusiastic students of MIST.

MIST Einthoven Club MIST Einthoven Club is supervised by the Department of Biomedical Engineering which aims to broaden the knowledge of its members about recent development and resources around the globe on Biomedical Engineering.

MIST Automobile Club MIST Automobile Club is supervised by the Department of Mechanical Engineering which holds various workshops and club activities regularly.

MIST Environmental Club MIST Environmental Club is supervised by the Department of EWCE which aims to keep its member up to date regarding recent technologies and innovation on Environmental Engineering.

MIST Robotics Club MIST Robotics club was established in the year 2015 under the guidance of EECE department. To cope with the technological advancement MIST Robotics Club provides opportunity to the students to explore their innovative ideas on activities. It organizes Robotics workshop and competition every year. It also organizes the Robolution competition which is the largest robotics competition in Bangladesh.

MIST Nuclear Engineering Club The club is for the students who are interested in the field of Nuclear Engineering at MIST. Each of the club's activities are dedicated to the promotion of safe use of nuclear energy and organization of relevant workshops and seminars.

Hydraulic Pump Testing Bench The "Hydraulic Pump Testing Bench" was inaugurated on 24 May 2016. This Testing Bench is one of the landmark establishments of MIST in the path of research and project work.

Automotive Engineering Equipment Testing Centre The "Automotive Engineering Equipment Testing Centre" provides the technological support in the field of research and project work. It also provides necessary technical support to different government and non-government organizations regarding approval of motor vehicles and other tests.

Computer Repair and Maintenance Centre The "Computer Repair and Maintenance Centre" was inaugurated on 01 December 2013. Since then, it is providing necessary services through repairing and maintaining the defective computer and accessories.

Centre for Energy, Environment Studies and Research (CEESR) The "Centre for Energy and Environmental Studies" of MIST is under the auspices of the department of EECE which is engaged in education, research, and professional training in the fields of energy and environmental analysis. The perspective of the centre is multi-disciplinary and problem-oriented.

Captaincy To promote leadership qualities among the students MIST Captain in various categories are elected from the students, namely MIST Captain, MIST Cultural Captain, MIST Debate Captain and MIST Sports Captain. Besides these, department captains of same categories and class captains are also elected for smooth functioning of students' activities.

Environment and Climate Change Studies Centre Climate change has become a burning issue for sustainable development. To contribute in capacity building and develop an appropriate technology, CE Department has incorporated environmental engineering in its post graduate program. A Research Centre named "Environment and Climate Change Studies Centre" is facilitating research work on this issue.

Centre for Disaster Management Studies Bangladesh is a disaster prone country. To provide quality human resources and facilitate disaster related research work for Disaster Management in Bangladesh a research centre named "Centre for Disaster Management Studies" under CE Department is functioning.

Inauguration Ceremony Each year launching ceremony of academic session is arranged for apprising new students regarding the salient aspects of MIST activities. MIST welcomes all the young engineering students including their guardians in this ceremony. There are interactive sessions for the guardians with MIST authority and orientation with MIST campus. All the students of level-1 in different disciplines (both military and civil) join the ceremony.

Graduation Dinner MIST organizes graduation dinner in honour of the outgoing students. Newly graduates from MIST attend this program after successful completion of their graduation from MIST. Students of level-4, all faculties and staff officers also join the dinner.

Collaboration with Other Universities For expanding research capability including undertaking of faculty-students exchange program MIST has signed Memorandum of Understanding (MoU) with numbers of organizations and universities both in home and abroad. Few notables are: Mershon Center For International Security Studies and The School of Earth Sciences, The Ohio State University (OSU), Columbus, Ohio, United States, The Institute of Water Modelling (IWM) Bangladesh, University of Malaya (UM), Stamford University Bangladesh, Port City International University, Institute of Information Technology (IIT) & Jahangirnagar University (JU), International Islamic University Malaysia (IIUM), University Kebangsaan Malaysia (UKM), University Tenaga Nasional (UNITEN), Kotelawala Defence University (KDU) Srilanka, United States Naval Academy (USNA), University Technology Mara (UITM), Bangabandhu Sheikh Mujibur Rahman Maritime University (BSMRMU), Bangladesh, Indian Institute of Engineering Science & Technology (IIEST) India, etc.

Academic Collaboration of University of Lincoln and London Metropolitan University with MIST

MoU

MIST has established Memorandum of Understanding with numbers of universities in home and abroad. The universities are as follows:

Ser	University/Institution	Year	Remark
1.	Indian Armed Forces	2009	MoU is completed
2.	International Islamic University Malaysia (IIUM)	2014	MoU is completed
3.	University Kebangsaan Malaysia (UKM)	2014	MoU is completed
4.	Indian Inst of Engg Science & Technology (IIEST), Shibpur, India	2015	MoU is completed
5.	Bangabandhu Sheikh Mujibur Rahman Maritime University (BSMRMU)	2015	MoU is completed
6.	Active Fine Chemicals (AFC)	2015	MoU is completed
7.	Gono Bishwabidyalay (GB)	2016	MoU is completed
8.	Rosatom Technical Academy Russian Federation, Russia	2018	MoU is completed
9.	Defence Inst of Advanced Technology (DIAT), India	2019	MoU is completed
10.	Lakehead University (ONTARIO, CANADA)	2021	MoU is completed
11.	Lincoln University, UK	2021	MoU is completed
12.	The Istituto Nazionale di Geofisica e Vulcanologia (INGV), Italy.	2021	MoU is completed
13.	JMI Hospital Requisite Manufacturing Ltd (JHRML)	2021	MoU is completed
14.	Aspire to Innovate (a2i) Programme (ICT) Division	2022	MoU is completed
15.	Fair Group	2022	MoU is completed

MoU Signing Ceremony Between GPH Ispat Ltd and MIST

MoU Signing between MIST and Rosatom Technical Academy at Obninsk

SEMINARS

Following are the seminars conducted by various departments of MIST from 2016 to 2022

Ser	Seminars	Organizing Department
1.	1st Regional Seminar on Climate Change, Water Security and prospects of Rainwater in Bangladesh	CE
2.	Seismic Performance Assessment and Design of Structures	CE
3.	Seminar on "Building Construction and Structural Safety"	CE
4.	Seminar on "Building Construction and Quality Control"	CE
5.	Seminar on "landslide and Ground Movement Effects on Onshore and Offshore Structure"	CE
6.	Seminar on " Seismic Design of Structure-ASCE-7"	CE
7.	Seminar on " Scope and Challenges of Higher Studies in Top Universities of World"	CE
8.	A Seminar on Approaches on Highway Bridge Type Selection.	CE
9.	A Seminar on Research and Academic Collaboration Opportunities between University of Melbourne, Australia and MIST, 2022	CE
10.	Resilient Civil Infrastructures with Self-Centering Materials/Components, 2022	CE
11.	Seminar on campus activation plan by ethics advanced technology ltd (EATL)"	CSE
12.	Seminar on Eatl Prothom Alo Apps Contest 2015	CSE
13.	Seminar on Cyber Security and Cert Awarding Ceremony of Certificate Course on Cyber Security -2015	CSE
14.	Seminar on Cloud Computing, GNSS (Global Navigation Satellite System) and Campaigning on EATL (Ethics Advanced Technology Limited) Prothom Alo Apps Contest 2016	CSE
15.	Seminar on Internet of Things (IoT) and Telecom Regulatory Environment in Bangladesh	CSE
16.	Seminar on Internet of Things (IoT)	CSE
17.	Cyber Security Seminar - 2019	CSE
18.	MIST Inter University Programming Contest (IUPC) 2018	CSE
19.	MIST Inter University Programming Contest (IUPC) 2019	CSE
20.	National Collegiate Programming Contest (NCPC) - 2020	EECE
21.	CSE department organized MIST Inter University ICT Innovation Fest 2021, A Celebration of Golden Jubilee of Independence, September - October 2021, Dhaka, Bangladesh	EECE
22.	Seminar on Big Data-2022	EECE
23.	Seminar on Blockchain and Its Application-2022	EECE
24.	Independence Day Programming Contest 2022	EECE
25.	4th International Conference on Electrical Engineering and Information & Communication Technology (iCEEiCT 2018)	EECE
26.	5th International Conference on Electrical Engineering and Information & Communication Technology (iCEEiCT-2021)	EECE
27.	Robofest-2017	EECE
28.	Robolution-2019	EECE
29.	Tri-Robo-Cup 2020	EECE
30.	Seminar on "Student Professional Awareness & Appearance"	EECE
31.	Seminar on "Free Seminar on the Aspects of IEEE"	EECE
32.	5 MVA Substation Planning, Designing & Simulation Using Power System Analysis Software (ETAP)	EECE
33.	Power Sector of Bangladesh and Employment Opportunities Overview	EECE
34.	Lightning and Thunderstorm: Forecasting, Awareness & Protection	EECE

Ser	Seminars	Organizing Department
35.	Basic Internet Networking and Fellowship for Students Related to Internet Networking	EECE
36.	Internet Connectivity on Perspective of Bangladesh and Basic Internet Networking for Beginners	EECE
37.	Seminar on "Research Paper Writing"	EECE
38.	Higher Study in USA and EMK MAKERLAB Overview	EECE
39.	Seminar on High Voltage Power Transmission: Prospects in Bangladesh organized in 2021	EECE
40.	Seminar On SCADA And SAS	EECE
41.	Seminar Arranged By IEEE MIST student branch On VLSI Design Prospects	EECE
42.	Fundamentals Of Chip Designing And Its Future Aspects	EECE
43.	Seminar on "Building Awareness on Safety and Security of Elevators among Users and Certification Authority Development for Lift in Bangladesh."	ME
44.	Seminar on "Engineering for Global Innovation and Introduction to Research Work on Biomaterials: Mechanical Engineering Aspect"	ME
45.	Prospect of Low Carbon Energy Technologies Around the World and its Transition.	ME
46.	Seminar on "Safety Ground Transportation Systems in Bangladesh"	ME
47.	1st International Conference On Mechanical Engineering And Applied Science.(ICMEAS-2017)	ME
48.	The 2nd International Conference on Mechanical Engineering and Applied Sciences – 2022	ME
49.	Automobile all in one – Seminar on how to deepen your understanding on automobile.	ME
50.	Seminar on how to give reference and citation in your undergraduate thesis/project.	ME
51.	Seminar on ''Mechanical Behavior of High Temperature Ceramics for Space Applications', 2018	AE
52.	Seminar on Cloud Computing, 2018	AE
53.	Seminar on "Careers breaking Barriers" organized by MIST Aeronautics & Astronautics Club (MAAC), July 2022	AE
54.	Seminar on "Current Space Research & Scopes", December 2022	AE
55.	Seminar on "Cloud Computing in Aviation", January 2023	AE
56.	Seminar 2014: Accident in Bangladesh Inland Waterways: Causes and Remedies	NAME
57.	Seminar 2016: Prospects of Shipbuilding Industries and Opportunities of Naval Architects in Bangladesh	NAME
58.	Seminar 2018: Necessity and implementation of International Association of Classification Societies (IACS)	NAME
59.	Seminar 2019 (World Maritime Day): Sustainable Shipping for a Sustainable Planet	NAME
60.	Role of Naval Architects and Marine Engineers to Ensure Green Ship Technologies, 2022	NAME
61.	Seminar on Environmental Responsibilities of Architects and Local Practice, 2017	Arch
62.	Seminar on Earthquake Resilient Buildings: Design Consideration for Architects, 2016	Arch
63.	Seminar on Water in Light, 2017	Arch
64.	Seminar on Building Material: Innovation and Influence on Architecture, 2018	Arch
65.	Seminar on Pedagogy of The Built Environment Design Education For 21st Century, 2018	Arch
66.	Seminar on Digital Architecture, Why? 2018	Arch
67.	Seminar on Housing is More Than Shelter, 2018	Arch
68.	Seminar on City Life Line, 2019	Arch
69.	Seminar on School in Tropic: Place of Memory, Joy and Inspiration, 2019	Arch

Ser	Seminars	Organizing Department
70.	Seminar on Organic Materials for Grassroot Construction in Rural Bangladesh: Cases and Prospects, 2019	Arch
71.	Seminar on Content and Framework of Urban Plans, 2019	Arch
72.	Seminar on Breaking the Ice, Professional Practice, 2019	Arch
73.	Seminar on Real Housing Practices in Dhaka, 2019	Arch
74.	Seminar on 'Architectural and Archeological Significance of Wari-Bateshwar'	Arch
75.	Seminar on 'Colonial Architecture in Bangladesh'	Arch
76.	Biomedical Engineering: The Essential Prerequisite for Effective Healthcare in Bangladesh	BME
77.	Seminar on "BioSafety Awareness: A Pathway to Improved Public Health"	BME
78.	Bangladesh International Conference for Biomedical Students & Young Doctors (BICoBS)	BME
79.	Seminar on: 'Regenerative Medicine'	BME
80.	Seminar on "World Birth Defects Day: Social Awareness and Prevention"	BME
81.	A Presentation on: 'Career Brief'	BME
82.	1st Meeting of: 'Industrial Advisory Panel'	BME
83.	Biomedical Engineering: Scope of Research and Its Applications	BME
84.	Job Fair for Biomedical Engineers	BME
85.	Challenges and Future Prospects in the Sectors of Environment, Water Resources, and Coastal Zones: Perspective from Potential Engineers	EWCE
86.	1st International Conference on Climate Change and Water Security	EWCE
87.	AQUAwareness- A Seminar and Exhibition on the Occasion of World Water Day 2018	EWCE
88.	'Nature Based Engineering for Sustainable Development' on the occasion of World Environment Day-2022	EWCE
89.	Seminar on "VVER Technology Based Nuclear Power Plant and Preparation for New Comer Countries"	NSE
90.	Seminar on "Present Status of Nuclear Energy Development in Bangladesh"	NSE
91.	Post Graduate Thesis Seminar	NSE
92.	Guest Lecture on Nuclear Security Culture	NSE
93.	4th International Conference on Energy and Power (ICEP) was hosted in association with the Australian Society of Energy and Power (ASEP) from 11-13 December 2022.	NSE
94.	4th Intl Conference on Energy and Power - 2022 (ICEP - 2022)	PME
95.	Seminar on "Energy Scenario and Prospect of Petroleum & Mining Engineering in Bangladesh"	PME
96.	Seminar on "Sustainable Energy Sectors Development; its Challenges and Energy Security of Bangladesh" and "Job Fair"	PME
97	An international conference "IEEE Conference on Service Operations Logistics and Informatics (IEEE SOLI-2021)	IPE

WEBINARS

Ser	Webinars	Organizing Department
1.	Webinar on "SMRF & IMRE Design and Detailing of Structures: Challenges and Way out"	CE
2.	Webinar on "Silent Piling Technique"	CE
3.	A Webinar of two consecutive lectures titled "Evaluation of a Precast Prestressed Concrete Bridge through Non-Destructive Evaluation (NDE) and Load Testing" by Dr Nur Yazdani, Professor, Department of Civil Engineering, University of Texas at Arlington, USA	CE
4.	A Webinar of Performance-based Seismic Analysis & Design of Structures" by Lt Col Khondaker Sakil Ahmed, PhD, Associate Professor, Department of Civil Engineering, MIST	CE
5.	A Webinar of "Transit Reliability Assessment along a Congested Urban Corridor: A Trffic Microsimulation Modeling Approach" by Dr. Mahmudur Fatmi, Assistant Professorr, School of Engineering Civil Engineering, The University of British Columbia, Canada.	CE
6.	A Framework for involving the Young Generation in Tranportation Planning Using Social Media and Crowd Sourcing" by Dr Moinul Hossain, Professor, Department of "Civil and Environmental Engineering (CEE), Islamic University of Technology (IUT), Bangladesh.	CE
7.	Webinar of "Impact of Climate Change on Pavement Performance in Bangladesh" by Brig Gen, Shah Md Muniruzzaman (Retd), Professor, Department ci Civil Engineering, MIST	CE
8.	International Seminar on Mega Structures 2021	CE
9.	Webinar On "SCADA And Substation Automation: The Platforms For All Automation" 2022	EECE
10.	Online Webinar on "Project Management For Industrial Revolution 4.0"	ME
11.	Webinar on "Career path in robotics: Challenges, Readiness & Opportunities"	ME
12.	Webinar on "Recent Advances in Automation, Control & Robotics towards Industry 4.0"	ME
13.	Webinar on Quality Assurance in UK Higher Education (Insiders Experience)	ME
14.	Webinar on "Exploring Aeronautics" organized by MIST Aeronautics & Astronautics Club (MAAC), 2020	AE
15.	Webinar On "Space Studies and Research in Bangladesh", 2020	AE
16.	Webinar on "Tales of A Luminary by NASA Scientist Dr. Goutam Chattopadhay" organized by MIST Aeronautics & Astronautics Club (MAAC), 2020	AE
17.	Webinar on "Satellites & UAVs Simplified with Anwar Aziz" organized by MIST Aeronautics & Astronautics Club (MAAC), 2020	AE
18.	Webinar on "Exploring Aeronautics with Dr. Hassan Saad Ifti" organized by MIST Aeronautics & Astronautics Club (MAAC), 2020	AE
19.	Webinar on "Higher Studies Aspects" organized by MIST Aeronautics & Astronautics Club (MAAC), July 2021	AE
20.	Webinar 2020 on World Maritime Day: Sustainable Shipping for a Sustainable Planet	NAME
21.	Webinar 2021 on World Maritime Day: Role of Naval Architects in Ensuring Safety and Comfort of Seafarers	NAME
22.	Webinar on "Biosafety for Clinical and Public Health"	BME
23.	Online Webinar on Water Pollution and Public Health	EWCE
24.	Webinar on Nuclear Fuel Cycle and Waste Management	NSE
25.	Webinar on Nuclear Power Plant Operation and Maintenance	NSE
26.	Webinar on "Nuclear Project Management and its safety, security and safeguard" by Dr. Jor-Shan Choi, Lawrence Livermore National Laboratory, USA and Dr. Shafiqul Islam, Senior Visiting Scholar, Nuclear Science & Engineering Department, MIT, USA.	NSE
27.	An online seminar titled "Webinar on Lean Six Sigma"	IPE
28.	A four-day webinar titled "Data Analysis with R"	IPE
29.	"Operations Research Insights into Real-Life Problems with Uncertainty"	IPE
30.	"Industrial Automation in the Era of Industry 4.0"	IPE

WORKSHOPS

Ser	Workshops	Organizing Department
1.	Workshop on "Seismic Performance Assessment and Design on Structure"	CE
2.	Workshop on " Performance Based Seismic Design of Structures"	CE
3.	Workshop on "Transport Planning & Policy"	CE
4.	Workshop on "Outcome Based Education (OBE) System"	CE
5.	Workshop on "Transport Planning Design and Modelling"	CE
6.	Workshop on "ABET Accreditation "	CE
7.	Workshop on "Earthquake Resistant Design of Structures"	CE
8.	Workshop on Line Following Robot (LFR)	EECE
9.	Online Workshop on "Ionospheric Prediction and Forecasting"	EECE
10.	Workshop on Embedded System Design (using Raspberry Pi) organized in 2021	EECE
11.	Workshop on ABET & OBE	EECE
12.	Workshop on "BDAPPS"	CSE
13.	Workshop on Basic Arduino	CSE
14.	Workshop on Cloud Computing	CSE
15.	Workshop on "1st Robi Datathon Competition	CSE
16.	Discussion on AI Towards Industrial Revolution 2022	CSE
17.	3rd International Advisory Panel (IAP) 2022	CSE
18.	Workshop on Cyber Security in Financial Sector 2022	CSE
19.	Workshop on Technique Electrical Power Quality Understanding, Standard, Events, Analysis and Mitigation Techniques	EECE
20.	Workshop on Line Following Robot (LFR)	EECE
21.	Online Workshop on "Ionospheric Prediction and Forecasting"	EECE
22.	Workshop on Embedded System Design (using Raspberry Pi) organized in 2021	EECE
23.	Workshop on ABET & OBE	EECE
24.	Workshop on Automobile" arranged by MOTOMIST Automotive Club.	ME
25.	Workshop on "Outcome Based Education (OBE)"	ME
26.	Workshop on "Computational Fluid Dynamics"	ME
27.	Workshop on "Hydraulic System Design and Control"	ME
28.	Online workshop on "Hydraulic Systems"	ME
30.	Workshop on – Ansys Basic Simulation Course	ME
31.	Workshop on – Solid Works Basic Design Course	ME
32.	Workshop on Remote Controlled Aircraft Design, Fabrication and Operation ,2015	AE
33.	Crash Course on Solidworks organized by MIST Aeronautics & Astronautics Club (MAAC), 2020	AE
34.	Workshop on Aviation Engineering with Nepalese Engineer Madip Kumar Joshi organized by MIST Aeronautics & Astronautics Club (MAAC), 2020	AE
35.	Workshop on Techniques of Model Making, 2016	Arch
36.	Workshop on Techniques of Model Making, 2018	Arch
37.	Workshop on Energy and Environmental Behavior of Buildings, 2019	Arch
38.	Workshop on Rhino Modeling Essentials and introduction to Grasshopper, 2019	Arch
39.	Special Guest Lecture on "Natural Gas Exploration and Prospect of Bangladesh" by Dr. Badrul Imam	PME
40.	Guest Lecture on "Mineral Deposits and Mining Prospects of Bangladesh"	PME
41.	Workshop on "Biomedical Imaging"	BME
42.	Workshop on PCTran Nuclear Power Plant Simulator	NSE
43.	Workshop on COMSOL Multiphysics Software	NSE
44.	Workshop on "Nuclear Reactor Core and Fuel Analysis"	NSE
45.	An online workshop titled "IPE Career Talk 1.0 RMG Sector"	IPE

SHORT COURSES

Ser	Short Courses	Organizing Department
1.	Short Course on Advance Bride Design-2017	CE
2.	Short Course on Retrofitting of Structures	CE
3.	Training Program on Occupational Safety, Health and Environment Management in EPZS of Bangladesh, BEPZA-MIST	CE
4.	Short Course on Design of Tall Building	CE
5.	Short Course on Construction and Project Management	CE
6.	Short Course on ANSYS (CIVIL)	CE
7.	Certificate Course on Professional Building and Bridge Design using ETABS and SAP2000	CE
8.	Professional Training Program on Environmental Management in Export Processing Zones of Bangladesh	CE
9.	Professional Training Course on Promotion of Industrial, Social and Environmental Standards in EPZs of Bangladesh	CE
10.	Post Graduate Diploma on Project Planning, Development and Management	CE
11.	Outcome-Based Education (OBE) Training for Faculty Members of CE Dept-2022	CE
12.	Certificate Training Course on Professional Building Design as per BNBC 2020-2022	CE
13.	Training Services on Laboratory Equipment for the Officers and Employees of Laboratory at Sagorika Yard of Chattogram City Corporation- 2020	CE
14.	PTV Vissim: Microscopic Modelling Basics	CE
15.	Short Course on "AutoCAD for Electrical Service Design"	EECE
16.	''Comptia A+' - 2018"	EECE
17.	Short Course on Introduction to Machine Learning and Python organized in 2021	EECE
18.	AutoCAD for Electrical Service Design organized in 2021	EECE
19.	Matlab & Python Course organized in 2021	EECE
20.	Programming Language Course (C, C++) 2021	EECE
21.	Short Course on Thunder Arrester SP 2021	EECE
22.	Short Course on Cable Designing 2021	EECE
23.	Microcontroller Based Embedded System Design using Arduino 2021	EECE
24.	Short Course on Electrical Protective Devices 2021	EECE
25.	Python Certification Course 2022	EECE
26.	Cert Awarding Ceremony of Mobile Apps Development Course-2015 and Inauguration of MIST Data Centre	CSE
27.	Certificate awarding ceremony of "basic ICT training for BEPZA officials"	CSE
28.	Cert Course on Cyber Sy by NIIT, INDIA –2017	CSE
29.	Short Course on C Programming Language	CSE
30.	Short Course on Cisco Certified Network Associate (CCNA) -2017	CSE
31.	Capsule Trg on Unicode	CSE
32.	Short Course on 'CompTia A+' For CSE - 18	CSE
33.	Short Course on A-Z of MS Excel -2018	CSE
34.	Short Course on Unicode for Clerk	CSE
35.	Short Course on 'CompTia A+' for CSE - 19	CSE
36.	Short Course on 'Mobile Application Development (Android OS)' for CSE -18	CSE
37.	Cert Course on Cyber Security-2019	CSE
38.	Resume on Inaugural Ceremony of Postgraduate Research Lab and Cert Awarding Ceremony of Mob Apps Dev Short Course-2016	CSE

Ser	Short Courses	Organizing Department
39.	Course on Cyber Security Operation Center Analysis and Threat Hunting	CSE
40.	Course on Info Security Assessment and Penetration 2022	CSE
41.	CCNA Course	CSE
42.	Short Courses for Skill Development	CSE
43.	Short Course on the Practical Implications of Artificial Intelligence (AI)	CSE
44.	Short Course on "AutoCAD for Electrical Service Design"	EECE
45.	"AutoCAD For Electrical Service Design"	EECE
46.	Electrical Service Design"	EECE
47.	''Comptia A+' - 2018"	EECE
48.	Short Course on Introduction to Machine Learning and Python organized in 2021	EECE
49.	AutoCAD for Electrical Service Design organized in 2021	EECE
50.	Matlab & Python Course organized in 2021	EECE
51.	Programming Language Course (C, C++) 2021	EECE
52.	Short Course on Thunder Arrester SP 2021	EECE
53.	Short Course on Cable Designing 2021	EECE
54.	Microcontroller Based Embedded System Design using Arduino 2021	EECE
55.	Short Course on Electrical Protective Devices 2021	EECE
56.	Short Course on "Programmable Logic Controller"	ME
57.	Short Training on Assessment Capability Development of Commercial HVAC Layout.	ME
58.	Short course on "Basic Solidworks"	ME
59.	Short Course on "ANSYS"	ME
60.	Short course on "Air Conditioning Duct design (HVAC)"	ME
61.	Short course on "Hydraulic System Design"	ME
62.	Short Course on "Modern Features of Automotive Vehicle and Vehicle Inspection Procedure"	ME
63.	Training on "Automotive Inspection"	ME
64.	Short Courses conducted on Computational Fluid Dynamics (CFD)-2018	AE
65.	Certification Course on Oracle and CompTIA A+, 2018	AE
66.	Training on Outcome Based Education System by Resource Person of BAETE (Prof Dr. Anisul Haque), 2018	AE
67.	Hands-on Training on Outcome Based Education, 2019	AE
68.	Short Course on Ship Design Software (MAXSURF & Rhino) organized in 2016, 2017, 2018, 2019, 2020 & 2021	NAME
69.	Certification Course on Ship Design Software (Maxsurf & Rhino), 2022	NAME
70.	Short Course on: 'Rapid Prototyping: A Robust platform for Advanced Biomanufacturing.'	BME
71.	Short Course on "Introduction to Programming with MATLAB"	BME
72.	Short Course on "SOLIDWORKS for Biomedical Applications"	BME
73.	Certificate Course on Tube well Design	EWCE
74.	Short Course on "Plumbing Design: Theory and Practice"	EWCE
75.	Short Course on "LPG Plant Construction and Operation"	PME
76.	Short Course on "Petroleum Reservoir Modeling by Eclips and Petrel"	PME
77.	A three-day online-based competition titled "Business Case Competition Mega Mind 1.0"	IPE

LABORATORY FACILITIES

Faculty of Civil Engineering:

CE Department

- Geotechnical Laboratory
- Transportation Laboratory
- Survey and Mapping Laboratory
- Geographic Information System (GIS) Laboratory

EWCE Department

- Environmental Engineering Laboratory
- Water Resource Engineering Laboratory

PME Department

- Petroleum Engineering Lab
  - ✓ Core Analysis Unit
  - ✓ Drilling Fluid Preparing and Testing Unit
  - ✓ Reservoir Fluid Analysis Unit
  - ✓ Reservoir Geology Unit
- Natural Gas Lab
- PME Simulation Lab
- Mining Engineering Lab
  - ✓ Rock Mechanics Unit
  - ✓ Mine Survey & Photogrammetry Unit
  - ✓ Mine Model Survey
  - ✓ Mine Instrumentation, Equipment and Machinery
  - ✓ Coal Testing Unit

Arch Department

- Laboratory under processing:
  - ✓ Computer Laboratory
  - ✓ Model Making Laboratory
- Future Laboratory:
  - ✓ Urban and Landscape Design Laboratory
  - ✓ Architectural Design Laboratory
  - ✓ Photography and Image Processing Laboratory
  - ✓ Heritage and Conservation Laboratory
  - ✓ Environmental Design Laboratory
  - ✓ Building Technology and Performance Design Laboratory

Faculty of Electrical and Computer Engineering:

CSE Department

- Cyber Range Laboratory
- Intelligent Computing Laboratory
- Software Quality and Security Testing Laboratory
- Mobile App & Game Testing Lab / HCI Laboratory,
- Post Graduate Research Laboratory
- Software Engineering Laboratory
- Digital Laboratory
- Microprocessor & Microcontroller Laboratory
- Artificial Intelligence and Robotics Laboratory
- Network Laboratory
- Interfacing and IoT Laboratory
- Multimedia & Graphics Laboratory

EECE Department

- Electrical Circuit Laboratory
- Measurement & Instrumentation System Laboratory
- Control System Laboratory
- Electronics Laboratory
- Power Electronics Laboratory
- Digital Electronics Laboratory
- Electrical Circuit Simulation Laboratory
- Electronic Circuit Simulation Laboratory
- Numerical Technique Analysis Laboratory
- Digital Signal Processing Laboratory
- VLSI Laboratory
- Electrical Machine Laboratory
- Power System Laboratory
- Switchgear & Protection Laboratory
- High Voltage Laboratory
- Analog and Digital Communication Laboratory
- Microwave Laboratory
- Telecommunication Laboratory
- Communication Network Laboratory
- Radar Engineering Laboratory
- Biomedical Signal Processing Laboratory
- Biomedical Instrumentation Laboratory

Faculty of Mechanical Engineering:

ME Department

- Measurement & Quality Control Laboratory
- Thermodynamics Laboratory
- Applied Thermodynamics Laboratory
- Refrigeration & Air Conditioning Laboratory
- Heat Transfer Laboratory
- Automobile Laboratory
- Machine Tools Laboratory
- Materials and Metallurgy Laboratory
- Drawing Shop
- CAD Laboratory
- Heat Engine Laboratory
- Applied Mechanics Laboratory
- Fluid Mechanics Laboratory

AE Department

- Applied Aerodynamics Laboratory
- Jet Propulsion Laboratory
- Radar Engineering Laboratory
- Avionics Sensors and Guidance Laboratory
- Aero Structure and Composite Material Laboratory
- Aero – Weapon System and Missile Laboratory
- Aircraft Instrumentational and Control Laboratory
- Aero plane Design Laboratory

NAME Department

- Computer Aided Ship Design Lab
- Ships Structure and Fabrication Lab
- Marine Machinery Lab
- Ship Instrument Lab
- Damage Control Fire Fighting and Life Saving Lab
- Ship Propulsion Lab
- Ship Resistance Lab
- Machine Tools Lab
- Model Fabrications Lab
- Towing tank stability Lab
- Marine Transportation Lab
- Hydrodynamics Lab
- Auxiliary Machinery Lab

IPE Department

- Advanced Machine Tools and Production Process Lab
- Ergonomics and Safety Engineering Lab
- Computer Integrated Manufacturing and Automation Lab
- Material Handling
- Simulation & Process Engineering Design Lab
- Instrumentation, Measurement and Quality Control Lab
- Material Characterization Lab

Faculty of Science and Engineering:

NSE Department

- Radiation Detection and Medical Application Lab
- Nuclear Chemistry and Safeguard Lab
- Modelling and Simulation Lab
- Thermo Fluid Dynamics Lab
- Nuclear Reactor and Control System Design Lab
- Nuclear Technique and Material Lab
- Nuclear Safety and Security Lab
- Nuclear Fuel and Waste Safety Lab

BME Department

- Biomedical Instruments Laboratory
- Biomechanics and Rehabilitation Engineering Laboratory
- Biomedical Design Laboratory
- Bio-fluid laboratory
- Biochemistry Laboratory
- Biomaterials Laboratory
- Cell and Tissue Engineering Laboratory
- Biomedical Signal and Image Processing Laboratory

Science and Humanities (Sc & Hum) Department

- Chemistry Laboratory
- Physics Laboratory

FACULTY MEMBERS

A group of qualified faculty from military as well as from civil society (internationally reputed) are relentlessly engaged in imparting knowledge to the students. In addition, faculties from reputed universities contribute as resource persons in various disciplines. Guest speakers / faculties from various organisations / institutions / universities are also invited to participate in teaching programs, lecturers, seminars etc. At present, the state of Instructors / faculties of MIST are as follows:

Appt	Faculty of CE				Faculty of ECE		Faculty of ME				Faculty of Sc & Engg			Total
	CE Dept	ARCH Dept	EWCE Dept	PME Dept	CSE Dept	EECE Dept	ME Dept	AE Dept	NAME Dept	IPE Dept	BME Dept	NSE Dept	Sc & Hum Dept	
Brig Gen	01	-	-	-	01	01	01	01	01	-	-	-	-	**05**
Professor	*02 **02 #06	-	**02	**01 #01	*01 **01 ***01	**03 #15	**02 ***02	**01 #01	-	**01	**01 #02	**02 ***01 #03	#07	**58**
Col	-	01	01	01	02	01	01	03	02	01	01	01	02	**17**
Associate Professor	**02	**02 ***03		**01	***01	**01	***01	-	-	-	-	#02	-	**13**
Lt Col	04	-	01	-	02	04	01	-	04	-	01	01	04	**22**
Assistant Professor	*03 ***04	**05 ***02		**01	*01 **04	*03 ***01	*03 **03 ***01	*04	*02	-	**02		*01 ***01	**41**
Maj	03	01	05	-	04	04	02	02	01	02	02	01	06	**33**
Captain	-	01	-	01	-	-	01	01	-	-	-	-	-	**04**
Lecturer	*02 **07	*03 **06	**04 ***05	**01 ***05	*02 ***08	*01 ***15	*01 ***18	*01 ***07	*01 ***03	**09	**06 ***01	***06 #01	***17	**130**
TA	-	-	-	-	-	-	-	**01	**01	-	-	-	-	**02**
RA	-	-	**01		**02		**01	**01	-	-	-	-	-	**05**
Total	**36**	**24**	**19**	**12**	**30**	**49**	**38**	**22**	**15**	**13**	**16**	**18**	**38**	**330**

LEGEND:

Civil Faculty Members	
Permanent	*
Contractual	**
Adjunct	***
Other Universities	#

JOURNAL PAPERS PUBLISHED IN 2022

Q1 PAPER

Ser	Title of the Article	Name of the Authors	Dept	Quartile of the journal
01.	Mechanical and durability properties of concrete with recycled polypropylene waste plastic as a partial replacement of coarse aggregate	Md. Shahjalal, Niaz Md Ashraful Haque	CE Dept	Q1
02.	Machine learning-based failure mode identification of double shear bolted connections in structural steel	Samia Zakir Sarothi, Khondaker Sakil Ahmed, Nafiz Imtiaz Khan, Aziz Ahmed, Moncef L.Nehdi	CE Dept	Q1
03.	Assessment of biomass production and greywater treatment capability of algal-based membrane bioreactor	A. K. M. Ashadullah, H. Haider, Md. M. Hasan, M. S. Azam, M. T. Alresheedi, S. S. AlSaleem, A. R. Ghumman	CE Dept	Q1
04.	Predicting bearing capacity of double shear bolted connections using machine learning	Khondaker Sakil Ahmed, Nafiz Imtiaz Khan, Aziz Ahmed	CE Dept	Q1
05.	Blast Performance of Reinforced Concrete Column with Different Levels of Seismic Detailing	Tahsin Reza Hossain	CE Dept	Q1
06.	Influence of different types of fibers on the mechanical properties of recycled waste aggregate concrete	Md. Shahjalal, Ehsani Khatun, Somaiya Islam, Anika Binte Razzaque	CE Dept	Q1
07.	Mechanical and thermo-chemical degradation of concrete exposed to simulated airfield conditions	Md Kamrul Hassan, Sukanta Kumer Shill, Safat Al-Deen	CE Dept	Q1
08.	Prediction of land cover change based on CA-ANN model to assess its local impacts on Bagerhat, southwestern coastal Bangladesh	Eshrat Jahan Esha	CE Dept	Q1
09.	Machine learning to predict pregnancy outcomes: a systematic review, synthesizing framework and future research agenda	Muhammad Nazrul Islam, Sumaiya Nuha Mustafina, Tahasin Mahmud, Nafiz Imtiaz Khan	CSE Dept	Q1
10.	Chi2-MI: A hybrid feature selection based machine learning approach in diagnosis of chronic kidney disease	Samrat Kumar Dey, Khandaker Mohammad Mohi Uddin, Hafiz Md. Hasan Babu, Md. Mahbubur Rahman, Arpita Howlader, K.M. Aslam Uddin	CSE Dept	Q1
11.	Prediction of dengue incidents using hospitalized patients, metrological and socioeconomic data in Bangladesh: A machine learning approach	Samrat Kumar Dey, Md. Mahbubur Rahman, Arpita Howlader,Umme Raihan Siddiqi,Khandaker Mohammad Mohi Uddin,Rownak Borhan,Elias Ur Rahman	CSE Dept	Q1

Ser	Title of the Article	Name of the Authors	Dept	Quartile of the journal
12.	Optimal Design of Ammonia Synthesis Reactor For A Process Industry	Md. Naimur Rahman Hemal, M.A.A. Shoukat Choudhury, Md. Ali Akkas Mazumder, Mohaiminul Islam	CSE Dept	Q1
13.	Hospital patients' length of stay prediction: A federated learning approach	Md. Mahbubur Rahman, Dipanjali Kundu, Sayma Alam Suha, Umme Raihan Siddiqi, Samrat KumarDey	CSE Dept	Q.1
14.	IoT-Based Serious Gaming Platform for Improving Cognitive Skills of Children with Special Needs	Uzma Hasan, Fourkanul Islam, Shaila Tajmim Anuva, Tarannum Zaki, Tarannum Zaki, A.K.M. Najmul Islam	CSE Dept	Q.1
15.	Time-series classification with SAFE: Simple and fast segmented word embedding-based neural time series classifier	Nuzhat Tabassum, Sujeendran Menon, Agnieszka Jastrzębska	CSE Dept	Q1
16.	Phoenix: Towards Designing and Developing a Human Assistant Rover	Mohammad Shahjahan Majib, Shoeb Ahmed Tanjim, Shah Md. Ahasan Siddique, Fardeen Ashraf, Shafayetul Islam, Abu Hena Md. Maruf Morshed, Shadman Tajwar Shahid	CSE Dept	Q1
17.	UVC-PURGE: A Novel Cost-Effective Disinfection Robot for Combating COVID-19 Pandemic	Akib Zaman, Mohammad Shahjahan Majib, Shoeb Ahmed Tanjim, Shah Md. Ahasan Siddique, Shafayetul Islam, Md Shadman Aadeeb, Nafiz Imtiaz Khan, Riasat Haque, Md Rashid Ul Islam, M. Rayhan Ferdous Faisal, Siddharth Malik, Muhammad Nazrul Islam,	CSE Dept	Q1
18.	An Approach for Demand Forecasting in Steel Industries Using Ensemble Learning	Amlan Sarker, Apurba Das, Md. Milon Islam, Mabrook S. Al-Rakhami, Atif M. Al-Amri, Tasniah Mohiuddin, Fahad R. Albogamy	CSE Dept	Q1
19.	An efficient authentication scheme for secured service provisioning in edge-enabled vehicular cloud networks towards sustainable smart cities	Md. Mahbubur Rahman, Mohammad Mahfuzul Islam	CSE Dept	Q1

Ser	Title of the Article	Name of the Authors	Dept	Quartile of the journal
20.	An attention-based hybrid deep learning approach for bengali video captioning	Md. Shahir Zaoad, M.M. Rushadul Mannan, Angshu Bikash, Mandol Mostafizur Rahman, Md. Adnanul Islam, Md. Mahbubur Rahman	CSE Dept	Q1
21.	An extended machine learning technique for polycystic ovary syndrome detection using ovary ultrasound image	Sayma Alam Suha, Muhammad Nazrul Islam	CSE Dept	Q1
22.	A deep learning based multimodal interaction system for bed ridden and immobile hospital admitted patients: design, development and evaluation	Muhammad Nazrul Islam, Md Shadman Aadeeb, Md. Mahadi Hassan Munna, Md. Raqibur Rahman	CSE Dept	Q1
23.	Energy management practices, barriers, and drivers in Bangladesh: An exploratory insight from pulp and paper industry	Md. Nazrul Islam Siddique, A S M Monjurul Hasan, Md. Ahsan Kabir, Fatema Zerin Prottasha, Abrer Mohsin Samin, Sadman Sakib Soumik, Andrea Trianni	EECE Dept	Q1
24.	Reversible data hiding with dual pixel-value-ordering and minimum prediction error expansion	Md. Abdul Wahed, Hussain Nyeem	EECE Dept	Q1
25.	Highly sensitive gold-coated surface plasmon resonance photonic crystal fiber sensor in near-infrared region	K.M. Mustafizur Rahman, M. Shah Alam, M. Asiful Islam	EECE Dept	Q1
26.	Numerical study of laminar convective heat transfer from a corrugated pipe into an Al2O3-AlN/H2O hybrid nanofluid	Md Insiat Islam Rabby, Muhammad Sharif, Farzad Hossain	ME Dept	Q1
27.	Thermal assessment and optimization of process fluids in transcritical organic and transcritical CO2 Rankine cycle for waste energy recuperating system	Md. Zayed Mostafa, Arman Hossain, Mohmmad. Shadman Sakib,	ME Dept	Q1
28.	Comparison of the emission factors of air pollutants from gasoline, CNG, LPG and diesel fueled vehicles at idle speed	Miahn Rasheeq Aosaf, Ke Du, Yang Wang	ME Dept	Q1
29.	Computationally expedient Photovoltaic power Forecasting: A LSTM ensemble method augmented with adaptive weighting and data segmentation technique	Razin Ahmed, Victor Sreeram, Roberto Togneri, Amitava Datta, Muammer Din Arif,	ME Dept	Q1
30.	Fabrication, Characterization and In Vitro Assessment of Laevistrombus canarium-Derived Hydroxyapatite Particulate-Filled Polymer Composite for Implant Applications	Marimuthu Krishnaswamy, Mugilan Thanigachalam, Huaizhong Xu, Saiful Islam Khan, Md Enamul Hoque	ME Dept	Q1
31.	Thermal performance of a hollow cylinder with low conductive materials in a lid-driven square cavity with partially cooled vertical wall	S.Yeasmin, Zahurul Islam, A.K.Azad, Eare M. Morshed Alam, M.M.Rahman, M.F.Karim	ME Dept	Q1

Ser	Title of the Article	Name of the Authors	Dept	Quartile of the journal
32.	Selection of the natural fiber for sustainable applications in aerospace cabin interior using fuzzy MCDM model	Nikhil Ranjan Dhar	AE Dept	Q1
33.	Numerical assessment of the scale effects on the propulsive performance of a ship with gate rudder system	Noriyuki Sasaki	NAME Dept	Q1
34.	Performance enhancement and life cycle analysis of a novel solar HVAC system using underground water and energy recovery technique	S.M.A.Rahman, Salah Issa, Mamdouh El Haj Assad, Sheikh Khaleduzzaman Shah, Mohammad Ali Abdelkareem, Md. Enamul Hoque, A.G.Olabi	BME Dept	Q1
35.	Development and in-vitro characterization of HAP blended PVA/PEG bio-membrane	Sankar Rajan, K.Marimuthu, C. Balaji Ayyanar, Md Enamul Hoque	BME Dept	Q1
36.	Early Prediction of Diabetes Using an Ensemble of Machine Learning Models	Mr. Md. Kamrul Hasan, Mohiuddin Ahmad, Dr. Md. Abdul Awal, Mr. Akhtarul Islam, Dr. Mehedi Masud, Dr. Hossam Meshref	BME Dept	Q1
37.	Investigation of engine performance, combustion, and emissions using waste tire Oil-Diesel-Glycine max biodiesel blends in a diesel engine	Md. Nurun Nabi, Wisam K.Hussam, Hasan Mohammad Mostofa Afroz, Adib Bin Rashid, Jahidul Islame, A.N.M. Mominul Islam Mukut	IPE Dept	Q1
38.	Bicycle industry as a post-pandemic green recovery driver in an emerging economy: a SWOT analysis	Md Doulotuzzaman Xames, Jannatul Shefa, Ferdous Sarwar	IPE Dept	Q1
39.	Notable improvement of fuel properties of waste tire pyrolysis oil by blending a novel pumpkin seed oil–biodiesel	Md. NurunNabi, Wisam K.Hussam, Adib Bin Rashid, Jahidul Islam, ShamiulIslam, Hasan Mohammad MostofaAfroz	IPE Dept	Q1
40.	Modeling a sustainable vaccine supply chain for a healthcare system	Naimur Rahman Chowdhury, Mushaer Ahmed, Priom Mahmud, Sanjoy Kumar Paul, Sharmine Akther Liza	IPE Dept	Q1
41.	Prediction of mining-induced subsidence at Barapukuria longwall coal mine, Bangladesh	A K M Badrul Alam, Yoshiaki Fujii, Shaolin Jahan Eidee, Sophea Boeut, Afikah Binti Rahim	PME Dept	Q1
42	Frequency control of nuclear-renewable hybrid energy systems using optimal PID and FOPID controllers	Riyad Hasan, Md Shafakat Masud, Nawar Haque, Muhammad R.Abdussami	NSE Dept	Q1
43.	Durability of Aligned Microtubules Dependent on Persistence Length Determines Phase Transition and Pattern Formation in Collective Motion	Hang Zhou, Wonyeong Jung, Tamanna Ishrat Farhana, Kazuya Fujimoto, Taeyoon Kim,	Sc & Hum	Q1

Q2 PAPER

Ser	Title of the Article	Name of the Authors	Dept	Quartile of the journal
01.	Engineering characteristics of soil stabilised with saw dust ash and cement	Tausif E Elahi, Azmayeen Rafat Shahriar, Md Kausar Alam, Md Zoynul Abedin	CE Dept	Q2
02.	Examining Pedestrian Crash Frequency, Severity, and Safety in Numbers Using Pedestrian Exposure from Utah Traffic Signal Data	Ahadul Islam, Michelle Mekker Ph.D, Patrick A. Singleton Ph.D	CE Dept	Q2
03.	Monitoring bank-line movements of the rivers flowing across the Sundarbans using remote sensing and GIS techniques	G.M. Jahid Hasan, Abdullah-Al Jabir, Md Manjurul Anam	CE Dept	Q2
04.	Comparative Study of Concrete with Polypropylene and Polyethylene Terephthalate Waste Plastic as Partial Replacement of Coarse Aggregate	Md Jahidul Islam	CE Dept	Q2
05.	Prediction of compressibility and shear strength behaviour of in-situ cohesive soil from reconstituted clay	Naveel Islam, Md. Zoynul Abedin, Mohammad Shariful Islam, Rajib Dey, Arun J. Valsangkar	CE Dept	Q2
06.	Intertidal bathymetry and foreshore slopes derived from satellite images for static coasts	Naila Matin	CE Dept	Q2
07.	Effect of Geometric and Material Properties on the Behavior of Axially Loaded Concrete-Filled Stainless Steel Tube Columns	Gazi Algaj Hossain, Khandaker Fariha Ahmed, Soebur Rahman,	CE Dept	Q2
08.	Mycosynthesis of Noble Metal Nanoparticle Using Laetiporus versisporus Mushroom and Analysis of Antioxidant Activity	M. R. Farzana Fathima, A. Usha Raja Nanthini, Fatimah S. Al-Khattaf, Ashraf Atef Hatamleh, Sadib Bin Kabir	CE Dept	Q2
09.	Performance of geotextile roofing felts and natural grass roots in a cricket pitch	Md Zoynul Abedin, Naveel Islam, Md Kausar Alam Anik, Rajib Dey, Arun Valsangkar	CE Dept	Q2
10.	Flexural and impact behavior of textile reinforced concrete panel	Tasnia Ahmed, Sheikh Muhammad Fahad Bin Imam, Muhammad Ifaz, Hamidul Islam	CE Dept	Q2
11.	A Comprehensive Guideline for Bengali Sentiment Annotation	Md. Adnanul Islam, Faisal Ahamed Khan, Afjal Hossain, Shuvanon Razik, Shazzad Hossain, Jalal Mahmud	CSE Dept	Q2
12.	COVID-19 analytics: Towards the effect of vaccine brands through analyzing public sentiment of tweets	Muhammad Nazrul Islam, Md. Musfique Anwar, Iqbal H. Sarker	CSE Dept	Q2
13.	A Machine Learning Model for Predicting Individual Substance Abuse with Associated Risk-Factors	Enamul Haque, Dheyaaldin Alsalman, Muhammad Nazrul Islam, Mohammad Ali Moni, Iqbal H. Sarker	CSE Dept	Q2
14.	An Enhanced RBMT: When RBMT Outperforms Modern Data-Driven Translators	Md. Saidul Hoque Anik, A. B. M. Alim Al Islam	CSE Dept	Q2
15.	Optimized Performance and Economic Assessment for Hybrid Island Microgrid System Considering Uncertainties	Abu Shufian, Shaharier Kabir, Nur Mohammad	EECE Dept	Q2

Ser	Title of the Article	Name of the Authors	Dept	Quartile of the journal
16.	Cancerous and Non-Cancerous Brain MRI Classification Method Based on Convolutional Neural Network and Log-Polar Transformation	Ferdaus Anam Jibon, Mayeen Uddin Khandaker, Mahadi Hasan Miraz , Himon Thakur , Fazle Rabby, Nissren Tamam, Abdelmoneim Sulieman, Yahaya Saadu Itas, Hamid Osman	EECE Dept	Q2
17.	Strain-induced electronic and optical properties of inorganic lead halide perovskites APbBr3 (A= Rb and Cs)	Rasidul Islam, Kong LiuZhijie Wang, Soyaeb Hasan, Yulin Wu, Shengchun Qu	EECE Dept	Q2
18.	Drivers and barriers to the implementation of biogas technologies in Bangladesh	Md Ahsan Kabir, Md Tanbhir Hoq, Maria T. Johansson, Patrik Thollander	EECE Dept	Q2
19.	Impact of supplemental vitamins and natural honey for treatment of COVID-19: A review	Md Insiat Islam Rabby, Farzad Hossain, Munadi Al Islam, A.K.M. Sadrul Islam, Israt Jahan Akhi, Ferdousi Akter	ME Dept	Q2
20.	Applicability of Current Statutory Rules for Stability Requirements of Bangladesh Inland Passenger Vessels	A. K. M. Samiu Haque Barnil, Md. Shaidur Rahman, Khandakar Akhter Hossain	NAME Dept	Q2
21.	Effects of work-hardening and post thermal-treatment on tensile behaviour of solder-affected copper	M Muzibur Rahman, S Reaz Ahmed,	NAME Dept	Q2
22.	Corrosion Behavior of Work Hardened SnPb-Solder Affected Copper in the Bay of Bengal Water Environment	M. Muzibur Rahman, S. Reaz Ahmed, M. Salim Kaiser	NAME Dept	Q2
23.	Lightweight End-to-End Deep Learning Solution for Estimating the Respiration Rate from Photoplethysmogram Signal	Mr. Md Nazmul Islam Shuzan, Dr. Muhammad E. H. Chowdhury, Prof. MD MAMUN BIN REAZ, Mr. Sakib Mahmud, Nasser Al Emadi, Dr. Mohamed Arselene Ayari, Sawal Hamid Md Ali, Dr. Ahmad Ashrif A Bakar, Syed Mahfuzur Rahman, Mr. Amith Khandakar	BME Dept	Q2
24.	Retrieving spatial variation of aerosol level over urban mixed land surfaces using Landsat imageries:	Abdullah-Al- Faisal, Md Mostafizur Rahman, Shajibul Haque	EWCE Dept	Q2
25.	A case study on severe damage at a tunnel in serpentinite rock mass	N. Ikeda, Y. Onoe, Y. Kanai, T. Hayakawa, D. Awaji, J. Kodama D. Fukuda, A. K. M. B. Alam, A. B. N. Dassanayake	PME Dept	Q2
26.	A decision support model for evaluating risks in a collaborative supply chain of the medical equipment manufacturing industry	R.K.A. Bhalaji, Bathrinath Sankaranarayanan, Shahriar Tanvir Alam, Niamat Ullah Ibne Hossain, Syed Mithun Ali, Koppiahraj Karuppiah	IPE Dept	Q2

Q3 PAPER

Ser	Title of the Article	Name of the Authors	Dept	Quartile of the journal
01.	Identifying the key attributes of fresh water crisis in Dhaka city: A structural equation modeling approach	Md. Mohaimenul Islam Sourav, Md Nafizul Islam, Asif Ahmed Abeer	CE Dept	Q3
02.	Automated reasoning of vehicle brake-force: a fuzzy inference system model	M. Akhtaruzzaman, Md. Arman Hossain, Md. Mahbubur Rahman, Mohammad Kamrul Hasan	CSE Dept	Q3
03.	A comprehensive understanding of popular machine translation evaluation metrics	Md. Adnanul Islam, Md. Saddam Hossain Mukta	CSE Dept	Q3
04.	Experimentation on Enhancing Mechanical Characteristics of E-glass Fiber-Strengthened Epoxy Resins with Fillers	M. H. Parveg, S. Ahmed, N. R. Dhar	AE Dept	Q3
05.	ANN-based performance prediction of electrical discharge machining of Ti-13Nb-13Zr alloys	Md Doulotuzzaman Xames, Fariha Kabir Torsha, Ferdous Sarwar	IPE Dept	Q3
06.	Accelerated wound closure: Systematic evaluation of cellulose acetate effects on biologically active molecules release from amniotic fluid stem cells	Tamrin Nuge, Xiaoling Liu, Kim Yeow Tshai, Siew Shee Lim, Norshariza Nordin, Md. Enamul Hoque, Ziqian Liu	BME Dept	Q3

Q4 PAPER

Ser	Title of the Article	Name of the Authors	Dept	Quartile of the journal
01.	Effect Of Corrugated Pipe On Laminar Convective Heat Transfer By Using Swcnt Nanofluid: A Numerical Study	Farzad Hossain, Muhammad Ifaz Shahriar Chowdhury, Tazeen Afrin Mumu	ME Dept	Q4
02.	Validation study of reactor physics code WIMSD-5B based on evaluated nuclear data libraries for VVER core calculations by benchmarking VVER critical experiments of light water reactors	K.M. Zaheen Nasir; Tanaya Chakma; Benozir Ahmed; Mohammad Jahirul Haque Khan	NSE Dept	Q4
03.	Effectiveness of Existing Language Courses and Classroom Tactics for ELT at the Engineering Universities in Bangladesh	Mohammad Shahazahan Seraj Bhuiyan, Mohammad Ehsanul Islam Khan	Sc & Hum	Q4

RECOGNITION OF ACADEMIC PERFORMANCE

Osmany Memorial Gold Medal

Awarded to the graduating regular student with highest CGPA obtained graduating regular student among all the MIST medal winners

FRONT VIEW

REAR VIEW

MIST Medal

Awarded to the graduating regular student with highest CGPA obtained graduating regular student among all the MIST medal winners

Dean's List

- All regular students of all departments except Architecture department, earning minimum GPA 3.75 at the end of each academic level for level 1 to 3
- For graduating students of all departments except Architecture department earning minimum CGPA 3.75 considering results of entire program (i.e. level 1 to 4)
- For Architecture department students with earning minimum GPA 3.50 at the end of each academic level for level 1 to 4
- For graduating students of Architecture department earning minimum CGPA 3.50 considering results of entire program (i.e. level 1 to 5)

MIST Scholarships

- MIST Scholarship is given to the regular students of each departments those are securing position from 1st to 5th as recognition of their academic performance in each term final examination.

ELIGIBILITY FOR ADMISSION TEST

Bangladeshi Students

Minimum qualifications to take part in the admission test are as follows:

a. SSC Examination (or Equivalent). The applicant must have passed the examination in Science Group obtaining a minimum GPA of 4.00 (without fourth subject) on the scale of 5.0. Only the applicants who passed SSC or Equivalent Examination in Corresponding current and previous one year can apply.

b. HSC Examination (or Equivalent). The applicants passed in current and previous one year must obtain minimum total grade point 17 in four subjects (Mathematics, Physics, Chemistry and English).

c. GCE ('O' and 'A' Levels or Equivalent)

(1) The applicant who passed in current and previous one year must have qualified with minimum 'B' grade in five subjects including Mathematics, Physics, Chemistry, and English in GCE 'O' Level.

(2) The applicant who passed in current and previous one year must have minimum two 'B' grades and one 'C' grade in Mathematics, Physics, and Chemistry in GCE 'A' Level.

d. Applicants interested in Biomedical Engineering must have Biology at HSC or equivalent level with a minimum grade point of 'A-' / GCE 'A' or equivalent level with a minimum grade point of 'C'.

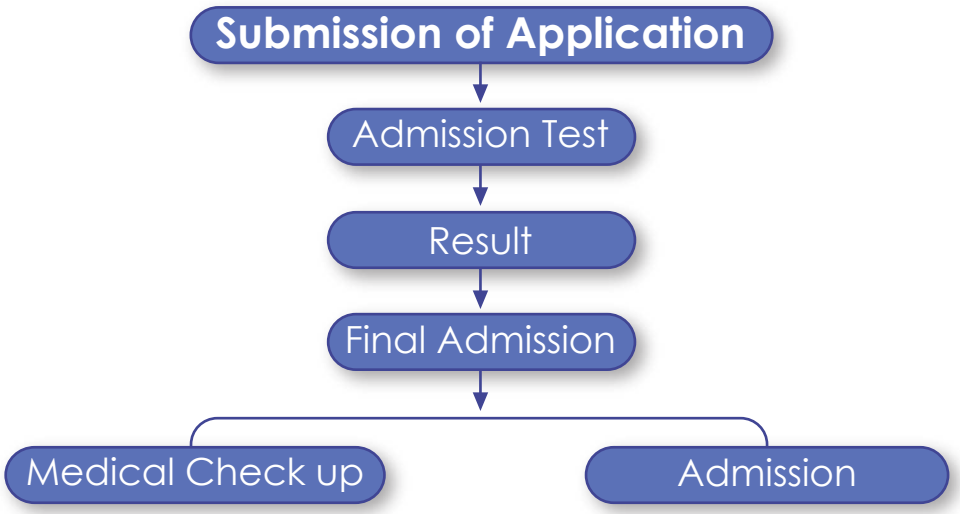
Foreign Students

Maximum 3% of overall vacancies available will be kept reserved for the foreign students and will be offered to foreign countries through Armed Forces Division (AFD) of the Government of the Peoples Republic of Bangladesh. Applicants must fulfill the following requirements:

- Educational qualifications as applicable for Bangladeshi students or equivalent.
- Must have security clearance from respective Embassy/ High Commission in Bangladesh.
- Sex: Male and Female.

Note: In the event of non-availability of foreign students, the vacancies will be filled up by Bangladeshi civil students as per merit.

SEQUENCE OF ADMISSION



Documents are to be Submitted During Admission

a. Original copies of certificates and mark sheet of SSC or Equivalent examination.

b. Original copies of certificate and mark sheet of HSC or Equivalent examination.

c. Three copies of recent passport size colored photograph of the candidate duly attested by class-I gazetted officer.

d. Character certificate from the head of the last institute attended.

e. Nationality Certificate from proper authority / Birth certificate / National ID Card.

f. For the Children of Freedom Fighters, original copies of Freedom Fighter certificate of parents, issued by the Ministry of Liberation War Affairs, People's Republic of Bangladesh.

g. For Tribal Citizen, original certificate as a tribal citizen issued by local UP Chairman and countersigned by concerned District Commissioner (DC).

h. For Children of Military Personnel original certificate of authenticity, issued by respective Commanding Officers (For serving parents); and by CORO/ Naval Secretary/ Air Secretary/ Record Office/ Drafting Office (For retired parents).

Department Allotment

Departments will be allotted on the basis of combined merit position. Individual choice for selection of departments will be given preference as far as possible.

Guardian's Consent

In the admission form selected civil candidates and their parents or guardians have to render consent certificate accepting terms and conditions as required by MIST authority from time to time.

MIST STUDENT WITHDRAWAL POLICY

Introduction

1. Military Institute of Science & Technology (MIST), a pioneer technical institution of Bangladesh Armed Forces conducts undergraduate courses of various engineering disciplines, like, Civil Engineering (CE), Computer Science and Engineering (CSE), Electrical, Electronic and Communication Engineering (EECE), Mechanical Engineering (ME), Aeronautical Engineering (AE), Naval Architectures and Marine Engineering (NAME), Nuclear Science and Engineering (NSE), Environmental, Water Resources, and Coastal Engineering (EWCE), Biomedical Engineering (BME), Architecture (Arch), Petroleum & Mining Engineering (PME) and Industrial & Production Engineering (IPE) . Since its beginning, all academics programs (including the MBA and Executive MBA programs) of MIST had been affiliated with the University of Dhaka (DU). On 05 June, 2008 the Bangladesh University of Professionals (BUP) came into existence as a new public university of the country. Since then all academic programs of MIST were disengaged from DU and have been affiliated with BUP. Again, the Management Division (BBA, MBA and Executive programs) of MIST was disengaged from MIST and remained with BUP in faculty of Business studies (FBS). Now, examinations of all engineering programs of MIST are held under the authority of BUP.

2. From the academic session 2017-18, MIST is introduceding a course system for undergraduate studies. The rules and regulations for administering undergraduate curriculum through the Course System have been applicable to students henceforth. This new course system has been introduced with an aim of creating a continuous, even and consistent workload throughout the term for the students. This new curriculum does not demand the same rate of academic progress from all students for obtaining the degree but only lays down the pace expected of a normal student. A student whose background or capacity for assimilation is lower, he/she is permitted to complete the program at a slower pace by studying a fewer number of courses during a given term, subject to a minimum course load.

3. A definite standard of education and general discipline will be followed in every level of the program. The unsuccessful students will therefore be withdrawn from the institute.

Definitions

4. **Definition of the terms :**

   a. **Permanent Withdrawal** The term `Permanent Withdrawal' will imply a complete/ permanent discontinuity from any course/program of the institute.

   b. **Temporary Withdrawal** The term `Temporary Withdrawal' means that the student has been allowed by the Academic Council, MIST to discontinue temporarily from any course/program for a definite period. The student, so withdrawn, may re-enter the course as per terms and conditions set by the authority .

   c. **Permanent Expulsion** The term `Permanent Expulsion' means expulsion permanently from the institution on disciplinary ground. A student, if expelled permanently will never be allowed to re-enter the course or similar program in MIST and be subjected to other terms and conditions as set by the authority while approving the permanent expulsion order.

d. Temporary Expulsion The term `Temporary Expulsion means expulsion from an academic course/program for a certain period on disciplinary ground. A student, if expelled temporarily, may be allowed to re-enter the course/program on expiry of the punishment period and on fulfilment of other terms and conditions (if any) as set by the authority while approving the temporary expulsion order.

5. The undergraduate (B.Sc) Engineering programs for all engineering disciplines are planned for 04 regular levels, comprising of 08 regular semester for Architecture program it is planned for 5 & regular levels, comprising of 10 regular terms. It is expected that all students will earn degree by clearing all the offered courses in the stipulated time. In case of failure the following policies will be adopted:

a. Students failing in any course/subject will have to clear/pass the said course/ subject by appearing it in supplementary/ self study (for graduating student) examination as per examination policy.

b. Students may also retake the failed subject/course in regular term/short term as per Examination policy.

c. Maximum grading for supplementary self study examination etc of failed subjects will be B+ as per examination policy.

d. One student can retake/reappear in a failed subject/course only twice. However, With the Permission of Academic Council of MIST, a student may be allowed for third time as last chance.

e. In case of sickness, which leads to missing of more than 40% classes or miss term final examination (supported by requisite medical documents), students may be allowed to withdraw temporarily from that term and repeat the whole level with the regular level in the next academic session, subject to the approval of Academic Council , MIST. However, he/she has to complete the whole undergraduate program within 06 (six) academic years (for Architecture 07 academic years) from the date of his/her registration.

f. Minimum credit requirement for the award of bachelor's degree in Engineering (Bsc Engg) and Architecture (B. Arch) will be decide by the respective Department as per existing rules. However the minimum CGPA requirement for obtaining a bachelor degree in engineering and Architecture is 2.20.

g. Whatever may be the cases, students have to complete the whole undergraduate Program within 06 (six) academic years for B.Sc Engineering and 07 (seven) years for Bachelor of Architecture from the date of registration.

h. All other terms and condition of MIST Examination Policy remain valid.

EXPULSION/ WITHDRAWAL ON DISCIPLINARY GROUND

6. **Unfair Means.** Adopting of unfair means may result in expulsion of a student from the program and so from the institution. The Academic Council of MIST will authorize such expulsion on the basis of recommendation of the Disciplinary Committee, MIST and as per policy approved by the affiliating university (BUP). Following would be considered as unfair means adopted during examinations and other contests:

   a. Communicating with fellow students for obtaining help in the examinations.
   b. Copying from another student's script/report/paper.
   c. Copying from desk or palm of a hand or from other incriminating documents.
   d. Possession of any incriminating document whether used or not.

7. **Influencing Grades** MIST Authority may expel/withdraw any student for approaching directly or indirectly in any form to influence a teacher or MIST authority for grades.

8. **Other Indiscipline Behaviour** MIST Authority may withdraw/expel any student on disciplinary ground, if any form of indiscipline or unruly behaviour is seen from him/her which may disrupt the academic environment/program or is considered detrimental to MIST's image.

9. **Immediate Action by the Disciplinary Committee of MIST** The Disciplinary Committee, MIST may take immediate disciplinary action against any student of the institution. But later the approval of BUP has to be taken. In case of withdrawal/expulsion, the matter will have to be referred later to the next academic Council, MIST.

WITHDRAWAL ON OWN ACCORD

10. **Permanent Withdrawal** A Student who has already completed some courses and has not performed satisfaction may apply for a permanent withdrawal.

11. **Temporary Withdrawal** A student, if he/she applies, may be allowed to withdraw temporarily from the program, subject to approval of Academic Council of MIST, but he/she has to complete the whole program within 06 (six) academic years (for Architecture 07 academic years) from the date of his/her registration.

STUDENTS' DRESS CODE

Non-military students are to wear dress with displayed identity card as per "Dress Code" prescribed by MIST authority. Military students will put on uniform as per dress regulation of respective services. Dress code for civil student is as follows:

Male Student		Female Student	
Summer	**Winter**	**Summer**	**Winter**
Light Grey coloured full sleeve shirt (tucked in), Light Black coloured full pant, Black Oxford shoes and Black socks.	Light Grey coloured full sleeve shirt (tucked in), Light Black coloured full pant, Blue jersey pull over (V-necked) (Normal), MIST Blazer (Formal), Black Oxford shoes and Black socks.	Ash coloured three quarter sleeve Kamiz, White coloured Sallowar and Dopatta, Black ladies shoes and socks/ Black sandal shoes.	Ash coloured three quarter sleeve Kamiz, White coloured Sallowar and Dopatta, Navy Blue cardigan (Normal), MIST Blazer (Formal), Black ladies shoes and socks/ Black sandal shoes.

SUMMER

WINTER (Formal)

WINTER (Regular)

RULES AND REGULATIONS FOR UNDERGRADUATE PROGRAM AS PER COURSE SYSTEM

Introduction

1. MIST has introduced course system for undergraduate studies from the academic session 2017-18. Therefore, the rules and regulations mentioned in this paper are applicable to students for administering undergraduate curriculum through the Course System. This has been introduced with an aim of creating a continuous, even and consistent workload throughout the term for the students.

The Course System

2. The salient features of the Course System are as follows:

   a. Number of theory courses will be generally 06 or as per syllabus in each term. However, with the recommendation of course coordinator and Head of the Department, Commandant MIST may allow up to 07 courses in exceptional cases if department can accommodate within 24 cr hr..
   b. Students will not face any level repeat for failing.
   c. Students will get scope to improve their grading.
   d. Introduction of more optional courses to enable the students to select courses according to their individual needs and preferences.
   e. Continuous evaluation of students' performance.
   f. Promotion of student-teacher interaction and contact.

3. Beside the professional courses pertaining to each discipline, the undergraduate curriculum gives a strong emphasis on acquiring thorough knowledge in the basic sciences of mathematics, physics and chemistry. Due importance is also given on the study of several subjects in humanities and social sciences.

4. The first two years of bachelor's degree programs generally consist of courses in basic engineering, general science and humanities subjects; while the third and subsequent years focus in specific disciplines.

Number of Terms in a Year

5. There will be two terms Spring Term (Jan-Jun) and Fall Term (Jul-Dec) in an academic year.

Duration of Terms

6. The duration of each of Spring Term and Fall Term (maximum 22 weeks) may be as under:

Ser	Events	Durations
1.	Classes before Mid Term	7 weeks
2.	Mid Term Vacation	1 week
3.	Classes after Mid Term	7 weeks
4.	Makeup Classes and Preparatory leave	2/3 weeks
5.	Term Final Examination	2/3 weeks
6.	Term End Vacation	1/2 week

Course Pattern and Credit Structure

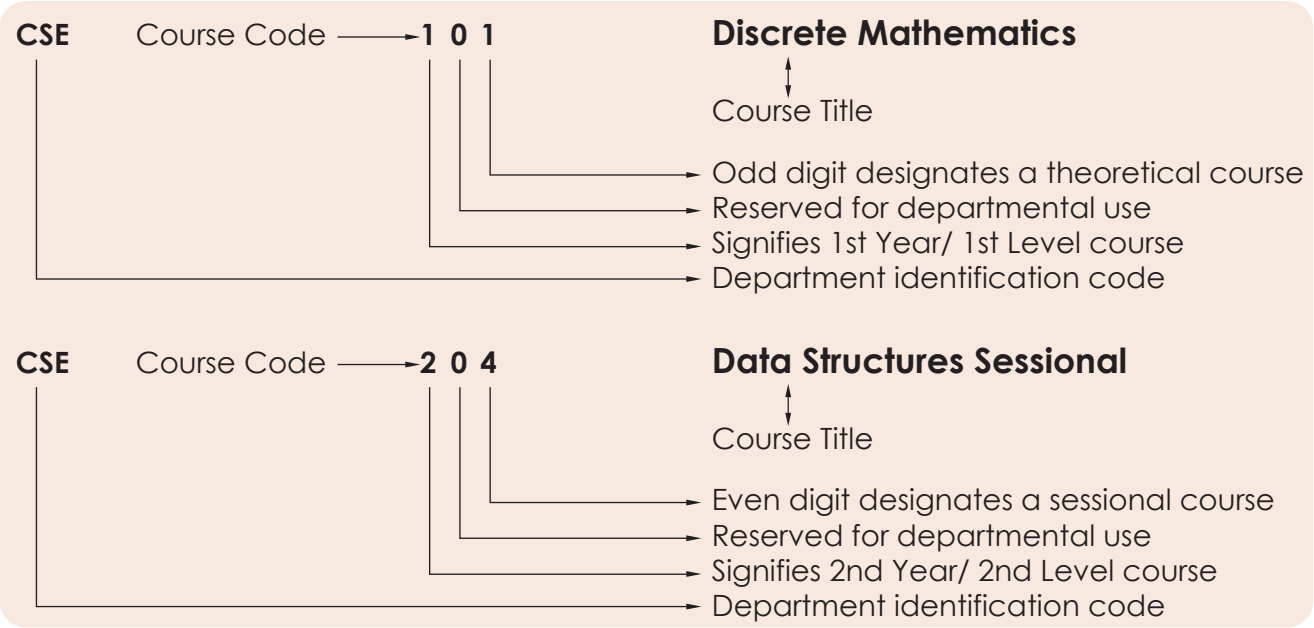
7. The undergraduate program is covered by a set of theoretical courses along with a set of laboratory (sessional) courses to support them.

Course Designation System

8. Each course is designated by a maximum of three/four letter code identifying the department offering the course followed by a three-digit number having the following interpretation:

    a. The first digit corresponds to the year/level in which the course is normally taken by the students.
    b. The second digit is reserved for departmental use. It usually identifies a specific area/group of study within the department.
    c. The last digit is an odd number for theoretical courses and an even number for sessional courses.

9. The course designation system is illustrated as follows:



Assignment of Credits

10. The assignment of credits to a theoretical course follows a different rule from that of a sessional course.

    a. Theoretical Courses: One lecture per week per term is equivalent to one credit.
    b. Sessional Courses: Credits for sessional courses is half of the class hours per week per term.

Credits are also assigned to project and thesis work taken by the students. The amount of credits assigned to such work varies from one discipline to another.

Types of Courses

11. The types of courses included in the undergraduate curricula are divided into the following groups:

    a. **Core Courses:** In each discipline, a number of courses are identified as core courses, which form the nucleus of the respective bachelor's degree program. A student has to complete all the designated core courses of his/her discipline.
    b. **Prerequisite Courses:** Some of the core courses are identified as prerequisite courses for a specific subject.
    c. **Optional Courses:** Apart from the core courses, the students can choose from a set of optional courses. A required number of optional courses from a specified group have to be chosen.

Course Offering and Instruction

12. The courses to be offered in a particular term are announced and published in the Course Catalog along with the tentative Term Schedule before the end of the previous term. The courses to be offered in any term will be decided by Board of Undergraduate Studies (BUGS) of the respective department.

13. Each course is conducted by a course teacher who is responsible for maintaining the expected standard of the course and for the assessment of students' performance. Depending on the strength of registered students (i.e. on the number of students) enrolled for the course, the teacher concerned might have course associates and Teaching Assistants (TA) to aid in teaching and assessment.

Teacher Student Interaction

14. The new course system encourages students to come in close contact with the teachers. For promotion of a high level of teacher-student interaction, each student is assigned to an adviser and the student is free to discuss all academic matters with his/her adviser. Students are also encouraged to meet any time with other teachers for help and guidance in academic matters. However, students are not allowed to interact with teachers after the moderation of questions.

Student Adviser

15. One adviser is normally appointed for a group of students by the BUGS of the concerned department. The adviser advises each student about the courses to be taken in each term by discussing the academic program of that particular term with the student.

16. However, it is also the student's responsibility to keep regular contact with his/her adviser who will review and eventually approve the student's specific plan of study and monitor subsequent progress of the student.

17. For a student of second and subsequent terms, the number and nature of courses for which he/she can register is decided on the basis of academic performance during the previous term. The adviser may permit the student to drop one or more courses based on previous academic performance.

Course Registration

18. Any student who uses classroom, laboratory facilities or faculty-time is required to register formally. Upon admission to the MIST, students are assigned to advisers. These advisers guide the students in choosing and registering courses.

19. **Registration Procedure.** At the commencement of each term, each student has to register for courses online in consultation with and under the guidance of his/her adviser. The date, time and venue of registration are announced in advance by the Registrar's Office. Counselling and advising are accomplished at this time. It is absolutely essential that all the students be present for registration at the specified time.

20. Pre-conditions for Registration.

a. For first year students, department-wise enrollment/admission is mandatory prior to registration. At the beginning of the first term, an orientation program will be conducted for them where they are handed over with the registration package on submission of the enrolment slip.

b. Any student, other than the new batch, with outstanding dues to the MIST or a hall of residence is not permitted to register. Each student must clear their dues and obtain a clearance certificate, upon production of which, he/she will be given necessary Course Registration Forms to perform course registration.

c. A student is allowed to register in a particular course subject to the class capacity constraints and satisfaction of pre-requisite courses. However, even if a student fails in a pre-requisite course in any term, the concerned department (BUGS) may allow him/her to register for a course which depends upon the pre-requisite course provided that his/her attendance and performance in the continuous assessment of the mentioned pre- requisite course is found to be satisfactory.

21. **Registration Deadline.** Each student must register for the courses to be taken before the commencement of each term. Late registration is permitted only during the first week of classes. Late registration after this date will not be accepted unless the student submits a written application to the registrar through the concerned Head of the department explaining the reasons for delay. Acceptable reasons may be medical problems with supporting documents from the Medical Officer of MIST or some other academic commitments that prohibit enrollment prior to the last date of registration.

22. **Penalty for Late Registration.** Students who fail to register during the designated dates for registration are charged a late registration fee of Tk. 100.00 (One hundred only) per credit hours. Under no circumstances, the penalty for late registration will be waived.

Limits on the Credit Hours to be taken

23. A student should be enrolled for at least 15 credit hours and is allowed to take a maximum of 24 credit hours. Relaxation on minimum credit hours may be allowed. A student must enroll for the sessional courses prescribed in a particular term within the allowable credit hour limits.

24. In special cases where it is not possible to allot the minimum required 15 credit hours to a student, the concerned department (BUGS) may permit with the approval of the Commandant, a lesser number of credit hours to suit individual requirements. Only graduating students may be allowed to register less than 15 credit hours without approval of Commandant. A list of all such cases to be forwarded to Register Office, ICT directorate and Controller of Exam Office by the respective Department.

Course Add/Drop

25. A student has some limited options to add or drop courses from the registration list. Addition of courses is allowed only within the first two weeks of a regular term. Dropping a course is permitted within the first four weeks of a regular term. Add or drop is not allowed after registration of courses for Supplementary-I and Supplementary-II examination.

26. Any student willing to add or drop courses has to fill up a Course Adjustment Form. This also has to be done in consultation with and under the guidance of the student's respective adviser. The original copy of the Course Adjustment Form has to be submitted to the Registrar's Office, where the required numbers of photocopies are made for distribution to the concerned adviser, Head, Dean, Controller of Examinations and the student.

27. All changes must be approved by the adviser and the Head of the concerned department. The Course Adjustment Form has to be submitted after being signed by the concerned persons.

Withdrawal from a Term

28. If a student is unable to complete the Term Final Examination due to serious illness or serious accident, he/she may apply to the Head of the degree awarding department for total withdrawal from the term before commencement of term final examination. However, application may be considered during term final examination in special case. The application must be supported by a medical certificate from the Medical Officer of MIST. The Academic Council will take the final decision about such applications. However, the total duration for graduation will not exceed 6 academic years.

The Grading System

29. The total performance of a student in a given course is based on a scheme of continuous assessment for theory courses. This continuous assessment is made through a set of quizzes, class tests, class evaluation, class participation, homework assignment and a term final examination. The assessments for sessional courses are made by evaluating performance of the student at work during the class, viva-voce during laboratory hours and quizzes. Besides that, at the end there will be a final lab test. Each course has a certain number of credits, which describes its corresponding weightages. A student's performance is measured by the number of credits completed satisfactorily and by the weighted average of the grade points earned. A minimum grade point average (GPA) is essential for satisfactory progress. A minimum number of earned credits also has to be acquired in order to qualify for the degree.

Letter grades and corresponding grade points will be given as follows:

Numerical Markings	Grade	Grade Points
80% and above	A+	4.00
75% to below 80%	A	3.75
70% to below 75%	A-	3.50
65% to below 70%	B+	3.25
60% to below 65%	B	3.00
55% to below 60%	B-	2.75
50% to below 55%	C+	2.50
45% to below 50%	C	2.25
40%to below 45%	D	2.00
below 40%	F*	0.00
	AB	Absent
	DC	Dis-collegiate
	VW	Voluntary Withdrawn
	X	Project/ Thesis Continuation
	E	Expelled
	S	Satisfactory

** Subject in which the student gets F grade shall not be regarded as earned credit hours for the calculation of Grade Point Average (GPA).*

Distribution of Marks

30. **Theory.** Forty percent (40%) of marks of a theoretical course shall be allotted for continuous assessment, i.e. assignments, class tests, pop quizzes, observations, projects and mid-term assessment. These marks must be submitted to Office of the Controller of Exam before commencement of final exam. The rest of the marks will be allotted to the Term Final Examination. The duration of final examination will be three (03) hours. The scheme of continuous assessment that a particular teacher would follow for a course will be announced on the first day of the classes. Distribution of marks for a given course per credit is as follows:

Class Performance	5%
Class Attendance	5%
Class Test/ Assignment	20%
Mid Term Assessment (Exam/ Project)	10%
Final Examination (Section A & B)	60%
Total	**100%**

Basis for awarding marks for class Attendance will be as follows:

Class Attendance	Marks
90% and above	100%
85% to less than 90%	90%
80% to less than 85%	80%
75% to less than 80%	70%
70% to less than 75%	60%
Below 70%	00%

Note:

a. In final exam, each section can be used for achieving not more than two course outcomes (COs). The remaining COs should be attained from mid-term assessment or class tests. Course teacher has to inform the student the beginning of the terms.

b. Course teacher of a particular course has to inform the department whether he/she wants to assess mid-term through exam or project within first two weeks of beginning of a term. The duration of mid-term examination should not be more than 50 minutes which has to be conducted in between 6th to 9th week of a semester. If mid-term assessment is done through project, then there should be project report and presentation.

c. The weightage of class performance can be assessed through checking attentiveness during classes or arranging unnoticed pop quizzes.

d. The number of class tests shall be n for 3.0 and above credit courses and (n-1) shall be considered for grading where n is the number of credits of the course. However, for courses having credits below 3.0, the considered class tests shall be 2 out of 3.

e. All class test will carry 20 marks each. Exam software system will finally convert these achieved marks into total class test marks as per credit hour. i.e for n=1(20), n=2 (40), n=3 (60), n=4(80) etc.

f. Irrespective of the result of the continuous assessment (class performance, class test, mid-term assessment), a student has to appear in the final examination (where applicable) for qualifying/passing the concern course/ subject.

31. **Laboratory/ Sessional/ Practical Examinations.** Sessional courses are designed and conducted by the concerned departments. Examination on Laboratory/ sessional/practical subjects will be conducted by the respective department before the commencement of term final examination. The date of practical examination will be fixed by the respective department. Students will be evaluated in the sessional courses on the basis of the followings.

a. Conduct of lab test/ class performance	25%
b. Report Writing/ Programming	15%
c. Mid Term Evaluation (exam/ project/ assignment)	20%
d. Final Evaluation (exam/ project/ assignment)	30%
e. Viva Voce/ Presentation	10%
Total	**100%**

32. **Laboratory/ Sessional Course in English.** The distribution will be as under:

a. Class performance/observation	10%
b. Written Assignment	15%
c. Oral Performance	25%
d. Listening Skill	10%
e. Group Presentation	30%
f. Viva Voce	10%
Total	**100%**

33. **Class Attendance.** Class Attendance may be considered as a part of continuous assessment. No mark will be allotted for attending class.

Collegiate, Non-collegiate and Dis-collegiate

34. Students having class attendance of 85% or above in individual subject will be treated as collegiate and less than 85% and up to 70% will be treated as non-collegiate in that subject. The non-collegiate student(s) may be allowed to appear in the examination subject to payment of non-collegiate fee/fine of an amount fixed by MIST/BUP. Students having class attendance below 70% will be treated as dis-collegiate and will not be allowed to appear in the examination and treated as fail. But in a special case such students may be allowed to appear in the examination with the permission of Commandant and it must be approved by the Academic Council.

Calculation of CGPA

35. Grade Point Average (GPA) is the weighted average of the grade points obtained of all the courses passed/ completed by a student. For example, if a student passes/completes n courses in a term having credits of C1, C2, ...,Cn and his grade points in these courses are G1, G2, ...Gn respectively, then

$$\text{GPA} = \frac{\text{Grade Points earned in the semester}}{\text{Credits completed in the semester}}$$

$$\frac{\text{Summation of (Credit hours in a course *Grade Points earned in that course)}}{\text{Total number of credit hour's completed}}$$

$$= \frac{\sum_{i=1}^{n} Ci * Gi}{\sum_{i=1}^{n} Ci}$$

36. The Cumulative Grade Point Average (CGPA) is the weighted average of the GPA obtained in all the terms passed/completed by a student. For example, if a student passes/ completes n terms having total credits of TC1, TC2, ... , TCn and his GPA in these terms are GPA1, GPA2,... , GPAn, respectively then

$$CGPA = \frac{\sum_{i=1}^{n} TCi * GPAi}{\sum_{i=1}^{n} TCi}$$

Numerical Example

Suppose a student has completed nine courses in a term and obtained the following grades:

Course	Credit Ci	Grade Points	Gi	Ci*Gi
EECE-163	3.00	A	3.75	11.25
EECE-164	0.75	A+	4.00	3.00
MATH-141	3.00	A-	3.50	10.50
PHY-103	3.00	B+	3.25	9.75
HUM-101	3.00	A	3.75	11.25
HUM-102	1.50	A	3.75	5.625
CSE-101	3.00	A	3.75	11.25
CSE-103	3.00	A-	3.50	10.50
CSE-104	1.5	B+	3.25	4.875
Total	**21.75**			**78.00**

$$GPA = \frac{78.00}{21.75} = 3.59$$

Suppose a student has completed four terms and obtained the following GPA:

Level	Term	Earned Credit Hours	Earned GPA	TCi*GPAi
		Tci	GPAi	
1	I	21.75	3.75	81.5625
1	II	20.75	3.61	74.9075
2	I	19.50	3.21	62.595
2	II	21.00	2.98	62.58
Total		83.00		281.645

$$CGPA = \frac{281.645}{83} = 3.39$$

Impacts of Grade Earned

37. The courses in which a student has earned a 'D' or a higher grade will be counted as credits earned by him/her. Any course in which a student has obtained an 'F' grade will not be counted towards his/her earned credits or GPA calculation. However, the 'F' grade will remain permanently on the Grade Sheet and the Transcript.

38. A student who obtains an 'F' grade in a core course will have to repeat that particular course. However, if a student gets an 'F' in an optional course, he/she may choose to repeat that course or take a substitute course if available. When a student will repeat a course in which he/she has previously obtained an 'F', he/she will not be eligible to get a grade better than 'B+' in that repeated course.

39. If a student obtains a grade lower than 'B+' in a particular course he/she will be allowed to repeat the course only once for the purpose of grade improvement. However, he/she will not be eligible to get a grade better than 'B+' for an improvement course.

40. A student will be permitted to repeat for grade improvement purposes a maximum of 6 courses in BSc. Engineering programs and a maximum of 7 courses in B. Arch. program.

41. If a student obtains a 'B+' or a better grade in any course he/she will not be allowed to repeat the course for the purpose of grade improvement.

Classification of Students

42. At MIST, regular students are classified according to the number of credit hours completed/ earned towards a degree. The following classification applies to all the students:

Level	Credit Hours Earned	
	Engineering/URP	Architecture
Level 1	0.0 to 36.0	0.0 to 34.0
Level 2	More than 36.0 to 72.0	More than 34.0 to 72.0
Level 3	More than 72.0 to 108.0	More than 72.0 to 110.0
Level 4	More than 108.0	More than 110.0 to 147.0
Level 5		More than 147.0

43. However, before the commencement of each term all students other than new batch are classified into three categories:

    a. **Category 1**: This category consists of students who have passed all the courses described for the term. A student belonging to this category will be eligible to register for all courses prescribed for the upcoming term.
    b. **Category 2**: This category consists of students who have earned a minimum of 15 credits but do not belong to category 1. A student belonging to this category is advised to take at least one course less since he might have to register for one or more backlog courses as prescribed by his/her adviser.
    c. **Category 3**: This category consists students who have failed to earn the minimum required 15 credits in the previous term. A student belonging to this category is advised to take at least two courses less than a category 1 student subject to the constraint of registering at least 15 credits. However, he will also be required to register for backlog courses as prescribed by the adviser.

44. **Definition of Graduating Student.** Graduating students are those students who will have ≤ 24 credit hour for completing the degree requirement.

Performance Evaluation

45. The performance of a student will be evaluated in terms of two indices, viz. Term Grade Point Average and Cumulative Grade Point Average which is the grade average for all the terms completed.

46. Students will be considered to be making normal progress toward a degree if their Cumulative Grade Point Average (CGPA) for all work attempted is 2.20 or higher. Students who regularly maintain a term GPA of 2.20 or better are making good progress toward the degrees and are in good standing with MIST. Students who fail to maintain this minimum rate of progress will not be in good standing. This can happen when any one of the following conditions exists.

a. The term GPA falls below 2.20.
b. The Cumulative Grade Point Average (CGPA) falls below 2.20.
c. The earned number of credits falls below 15 times the number of terms attended.

47. All such students can make up their deficiencies in GPA and credit requirements by completing courses in the subsequent term(s) and backlog courses, if there are any, with better grades. When the minimum GPA and credit requirements are achieved the student is again returned to good standing.

Minimum Earned Credit and GPA Requirement for Obtaining Degree

48. Minimum credit hour requirements for the award of Bachelor's degree in engineering (BSc Engg) and architecture (B Arch) will be decided by the respective department (BUGS). However, the syllabus of all BSc engineering prog must be of minimum 157 credit hours or more and for architecture prog minimum 189 credit hours or more. A student must earnsearn minimum credit hour set in the syllabus by the concerned department for qualifying Bachelor's Degree. The minimum CGPA requirement for obtaining a Bachelor's degree in engineering and architecture is 2.20.

49. A student may take additional courses with the consent of his/her Adviser in order to raise CGPA, but he/she may take a maximum of 15 such additional credits in engineering and 18 such additional credits in architecture beyond respective credit-hour requirements for Bachelor's degree during his/her entire period of study.

Application for Graduation and Award of Degree

50. A student who has fulfilled all the academic requirements for Bachelor's degree will have to apply to the Controller of Examinations through his/her Adviser for graduation. Provisional Degree will be awarded by BUP on completion of credit and GPA requirements.

Time Limits for Completion of Bachelor's Degree

51. A student must complete his studies within a maximum period of six years for engineering and seven years for architecture bachelor's degree.

Attendance, Conduct and Discipline

52. MIST has strict rules regarding the issues of attendance in class and discipline.

53. **Attendance.** All students are expected to attend classes regularly. MIST believes that attendance is necessary for effective learning. The first responsibility of a student is to attend classes regularly and one is required to attend the classes as per MIST rules.

54. **Conduct and Discipline.** During their stay in MIST all students are required to abide by the existing rules, regulations and code of conduct. Students are strictly forbidden to form or be members of student organization or political party, club, society etc., other than those set up by MIST authority in order to enhance student's physical, intellectual, moral and ethical development. Zero tolerance in regards of sexual abuse and harassment in any forms and drug abuse and addiction are strictly observed in the campus.

Teacher-Student Interaction

55. The academic system in MIST encourages students to come in close contact with the teachers. For promotion of high level of teacher-student's interaction, a course coordinator (CC) is assigned to each course. Students are free to discuss with CC about all academic matters. Students are also encouraged to meet other teachers any time for help and guidance for academic matters. Heads of the departments, Director of Administration, Director of Students Welfare (DSW), Dean and Commandant address the students at some intervals. More so, monthly Commandant's Parade is organized in MIST where all faculty members, staff and students are formed up, thereby increasing teacher-student interaction.

Absence during a Term

56. A student should not be absent from quizzes, tests, etc. during the term. Such absence will naturally lead to reduction in points/marks, which count towards the final grade. Absence in the Term Final Examination will result in an F grade in the corresponding course. A student who has been absent for short periods, up to a maximum of three weeks due to illness, should approach the course teacher(s) or the course (s) for make-up quizzes or assignments immediately upon return to classes. Such request has to be supported by medical certificate from competent authority (e.g. CMH/MIST Medical Officer).

Recognition of Performance

57. As recognition of performance and ensure continued studies MIST awards medals, scholarships and stipends will be given as per existing rules and practices.

Types of Different Examination

58. Following different types of final Examinations will be conducted in MIST to evaluate the students of Undergraduate Programs:

    a. **Term Final Examination:** At the end of each normal term (after 22wk or so), Term Final Examination will be held. Students will appear in the Term Final Examination for all the theory courses they have taken in the Term.

    b. **Supplementary Examination:** It will take place twice in a year. Supplementary-I is defined as provision of giving exam in the first week of Spring Term (Jan-Jun) / Fall Term(Jul-Dec) end break and Supplementary-II in the first week of Fall Term (Jul-Dec) / Spring Term (Jan-Jun) end break, respectively. Students will be allowed to register for a maximum of two theory courses (Failed/Improvement) in Supplementary-I and maximum of one theory course (Failed/Improvement) in Supplementary-II. However, with the approval of Commandant, in special circumstances, departments may allow students to register for a maximum of one theory courses (Failed/Improvement) in Supplementary-I and maximum of two theory courses (Failed/Improvement) in Supplementary-II. Total courses to register by a student in supplementary examination in a year can not be more than three.

    c. **Improvement Examination:** It will be taken during Supplementary-I and Supplementary-II Examination. Questions will be same as the question of the regular examination of that Supplementary Examination (if any). Student can take maximum two subjects at

a time (two subjects in supplementary-I and one subject in supplementary-II) and maximum 6 subjects in the whole academic duration. If a student obtains a grade lower than 'B+' in a course, he/she will be allowed to repeat the course only once for grade improvement. However, he/she will not be eligible to get a grade better then 'B+' for an improvement course. Among the previous result and improvement examination result, best one will be considered as final result for an individual student. However, performance of all examination i,ei.e. previous to improvement examination, shall be reflected in the transcript.

Rules of Different Examinations

59. **Term Final Examination**. Following rules to be followed:

a. Registration to be completed before commencement of the Term. A student has to register his desired courses paying registration, examination fee and other related fees.
b. Late registration will be allowed without penalty within first two weeks of the term.
c. Within 1st two weeks of a term a student can Add/Drop course/courses. To add a course, in the 3rd week, one has to register the course by paying additional fees. To drop a course, one has to apply within three weeks and paid fees will be adjusted/ refunded. If anyone wants to drop a course after three weeks and within 4 weeks, that will be permitted but paid fees will not be refunded in that case.
d. Registrar office will finalize registration of all courses within 7 (seven) weeks, issue registration slip and that will be followed by issuing Admit Card.
e. Term Final Examination to be conducted in the 18-20th week of the term as per approved Academic Calendar.

60. **Supplementary Examination**. Following rules are to be followed:

a. Supplementary-I is defined as provision of giving exam in the first week of Spring Term (Jan-Jun) / Fall Term (Jul-Dec) end break and Supplementary-II in the first week of Fall Term (Jul-Dec) / Spring Term (Jan-Jun) end break, respectively.
b. Students will be allowed to register for a maximum of two theory courses (Failed/ Improvement) in Supplementary-I and maximum of one theory course (Failed/ Improvement) in Supplementary-II. However, with the approval of Commandant, in special circumstances, departments may allow students to register for a maximum of one theory courses (Failed/Improvement) in Supplementary-I and maximum of two theory courses (Failed/Improvement) in Supplementary-II. Total courses to register by a student in supplementary examination in a year can not be more than three,
c. No class will be conducted.
d. 40% marks will be considered from the previous exams.
e. Maximum grading in Supplementary Exam will be 'B+'.
f. No Sessional Exam will be conducted.
g. Examination will be taken on 60% marks like Term Final Examination.
h. If a student fails in a course more than once in regular terms, then for calculating 40% marks best one of all continuous assessment marks will be counted.
j. If anyone fails in the laboratory/sessional course, that course cannot be taken in the supplementary examination.
k. If any student fails in a course, he can clear the course retaking it 2nd time or, he can clear the examination appearing at the supplementary examination as well. Any one fails twice in a course, can only retake it in the regular term for appearing third time. But anyone fails even after appearing third time. He/she has to take approval of

Academic Council of MIST for appearing 4th (last) time in a course and need to pay extra financial penalty. If any student fails even 4th time in a course, will not be allowed to appear anymore in this same course.

l. Registration of Supplementary-I Exam to be done within 5th wk after completion of Fall Term (July to Dec) and registration of Supplementary-II exam to be done during the Mid-Term break of Spring Term (Jan to Jun), paying all the required fees.
m. There will be no provision for add/drop courses after registration.
n. Question Setting, Moderation, and Result Publication to be done following the same rules of Spring (Jan to Jun) / Fall (July to Dec) Term Final Exam as per existing Examination Policy.
p. Moderation of the questions for Supplementary-I will be done in the 5th week after completion of Fall Term (July to Dec) Final Exam and Supplementary-II with the moderation of the questions of Spring Term (Jan to Jun).
q. Separate Tabulation sheet to be made.
r. **Thesis**: if a student cannot complete thesis in two consecutive terms, with the recommendation of the supervisor, he/she may continue for next one/two term within six academic years.62.

61. **Improvement Examination.** Following rules to be followed:

a. Improvement examination is to be taken during the Supplementary-I and Supplementary-II examinations.
b. For Improvement examination, registration is to be done during the registration of Supplementary-I and Supplementary-II examinations by paying all the fees.
c. Question Setting, Moderation and Result Publication to be done with courses of Supplementary-I and Supplementary-II examinations.
d. Any student gets a grading below 'B+' and desires to improve that course; he will be allowed to appear the improvement examination for that particular course.
e. Highest grade of Improvement examination will be 'B+'.
f. One student is allowed to appear at Improvement exam in 6 (six) courses in his whole graduation period taking maximum two courses at a time (two courses at supplementary-I and one course at supplementary-II).

Irregular Graduation

62. If any graduating student clears his/her failed course in Spring Term/Fall Term/ Supplementary examinations and his graduation requirements are fulfilled, his graduation will be effective from the result publication date of Spring Term/Fall Term/Supplementary examinations and that student will be allowed to apply for provisional certificate.

Conclusion

63. MIST is committed in conferring degrees to the students in time which plays a very vital role in steering all academic activities of any university/institute. At the beginning MIST conducted all its examinations under the examination section of the University of Dhaka. IN June 2008, MIST got affiliation with BUP. Since then MIST has been conducting all its examinations under the control and authority of BUP. For the need of time, former MIST examination policy was reviewed several times. Present Review Committee has made necessary amendment/addition/deletion to suit the proposed course system. This policy may be reviewed every after 05 (five) years or as and when felt necessary by the authority of MIST.

DISTRIBUTION OF CREDIT HOURS

FACULTY OF CIVIL ENGINEERING

CE Department

Level	Term	Credit Hour
1	I	20.00
	II	20.00
2	I	20.00
	II	20.00
3	I	19.00
	II	20.50
4	I	20.50
	II	20.00
Total Credit Hours:		**160.00**

Arch Department

Level	Term	Credit Hour
1	I	19.00
	II	20.50
2	I	21.00
	II	21.00
3	I	19.50
	II	19.50
4	I	17.50
	II	17.50
5	I	17.50
	II	16.00
Total Credit Hours:		**189.00**

EWCE Department

Level	Term	Credit Hour
1	I	19.50
	II	18.50
2	I	20.50
	II	18.50
3	I	20.50
	II	22.00
4	I	20.50
	II	20.00
Total Credit Hours:		**160.00**

PME Department

Level	Term	Credit Hour
1	I	18.00
	II	19.50
2	I	23.00
	II	20.50
3	I	19.50
	II	21.00
4	I	19.00
	II	19.50
Total Credit Hours:		**160.00**

FACULTY OF ELECTRICAL AND COMPUTER ENGINEERING

CSE Department

Level	Term	Credit Hour
1	I	20.75
	II	19.25
2	I	20.25
	II	21.50
3	I	20.25
	II	19.50
4	I	19.25
	II	19.25
Total Credit Hours:		**160.00**

EECE Department

Level	Term	Credit Hour
1	I	18.50
	II	18.50
2	I	20.00
	II	19.00
3	I	21.50
	II	21.00
4	I	21.00
	II	20.50
Total Credit Hours:		**160.00**

FACULTY OF MECHANICAL ENGINEERING

ME Department

Level	Term	Credit Hour
1	I	20.50
	II	18.00
2	I	18.00
	II	21.50
3	I	21.50
	II	19.50
4	I	21.50
	II	19.50
Total Credit Hours:		**160.00**

AE Department

Level	Term	Credit Hour	
		Aerospace	Avionics
1	I	19.25	19.25
	II	21.25	21.25
2	I	18.75	21.75
	II	22.50	22.50
3	I	20.75	20.00
	II	20.50	20.25
4	I	18.50	18.50
	II	18.50	16.50
Total Credit Hours:		**160.00**	**160.00**

NAME Department

Level	Term	Credit Hour
1	I	20.00
	II	21.00
2	I	20.00
	II	19.50
3	I	20.50
	II	20.50
4	I	19.00
	II	19.50
Total Credit Hours:		**160.00**

IPE Department

Level	Term	Credit Hour
1	I	18.00
	II	18.25
2	I	23.00
	II	21.00
3	I	21.25
	II	21.00
4	I	21.00
	II	16.50
Total Credit Hours:		**160.00**

FACULTY OF SCIENCE AND ENGINEERING

BME Department

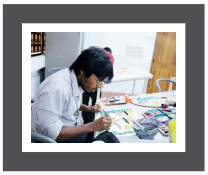
Level	Term	Credit Hour
1	I	19.00
	II	18.50
2	I	18.50
	II	21.00
3	I	21.50
	II	19.50
4	I	21.50
	II	20.50
Total Credit Hours:		**160.00**

NSE Department

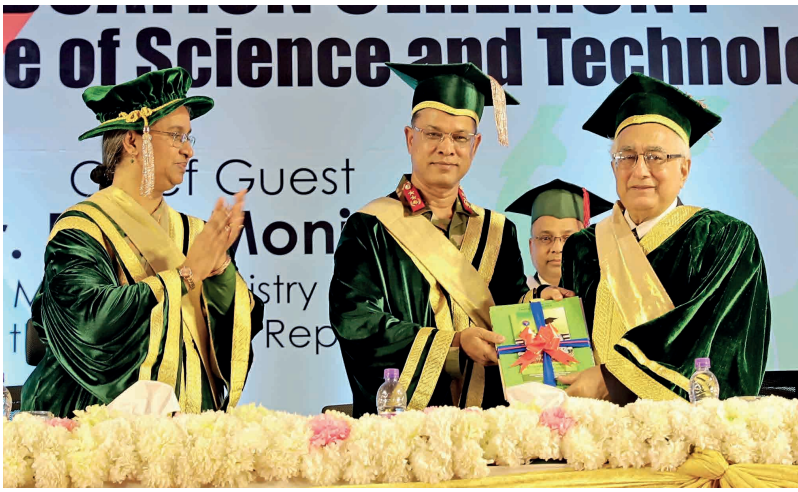
Level	Term	Credit Hour
1	I	18.50
	II	21.50
2	I	20.25
	II	20.75
3	I	20.00
	II	19.75
4	I	20.50
	II	18.75
Total Credit Hours:		**160.00**


MIST

PHOTO GALLERY



Graduation Ceremony 2020



Osmany Memorial Gold Medal 2020

Maj Md Ziaul Islam
CE-18

MIST MEDAL 2020

Uzma Hasan
CSE-16

Afsana Mustari
AE-8

Maj Md Nazmul Hasan
EECE-14

A S M Araf Raihan
NAME-4

Miahn Rasheeq Aosaf
ME-14

Maj Azfar Ahmed Engrs
Arch-1

Afsara Tasnim
BME-2

Shahriar Tanvir Alam
IPE-1

Golamur Rahman Khan
NSE-2

Farzana Mubassira
PME-1

Farhat Tahsin Prattoyee
EWCE-2

Council of MIST

Governing Body of MIST

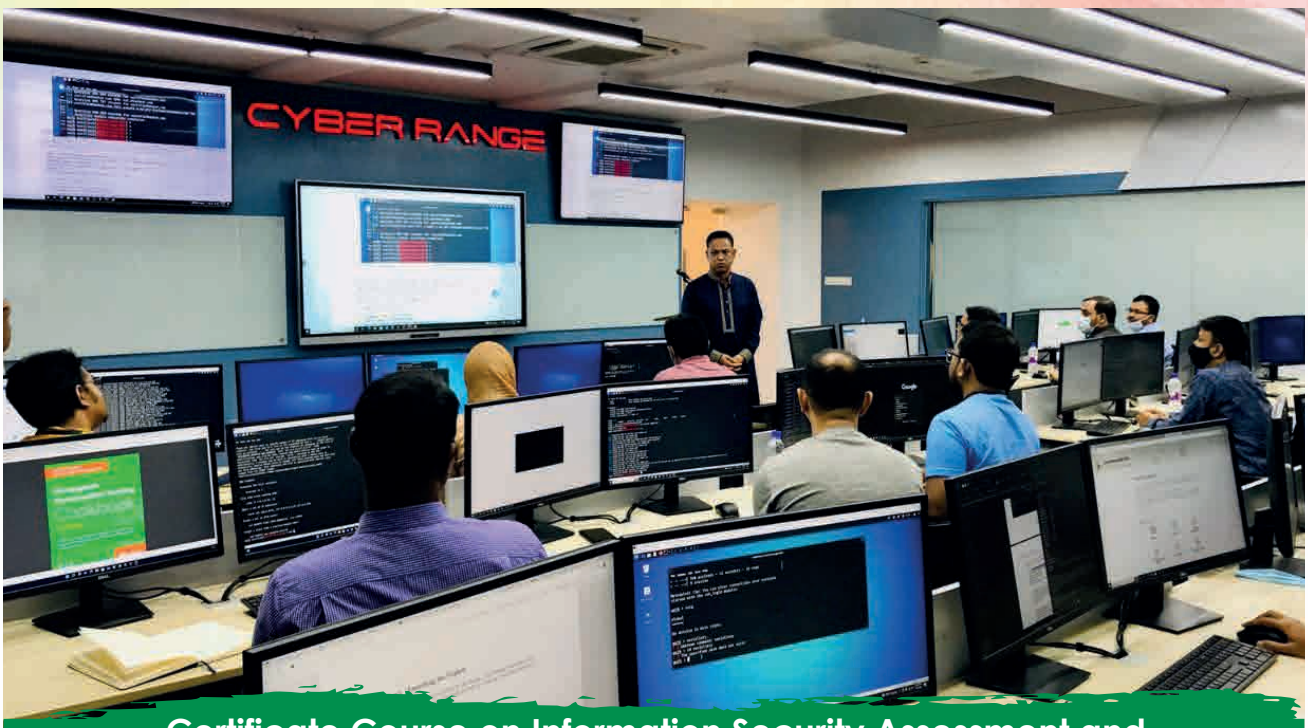
75th Academic Council of MIST

4th International Conference on Energy and Power (ICEP)

2nd International Conference on Mechanical Engineering and Applied Sciences

Seminar on Engineering Mathematics to Face IR 4.0 and Intra-MIST Math Olympiad- 2022

Discussion Session by CACR (Center for Advanced Computing Research), MIST

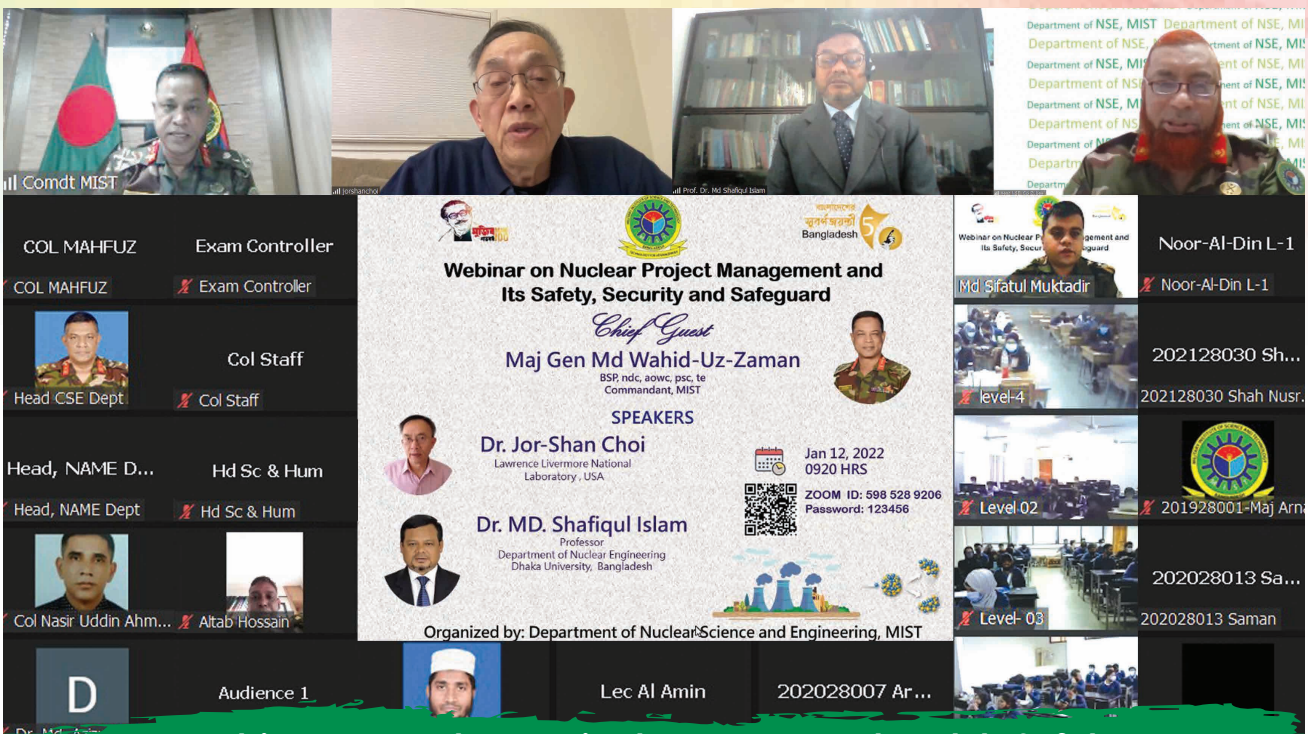


Certificate Course on Information Security Assessment and Penetration Testing

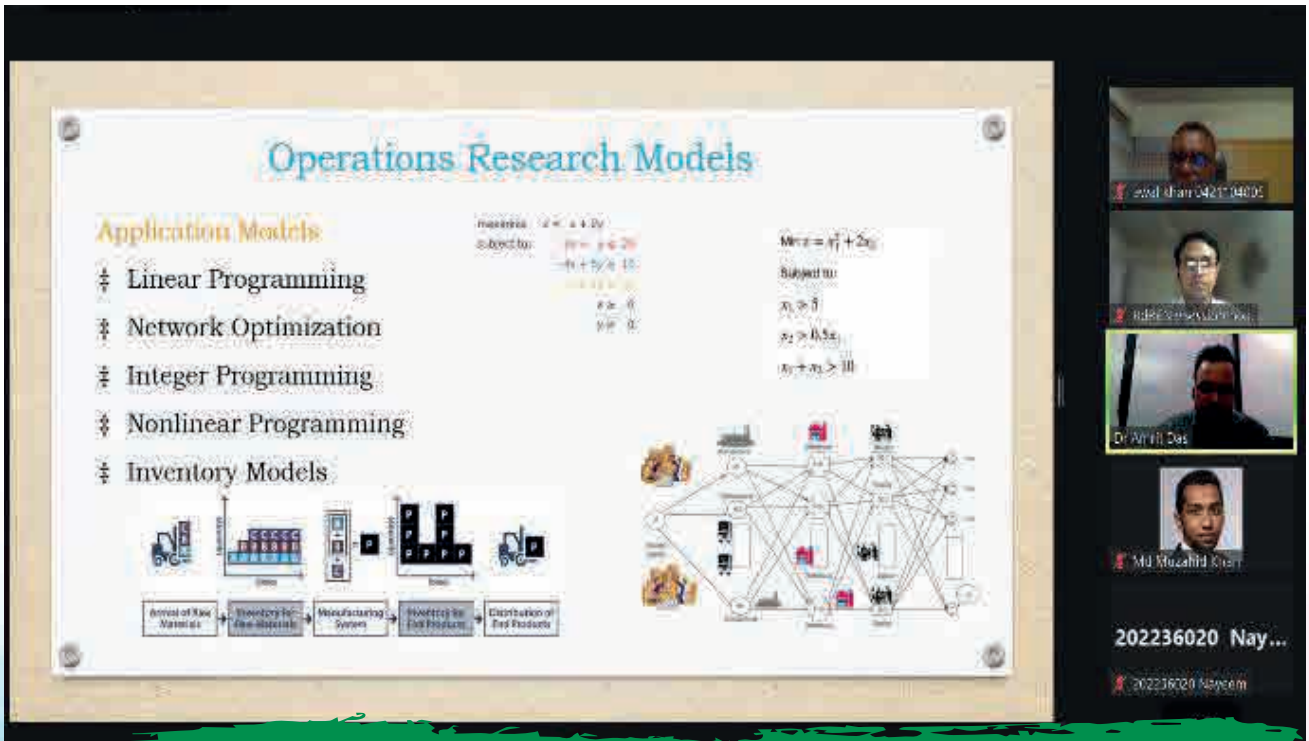
World Industrial Design Day 2022 (Industrial Talk 1.0 & IPE CADSTAR)

Specialized Course on Cyber Security Operation Center Analysis and Threat Hunting

Short Course on Practical Application of Artificial Intelligence (AI)



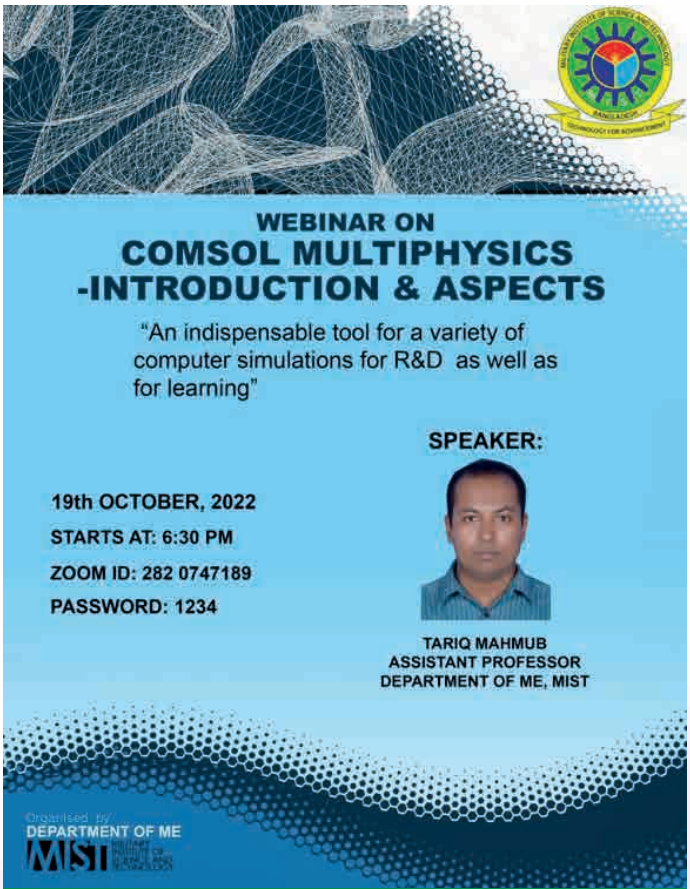
Webinar on Nuclear Project Management and Its Safety, Security and Safeguard



Webinar on Operations Research Insights Into Real-Life Problems with Uncertainty

Webinar on Scada and Substation Automation The Platforms for all Automation

Webinar on Reference Management for Undergraduate and Postgraduate Thesis-Project



Webinar on Comsol Multiphysics-Introduction & Aspects

Inauguration Ceremony of Newly Constructed Academic and Admin Towers

Inauguration Ceremony of ‘Hall of Fame’ & ‘Central Library

BAETE Evaluation Team Visit to MIST

4th Advisory Committee Meeting (Arch Dept)

Industrial Advisory Panel Meeting (AE Dept)

BCS and BJS 79 Orientation Training Visit to MIST

Flight Safety Officers' (FSO) visit to MIST

Visit of Armed Forces War Course (AFWC-2023) in Cyber Range, MIST

Mr Salih Arican, a Bio-medical professional from Germany

H.E Charles Whiteley, Ambassador of European Union

Defence Advisor of Indian Commission

Visit of Commandant BNA

Visit of Senior Secretary, MOD

Commandant, MIST Visited BMTF & BDP

World Environment Day 2022

National Mouring Day 2022

Genocide Day 2022

Painting Competition on the Occasion of the Independence and National Day 2022

Scholarship Award & MoU Signing with Fair Electronics

MoU Signing Ceremony Between GPH Ispat Ltd and MIST

MoU Signing Ceremony Between MIST and Armed Forces Medical College (AFMC)

MIST Job Fair 2022

Inauguration Ceremony of MIST Cyber Range Lab

Inauguration of Petroleum Products and Lubricating Oil Testing Lab

Commandant's

Farewell


MILITARY INSTITUTE OF SCIENCE AND TECHNOLOGY
BANGLADESH
TECHNOLOGY FOR ADVANCEMENT


SOUVENIR
HANDOVER
TO
RESPECTED
COMMANDANT AND
TECHNO

Campus to Corporate with British American Tobacco Bangladesh

CE Day (CE Fest)

Mecha Day 2022

ANURONON 2022 The Biggest National Event

Farewell Festival

Spondon 2022

Online Eassay Writing Competition 2022

RC Moto Racing Competition

Bangabandhu 3rd Inter-University Sports Championship 2022

Nobin Baron & Bangabandhu Inter Department Cultural Competition 2022

Sports Competition 2022


W BASKETBALL GROUND
SKETBALL MATCH
d-Uz-Zaman, BSP (BAR), ndc, aowc, psc, te
ndant, MIST
ber 2022
ATE OF STUDENTS' WELFARE
CIENCE AND TECHNOLOGY


INTER-DEPARTMENT
VOLLEYBALL COMPETITION-2022
EECE
INTER-DEPARTMENT
VOLLEYBALL COMPETITION-2022
ORGANIZED BY: DIRECTOR
MILITARY INSTITUTE OF

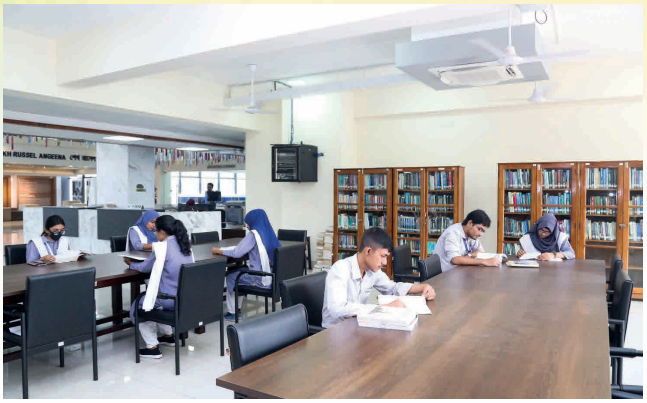

ASHIK
17
FAYSAL
4

MIST Daycare Centre

Female Common Room

Medical Center

CAMPUS **HOUR**



Central Library

STUDENTS' ACCOMMODATION (OSMANY HALL)

SYLLABI OF ALL DEPARTMENTS

FACULTY OF CIVIL ENGINEERING

DEPT OF CIVIL ENGINEERING

Total Credit Hours: 160.00

Level-1, Term-I

Course Code	Course Name	Type of Course	Contact Hour	Credits
CE 101	Analytical Mechanics	Theory	3.00	3.00
PHY 101	Waves and Oscillation, Optics and Modern Physics	Theory	3.00	3.00
CHEM 101	Fundamentals of Chemistry	Theory	3.00	3.00
MATH 101	Differential and Integral Calculus	Theory	3.00	3.00
GEBS 101	Bangladesh Studies	Theory	2.00	2.00
		Subtotal (Theory)	**14.00**	**14.00**
CSE 176	Computer Programming Sessional	Sessional	3.00	1.50
ME 132	Workshop Technology Sessional	Sessional	3.00	1.50
CHEM 102	Chemistry Sessional	Sessional	3.00	1.50
CE 100	Civil Engineering Drawing	Sessional	3.00	1.50
		Subtotal (Sessional)	**12.00**	**6.00**
		Total =	**26.00**	**20.00**

Level-1, Term-II

Course Code	Course Name	Type of Course	Contact Hour	Credits
PHY 107/ CHEM 105	Structure of Matter, Heat and Temperature, Kinetics and Kinematics/ Environmental Chemistry	Theory	3.00	3.00
MATH 103	Differential Equations and Matrix	Theory	3.00	3.00
GES 101	Fundamentals of Sociology	Theory	2.00	2.00
EECE 165	Basic Electrical Technology	Theory	3.00	3.00
CE 103	Surveying and Spatial Information Engineering	Theory	3.00	3.00
		Subtotal (Theory)	**14.00**	**14.00**
PHY 102	Physics Sessional	Sessional	3.00	1.50
LANG 102	Communicative English I	Sessional	3.00	1.50
CE 102	Computer Aided Drawing	Sessional	3.00	1.50
CE 104	Practical Surveying	Field work	3wks	1.50
		Subtotal (Sessional & Field Work)	**9.00**	**6.00**
		Total =	**23.00**	**20.00**

Level-2, Term-I

Course Code	Course Name	Type of Course	Contact hours	Credits
MATH 201	Vector Analysis, Laplace Transform and Coordinate Geometry	Theory	3.00	3.00
GEA 201/ GEE 201	Principles of Accounting/ Fundamentals of Economics	Theory	2.00	2.00
CE 203	Engineering Geology and Geomorphology	Theory	3.00	3.00
CE 211	Mechanics of Solids I	Theory	3.00	3.00
CE 261	Fluid Mechanics	Theory	3.00	3.00
		Subtotal (Theory)	**14.00**	**14.00**
CE 200	Details of Construction	Sessional	3.00	1.50
CE 210	GIS and Remote Sensing	Sessional	3.00	1.50
CE 262	Fluid Mechanics Sessional	Sessional	3.00	1.50
LANG 202	Communicative English II	Sessional	3.00	1.50
		Subtotal (Sessional)	**12.00**	**6.00**
		Total =	**26.00**	**20.00**

Level-2, Term-II

Course Code	Course Name	Type of Course	Contact hours	Credits
MATH 203	Applied Mathematics for Engineers	Theory	3.00	3.00
GELM 275	Leadership and Management	Theory	2.00	2.00
CE 201	Engineering Materials	Theory	3.00	3.00
CE 205	Numerical Methods for Engineering	Theory	3.00	3.00
CE 213	Mechanics of Solids II	Theory	3.00	3.00
		Subtotal (Theory)	**14.00**	**14.00**
CSE 274	Engineering Computations Sessional	Sessional	3.00	1.50
ARCH 214	Architectural, Engineering and Planning Appreciation	Sessional	3.00	1.50
CE 208	Quantity Surveying	Sessional	3.00	1.50
CE 212	Structural Mechanics and Materials Sessional	Sessional	3.00	1.50
		Subtotal (Sessional)	**12.00**	**6.00**
		Total =	**26.00**	**20.00**

Level-3, Term-I

Course Code	Course Name	Type of Course	Contact hours	Credits
CE 311	Structural Analysis and Design I	Theory	4.00	4.00
CE 315	Design of Concrete Structures I	Theory	3.00	3.00
CE 331	Environmental Engineering I	Theory	3.00	3.00
CE 341	Principles of Soil Mechanics	Theory	4.00	4.00
		Subtotal (Theory)	**14.00**	**14.00**
GERM 352	Fundamentals of Research Methodology	Sessional	4.00	2.00
CE 332	Environmental Engineering Sessional	Sessional	3.00	1.50
CE 342	Geotechnical Engineering Sessional	Sessional	3.00	1.50
		Subtotal (Sessional)	**10.00**	**5.00**
		Total =	**24.00**	**19.00**

Level-4, Term-I

Course Code	Course Name	Type of Course	Contact hours	Credits
CE 411	Structural Analysis and Design II	Theory	3.00	3.00
CE 413	Design of Steel Structures	Theory	3.00	3.00
CE 451	Highway Materials, Pavement Design and Railways	Theory	4.00	4.00
CE 463	Hydrology and Irrigation Engineering	Theory	4.00	4.00
		Subtotal (Theory)	**14.00**	**14.00**
CE 410	Concrete Structures Design Sessional II	Sessional	3.00	1.50
CE 414	Steel Structures Design Sessional	Sessional	3.00	1.50
CE 452	Highway Materials, Mix Design and Traffic Engineering Sessional	Sessional	3.00	1.50
CE 400	Final Year Research Project (FYP)	Thesis	4.00	2.00
		Subtotal (Thesis, Sessional & Project)	**13.00**	**6.50**
		Total =	**27.00**	**20.50**

List of Elective Courses for Structural Engineering (Any Two Theory & One Sessional)

Sl	Course Code	Course Name	Type of Course	Contact hours	Credits
1.	CE 415	Pre-stressed Concrete	Theory	2.00	2.00
2.	CE 417	Design of Concrete Structures III	Theory	2.00	2.00
3.	CE 419	Introduction to Finite Element Method	Theory	2.00	2.00
4.	CE 421	Dynamics of Structures	Theory	2.00	2.00
5.	CE 423	Structural Safety	Theory	2.00	2.00
6.	CE 425	Seismic Design of Structures	Theory	2.00	2.00
7.	CE 427	Advanced Solid Mechanic	Theory	2.00	2.00
8.	CE 429	Design of Steel-Concrete Composite Structure	Theory	2.00	2.00
9.	CE 412	Bridge Design Sessional	Sessional	3.00	1.50

Level-3, Term-II

Course Code	Course Name	Type of Course	Contact hours	Credits
CE 317	Design of Concrete Structures II	Theory	3.00	3.00
CE 333	Environmental Engineering II	Theory	4.00	4.00
CE 343	Foundation Engineering	Theory	3.00	3.00
CE 351	Fundamentals of Transportation Engineering	Theory	3.00	3.00
CE 361	Open Channel Hydraulics	Theory	3.00	3.00
		Subtotal (Theory)	**16.00**	**16.00**
CE 300	Civil Engineering Students' Internship Programme (CESIP)	Internship	3 wks	1.50
CE 316	Concrete Structures Design Sessional I	Sessional	3.00	1.50
CE 362	Open Channel Hydraulics Sessional	Sessional	3.00	1.50
		Subtotal (Sessional)	**6.00**	**4.50**
		Total =	**22.00**	**20.50**

Level-4, Term-II

Course Code	Course Name	Type of Course	Contact hours	Credits
GEPM 401	Project Planning and Construction Management	Theory	3.00	3.00
GEEP 403	Engineering Ethics and Professional Practices	Theory	2.00	2.00
CE 4XX	Two Theory Courses in Major Division from Elective Courses	Theory	4.00	4.00
CE 4XX	Two Theory Courses in Minor Division from Elective Courses	Theory	4.00	4.00
		Subtotal (Theory)	**13.00**	**13.00**
CE 400	Final Year Research Project (FYP)from Elective Courses	Thesis	8.00	4.00
CE 4XX	One Lab Course in Major Division from Elective Courses	Sessional	3.00	1.50
CE 4XX	One Lab Course in Major Division from Elective Courses	Sessional	3.00	1.50
		Subtotal (Thesis, Sessional)	**14.00**	**7.00**
		Total =	**27.00**	**20.00**

List of Elective Courses for Environment Engineering (Any Two Theory & One Sessional)

Sl	Course Code	Course Name	Type of Course	Contact hours	Credits
1.	CE 431	Natural Resources and Renewable Energy	Theory	2.00	2.00
2.	CE 433	Solid and Hazardous Waste Management	Theory	2.00	2.00
3.	CE 435	Environmental Pollution and Management	Theory	2.00	2.00
4.	CE 437	Climate Change and Disaster Management	Theory	2.00	2.00
5.	CE 439	Environmental Impact Assessment and Sustainability	Theory	2.00	2.00
6.	CE 432	Design of Water Supply, Sanitation and Sewerage Systems	Sessional	3.00	1.50

List of Elective Courses for Geotechnical Engineering (Any Two Theory & One Sessional)

Sl	Course Code	Course Name	Type of Course	Contact hours	Credits
1.	CE 443	Earth Retaining Structures	Theory	2.00	2.00
2.	CE 445	Elementary Soil Dynamics	Theory	2.00	2.00
3.	CE 447	Soil-Water Interaction	Theory	2.00	2.00
4.	CE 449	Numerical Methods in Geotechnics	Theory	2.00	2.00
5.	CE 442	Foundation Design Sessional	Sessional	3.00	1.50

List of Elective Courses for Water Engineering (Any Two Theory & One Sessional)

Sl	Course Code	Course Name	Type of Course	Contact hours	Credits
1.	CE 465	Groundwater Engineering	Theory	2.00	2.00
2.	CE 467	Flood Mitigation and Management	Theory	2.00	2.00
3.	CE 469	River Engineering	Theory	2.00	2.00
4.	CE 471	Hydraulic Structures	Theory	2.00	2.00
5.	CE 473	Coastal Engineering	Theory	2.00	2.00
6.	CE 472	Hydraulic Structures Design Sessional	Sessional	3.00	1.50

List of Elective Courses for Transportation Engineering (Any Two Theory & One Sessional)

Sl	Course Code	Course Name	Type of Course	Contact hours	Credits
1.	CE 453	Traffic Engineering Design and Management	Theory	2.00	2.00
2.	CE 455	Pavement Management, Drainage and Airport Engineering	Theory	2.00	2.00
3.	CE 457	Urban Transportation Planning & Management	Theory	2.00	2.00
4.	CE 459	Intelligent Transportation System	Theory	2.00	2.00
5.	CE 461	Railway Engineering	Theory	2.00	2.00
6.	CE 454	Traffic Studies and Pavement Design Sessional	Sessional	3.00	1.50

DEPT OF ARCHITECTURE

Total Offered Credit Hours: 221.00
Total Required Credit Hours: 189.00

	L-1, T-1		Cr.	Hr.
Core Sessional	Design Studios	ARCH 1102: Design Studio I	6.00	9.00
	Design Communication Studios	ARCH 1104: Architectural graphics I	3.00	6.00
	Total Cr. & Cr. Hr. Sessional		**9.00**	**15.00**
Core Theory	General Education	HUM 1111: English	2.00	2.00
		MATH 1111: Mathematics	2.00	2.00
	Design Related Theories	ARCH 1103: Design Theory I	2.00	2.00
		ARCH 1105: Building and Finish Material	2.00	2.00
	Technical System		2.00	2.00
	History, Human Behavior & Environment	ARCH 1101: Art and Architecture I	2.00	2.00
	Practice			
	Total Cr.& Cr. Hr. Core Theory		**10.00**	**10.00**
Elective Theory	General Education			
	Technical System			
	Design Related Theories			
	History, Human Behavior & Environment			
	Total Cr. & Cr. Hr. Elec. Theory		**0**	**0**
	Total Credit and Contact Hours of L-1, T-1		**19.00**	**25 .00**

	L-1, T-2		Cr.	Hr.
Core Sessional	Design Studios	ARCH 1202: Design Studio II pre req. ARCH 1102: Design Studio I pre req. ARCH 1104: Architectural Graphics I	6.00	9.00
	Design Communication Studios	ARCH 1204: Architectural graphics II pre req. ARCH 1104: Architectural Graphics I	3.00	6.00
		ARCH 1230: Computer Application I	1.50	3.00
	Total Cr. Hr. Sessional		**10.5**	**18**
Core Theory	General Education	HUM 1213: Sociology	2.00	2.00
		PHY 1211: Physics	2.00	2.00
	Design Related Theories	ARCH 1205: Climate and Design	2.00	2.00
		ARCH 1203: Design Theory II	2.00	2.00
	Technical System			
	History, Human Behavior & Environment	ARCH 1201: Art and Architecture II	2.00	2.00
	Practice			
	Total Cr.& Cr. Hr. Core Theory		**10.00**	**10.00**
Elective Theory	General Education			
	Technical System			
	Design Related Theories			
	History, Human Behavior & Environment			
	Total Cr.& Cr. Hr. Elec. Theory		**0**	**0**
	Total Credit and Contact Hours of L-1, T-2		**20.50**	**28.00**

	L-2, T-1		Cr.	Hr.
Core Sessional	Design Studios	ARCH 2102: Design Studio III pre req. ARCH 1202: Design Studio II pre req. ARCH 1204: Architectural graphics II	8.00	12.00
	Design Communication Studios	ARCH 2104: Graphic Art & Sculpture	1.50	3.00
		ARCH 2130: Computer Application II pre req. ARCH 1230: Computer Application I	1.50	3.00
	Total Cr.& Cr. Hr. Sessional		**11.00**	**18.00**
Core Theory	General Education			
	Design Related Theories	ARCH 2103: Visual & Sonic Environment	2.00	2.00
		ARCH 2105: Basic Planning	2.00	2.00
	Technical System	CE 2121: Structure I	2.00	2.00
	History, Human Behavior & Environment	ARCH 2101: Art and Architecture III	2.00	2.00
	Practice			
	Total Cr. & Cr. Hr. Core Theory		**8.00**	**8.00**
Elective Theory	General Education	HUM 2111: Logic and Philosophy HUM 2113: Psychology and Behavior	2.00	2.00
	Technical System			
	Design Related Theories			
	History, Human Behavior & Environment			
	Total Cr.& Cr. Hr. Elec. Theory		**2.00**	**2.00**
	Total Credit and Contact Hours of L-2, T-1		**21.00**	**28.00**

	L-2, T-2		Cr.	Hr.
Core Sessional	Design Studios	ARCH 2202: Design Studio IV pre req. ARCH 2102: Design Studio III	8.00	12.00
	Design Communication Studios	ARCH 2204: Photography and Film	1.50	3.00
		ARCH 2230: Computer Application II	1.50	3.00
	Total Cr. & Cr. Hr. Sessional		**11.00**	**18.00**
Core Theory	General Education			
	Design Related Theories	ARCH 2203: Landscape Design	2.00	2.00
	Technical System	CE 2221: Structure II	2.00	2.00
		EWC 2231: Building Services I: Plumbing	2.00	2.00
	History, Human Behavior & Environment	ARCH 2201: Art and Architecture IV	2.00	2.00
	Practice			
	Total Cr. & Cr. Hr. Core Theory		**8.00**	**8.00**
Elective Theory	General Education			
	Technical System			
	Design Related Theories	ARCH 2205: Design in the Tropics ARCH 2207: Green & Sustainable Architecture ARCH 2209: Vernacular Architecture	2.00	2.00
	History, Human Behavior & Environment			
	Total Cr. & Cr. Hr. Elec. Theory		**2.00**	**2.00**
	Total Credit and Contact Hours of L-2, T-2		**21.00**	**28.00**

	L-3, T-1		Cr.	Hr.
Core Sessional	Design Studios	ARCH 3102: Design Studio V pre req. ARCH 2202: Design Studio IV	8.00	12.00
	Design Communication Studios	ARCH 3104: Landscape Design Studio	1.50	3.00
	Total Cr. & Cr. Hr. Sessional		**9.50**	**15.00**
Core Theory	General Education			
	Design Related Theories			
	Technical System	CE 3121: Structure III	2.00	2.00
		ME 3141: Building Services II: Mechanical Equipment	2.00	2.00
		ARCH 3161: Construction Method & Details	2.00	2.00
	History, Human Behavior & Environment	ARCH 3101: Architecture of Bengal	2.00	2.00
	Practice			
	Total Cr. & Cr. Hr. Core Theory		**8.00**	**8.00**
Elective Theory	General Education			
	Technical System			
	Design Related Theories	ARCH 3103: Bio-Design and Architecture ARCH 3105: Advanced Construction & Building Technology ARCH 3107: Modular Architecture, Production line & Customization	2.00	2.00
	History, Human Behavior & Environment			
	Total Cr. & Cr. Hr. Elec. Theory		**2.00**	**2.00**
	Total Credit and Contact Hours of L-3, T-1		**19.50**	**25.00**

	L-3, T-2		Cr.	Hr.
Core Sessional	Design Studios	ARCH 3202: Design Studio VI pre req. ARCH 3102: Design Studio V	8.00	12.00
	Design Communication Studios	ARCH 3204: Working Drawing I: Construction Drawing	1.50	3.00
	Total Cr. & Cr. Hr. Sessional		**9.50**	**15.00**
Core Theory	General Education			
	Design Related Theories	ARCH 3203: Urban Design	2.00	2.00
	Technical System	CE 3221: Structure IV	2.00	2.00
		EECE 3251: Building Services III: Electrical Equipment	2.00	2.00
	History, Human Behavior & Environment	ARCH 3201: Art and Architecture V	2.00	2.00
	Practice			
	Total Cr. & Cr. Hr. Core Theory		**8.00**	**8.00**
Elective Theory	General Education			
	Technical System			
	Design Related Theories	ARCH 3205: Advanced Planning ARCH 3207: Rural Planning ARCH 3209: Transportation and Mobility Design	2.00	2.00
	History, Human Behavior & Environment			
	Total Cr. & Cr. Hr. Elec. Theory		**2.00**	**2.00**
	Total Credit and Contact Hours of L-3, T-2		**19.50**	**25.00**

	L-4, T-1		Cr.	Hr.
Core Sessional	Design Studios	ARCH 4102: Design Studio VII	8.00	12.00
		pre req. ARCH 3202: Design Studio VI		
	Design Communication Studios	ARCH 4104: Working Drawing II: Production Drawing	1.50	3.00
		ARCH 3204: pre req. Working Drawing I		
	Total Cr. & Cr. Hr. Sessional		**9.50**	**15.00**
Core Theory	General Education			
	Design Related Theories	ARCH 4103: Interior Design	2.00	2.00
		ARCH 4105: Housing	2.00	2.00
	Technical System	ARCH 4161: Cost Estimation & Specification	2.00	2.00
	History, Human Behavior & Environment			
	Practice			
	Total Cr. & Cr. Hr. Core Theory		**6.00**	**6.00**
Elective Theory	General Education			
	Technical System			
	Design Related Theories			
	History, Human Behavior & Environment	ARCH 4101: Music and Film Appreciation	2.00	2.00
		ARCH 4107: Post Modern Art & Architecture		
		ARCH 4109: Contemporary Architectural Theories		
	Total Cr.& Cr. Hr. Elec. Theory		**2.00**	**2.00**
	Total Credit and Contact Hours of L-4, T-1		**17.50**	**23 .00**

	L-4, T-2		Cr.	Hr.
Core Sessional	Design Studios	ARCH 4202: Design Studio VIII	8.00	12.00
		pre req. ARCH 4102: Design Studio VII		
	Design Communication Studios	ARCH 4204: Interior Design Studio	1.50	3.00
		ARCH 4206: Professional Training	0.00	0.00
	Total Cr. & Cr. Hr. Sessional		**9.5**	**15**
Core Theory	General Education	Hum 4211: Economics	2.00	2.00
		HUM 4213: Project Management	2.00	2.00
	Design Related Theories			
	Technical System	ARCH 4261: Survey Techniques	2.00	2.00
	History, Human Behavior & Environment			
	Practice			
	Total Cr. & Cr. Hr. Core Theory		**6.00**	**6.00**
Elective Theory	General Education			
	Technical System	ARCH 4203: Ambient Technology and Building Environment	2.00	2.00
	Design Related Theories	ARCH 4205: Architecture in Extreme Environments		
		ARCH 4207: Spaces & Forms in Architecture		
	History, Human Behavior & Environment			
	Total Cr. & Cr. Hr. Elec. Theory		**2.00**	**2.00**
	Total Credit and Contact Hours of L-4, T-2		**17.50**	**23.00**

	L-5, T-1		Cr.	Hr.
Core Sessional	Design Studios	ARCH 5102: Design Studio IX pre req. ARCH 4202: Design Studio VII	10.00	15.00
	Design Communication Studios	ARCH 5104: Seminar	1.50	3.00
	Total Cr. & Cr. Hr. Sessional		**11.50**	**18.00**
Core Theory	General Education	ARCH5175: Research Methodology	2.00	2.00
		Hum 5111: Accounting	2.00	2.00
	Design Related Theories			
	Technical System			
	History, Human Behavior & Environment			
	Practice			
	Total Cr. & Cr. Hr. Core Theory		**4.00**	**4.00**
Elective Theory	General Education			
	Technical System			
	Design Related Theories	ARCH 5103: Health Facilities Planning & Design ARCH 5105: Industrial & Commercial Building Design ARCH 5107: Educational, Religious & Recreational Facilities Design	2.00	2.00
	History, Human Behavior & Environment			
	Total Cr. & Cr. Hr. Elec. Theory		**2.00**	**2.00**
	Total Credit and Contact Hours of L-5, T-1		**17.50**	**24.00**

	L-5, T-2		Cr.	Hr.
Core Sessional	Design Studios	ARCH 5202: Design Studio X / ARCH 5208: Design Studio X (Thesis) pre req. ARCH 5102: Design Studio IX	12.00	18.00
	Design Communication Studios			
	Total Cr. Hr. Sessional		**12.00**	**18.00**
Core Theory	General Education			
	Design Related Theories			
	Technical System			
	History, Human Behavior & Environment			
	Practice	ARCH 5273: Professional Practice	2.00	2.00
	Total Cr. Hr. Core Theory		**2.00**	**2**.00
Elective Theory	General Education			
	Technical System	ARCH 5203: Building Safety Design ARCH 5205: Disaster & Post Disaster Responsive Architecture	2.00	2.00
	Design Related Theories	ARCH 5207: Architecture for Children and Differently Able People ARCH 5209: Architectural Conservation		
	History, Human Behavior & Environment			
	Total Cr. Hr. Elec. Theory		**2.00**	**2.00**
	Total Credit and Contact Hours of L-5, T-2		**16.00**	**22.00**

DEPT OF ENVIRONMENTAL, WATER RESOURCES AND COASTAL ENGINEERING

Total Credit Hours: 160.00

Level– 1, Term – I

Course No	Course Name	Type of Course	Credit Hour	Contact Hour
CHEM 101	Fundamentals of Chemistry	Theory	3.00	3.00
MATH 101	Differential and Integral Calculus		3.00	3.00
EECE 167	Basic Electrical Technology		3.00	3.00
EWCE 101	Analytical Mechanics		3.00	3.00
EWCE 131	Ecology and Environmental Pollution		3.00	3.00
	Subtotal (Theory)		**15.00**	**15.00**
CHEM 102	Chemistry Sessional	Sessional	1.50	3.00
ME 142	Workshop Sessional		1.50	3.00
EWCE 100	Engineering Drawing and Computer Aided Design Sessional		1.50	3.00
	Subtotal (Sessional)		**4.50**	**9.00**
	Total = Credits: 19.50, Contact hours: 24.00			

Level – 1, Term – II

Course No	Course Name	Type of Course	Credit Hour	Contact Hour
PHY 101	Waves and Oscillations, Optics and Modern Physics	Theory	3.00	3.00
MATH 103	Differential Equations and Matrix		3.00	3.00
GEBS 101	Bangladesh Studies		2.00	2.00
EWCE 103	Surveying		3.00	3.00
EWCE 105	Environmental Chemistry		3.00	3.00
	Subtotal (Theory)		**14.00**	**14.00**
PHY 102	Physics Sessional	Sessional	1.50	3.00
LANG 102	Communicative English-1		1.50	3.00
EWCE 104	Practical Surveying		1.50	3.00
	Subtotal (Sessional)		**4.50**	**9.00**
	Total = Credits: 18.50, Contact hours: 23.00			

Level – 2, Term – I

Course No	Course Name	Type of Course	Credit Hour	Contact Hour
GELM 275	Leadership and Management	Theory	2.00	2.00
MATH 201	Vector Analysis, Laplace Transform & Co-ordinate Geometry		3.00	3.00
EWCE 201	Construction Materials		3.00	3.00
GES 201	Fundamentals of Sociology		2.00	2.00
EWCE 205	Numerical Methods		2.00	2.00
EWCE 211	Mechanics of Solids		4.00	4.00
	Subtotal (Theory)		**16.00**	**16.00**
CSE 278	Computer Programming and Computations Sessional	Sessional	1.50	3.00
LANG 202	Communicative English-II		1.50	3.00
EWCE 212	Structural Mechanics and Materials Sessional		1.50	3.00
	Subtotal (Sessional)		**4.50**	**9.00**
	Total = Credits: 20.50, Contact hours: 25.00			

Level – 2, Term – II

Course No	Course Name	Type of Course	Credit Hour	Contact Hour
GEA 201/ GEE 201	Principles of Accounting/ Fundamentals of Economics	Theory	2.00	2.00
MATH 203	Applied Math for Engineering		3.00	3.00
EWCE 203	Geology and Geomorphology		3.00	3.00
EWCE 261	Fluid Mechanics		3.00	3.00
EWCE 263	Engineering Hydrology		3.00	3.00
	Subtotal (Theory)		**14.00**	**14.00**
EWCE 200	Details of Construction & Quantity Surveying	Sessional	1.50	3.00
EWCE 206	GIS in Environmental and Water Resources Engineering		1.50	3.00
EWCE 262	Fluid Mechanics Sessional		1.50	3.00
	Subtotal (Sessional)		**4.50**	**9.00**
	Total = Credits: 18.50, Contact hours: 23 .00			

Level- 3, Term - I

Course No	Course Name	Type of Course	Credit Hour	Contact Hour
EWCE 311	Structure Analysis and Design I	Theory	3.00	3.00
CE 385	Design of Concrete Structures I		3.00	3.00
EWCE 331	Water Supply Engineering		3.00	3.00
EWCE 341	Principles of Soil Mechanics		3.00	3.00
EWCE 351	Transportation Engineering		4.00	4.00
	Subtotal (Theory)		**16.00**	**16.00**
EWCE 332	Environment Engineering Sessional	Sessional	1.50	3.00
EWCE 342	Soil Mechanics Sessional		1.50	3.00
EWCE 352	Transportation Engineering Sessional		1.50	3.00
	Subtotal (Sessional)		**4.50**	**9.00**
	Total = Credits: 20.50, Contact hours: 25.00			

Level - 4, Term - I

Course No	Course Name	Type of Course	Credit Hour	Contact Hour
GEEM 445	Engineering Ethics and Professional Practices	Theory	2.00	2.00
EWCE 411	Structural Analysis and Design II		3.00	3.00
EWCE 431	Environment and Social Impact Assessment		3.00	3.00
EWCE 461	River Engineering and Flood Management		3.00	3.00
EWCE 471	Coastal Engineering		3.00	3.00
	Subtotal (Theory)		**14.00**	**14.00**
EWCE 432	Environmental Engineering Design Sessional	Sessional	1.50	3.00
EWCE 462	Computer Applications in Water and Environmental Engineering		1.50	3.00
EWCE 464	Advanced GIS and RS in Environmental and Water Resources Engineering		1.50	3.00
EWCE 400	Final Year Research Project (FYP)	Project	2.00	4.00
	Subtotal (Sessional & Project)		**6.50**	**13.00**
	Total = Credits: 20.50, Contact hours: 27.00			

Level - 4, Term - II (Major: Environmental Engg)

Course No	Course Name	Type of Course	Credit Hour	Contact Hour
EWCE 467	Integrated Water Resource Management (IWRM)	Compulsory Theory	3.00	3.00
EWCE 433	Solid and Hazardous Waste Management	Major Theory	3.00	3.00
EWCE 435	Air Pollution and Control		2.00	2.00
EWCE 437	Industrial Waste and Waste Water Treatment		3.00	3.00
EWCE 469/ 473/ 475/ 477/ 479	Mathematical Modelling in Water Resources Engineering/ Waterway Engineering/ Urban Hydrology/ Climatology/Groundwater Engineering	Minor Theory	2.00	2.00
	Subtotal (Theory)		**13.00**	**13.00**
EWCE 400	Final Year Research Project (FYP)	Thesis	4.00	8.00
EWCE 434	Environmental Modelling Sessional	Sessional	1.50	3.00
EWCE 436/ 438	Treatment plant design sessional/ Building Service Sessional		1.50	3.00
	Subtotal (Sessional & Project)		**7.00**	**14.00**
	Total = Credits: 20.00, Contact hours: 27.00			

Level - 3, Term - II

Course No	Course Name	Type of Course	Credit Hour	Contact Hour
GEPM 375	Project Planning and Construction Management	Theory	3.00	3.00
CE 387	Design of Concrete Structure II		3.00	3.00
EWCE 333	Waste Water Engineering and Sanitation		4.00	4.00
EWCE 343	Geotechnical and Foundation Engineering		3.00	3.00
EWCE 361	Open Channel Hydraulics		3.00	3.00
	Subtotal (Theory)		**16.00**	**16.00**
EWCE 300	Students' Internship Program (SIP)	Internship	1.00	2+.00
CE 386	Concrete Structure Design Sessional I	Sessional	1.50	3.00
EWCE 362	Open Channel Hydraulics Sessional		1.50	3.00
GERM 352	Fundamentals of Research Methodology		2.00	4.00
	Subtotal (Internship & Sessional)		**6.00**	**12.00**
	Total = Credits: 22.00, Contact hours: 28.00			

Level - 4, Term - II (Major: Water Resources Engg)

Course No	Course Name	Type of Course	Credit Hour	Contact Hour
EWCE 467	Integrated Water Resource Management (IWRM)	Compulsory Theory	3.00	3.00
EWCE 463	Irrigation and Drainage Engineering	Major Theory	3.00	3.00
EWCE 465	Design of Hydraulic Structures		3.00	3.00
EWCE 477/ 479	Climatology / Groundwater Engineering		2.00	2.00
EWCE 435/ 439/481/ 483/485	Air Pollution and Control / Natural Resources & Renewable Energy/ Climate Change & Disaster Management/ Building Services/ Environmental Management System	Minor Theory	2.00	2.00
	Subtotal (Theory)		**13.00**	**13.00**
EWCE 400	Final Year Research Project (FYP)	Thesis	4.00	8.00
EWCE 466	Hydraulic Structure Design Sessional	Sessional	1.50	3.00
EWCE 468	Water Modelling Sessional		1.50	3.00
	Subtotal (Sessional & Project)		**7.00**	**14.00**
	Total = Credits: 20.00, Contact hours: 27.00			

DEPT OF PETROLEUM AND MINING ENGINEERING

Total Credit Hours: 160.00

LEVEL – 1, TERM – I

Course Code	Course Name	Contact hour/week	Credits
THEORY			
PHY 101	Physics	3.00	3.00
MATH 101	Differential and Integral Calculus	3.00	3.00
PME 111	Geology for Petroleum and Mining Engineers	3.00	3.00
PME 113	Introduction to Petroleum and Mining Engineering	3.00	3.00
SESSIONAL / LABORATORY			
PHY 102	Physics Sessional	3.00	1.50
ME 176	Workshop Practice	3.00	1.50
ME 180	Engineering Drawing and CAD	3.00	1.50
PME 112	Geology Laboratory	3.00	1.50
	Total:	**24.00**	**18.00**

Contact Hours= 12.00 (Theo) + 12.0 (Lab) = 24.00 hours/week
Total Credits = 18.00
No of Theory Courses = 4
No of Laboratory Courses = 4

LEVEL – 1, TERM – II

Course Code	Course Name	Contact hour/week	Credits
THEORY			
PME 121	Petroleum Engineering Thermodynamics	2.00	2.00
GES 101	Fundamentals of Sociology	2.00	2.00
GEBS 101	Bangladesh Studies	2.00	2.00
MATH 103	Differential Equations and Matrix	3.00	3.00
CHEM 101	Fundamentals of Chemistry	3.00	3.00
PME 123	Reservoir Rock and Fluid Properties	3.00	3.00
SESSIONAL/LABORATORY			
CHEM 102	Chemistry Sessional	3.00	1.50
PME 124	Reservoir Rock and Fluid Properties Laboratory	3.00	1.50
LANG 102	Communicative English-I	3.00	1.50
	Total:	**24.00**	**19.50**

Contact Hours= 15.00 (Theo) + 9.00 (Lab) = 24 hours/week
Total Credits = 19.50
No of Theory Courses = 6
No of Laboratory Courses = 3

LEVEL – 2, TERM – I

Course Code	Course Name	Contact hour/week	Credits
THEORY			
EECE 261	Fundamentals of Electrical and Electronic Engineering	3.00	3.00
MATH 201	Vector Analysis, Laplace Transformation & Co-ordinate Geometry	3.00	3.00
GELM 275	Leadership and Management	2.00	2.00
CE 281	Engineering Mechanics	3.00	3.00
CE 283	Strength of Materials	3.00	3.00
PME 211	Rock Mechanics for Petroleum and Mining Engineers	3.00	3.00
SESSIONAL / LABORATORY			
LANG 202	Communicative English-II	3.00	1.50
EECE 262	Electrical and Electronic Engineering Laboratory	3.00	1.50
PME 212	Rock Mechanics Laboratory	3.00	1.50
PME 222	Drilling Fluid Laboratory	3.00	1.50
	Total:	**29.00**	**23.00**

Contact Hours: 17.00 (Theo) + 11.00 (Lab) = 29.00 hours/week
Total Credits = 23.00
No of Theory Courses = 6
No of Laboratory Courses = 4

LEVEL – 2, TERM – II

Course Code	Course Name	Contact hour/week	Credits
THEORY			
CSE 271	Introduction to Computer Programming	2.00	2.00
PME 213	Exploration Geophysics	2.00	2.00
ME 271	Fluid Mechanics	3.00	3.00
PME 231	Mining System	3.00	3.00
PME 233	Shaft sinking and Tunneling	3.00	3.00
GEEA 201	Fundamentals of Economics and Accounting	3.00	3.00
SESSIONAL / LABORATORY			
CSE 272	Computer Programming Sessional	1.50	0.75
PME 214	Exploration Geophysics Laboratory	3.00	1.50
PME 232	Mining System Laboratory	3.00	1.50
ME 272	Fluid Mechanics Laboratory	1.50	0.75
	Total:	**25**	**20.5**

Contact Hours: 16.00 (Theo) + 9.00 (Lab) = 25 hours/week
Total Credits = 20.50
No of Theory Courses = 6
No of Laboratory Courses = 4

LEVEL – 3, TERM – I

Course Code	Course Name	Contact hour/week	Credits
THEORY			
PME 331	Mine Instrumentation and Machineries	3.00	3.00
PME 333	Ground Water Managements in Mining	2.00	2.00
PME 321	Well Logging and Formation Evaluation	3.00	3.00
PME 323	Drilling Engineering	3.00	3.00
PME 311	Heat and Mass Transfer	2.00	2.00
SESSIONAL / LABORATORY			
PME 332	Mine Instrumentation and Machineries Laboratory	3.00	1.50
PME 322	Well Logging and Formation Evaluation Laboratory	3.00	1.50
PME 324	Rig Floor Simulation Laboratory	3.00	1.50
GERM 352	Fundamentals of Research Methodology	4.00	2.00
	Total:	**26.00**	**19.50**

Contact Hours: 13.00 (Theo) + 13.00 (Lab) = 26.0 hours/week
Total Credits = 19.50
No of Theory Courses = 5
No of Laboratory Courses = 4

LEVEL – 3 (TERM – II)

Course Code	Course Name	Contact hour/week	Credits
THEORY			
PME 325	Petroleum Production Engineering	3.00	3.00
PME 327	Natural Gas Processing and LNG Technology	3.00	3.00
PME 329	Reservoir Engineering	3.00	3.00
PME 335	Mine survey	3.00	3.00
GESL 317	Environment, Sustainability and Law	2.00	2.00
PME 337	Rock Blasting and Explosive Technology	3.00	3.00
SESSIONAL / LABORATORY			
PME 328	Natural Gas Processing and LPG Laboratory	3.00	1.50
PME 336	Mine Survey Laboratory	3.00	1.50
PME 310	Industrial Training	4 weeks	1.00
	Total:	**23+4 weeks**	**21.00**

Contact Hours: 17.00+ (Theo) + 6.00 (Lab) = 23 hours/week + 4 weeks
Total Credits = 21.00
No of Theory Courses = 6
No of Laboratory Courses = 3

LEVEL – 4, TERM – I

Course Code	Course Name	Contact hour/week	Credits
THEORY			
PME 421	Well Test Analysis	3.00	3.00
PME 423	Reservoir Modeling and Simulation	3.00	3.00
PME 431	Mine ventilation and Environmental Engineering	3.00	3.00
PME 425	Petroleum Refining and LPG Technology	3.00	3.00
GEEM 447	Engineering Ethics and Moral Philosophy	2.00	2.00
SESSIONAL / LABORATORY			
PME 410	Research Project I	4.00	2.00
PME 424	Reservoir Modeling and Simulation Sessional	3.00	1.50
PME 432	Mine Ventilation and Environmental Engineering Laboratory	3.00	1.50
	Total:	**24.00**	**19.00**

Contact Hours: 14.00 (Theo) + 10.00 (Lab) = 24.0 hours/week
Total Credits = 19.00
No of Theory Courses = 5
No of Laboratory Courses = 3

LEVEL – 4 (TERM – II)

Course Code	Course Name	Contact hour/week	Credits
THEORY			
GEPM 477	Project Management and Finance	3.00	3.00
PME 427	Transmission and Distribution of Natural Gas	3.00	3.00
PME 429	Enhanced Oil Recovery Techniques	2.00	2.00
PME 433	Mineral Processing	3.00	3.00
PME 435	Mine Planning and Design	3.00	3.00
SESSIONAL / LABORATORY			
PME 410	Research Project II	8.00	4.00
PME 434	Minerals Processing Laboratory	3.00	1.50
	Total:	**25.00**	**19.50**

Contact Hours: 14.00 (Theo) + 11.00 (Lab) = 25.00 hours/week
Total Credits = 19.50
No of Theory Courses = 5
No of Laboratory Courses = 2

FACULTY OF ELECTRICAL AND COMPUTER ENGINEERING

DEPT OF COMPUTER SCIENCE AND ENGINEERING

Total Credit Hours: 160.00

Level-1, Term-I

Course Code	Course Name	Contact Hour/ Week		Credits
		Theory	Sessional	
CSE -101	Discrete Mathematics	3.00		3.00
CHEM-101	Fundamentals of Chemistry	3.00	-	3.00
CHEM-102	Chemistry Sessional	-	3.00	1.50
EECE-163	Electrical Circuit Analysis	3.00	-	3.00
EECE-164	Electrical Circuit Analysis Sessional	-	1.50	0.75
GEBS-101	Bangladesh Studies	2.00	-	2.00
MATH-101	Differential and Integral Calculus	3.00	-	3.00
PHY-101	Waves and Oscillations, Optics and Modern Physics	3.00	-	3.00
PHY-102	Physics Sessional	-	3.00	1.50
	Total:	**17.00**	**7.50**	**20.75**
Total = Contact hours: 24.50; Credits : 20.75				

Level-1, Term-II

Course Code	Course Name	Contact Hour/ Week		Credits
		Theory	Sessional	
CSE-103	Digital Logic Design	3.00	-	3.00
CSE-104	Digital Logic Design Sessional	-	3.00	1.50
CSE-105	Structured Programming Language	3.00	-	3.00
CSE-106	Structured Programming Language Sessional	-	3.00	1.50
EECE-169	Electronic Devices and Circuits	3.00	-	3.00
EECE-170	Electronic Devices and Circuits Sessional	-	1.50	0.75
ENG-102	Communicative English-I	-	3.00	1.50
MATH-105	Vector Analysis, Matrix and Coordinate Geometry	3.00	-	3.00
ME-122	Fundamental of Mechanical Engineering Sessional	-	4.00	2.00
	Total:	**12.00**	**13.50**	**19.25**
Total = Contact hours: 25.50; Credits : 19.25				

Level-2, Term-I

Course Code	Course Name	Contact Hour/ Week		Credits
		Theory	Sessional	
CSE-203	Data Structures and Algorithms-I	3.00	-	3.00
CSE-204	Data Structures and Algorithms-I Sessional	-	3.00	1.50
CSE-205	Object Oriented Programming Language	3.00	-	3.00
CSE-206	Object Oriented Programming Language Sessional-I	-	3.00	1.50
CSE-217	Theory of Computation	3.00	-	3.00
EECE-269	Electrical Drives and Instrumentation	3.00	-	3.00
EECE-270	Electrical Drives and Instrumentation Sessional	-	1.50	0.75
ENG-202	Communicative English-II	-	3.00	1.50
MATH-205	Differential Equations, Laplace Transform and Fourier Transform	3.00	-	3.00
	Total:	**15.00**	**10.50**	**20.25**
Total = Contact hours: 25.50; Credits : 20.25				

Level –2, Term-II

Course Code	Course Name	Contact Hour/ Week		Credits
		Theory	Sessional	
CE-250	Engineering Drawing and CAD Sessional	-	3.00	1.50
CSE-213	Computer Architecture	3.00	-	3.00
CSE-215	Data Structures and Algorithms-II	3.00	-	3.00
CSE-216	Data Structures and Algorithms-II Sessional	-	3.00	1.50
CSE-219	Mathematical Analysis for Computer Science	3.00	-	3.00
CSE-220	Object Oriented Programming Sessional-II	-	1.50	0.75
EECE-279	Digital Electronics and Pulse Technique	3.00	-	3.00
EECE-280	Digital Electronics and Pulse Technique Sessional	-	1.50	0.75
GELM-275	Leadership and Management	2.00	-	2.00
MATH-207	Complex Variable and Statistics	3.00	-	3.00
	Total:	**17.00**	**9.00**	**21.50**
Total = Contact hours: 26.00; Credits : 21.50				

Level-3, Term-I

Course Code	Course Name	Contact Hour/ Week		Credits
		Theory	Sessional	
CSE-301	Database Management Systems	3.00	-	3.00
CSE-302	Database Management Systems Sessional	-	3.00	1.50
CSE-303	Compiler	3.00	-	3.00
CSE-304	Compiler Sessional	-	1.50	0.75
CSE-305	Microprocessors, Micro-controllers and Assembly Language	3.00	-	3.00
CSE-306	Microprocessors, Micro-controllers and Assembly Language Sessional	-	3.00	1.50
CSE-307	Operating System	3.00	-	3.00
CSE-308	Operating System Sessional	-	1.50	0.75
CSE-317	Data Communication	3.00	-	3.00
CSE-318	Data Communication Sessional	-	1.50	0.75
	Total:	**15.00**	**10.50**	**20.25**
Total = Contact hours: 25.50; Credits : 20.25				

Level-3, Term II

Course Code	Course Name	Contact Hour/ Week		Credits
		Theory	Sessional	
CSE-309	Computer Network	3.00	-	3.00
CSE-310	Computer Network Sessional	-	3.00	1.50
CSE-315	Digital System Design	2.00	-	2.00
CSE-316	Digital System Design Sessional	-	1.50	0.75
CSE-319	Software Engineering	3.00	-	3.00
CSE-320	Software Engineering Sessional	-	1.50	0.75
CSE-364	Software Development Project - I	-	3.00	1.50
GERM-352	Fundamentals of Research Methodology	-	4.00	2.00
GES-301	Fundamentals of Sociology	2.00	-	2.00
GESL-303	Environment, Sustainability and Law	2.00	-	2.00
	Total:	**12.00**	**13.00**	**18.50**
Total = Contact hours: 25.00; Credits : 18.50				

*LEVEL-3 Industrial Training

Course Code	Course Name	Contact Hour/ Week		Credits
		Theory	Sessional	
CSE-350	Industrial Training	-	4 Weeks	1.00

***Note:** This course is mandatory. Evaluation report from industry is to be submitted at the end of the training and accordingly to be incorporated in the tabulation sheet.

Level-4, Term-I

Course Code	Course Name	Contact Hour/ Week		Credits
		Theory	Sessional	
CSE-400	Final Year Research & Design Project	-	6.00	3.00
CSE-405	Computer Interfacing	3.00	-	3.00
CSE-406	Computer Interfacing Sessional	-	1.50	0.75
CSE-415	Human Computer Interaction	3.00	-	3.00
CSE-429	Computer Security	3.00	-	3.00
CSE-464	Software Development Project-II	-	3.00	1.50
CSE-4XO	Technical Elective-I	3.00	-	3.00
GEEM-433	Engineering Ethics and Moral Philosophy	2.00	-	2.00
	Total:	**14.00**	**10.50**	**19.25**
Total = Contact hours: 24.50; Credits : 19.25				

Technical Elective-I

Course Code	Course Name	Contact Hour/ Week		Credits
		Theory	Sessional	
CSE-407	Applied Statistics and Queuing Theory	3.00	-	3.00
CSE-417	Blockchaining and Cryptocurrency Technology	3.00	-	3.00
CSE-419	Advanced Algorithms	3.00	-	3.00
CSE-421	Basic Graph Theory	3.00	-	3.00
CSE-423	Fault Tolerance System	3.00	-	3.00
CSE-425	Basic Multimedia Theory	3.00	-	3.00
CSE-427	Digital Image Processing	3.00	-	3.00
CSE-431	Object Oriented Software Engineering	3.00	-	3.00
CSE-433	Artificial Neural Networks and Fuzzy Systems	3.00	-	3.00
CSE-435	Distributed Algorithms	3.00	-	3.00
CSE-437	Bioinformatics	3.00	-	3.00
CSE-439	Robotics	3.00	-	3.00
CSE-447	Telecommunication Engineering	3.00	-	3.00

Level-4, Term-II

Course Code	Course Name	Contact Hour/ Week		Credits
		Theory	Sessional	
CSE-400	Final Year Research & Design Project	-	6.00	3.00
CSE-401	Information System Design and Development	3.00	-	3.00
CSE-403	Artificial Intelligence	3.00	-	3.00
CSE-404	Artificial Intelligence Sessional	-	1.50	0.75
CSE-413	Computer Graphics	3.00	-	3.00
CSE-414	Computer Graphics Sessional	-	1.50	0.75
CSE-4XO	Technical Elective-II	3.00	-	3.00
CSE-4XE	Technical Elective-II Sessional	-	1.50	0.75
GEPM-463	Project Management and Finance	2.00	-	2.00
	Total:	**14.00**	**10.50**	**19.25**
Total = Contact hours: 24.50; Credits : 19.25				

Technical Elective-II

Course Code	Course Name	Contact Hour/ Week		Credits
		Theory	Sessional	
CSE-411	VLSI Design	3.00	-	3.00
CSE-412	VLSI Design Sessional	-	1.50	0.75
CSE-441	Machine Learning	3.00	-	3.00
CSE-442	Machine Learning Sessional	-	1.50	0.75
CSE-443	Pattern Recognition	3.00	-	3.00
CSE-444	Pattern Recognition Sessional	-	1.50	0.75
CSE-445	Digital Signal Processing	3.00	-	3.00
CSE-446	Digital Signal Processing Sessional	-	1.50	0.75
CSE-449	Mobile and Ubiquitous Computing	3.00	-	3.00
CSE-450	Mobile and Ubiquitous Computing Sessional	-	1.50	0.75
CSE- 451	Simulation and Modeling	3.00	-	3.00
CSE- 452	Simulation and Modeling Sessional	-	1.50	0.75
CSE-455	Natural Language Processing	3.00	-	3.00
CSE-456	Natural Language Processing Sessional	-	1.50	0.75
CSE-457	Advanced Database Management Systems	3.00	-	3.00
CSE-458	Advanced Database Management Systems Sessional	-	1.50	0.75
CSE-459	Internet of Things (IoT)	3.00	-	3.00
CSE-460	Internet of Things (IoT) Sessional	-	1.50	0.75
CSE-461	Industrial Revolution	3.00	-	3.00
CSE-462	Industrial Revolution Sessional	-	1.50	0.75
CSE-465	Cyber & Physical Security	3.00	-	3.00
CSE-466	Cyber & Physical Security Sessional	-	1.50	0.75

DEPT OF ELECTRICAL, ELECTRONIC AND COMMUNICATION ENGINEERING

Total Credit Hours: 160.00

Level-1, Term-I

Course Code	Course Name	Type of Course	Contact Hour	Credits
EECE 101	Electrical Circuits I	Theory	3.00	3.00
PHY 101	Waves & Oscillation, Optics and Modern Physics	Theory	3.00	3.00
MATH 101	Differential and Integral Calculus	Theory	3.00	3.00
CHEM 101	Fundamentals of Chemistry	Theory	3.00	3.00
GEBS 101	Bangladesh Studies	Theory	2.00	2.00
	Subtotal (Theory)		**14.00**	**14.00**
EECE 102	Electrical Circuits and Simulation Laboratory I	Sessional	3.00	1.50
PHY 102	Physics Sessional	Sessional	3.00	1.50
CHEM 102	Chemistry Sessional		3.00	1.50
	Subtotal (Sessional)		**9.00**	**4.50**
	Total = Contact hours: 23.00; Credits : 18.50			

Level-1, Term-II

Course Code	Course Name	Type of Course	Contact Hour	Credits
EECE 105	Electrical Circuits II	Theory	3.00	3.00
PHY 103	Electricity & Magnetism, Thermal Physics, Quantum Mechanics & Photonics	Theory	3.00	3.00
MATH 105	Vector analysis, Matrices and Coordinate Geometry	Theory	3.00	3.00
CSE 109	Computer Programming	Theory	3.00	3.00
GES 101	Fundamentals of Sociology	Theory	2.00	2.00
	Subtotal (Theory)		**14.00**	**14.00**
EECE 106	Electrical Circuits and Simulation Laboratory II	Sessional	3.00	1.50
CSE 110	Computer Programming Laboratory	Sessional	3.00	1.50
LANG 102	Communicative English I	Sessional	3.00	1.50
	Subtotal (Sessional)		**9.00**	**4.50**
	Total = Contact hours: 23.00; Credits: 18.50			

Level-2, Term-I

Course Code	Course Name	Type of Course	Contact Hour	Credits
EECE 201	Electronics-I	Theory	3.00	3.00
EECE 203	Electrical Machines-I/ Energy Conversion-I	Theory	3.00	3.00
ME 283	Fundamental of Mechanical Engineering	Theory	3.00	3.00
MATH 205	Differential Equation, Laplace Transform and Fourier Transform	Theory	3.00	3.00
GEE 201	Fundamentals of Economics	Theory	2.00	2.00
	Subtotal (Theory)		**14.00**	**14.00**
EECE 202	Electronics Circuit and Simulation Laboratory	Sessional	3.00	1.50
EECE 212	Numerical Technique Laboratory	Sessional	3.00	1.50
ME 284	Fundamental of Mechanical Engineering Laboratory	Sessional	3.00	1.50
LANG 202	Communicative English II	Sessional	3.00	1.50
	Subtotal (Sessional)		**12.00**	**6.00**
	Total = Contact hours: 26.00; Credits: 20.00			

Level-2, Term-II

Course Code	Course Name	Type of course	Contact hour	Credits
EECE 205	Electrical Machines-II/ Energy Conversion-II	Theory	3.00	3.00
EECE 207	Electronics II	Theory	3.00	3.00
EECE 217	Engineering Electromagnetic	Theory	3.00	3.00
MATH 213	Complex Variable, Harmonic Function and Statistics	Theory	3.00	3.00
GELM 275	Leadership and Management	Theory	2.00	2.00
	Subtotal (Theory)		**14.00**	**14.00**
EECE 206	Electrical Machines Laboratory/ Energy Conversion Laboratory	Sessional	3.00	1.50
EECE 208	Electronics Circuit and Simulation Laboratory II	Sessional	3.00	1.50
EECE 222	Electrical Service Design and CAD Laboratory	Sessional	4.00	2.00
	Subtotal (Sessional)		**10.00**	**5.00**
	Total = Contact hours: 24.00; Credits: 19.00			

Level-3, Term-I

Course Code	Course Name	Type of course	Contact Hour	Credits
EECE 301	Continuous Signals and Linear Systems	Theory	3.00	3.00
EECE 303	Digital Electronics	Theory	3.00	3.00
EECE 305	Power System I	Theory	3.00	3.00
EECE 313	Electrical Measurement, Instrumentation and Sensors	Theory	3.00	3.00
EECE 315	Electrical Properties of Material	Theory	3.00	3.00
GESL 305	Environment, Sustainability and Law	Theory	2.00	2.00
		Subtotal (Theory)	**17.00**	**17.00**
EECE 304	Digital Electronics Laboratory	Sessional	3.00	1.50
EECE 306	Power System I Laboratory	Sessional	3.00	1.50
EECE 314	Electrical Measurement, Instrumentation and Sensors Lab	Sessional	3.00	1.50
		Subtotal (Sessional)	**9.00**	**4.50**
		Total = Contact hours : 26.00 ; Credits : 21.50		

Level-3, Term-II

Course Code	Course Name	Type of course	Contact hour	Credits
EECE 309	Communication Theory I	Theory	3.00	3.00
EECE 311	Digital Signal Processing I	Theory	3.00	3.00
EECE 317	VLSI I	Theory	3.00	3.00
CSE 371	Microprocessors and Interfacing	Theory	3.00	3.00
	Subtotal (Theory)		**12.00**	**12.00**
GERM 352	Fundamentals of Research Methodology	Sessional	4.00	2.00
EECE 310	Communication Theory I Laboratory	Sessional	3.00	1.50
EECE 312	Digital Signal Processing I Laboratory	Sessional	3.00	1.50
EECE 318	VLSI I Laboratory	Sessional	3.00	1.50
CSE 372	Microprocessors and Interfacing Laboratory	Sessional	3.00	1.00
EECE 330	Industrial Training	Sessional	1.00	1.00
		Subtotal (Sessional)	**16+1 (6 weeks)**	**9.00**
		Total = Contact hours : 29.00; Credits: 21.00		

Level-4, Term-I

Course No	Course Name	Type of Course	Contact hour	Credits
EECE 401	Control System I	Theory	3.00	3.00
EECE 405	Solid State Devices	Theory	3.00	3.00
EECE 473	Power Electronics	Theory	3.00	3.00
EECE 4**	Elective I	Theory	3.00	3.00
EECE 4**	Elective II	Theory	3.00	3.00
		Subtotal (Theory)	**15.00**	**15.00**
EECE 400	Final Year Design and Research Project		6.00	3.00
EECE 402	Control System I Laboratory	Sessional	3.00	1.05
EECE 474	Power Electronics Laboratory	Sessional	3.00	1.50
		Subtotal (Sessional)	**12.00**	**6.00**
		Total = Contact hours : 27.00; Credits : 21.00		

Level-4, Term-II

Course No	Course Name	Type of course	Contact hour	Credits
EECE 409	Communication Theory II	Theory	3.00	3.00
GEEM 435	Engineering Ethics and Moral Philosophy	Theory	2.00	2.00
GEPM 465	Project Management and Finance	Theory	2.00	2.00
EECE 4**	Elective III	Theory	3.00	3.00
EECE 4**	Elective IV	Theory	3.00	3.00
EECE 4**	Elective V	Theory	3.00	3.00
	Subtotal (Theory)		**16.00**	**16.00**
EECE 400	Final Year Design and Research Project		6.00	3.00
EECE 4**	Elective III Laboratory	Sessional	3.00	1.50
		Subtotal (Sessional)	**9.00**	**4.50**
		Total = Contact hours : 25.00 ; Credits: 20.50		

List of Elective Courses

Power

Ser. No.	Course Code	Course Name	Level	Contact Hour	Credits
1	EECE 471	Power System II	4-I/ 4-II	3.00	3.00
2	EECE 475	Power Plant Engineering	4-I/ 4-II	3.00	3.00
3	EECE 477	Power System Protection	4-I/ 4-II	3.00	3.00
4	EECE 478	Power System Protection Laboratory	4-II	3.00	1.50
5	EECE 483	High Voltage Engineering	4-I/ 4-II	3.00	3.00
6	EECE 484	High Voltage Engineering Laboratory	4-II	3.00	1.50
7	EECE 479	Power System Reliability	4-I/ 4-II	3.00	3.00
8	EECE 481	Power System Operation and Control	4-I/ 4-II	3.00	3.00
9	EECE 485	Electrical Machines III / Energy Conversion III	4-I/ 4-II	3.00	3.00

Electronics

Ser. No.	Course Code	Course Name	Level	Contact Hour	Credits
1	EECE 451	Processing and Fabrication Technology	4-I/ 4-II	3.00	3.00
2	EECE 453	Analog Integrated Circuits	4-I/ 4-II	3.00	3.00
3	EECE 455	Compound Semiconductor and Hetero-junction Devices	4-I/ 4-II	3.00	3.00
4	EECE 457	VLSI II	4-I/ 4-II	3.00	3.00
5	EECE 458	VLSI II Laboratory	4-II	3.00	1.50
6	EECE 459	Optoelectronics	4-I/ 4-II	3.00	3.00
7	EECE 461	Semiconductor Device Theory	4-I/ 4-II	3.00	3.00
8	EECE 463	Introduction to Nanotechnology	4-I/ 4-II	3.00	3.00
9	EECE 465	Semiconductor and Nano-scale Devices	4-I/ 4-II	3.00	3.00

Communication

Ser. No.	Course Code	Course Name	Level	Contact Hour	Credits
1	EECE 403	Telecommunication Engineering	4-I/ 4-II	3.00	3.00
2	EECE 433	Microwave Engineering	4-I/ 4-II	3.00	3.00
3	EECE 434	Microwave Engineering Laboratory	4-II	3.00	1.50
4	EECE 435	Optical Fiber Communication	4-I/ 4-II	3.00	3.00
5	EECE 437	Digital Communication	4-I/ 4-II	3.00	3.00
6	EECE 438	Digital Communication Laboratory	4-II	3.00	1.50
7	EECE 439	Mobile Cellular Communication	4-I/ 4-II	3.00	3.00
8	EECE 441	Random Signals and Processes	4-I/ 4-II	3.00	3.00
9	EECE 443	Satellite Communication	4-I/ 4-II	3.00	3.00
10	EECE 444	Satellite Communication Laboratory	4-II	3.00	1.50
11	EECE 445	Communications Network	4-I/ 4-II	3.00	3.00
12	EECE 446	Communications Network Laboratory	4-II	3.00	1.50

Interdisciplinary

Ser. No.	Course Number	Course Name	Level	Contact Hour	Credits
1	EECE 421	Control System II	4-I/ 4-II	3.00	3.00
2	EECE 422	Control System II Laboratory	4-II	3.00	1.50
3	EECE 423	Numerical Methods	4-I/ 4-II	3.00	3.00
4	EECE 424	Numerical Methods Laboratory	4-II	3.00	1.50
5	EECE 425	Biomedical Instrumentation	4-I/ 4-II	3.00	3.00
6	EECE 426	Biomedical Instrumentation Laboratory	4-II	3.00	1.50
7	EECE 429	Radar Engineering	4-I/ 4-II	3.00	3.00
8	EECE 430	Radar Engineering Laboratory	4-II	3.00	1.50
9	EECE 491	Sonar and Underwater Engineering	4-I/ 4-II	3.00	3.00
10	EECE 492	Sonar and Underwater Engineering Laboratory	4-II	3.00	1.50
11	EECE 493	Electronics Warfare	4-I/ 4-II	3.00	3.00
12	EECE 494	Electronics Warfare Laboratory	4-II	3.00	1.50
13	EECE 495	Avionics Engineering	4-I/ 4-II	3.00	3.00
14	EECE 496	Avionics Engineering Laboratory	4-II	3.00	1.50
15	EECE 497	Biomedical Signal Processing	4-I/ 4-II	3.00	3.00
16	EECE 498	Biomedical Signal Processing Laboratory	4-II	3.00	1.50
17	CSE 491	Microprocessor System Design	4-I/ 4-II	3.00	3.00
18	CSE 492	Microprocessor System Design Laboratory	4-II	3.00	1.50

DEPT OF MECHANICAL ENGINEERING

Total Credit Hours: 160.00

Level- 1, Term-I

Course Code	Course Name	Type of Course	Contact hours	Credits
ME 161	Introduction to Mechanical Engineering	Theory	2.00	2.00
ME 103	Thermodynamics	Theory	3.00	3.00
EECE 159	Fundamentals of Electrical Engineering	Theory	3.00	3.00
PHY 101	Waves and Oscillations, Optics and Modern Physics	Theory	3.00	3.00
MATH 101	Differential and Integral Calculus	Theory	3.00	3.00
GEBS 101	Bangladesh Studies	Theory	2.00	2.00
		Subtotal (Theory)	**16.00**	**16.00**
PHY 102	Physics Sessional	Sessional	3.00	1.50
ME 104	Thermodynamics Sessional	Sessional	3.00	1.50
SHOP 162	Workshop Practice Sessional	Sessional	3.00	1.50
		Subtotal (Sessional)	**9.00**	**4.50**
		Total = Contact hours: 25.00; Credits: 20.50		

Level- 1, Term-II

Course Code	Course Name	Type of Course	Contact hours	Credits
ME 193	Engineering Materials	Theory	3.00	3.00
CHEM 101	Fundamentals of Chemistry	Theory	3.00	3.00
MATH 103	Differential Equations and Matrix	Theory	3.00	3.00
EECE 161	Electrical and Electronics Technology	Theory	3.00	3.00
		Subtotal (Theory)	**12.00**	**12.00**
CHEM 102	Chemistry Sessional	Sessional	3.00	1.50
LANG 102	Communicative English I	Sessional	3.00	1.50
ME 194	Engineering Materials Sessional	Sessional	3.00	1.50
EECE 162	Electrical and Electronics Technology Sessional	Sessional	3.00	1.50
		Subtotal (Sessional)	**12.00**	**6.00**
		Total = Contact hours: 24.00; Credits:18.00		

Level- 2, Term-I

Course Code	Course Name	Type of Course	Contact hours	Credits
CSE 275	Computer Programming Language	Theory	3.00	3.00
ME 245	Engineering Mechanics-I	Theory	3.00	3.00
MATH 201	Vector Analysis, Laplace Transform & Co-ordinate Geometry	Theory	3.00	3.00
ME 205	Heat and Mass Transfer	Theory	3.00	3.00
		Subtotal (Theory)	**12.00**	**12.00**
CSE 276	Computer Programming Language Sessional	Sessional	3.00	1.50
ME 258	Mechanical Engineering Drawing –I	Sessional	3.00	1.50
ME 206	Heat and Mass Transfer Sessional	Sessional	3.00	1.50
LANG 202	Communicative English II	Sessional	3.00	1.50
		Subtotal (Sessional)	**12.00**	**6.00**
		Total = Contact hours: 24.00; Credits: 18.00		

Level- 2, Term-II

Course Code	Course Name	Type of Course	Contact hours	Credits
ME 247	Engineering Mechanics - II	Theory	3.00	3.00
ME 233	Manufacturing Technology	Theory	3.00	3.00
ME 207	Heat Transfer Equipment Design	Theory	3.00	3.00
ME 263	Numerical Analysis	Theory	3.00	3.00
MATH 265	Complex Variable, Harmonic Function and Fourier Analysis	Theory	3.00	3.00
GELM 275	Leadership and Management	Theory	2.00	2.00
		Subtotal (Theory)	**17.00**	**17.00**
ME 234	Manufacturing Technology Sessional	Sessional	3.00	1.50
ME 264	Numerical Analysis Sessional	Sessional	3.00	1.50
ME 260	Mechanical Engineering Drawing –II	Sessional	3.00	1.50
		Subtotal (Sessional)	**9.00**	**4.50**
		Total = Contact hours: 26.00; Credits: 21.50		

Level- 3, Term-I

Course Code	Course Name	Type of Course	Contact hours	Credits
ME 361	Instrumentation and Measurement	Theory	2.00	2.00
ME 343	Mechanics of Solids	Theory	3.00	3.00
ME 375	Control Engineering	Theory	2.00	2.00
ME 303	Power plant Engineering	Theory	3.00	3.00
ME 321	Fluid Mechanics-I	Theory	3.00	3.00
GEE 305	Fundamentals of Economics	Theory	2.00	2.00
Subtotal (Theory)			**15.00**	**15.00**
ME 344	Mechanics of Solids Sessional	Sessional	3.00	1.50
ME 376	Control Engineering Sessional	Sessional	3.00	1.50
ME 304	Power plant Engineering Sessional	Sessional	3.00	1.50
GERM 352	Fundamentals of Research Methodology	Sessional	4.00	2.00
Subtotal (Sessional)			**13.00**	**6.50**
Total = Contact hours: 28.00; Credits: 21.50				

Level- 3, Term-II

Course Code	Course Name	Type of Course	Contact hours	Credits
GES 307	Fundamentals of Sociology	Theory	2.00	2.00
ME 345	Mechanics of Machinery	Theory	3.00	3.00
ME 323	Fluid Mechanics-II	Theory	2.00	2.00
ME 341	Machine Design	Theory	3.00	3.00
ME 367	Automobile Engineering	Theory	3.00	3.00
Subtotal (Theory)			**13.00**	**13.00**
ME 324	Fluid Mechanics Sessional	Sessional	3.00	1.50
ME 346	Mechanics of Machinery Sessional	Sessional	3.00	1.50
ME 368	Automobile Engineering Sessional	Sessional	3.00	1.50
ME 366	Engineering Simulation	Sessional	2.00	1.00
ME 372*	Industrial Training	Training	4 weeks	1.00
Subtotal (Sessional)			**11 Hr + 4 weeks**	**6.50**
Total = Contact hours: 24.00 + 4 weeks; Credits: 19.50				

Level- 4, Term-I

Course Code	Course Name	Type of Course	Contact hours	Credits
ME 401	Internal Combustion Engines	Theory	3.00	3.00
ME 421	Fluid Machinery	Theory	3.00	3.00
ME 405	Refrigeration and Building Mechanical Systems	Theory	3.00	3.00
Optional I	Selected from prescribed optional subjects	Theory	3.00	3.00
Optional II	Selected from prescribed optional subjects	Theory	3.00	3.00
Subtotal (Theory)			**15.00**	**15.00**
ME 402	Heat Engines Sessional	Sessional	1.50	0.75
ME 422	Fluid Machinery Sessional	Sessional	1.50	0.75
ME 400	Project and Thesis I	Sessional	6.00	3.00
Subtotal (Sessional)			**9.00**	**4.50**
Total = Contact hours: 24.00; Credits: 19.50				

Level- 4, Term-II

Course Code	Course Name	Type of Course	Contact hours	Credits
ME 403	Power Plant Engineering	Theory	3.00	3.00
ME 481	Industrial Management	Theory	3.00	3.00
ME 467	Automobile Engineering	Theory	3.00	3.00
Optional III	Selected from prescribed optional subjects	Theory	3.00	3.00
Optional IV	Selected from prescribed optional subjects	Theory	3.00	3.00
Subtotal (Theory)			**15.00**	**15.00**
ME 404	Power Plant Engineering Sessional	Sessional	1.50	0.750
ME 468	Automobile Engineering Sessional	Sessional	3.00	1.50
ME 486	Engineering Research & Business Communication Sessional	Sessional	1.50	0.750
ME 400	Project and Thesis II		6.00	3.00
Subtotal (Sessional)			**12.00**	**6.00**
Total = Contact hours: 27.00; Credits: 21.00				

List of Elective Courses

Course No	Course Name	Level-Term	Contact Hours	Credit Hours
ME 407	Advanced Thermodynamics	4-I or 4-II	3.00	3.00
ME 409	Renewable Energy	4-I or 4-II	3.00	3.00
ME 411	Combustion and Pollution	4-I or 4-II	3.00	3.00
ME 413	Energy and Environment	4-I or 4-II	3.00	3.00
ME 415	Advanced Programming with MATLAB	4-I or 4-II	3.00	3.00
ME 417	Multiphase Flows	4-I or 4-II	3.00	3.00
ME 419	Introduction to Nanomaterials and Nanotechnology	4-I or 4-II	3.00	3.00
ME 423	Fluid Engineering	4-I or 4-II	3.00	3.00
ME 425	Aerodynamics	4-I or 4-II	3.00	3.00
ME 427	Applied Engineering Mathematics	4-I or 4-II	3.00	3.00
ME 429	Gas Dynamics	4-I or 4-II	3.00	3.00
ME 431	Finite Element Method	4-I or 4-II	3.00	3.00
ME 433	Fluid Power and Control	4-I or 4-II	3.00	3.00
ME 435	Introduction to CFD	4-I or 4-II	3.00	3.00
ME 437	Design of Fluid Machines	4-I or 4-II	3.00	3.00
ME 439	Bio-Fluid Mechanics	4-I or 4-II	3.00	3.00
ME 441	Theory of Structures	4-I or 4-II	3.00	3.00
ME 447	Robotics	4-I or 4-II	3.00	3.00
ME 449	Composite Materials	4-I or 4-II	3.00	3.00
ME 451	Aircraft & Aero-engine Structure	4-I or 4-II	3.00	3.00
ME 453	Applied Aerodynamics	4-I or 4-II	3.00	3.00
ME 455	Fire Safety and Engineering	4-I or 4-II	3.00	3.00
ME 459	Preventive Maintenance	4-I or 4-II	3.00	3.00
ME 463	Petroleum Engineering	4-I or 4-II	3.00	3.00
ME 465	Automotive Chassis Engineering	4-I or 4-II	3.00	3.00
ME 467	Autotronics	4-I or 4-II	3.00	3.00
ME 469	Vehicle Dynamics	4-I or 4-II	3.00	3.00
ME 471	Bio-Engineering	4-I or 4-II	3.00	3.00
ME 473	Plastic Process Technology	4-I or 4-II	3.00	3.00
ME 475	Modern Manufacturing Technology	4-I or 4-II	3.00	3.00
ME 477	Metal Cutting Processes	4-I or 4-II	3.00	3.00
ME 479	Occupational Health and safety engineering	4-I or 4-II	3.00	3.00
ME 483	Standards and inspection	4-I or 4-II	3.00	3.00
ME 485	Introduction to Nuclear Engineering	4-I or 4-II	3.00	3.00
ME 487	Tools Engineering	4-I or 4-II	3.00	3.00
ME 489	Automobile Maintenance Engineering	4-I or 4-II	3.00	3.00
ME 491	Mems Devices - Design and Fabrication	4-I or 4-II	3.00	3.00
ME 493	Material Handling	4-I or 4-II	3.00	3.00
ME 495	Mechatronics	4-I or 4-II	3.00	3.00
ME 497	Textile Technology	4-I or 4-II	3.00	3.00
ME 499	Weapon Engineering	4-I or 4-II	3.00	3.00

Science and Hum

Ser	Subject Code	Subject Name	Level and Term	Course Type
1	PHY 101	Waves and Oscillations, Optics and Modern Physics	Level 1 Term 1	Theory
2	MATH 101	Differential and Integral Calculus		
3	GEBS 101	Bangladesh Studies		
4	PHY 102	Physics Sessional		Sessional
5	CHEM 101	Fundamentals of Chemistry	Level 1 Term 2	Theory
6	MATH 103	Differential Equations and Matrix		
7	CHEM 102	Chemistry Sessional		Sessional
8	LANG102	Communicative English I		
9	MATH 201	Vector Analysis, Laplace Transform& Co-ordinate Geometry	Level 2 Term 1	Theory
10	LANG202	Communicative English II		Sessional
11	GELM 275	Leadership and Management	Level 2 Term 2	Theory
12	GEE 305	Fundamentals of Economics	Level 3 Term 1	Theory
13	GERM 352	Fundamentals of Research Methodology		Sessional
14	GES 307	Fundamentals of Sociology	Level 3 Term 2	Theory
15	GEPM 467	Project Management & Finance	Level 4 Term 1	Theory

AERONAUTICAL ENGINEERING

Total Credit Hours: Aerospace 160.00 & Avionics 160.00

Level- 1, Term-I (Aerospace & Avionics)

Course Code	Course Name	Type of Course	Contact Hour	Credits
PHY 101	Waves and Oscillations, Optics and Modern Physics	Theory	3.00	3.00
EECE 161	Electrical Circuit Analysis-I	Theory	3.00	3.00
MATH 101	Differential and Integral Calculus	Theory	3.00	3.00
AEAS 103	Fundamentals of Aeronautical Engineering	Theory	3.00	3.00
GEBS 101	Bangladesh Studies	Theory	2.00	2.00
		Subtotal (Theory)	**14.00**	**14.00**
PHY 102	Physics Sessional	Sessional	3.00	1.50
EECE 162	Electrical Circuit Analysis-I Sessional	Sessional	3.00	1.50
SHOP 108	Workshop Technology Sessional –I	Sessional	1.50	0.75
AEAS 110	Aeronautical Engineering Drawing-I	Sessional	3.00	1.50
		Subtotal (Sessional)	**10.50**	**5.25**
		Total = Contact hours: 24.50; Credits: 19.25		

Level- 1, Term-II (Aerospace and Avionics)

Course Code	Course Name	Type of Course	Contact Hour	Credits
PHY 111	Electricity and Magnetism, Thermal Physics and Mechanics	Theory	3.00	3.00
CHEM 101	Fundamentals of Chemistry	Theory	3.00	3.00
MATH 103	Differential Equations and Matrix	Theory	3.00	3.00
CSE 173	Computer Programming and Application	Theory	3.00	3.00
GEA 101	Principles of Accounting	Theory	2.00	2.00
GES 101	Fundamentals of Sociology	Theory	2.00	2.00
		Subtotal (Theory)	**16.00**	**16.00**
CHEM 102	Chemistry Sessional	Sessional	3.00	1.50
LANG 102	Communicative English-I	Sessional	3.00	1.50
CSE 174	Computer Programming and Application Sessional	Sessional	3.00	1.50
SHOP 112	Workshop Technology Sessional-II	Sessional	1.50	0.75
		Subtotal (Sessional)	**10.50**	**5.25**
		Total = Contact hours: 26.50; Credits: 21.25		

Level- 2, Term-I (Aerospace)

Course Code	Course Name	Type of Course	Contact Hour	Credits
ME 249	Engineering Mechanics (Statics and Dynamics)	Theory	4.00	4.00
AEAV 205	Numerical Analysis and Application	Theory	3.00	3.00
AEAV 203	Electronics-I	Theory	3.00	3.00
MATH 201	Vector Analysis, Laplace Transform and Co-ordinate Geometry	Theory	3.00	3.00
GEE 201	Fundamentals of Economics	Theory	2.00	2.00
		Subtotal (Theory)	**15.00**	**15.00**
AEAV 206	Numerical Analysis and Application Sessional	Sessional	3.00	1.50
AEAV 204	Electronics-I Sessional	Sessional	1.50	0.75
LANG 202	Communicative English-II	Sessional	3.00	1.50
		Subtotal (Sessional)	**7.50**	**3.75**
		Total = Contact hours: 22.50 Credits: 18.75		

Level- 2, Term-I (Avionics)

Course Code	Course Name	Type of Course	Contact Hour	Credits
AEAV 203	Electronics-I	Theory	3.00	3.00
AEAV 201	Electrical Circuit Analysis- II	Theory	3.00	3.00
AEAV 205	Numerical Analysis and Applications	Theory	3.00	3.00
ME 249	Engineering Mechanics (Statics and Dynamics)	Theory	4.00	4.00
MATH 201	Vector Analysis, Laplace Transform and Coordinate Geometry	Theory	3.00	3.00
GEE 201	Fundamentals of Economics	Theory	2.00	2.00
		Subtotal (Theory)	**18.00**	**18.00**
AEAV 202	Electrical Circuit Analysis- II Sessional	Sessional	3.00	1.50
AEAV 226	Numerical Analysis and Applications Sessional	Sessional	1.50	0.75
LANG 202	Communicative English-II	Sessional	3.00	1.50
		Subtotal (Sessional)	**7.50**	**3.75**
		Total = Contact hours: 25.50; Credits: 21.75		

Level- 2, Term-II (Aerospace)

Course Code	Course Name	Type of Course	Contact Hour	Credits
AEAS 203	Fundamentals of Fluid Mechanics	Theory	3.00	3.00
AEAS 205	Mechanics of Solids	Theory	3.00	3.00
AEAS 207	Thermodynamics	Theory	3.00	3.00
AEAS 215	Aircraft Aerospace Systems	Theory	3.00	3.00
GELM 275	Leadership and Management	Theory	2.00	2.00
MATH 217	Complex Variable, Fourier Analysis and Statistics	Theory	4.00	4.00
Subtotal (Theory)			**18.00**	**18.00**
AEAS 206	Mechanics of Solids Sessional	Sessional	3.00	1.50
AEAS 204	Fundamentals of Fluid Mechanics Sessional	Sessional	1.50	0.75
AEAS 208	Thermodynamics Sessional	Sessional	1.50	0.75
AEAS 210	Aeronautical Engineering Drawing-II	Sessional	3.00	1.50
Subtotal (Sessional)			**9.00**	**4.50**
Total = Contact hours: 27.00; Credits: 22.50				

Level- 2, Term-II (Avionics)

Course Code	Course Name	Type of Course	Contact Hour	Credits
AEAV 215	Electronics-II	Theory	3.00	3.00
AEAV 217	Aircraft Electrical System	Theory	3.00	3.00
AEAS 203	Fundamentals of Fluid Mechanics	Theory	3.00	3.00
AEAS 207	Thermodynamics	Theory	3.00	3.00
GELM 275	Leadership and Management	Theory	2.00	2.00
MATH 217	Complex Variable, Fourier Analysis and Statistics	Theory	4.00	4.00
Subtotal (Theory)			**18.00**	**18.00**
AEAV 216	Electronics-II Sessional	Sessional	3.00	1.50
AEAV 218	Aircraft Electrical System Sessional	Sessional	1.50	0.75
AEAS 208	Thermodynamics Sessional	Sessional	1.50	0.75
AEAS 210	Aeronautical Engineering Drawing-II	Sessional	3.00	1.50
Subtotal (Sessional)			**9.00**	**4.50**
Total = Contact hours: 27.00; Credits: 22.50				

Level- 3, Term-I (Aerospace)

Course Code	Course Name	Type of Course	Contact Hour	Credits
AEAS 301	Heat Transfer	Theory	3.00	3.00
AEAS 335	Applied Aerodynamics	Theory	3.00	3.00
AEAS 3XX	Elective I	Theory	3.00	3.00
AEAS 307	Aircraft Loading & Structure Analysis	Theory	3.00	3.00
AEAS 331	Material Science & Aerospace Materials	Theory	3.00	3.00
GEEM 339	Engineering Ethics and Moral Philosophy	Theory	2.00	2.00
Subtotal (Theory)			**17.00**	**17.00**
AEAS 336	Applied Aerodynamics Sessional	Sessional	1.50	0.75
AEAS 338	Aerospace Propulsion Sessional	Sessional	1.50	0.75
AEAS 322	Heat Transfer Sessional	Sessional	3.00	1.50
AEAS 332	Material Science & Aerospace Materials Sessional	Sessional	1.50	0.75
Subtotal (Sessional)			**7.50**	**3.75**
Total = Contact hours: 24.50; Credits: 20.75				

Level- 3, Term-I (Avionics)

Course Code	Course Name	Type of Course	Contact Hour	Credits
AEAV 301	Digital Systems	Theory	3.00	3.00
AEAV 303	Signals and Systems	Theory	3.00	3.00
AEAS 3XX	Elective I	Theory	3.00	3.00
AEAV 309	Aircraft Avionics Systems	Theory	3.00	3.00
AEAS 335	Applied Aerodynamics	Theory	3.00	3.00
GEEM 339	Engineering Ethics and Moral Philosophy	Theory	2.00	2.00
Subtotal (Theory)			**17.00**	**17.00**
AEAV 302	Digital Systems Sessional	Sessional	3.00	1.5
AEAS 338	Aerospace Propulsion Sessional	Sessional	1.50	0.75
AEAS 336	Applied Aerodynamics Sessional	Sessional	1.50	0.75
Subtotal (Sessional)			**6.00**	**3.00**
Total = Contact hours: 23.00; Credits: 20.00				

Level- 3, Term-II (Aerospace)

Course Code	Course Name	Type of Course	Contact Hour	Credits
AEAS 315	Aircraft Stability and Control	Theory	3.00	3.00
AEAS 317	Mechanics of Structures, Structural Vibration and Aero Elasticity	Theory	4.00	4.00
AEAS 319	Machine Design	Theory	3.00	3.00
AEAV 3XX	Elective II	Theory	3.00	3.00
AEAS 325	Computational Fluid Dynamics	Theory	3.00	3.00
Subtotal (Theory)			**16.00**	**16.00**
AE 300	Industrial Training	Sessional	8 weeks	1.00
AEAV 330	Measurement and Aircraft Instruments Sessional	Sessional	1.50	0.75
AEAS 326	Computational Fluid Dynamics Sessional	Sessional	1.50	0.75
GERM 352	Fundamentals of Research Methodology	Sessional	4.00	2.00
Subtotal (Sessional)			**7+8 weeks**	**4.50**
Total = Contact hours: 23.00+8 weeks; Credits: 20.50				

Level- 3, Term-II (Avionics)

Course Code	Course Name	Type of Course	Contact Hour	Credits
AEAV 305	Communication Engineering	Theory	3.00	3.00
AEAV 307	Electro-Magnetic Field Theory	Theory	3.00	3.00
AEAV 313	Digital Signal Processing	Theory	3.00	3.00
AEAV 3XX	Elective II	Theory	3.00	3.00
AEAS 315	Aircraft Stability and Control	Theory	3.00	3.00
Subtotal (Theory)			**15.00**	**15.00**
AE 300	Industrial Training	Sessional	8 weeks	1.00
AEAV 306	Communication Engineering Sessional	Sessional	1.50	0.75
AEAV 324	Digital Signal Processing Sessional	Sessional	1.50	0.75
AEAV 330	Measurement and Aircraft Instruments Sessional	Sessional	1.50	0.75
GERM 352	Fundamentals of Research Methodology	Sessional	4.00	2.00
Subtotal (Sessional)			**8.50+8 weeks**	**5.25**
Total = Contact hours: 23.50+8 weeks; Credits: 20.25				

Level- 4, Term-I (Aerospace)

Course Code	Course Name	Type of Course	Contact Hour	Credits
AEAS 437	Aerospace Vehicle Design	Theory	3.00	3.00
AEAS 439	Rotor-dynamics and Aircraft Performance	Theory	3.00	3.00
AEAS 447	Space Engineering	Theory	3.00	3.00
GESL 409	Environment Sustainability and Law	Theory	2.00	2.00
AEAS 4XX	Elective III	Theory	3.00	3.00
Subtotal (Theory)			**14.00**	**14.00**
AEAS 400	Final Year Design and Research Project	Sessional	6.00	3.00
AEAS 438	Aerospace Vehicle Design Sessional	Sessional	3.00	1.50
Subtotal (Sessional)			**9.00**	**4.50**
Total = Contact hours: 23.00; Credits: 18.50				

Level- 4, Term-I (Avionics)

Course Code	Course Name	Type of Course	Contact Hour	Credits
AEAV 401	Microwave Engineering	Theory	3.00	3.00
AEAV 407	Radar Engineering	Theory	3.00	3.00
AEAS 447	Space Engineering	Theory	3.00	3.00
GESL 409	Environment Sustainability and Law	Theory	2.00	2.00
AEAS 4XX	Elective III	Theory	3.00	3.00
Subtotal (Theory)			**14.00**	**14.00**
AEAV 400	Final Year Design and Research Project	Sessional	6.00	3.00
AEAV 408	Radar Engineering Sessional	Sessional	1.50	0.75
AEAV 442	Microwave Engineering Sessional	Sessional	1.50	0.75
Subtotal (Sessional)			**9.00**	**4.50**
Total = Contact hours: 23.00; Credits: 18.50				

Level- 4, Term-II (Aerospace)

Course Code	Course Name	Type of Course	Contact Hour	Credits
AEAS 407	Turbo Machinery	Theory	3.00	3.00
AEAV 411	Control Systems Engineering	Theory	3.00	3.00
AEAS 413	High Speed Aerodynamics	Theory	3.00	3.00
GEPM 469	Project Management and Finance	Theory	2.00	2.00
AEAS 4XX	Elective IV	Theory	3.00	3.00
Subtotal (Theory)			**14.00**	**14.00**
AEAS 400	Final Year Design and Research Project	Sessional	6.00	3.00
AEAS 408	Turbo Machinery Sessional	Sessional	1.50	0.75
AEAV 412	Control Systems Engineering Sessional	Sessional	1.50	0.75
Subtotal (Sessional)			**3.00**	**4.50**
Total = Contact hours: 23.00; Credits: 18.50				

Level- 4, Term-II (Avionics)

Course Code	Course Name	Type of Course	Contact Hour	Credits
AEAV 411	Control Systems Engineering	Theory	3.00	3.00
AEAV 443	Aircraft Communication and Navigation	Theory	4.00	4.00
GEPM 469	Project Management and Finance	Theory	2.00	2.00
AEAS 4XX	Elective IV	Theory	3.00	3.00
Subtotal (Theory)			**12.00**	**12.00**
AEAV 400	Final Year Design and Research Project	Sessional	6.00	3.00
AEAV 412	Control Systems Engineering Sessional	Sessional	1.50	0.75
AEAV 444	Aircraft Communication and Navigation Sessional	Sessional	1.50	0.75
Subtotal (Sessional)			**9.00**	**4.50**
Total = Contact hours: 21.00; Credits: 16.50				

DEPT OF NAVAL ARCHITECTURE AND MARINE ENGINEERING

Total Credit Hours: 160.00

Level- 1, Term-I

Course Code	Course Name	Contact Hour	Credits
Theory Courses			
NAME 107	Introduction to Naval Architecture and Marine Engineering	3.00	3.00
CHEM 101	Fundamentals of Chemistry	3.00	3.00
MATH 101	Differential Calculus and Integral Calculus	3.00	3.00
PHY 101	Wave Oscillation, Geometrical Optics and Modern Physics	3.00	3.00
GEBS 101	Bangladesh Studies	2.00	2.00
Sessional Courses			
CHEM 102	Chemistry Lab	3.00	1.50
PHY 102	Physics Lab	3.00	1.50
ME 150	Mechanical Engineering Drawing	3.00	1.50
SHOP 180	Workshop Practice	3.00	1.50
	Total (5T + 4S)	**26.00**	**20.00**

Level- 1, Term-II

Course Code	Course Name	Contact Hour	Credits
Theory Courses			
NAME 157	Hydrostatics and Stability	3.00	3.00
NAME 177	Thermal Engineering	3.00	3.00
CSE 115	Computer Programming Language	3.00	3.00
MATH 103	Differential Equation and Matrix	3.00	3.00
PHY 113	Structure of Matter, Electricity and Magnetism	3.00	3.00
Sessional Courses			
NAME 158	Basic Ship Design	3.00	1.50
NAME 178	Thermal Engineering Lab	3.00	1.50
LANG 102	Communicative English-I	3.00	1.50
CSE 116	Computer Programming Lab	3.00	1.50
	Total (5T + 4S)	**27.00**	**21.00**

Level- 2, Term-I

Course Code	Course Name	Contact Hour	Credits
Theory Courses			
NAME 201	Mechanics of Structure	3.00	3.00
NAME 205	Shipbuilding Materials and Metallurgy	3.00	3.00
NAME 207	Ship Design	3.00	3.00
NAME 213	Fluid Mechanics	3.00	3.00
MATH 201	Vector Analysis, Laplace and Coordinate Geometry	3.00	3.00
Sessional Courses			
NAME 208	Computer Aided Ship Design	4.00	2.00
NAME 214	Fluid Mechanics Lab	3.00	1.50
LANG 202	Communicative English-II	3.00	1.50
	Total (5T + 3S)	**25.00**	**20.00**

Level- 2, Term-II

Course Code	Course Name	Contact Hour	Credits
Theory Courses			
NAME 253	Marine Hydrodynamics	3.00	3.00
ME 277	Heat Transfer	3.00	3.00
EECE 281	Marine Electrical and Electronics	4.00	4.00
MATH 219	Statistics, Complex Variable and Fourier Analysis	3.00	3.00
GELM 275	Leadership & Management	2.00	2.00
Sessional Courses			
NAME 202	Mechanics of Structure Lab	1.50	0.75
NAME 206	Shipbuilding Materials and Metallurgy Lab	1.50	0.75
NAME 254	Marine Hydrodynamics Lab	3.00	1.50
NAME 258	Stability and Machinery Layout Design	3.00	1.50
	Total (5T + 4S)	**24.00**	**19.50**

Level- 3, Term-I

Course Code	Course Name	Contact Hour	Credits
Theory Courses			
NAME 301	Ship Structure	3.00	3.00
NAME 315	Ship Construction and Welding Technology	3.00	3.00
NAME 353	Ship Resistance and Propulsion	3.00	3.00
NAME 311	Machine Elements Design	3.00	3.00
GEE 303	Fundamentals of Economics	2.00	2.00
GES 305	Fundamentals of Sociology	2.00	2.00
Sessional Courses			
NAME 300	Ship Design Project	3.00	1.50
NAME 308	Application of ship design software	3.00	1.50
EECE 382	Marine Electrical and Electronics Lab	3.00	1.50
	Total (6T + 2S + 1P)	**25.00**	**20.50**

Level- 3, Term-II

Course Code	Course Name	Contact Hour	Credits
Theory Courses			
NAME 307	Design of Special Ships	3.00	3.00
NAME 309	Marine Engineering-I	3.00	3.00
NAME 363	Numerical Methods	3.00	3.00
GESL311	Environment, Sustainability and Industrial Law	2.00	2.00
NAME 3XX	Optional Course 1*	3.00	3.00
Sessional Courses			
NAME 300	Ship Design Project	3.00	1.50
NAME 310	Marine Engineering Lab-I	3.00	1.50
NAME 354	Ship Resistance and Propulsion Lab	3.00	1.50
GERM 352	Fundamentals of Research Methodology	4.00	2.00
	Total (5T + 3S + 1P)	**27.00**	**20.50**

Level- 4, Term-I

Course Code	Course Name	Contact Hour	Credits
Theory Courses			
NAME 403	Dynamics of Marine Vehicles	3.0	3.0
NAME 409	Marine Engineering -II	3.0	3.0
GEA407	Principles of Accounting	2.0	2.0
GEPM 471	Project Management and Finance	2.0	2.0
NAME 4XX	Optional Course 2*	3.0	3.0
Sessional Courses			
NAME 400	Research Project/ Thesis	6.00	3.00
NAME 464	Numerical Methods Lab	3.00	1.50
NAME 450	Shipyard Practice/Industrial Training (4 Weeks)**	4 weeks	1.50
Total (5T + 2S + 1RP)		**22.00 + 4 weeks**	**19.00**

Level- 4, Term-II

Course Code	Course Name	Contact Hour	Credits
Theory Courses			
NAME 457	Maritime Economics and Management	3.00	3.00
NAME 459	Marine Maintenance and Repair Engineering	3.00	3.00
GEEM 441	Engineering Ethics and Moral Philosophy	2.00	2.00
NAME 4XX	Optional Course 3*	3.00	3.00
NAME 4XX	Optional Course 4*	3.00	3.00
Sessional Courses			
NAME 400	Research Project/Thesis	6.00	3.00
NAME 410	Marine Engineering Lab-II	3.00	1.50
NAME 490	Bangladesh Studies for Naval Architects	2.00	1.00
Total (5T + 2S + 1P)		**25.00**	**19.50**

List of Optional Courses:

Ser.	Course Code	Course Title	Type of Course	Credit Hour	Level & Term
1.	NAME 371	Finite Element Method for Ship Structure	Theory	3.00	L-3, T-1/2
2.	NAME 373	Computational Fluid Dynamics (CFD)	Theory	3.00	L-3, T-1/2
3.	NAME 375	Composite Materials	Theory	3.00	L-3, T-1/2
4.	NAME 387	Portand Harbor Engineering	Theory	3.00	L-3, T-1/2
5.	NAME 389	Marine Productionand Planning	Theory	3.00	L-3, T-1/2
6.	NAME 431	Ship Hull Vibration	Theory	3.00	L-4, T-1/2
7.	NAME 435	Computer Aided Ship Production	Theory	3.00	L-4, T-1/2
8.	NAME 437	Inland Water Transportation System	Theory	3.00	L-4, T-1/2
9.	NAME 445	Dredger and Dredging Technology	Theory	3.00	L-4, T-1/2
10.	NAME 447	Maritime Transportation System	Theory	3.00	L-4, T-1/2
11.	NAME 453	Power and Propulsion System	Theory	3.00	L-4, T-1/2
12.	NAME 463	Ship Performance	Theory	3.00	L-4, T-1/2
13.	NAME 465	Navigation and Maritime Regulations	Theory	3.00	L-4, T-1/2
14.	NAME 477	Control Engineering	Theory	3.00	L-4, T-1/2
15.	NAME 481	Optimization Method in Ship Design	Theory	3.00	L-4, T-1/2
16.	NAME 483	Theory of Hydrofoils	Theory	3.00	L-4, T-1/2
17.	NAME 489	Introduction to Offshore Structure	Theory	3.00	L-4, T-1/2
18.	NAME 493	Marine Acoustics	Theory	3.00	L-4, T-1/2
19.	NAME 499	Shipyard Management	Theory	3.00	L-4, T-1/2

DEPT OF INDUSTRIAL AND PRODUCTION ENGINEERING

Total Credit Hours: 160.00

Level- 1, Term-I

Course Code	Course Title	Contact hours	Credit
IPE 101	Introduction to Industrial and Production Engineering	3.00	3.00
MATH 101	Differential and Integral Calculus	3.00	3.00
CHEM 101	Fundamentals of Chemistry	3.00	3.00
PHY 101	Waves & Oscillations, Optics and Modern Physics	3.00	3.00
GES 101	Fundamentals of Sociology	2.00	2.00
	Total Theoretical :	**14.00**	**14.00**
PHY 102	Physics Sessional	3.00	1.50
SHOP 172	Machine Shop Practice	2.00	1.00
CHEM 102	Chemistry Sessional	3.00	1.50
	Total Sessional :	**8.00**	**4.00**
	Grand Term Total:	**22.00**	**18.00**

Level- 1, Term-II

Course Code	Course Title	Contact hours	Credit
MATH 103	Differential Equations and Matrix	3.00	3.00
IPE 105	Engineering Materials	3.00	3.00
EECE 171	Basic Electrical & Electronic Circuit	3.00	3.00
GEA 101	Principles of Accounting	2.00	2.00
GEBS 101	Bangladesh Studies	2.00	2.00
	Total Theoretical :	**13.00**	**13.00**
ME 160	Engineering Drawing	3.00	1.50
LANG 102	Communicative English I	3.00	1.50
EECE 172	Basic Electrical & Electronic Circuit Sessional	1.50	0.75
IPE 106	Engineering Materials Sessional	3.00	1.50
	Total Sessional :	**10.50**	**5.25**
	Grand Term Total:	**23.50**	**18.25**

Level- 2, Term-I

Course Code	Course Title	Contact hours	Credit
MATH 201	Vector Analysis, Laplace Transformation & Co-ordinate Geometry	3.00	3.00
EECE 271	Electrical Machines and Electronics	3.00	3.00
CSE 281	Computer Programming	3.00	3.00
IPE 201	Manufacturing Processes I	3.00	3.00
GELM 275	Leadership and Management	2.00	2.00
IPE 207	Engineering Economy	3.00	3.00
	Total Theoretical :	**17.00**	**17.00**
EECE 272	Electrical Machines and Electronics Sessional	1.50	0.75
CSE 282	Computer Programming Sessional	3.00	1.50
IPE 202	Manufacturing Processes I Sessional	1.50	0.75
IPE 200	Engineering Graphics and CAD Sessional	3.00	1.50
LANG 202	Communicative English II	3.00	1.50
	Total Sessional :	**12.00**	**6.00**
	Grand Term Total:	**29.00**	**23.00**

Level- 2, Term-II

Course Code	Course Title	Contact Hour	Credit
IPE 203	Manufacturing Process II	3.00	3.00
IPE 205	Probability and Statistics	3.00	3.00
IPE 243	Mechanics of Solids	3.00	3.00
IPE 251	Thermodynamics and Heat Transfer	3.00	3.00
MATH 215	Numerical Analysis	3.00	3.00
IPE 271	Engineering Mechanics and Mechanics of Machinery	3.00	3.00
	Total Theoretical :	**18.00**	**18.00**
IPE 204	Manufacturing Processes II Sessional	1.50	0.75
IPE 206	Probability and Statistics Sessional	1.50	0.75
IPE 244	Mechanics of Solids Sessional	1.50	0.75
IPE 252	Thermodynamics and Heat Transfer Sessional	1.50	0.75
	Total Sessional :	**6.00**	**3.00**
	Grand Term Total:	**24.00**	**21.00**

Level- 3, Term-I

Course Code	Course Title	Contact Hour	Credit
IPE 351	Fluid Mechanics & Machinery	3.00	3.00
IPE 301	Measurement, Instrumentation and Control	3.00	3.00
IPE 303	Product Design I	3.00	3.00
IPE 305	Operations Research	4.00	4.00
GEEM 343	Engineering Ethics and Moral Philosophy	2.00	2.00
GESL 313	Environment, Sustainability and Law	2.00	2.00
	Total Theoretical:	**17.00**	**17.00**
IPE 352	Fluid Mechanics & Machinery Sessional	1.50	0.75
IPE 302	Measurement, Instrumentation and Control Sessional	1.50	0.75
IPE 306	Operations Research Sessional	1.50	0.75
GERM 352	Fundamentals of Research Methodology	4.00	2.00
	Total Sessional :	**8.50**	**4.25**
	Grand Term Total:	**25.5**	**21.25**

Level- 3, Term-II

Course Code	Course Title	Contact Hour	Credit Hour
IPE 309	Material Handling and Maintenance Management	3.00	3.00
IPE 311	Operations Management	3.00	3.00
IPE 313	Quality Management	3.00	3.00
IPE 315	Entrepreneurship Development and Micro Industries	2.00	2.00
IPE 317	Ergonomics and Safety Management	3.00	3.00
IPE 307	Product Design II	3.00	3.00
Total Theoretical		**17.00**	**17.00**
IPE 308	Product Design Sessional	1.50	0.75
IPE 310	Material Handling and Maintenance Management Sessional	1.50	0.75
IPE 314	Quality Management Sessional	1.50	0.75
IPE 318	Ergonomics and Safety Management	1.50	0.75
IPE 320	Industrial Practice	4 Weeks	1.00
	Total Sessional :	**6.00**	**4.00**
	Grand Term Total:	**23.00**	**21.00**

Level- 4, Term-I

Course Code	Course Title	Contract Hour	Credit Hour
IPE 421	Machine Tools	3.00	3.00
IPE 419	Modeling and Simulation	3.00	3.00
IPE 415	Project Management	3.00	3.00
IPE ---	Optional I	3.00	3.00
IPE ---	Optional II	3.00	3.00
	Total Theoretical :	**15.00**	**15.00**
IPE 400	Final Year Design & Research Project I	6.00	3.00
IPE 420	Modeling and Simulation Sessional	1.50	0.75
IPE 422	Machine Tools Sessional	3.00	1.50
IPE 450	Business Communication Seminar	1.50	0.75
	Total Sessional :	**12.00**	**6.00**
	Grand Term Total:	**27.00**	**21.00**

Level- 4, Term-II

Course No	Course Title	Contract Hour	Credit Hour
IPE 405	Supply Chain Management	3.00	3.00
IPE 411	CAD/CAM	3.00	3.00
IPE ---	Optional III	3.00	3.00
IPE ---	Optional IV	3.00	3.00
	Total Theoretical :	**12.00**	**12.00**
IPE 400	Final Year Design & Research Project II	6.00	3.00
IPE 412	CAD/CAM Sessional	1.50	0.75
IPE 418	Mechatronics and Industrial Automation Sessional	1.50	0.75
	Total Sessional :	**9.00**	**4.50**
	Grand Term Total:	**21.00**	**16.50**

The grand total credit hours required for the degree of B.Sc. in Industrial and Production Engineering is **160.00.**

FACULTY OF SCIENCE AND ENGINEERING

DEPT OF BIOMEDICAL ENGINEERING

Total Credit Hours: 160.00

Level- 1, Term-I

Course Code	Course Name	Contact Hour	Credits
BME 101	Introduction to Biomedical Engineering	2.00	2.00
PHY 101	Waves and Oscillations, Optics and Modern physics	3.00	3.00
GES 101	Fundamentals of Sociology	2.00	2.00
CHEM 101	Fundamentals of Sociology	3.00	3.00
CHEM 102	Chemistry Sessional	3.00	1.50
MATH 101	Differential and Integral Calculus	3.00	3.00
EECE 191	Principles of Electrical Engineering	3.00	3.00
EECE 192	Principles of Electrical Engineering Sessional	3.00	1.50
	Total:	**22.00**	**19.00**

Level- 1, Term-II

Course Code	Course Name	Contact Hour	Credits
BME 104	CAD in Biomedical Engineering Sessional	3.00	1.50
BME 105	Human Anatomy	3.00	3.00
PHY 109	Structure of matter, Electricity and Magnetism, and Mechanics	3.00	3.00
CHEM 125	Physical and Bio-organic Chemistry	3.00	3.00
MATH 105	Vector Analysis, Matrix and Coordinate Geometry	3.00	3.00
PHY 102	Physics Sessional	3.00	1.50
GEBS 101	Bangladesh Studies	2.00	2.00
LANG 102	Communicative English I	3.00	1.50
	Total:	**22.00**	**18.50**

Level- 2, Term-I

Course Code	Course Name	Contact Hour	Credits
BME 201	Human Physiology	3.00	3.00
MATH 205	Differential Equation, Laplace transform and Fourier Transform	3.00	3.00
EECE 291	Electronic Circuits and Devices	3.00	3.00
EECE 292	Electronic Circuits and Devices Sessional	3.00	1.50
CSE 291	Computer Programming	3.00	3.00
CSE 292	Computer Programming Sessional	3.00	1.50
GELM 271	Leadership and Management	2.00	2.00
LANG 202	Communicative English II	3.00	1.50
	Total:	**23.00**	**18.50**

Level- 2, Term-II

Course Code	Course Name	Contact Hour	Credits
BME 203	Biochemistry	3.00	3.00
BME 204	Biochemistry Sessional	3.00	1.50
BME 205	Biofluid Mechanics and Heat Transfer	3.00	3.00
BME 206	Biofluid Mechanics and Heat Transfer Sessional	3.00	1.50
BME 207	Biomedical Instrumentation and Measurements	3.00	3.00
BME 208	Biomedical Instrumentation and Measurements Sessional	3.00	1.50
ME 291	Principles of Mechanical Engineering	3.00	3.00
ME 292	Mechanical Engineering Lab	3.00	1.50
MATH 231	Complex Variables and Linear Algebra	3.00	3.00
	Total:	**27.00**	**21.00**

Level- 3, Term-I

Course Code	Course Name	Contact Hour	Credits
BME 301	Statistics and Numerical Methods for Engineers	3.00	3.00
BME 303	Biomaterials	3.00	3.00
BME 304	Biomaterials Sessional	3.00	1.50
BME 305	Biomedical Signal Processing	3.00	3.00
BME 306	Biomedical Signal Processing Sessional	3.00	1.50
BME 307	Medical Imaging	3.00	3.00
EECE 391	Digital Electronics	3.00	3.00
EECE 392	Digital Electronics Sessional	3.00	1.50
GERM 352	Fundamentals of Research Methodology (Sessional)	4.00	2.00
	Total:	**28.00**	**21.50**

Level- 3, Term-II

Course Code	Course Name	Contact Hour	Credits
BME 309	Diagnostic and Therapeutic Equipment-I	3.00	3.00
BME 311	Embedded Systems and Interfacing	3.00	3.00
BME 312	Embedded Systems and Interfacing Sessional	3.00	1.50
BME 313	Biomedical Image Processing	3.00	3.00
BME 314	Biomedical Image Processing Sessional	3.00	1.50
BME 315	Biomechanics	3.00	3.00
BME 316	Biomechanics Sessional	3.00	1.50
BME 318	Biomedical Engineering Design Sessional	3.00	1.50
BME 300	Industrial Training	4 weeks	1.50
	Total:	**24.00**	**19.50**

Level- 4, Term-I

Course Code	Course Name	Contact Hour	Credit
BME 401	Diagnostic and Therapeutic Equipment-II	3.00	3.00
BME 403	Biomedical Transport Phenomenon	3.00	3.00
BME 405	Molecular Biology for Engineers	3.00	3.00
BME 406	Molecular Biology for Engineers Sessional	3.00	1.50
BME 4**	Elective 1	3.00	3.00
BME 4**	Elective 2	3.00	3.00
GEPM 481	Project Management and Finance	2.00	2.00
BME 400	Final Year Design and Research Project	6.00	3.00
	Total:	**26.00**	**21.50**

Level- 4, Term-II

Course Code	Course Name	Contact Hour	Credit
BME 407	Healthcare Technology Management	3.00	3.00
BME 409	Rehabilitation Engineering	3.00	3.00
BME 410	Rehabilitation Engineering Sessional	3.00	1.50
BME 4**	Elective 3	3.00	3.00
BME 4**	Elective 4	3.00	3.00
GESL 421	Environment, Sustainability and Law	2.00	2.00
GEEM 451	Engineering Ethics and Moral Philosophy	2.00	2.00
BME 400	Final Year Design and Research Project	6.00	3.00
	Total:	**25.00**	**20.50**

DEPT OF NUCLEAR SCIENCE AND ENGINEERING (NSE)

Total Credit Hours: 160.00

Level- 1, Term-I

Course Code	Course Title	Contact Hour	Credits
NE 101	Introduction to Nuclear Engineering	3.00	3.00
PHY 101	Waves and Oscillations, Optics and Modern Physics	3.00	3.00
MATH 101	Differential and Integral Calculus	3.00	3.00
EECE 119	Fundamentals of Electrical Circuit Analysis	3.00	3.00
GES 101	Fundamentals of Sociology	2.00	2.00
	Theory Total:	**14.00**	**14.00**
LANG 172	Introduction to Russian Language - I	1.50	0.75
PHY 102	Physics Sessional	3.00	1.50
EECE 120	Fundamentals of Electrical Circuit Analysis Sessional	1.50	0.75
ME 180	Basic Engineering Drawing	3.00	1.50
	Sessional Total:	**9.00**	**4.50**
	Term Total:	**23.00**	**18.50**

Level- 1, Term-II

Course Code	Course Title	Contact Hour	Credits
NE 105	Fundamentals of Atomic and Nuclear Physics	3.00	3.00
NE 141	Fundamentals of Thermodynamics	3.00	3.00
CHEM 101	Fundamentals of Chemistry	3.00	3.00
MATH 103	Differential Equations and Matrix	3.00	3.00
CSE 121	Introduction to Computer Science and Programming Language	3.00	3.00
GEBS 101	Bangladesh Studies	2.00	2.00
	Theory Total:	**17.00**	**17.00**
LANG 174	Introduction to Russian Language - II	1.50	0.75
CHEM 102	Chemistry Sessional	3.00	1.50
LANG 102	Communicative English-I	3.00	1.50
CSE 122	Introduction to Computer Science and Programming Language Sessional	1.50	0.75
	Sessional Total:	**9.00**	**4.50**
	Term Total:	**26.00**	**21.50**

Level- 2, Term-I

Course Code	Course Title	Contact Hour	Credits
NE 203	Introduction to Nuclear and Radio Chemistry	3.00	3.00
NE 243	Fundamentals of Heat Transfer and Thermal Engineering	4.00	4.00
NE 251	Nuclear Materials	3.00	3.00
MATH 201	Vector Analysis, Laplace Transform and Coordinate Geometry	3.00	3.00
GELM 275	Leadership and Management	2.00	2.00
	Theory Total:	**15.00**	**15.00**
NE 204	Introduction to Nuclear and Radio Chemistry Sessional	1.50	0.75
NE 244	Fundamentals of Heat Transfer and Thermal Engineering Sessional	3.00	1.50
NE 252	Nuclear Materials Sessional	3.00	1.50
LANG 202	Communicative English-II	3.0	1.50
	Sessional Total:	**10.50**	**5.25**
	Term Total:	**25.50**	**20.25**

Level- 2, Term-II

Course Code	Course Title	Contact Hour	Credits
NE 207	Reactor Theory and Analysis-I	3.00	3.00
NE 261	Numerical Methods in Nuclear Engineering Analysis	3.00	3.00
EECE 221	Electrical and Electronics Technology	3.00	3.00
ME 253	Engineering Mechanics	3.00	3.00
MATH 209	Fourier Analysis, Complex Variable and Statistics	3.00	3.00
GESL 221	Environment, Sustainability and Law	2.00	2.00
	Theory Total:	**17.0**	**17.0**
NE 262	Numerical Methods in Nuclear Engineering Analysis Sessional	3.00	1.50
EECE 222	Electrical and Electronics Technology Sessional	3.00	1.50
ME 254	Engineering Mechanics Sessional	1.50	0.75
	Sessional Total:	**7.50**	**3.75**
	Term Total:	**24.50**	**20.75**

Level- 3, Term-I

Course Code	Course Title	Contact Hour	Credits
NE 301	Radiation Detection and Measurement	3.00	3.00
NE 305	Nuclear Reactor Thermal Hydraulics	3.00	3.00
NE 307	Reactor Theory and Analysis - II	3.00	3.00
NE 317	Nuclear Security and Safeguard Engineering	3.00	3.00
NE 331	Automation, Robotics and Liner Control System	3.00	3.00
GEPM 381	Project Management and Finance	2.00	2.00
	Theory Total:	**17.00**	**17.00**
NE 302	Radiation Detection and Measurement Sessional	1.50	0.75
NE 306	Nuclear Reactor Thermal Hydraulics Sessional	3.00	1.50
NE 318	Nuclear Security and Safeguard Engineering Sessional	1.50	0.75
	Sessional Total:	**6.00**	**3.00**
	Term Total:	**23.00**	**20.00**

Level- 3, Term-II

Course Code	Course Title	Contact Hour	Credits
NE 321	Reactor Operation and Safety	3.00	3.00
NE 333	Reactor Instrumentation and Control	3.00	3.00
NE 353	Mechanics of Materials	3.00	3.00
NE 355	Fluid Mechanics and Machinery	3.000	3.00
GEEM 351	Engineering Ethics & Moral Philosophy	2.00	2.00
	Theory Total:	**14.00**	**14.00**
NE 320	Industrial Training	4 Wks	1.50
NE 334	Reactor Instrumentation and Control Sessional	1.50	0.75
NE 354	Mechanics of Materials Sessional	1.50	0.75
NE 356	Fluid Mechanics and Machinery Sessional	1.50	0.75
GERM 352	Fundamentals of Research Methodology	4.00	2.00
	Sessional Total:	**8.5 + 4 Wks**	**5.75**
	Term Total:	**22.5 + 4 Wks**	**19.75**

Level- 4, Term-I

Course Code	Course Title	Contact Hour	Credits
NE 409	Nuclear Fuel Cycle and Radioactive Waste Management	3.00	3.00
NE 417	Nuclear Accidents Analysis and Radiological Emergency	3.00	3.00
NE 425	Nuclear Reactor Design and Features	4.00	4.00
-	Elective Course-1	3.00	3.00
-	Elective Course-2	3.00	3.00
	Theory Total:	**16.00**	**16.00**
NE 400	Final Year Design and Research Project	6.00	3.00
NE 426	Nuclear Reactor Design and Features Sessional	3.00	1.50
	Sessional Total:	**9.00**	**4.50**
	Term Total:	**25.0**	**20.50**

Level- 4, Term-II

Course Code	Course Title	Contact Hour	Credits
NE 415	Radiation Interactions, Shielding and Protection	3.00	3.00
NE 423	Nuclear Power Plant Operation and In-core Fuel Management	3.00	3.00
NE 427	Nuclear Power Plant Engineering	3.00	3.00
-	Elective Course-3	3.00	3.00
-	Elective Course-4	3.00	3.00
	Theory Total:	**15.00**	**15.00**
NE 400	Final Year Design and Research Project	6.00	3.00
NE 428	Nuclear Power Plant Engineering Sessional	1.50	0.75
	Sessional Total:	**7.50**	**3.75**
	Term Total:	**22.5**	**18.75**

CONCLUSION

Military Institute of Science and Technology (MIST) is dedicated with a progressive and innovative outlook to pursue in excelling technical education of the modern age. In the meantime, it is established as prestigious academic institute for studies in different fields of engineering and technology for both military and civil officials/ students. MIST runs undergraduate and post graduate level studies including M.Phil and Ph.D program. Students from home and abroad participate in their respective fields of study. MIST has provision for advisory, research and consultancy service including supervisions, material testing and to enter into suitable agreement with any government and non- government organizations for this purpose. MIST intends to establish co-operations with globally reputed universities and strictly maintains yearly academic schedule. Strict adherence to program schedule and in-time completion of the curricula is the hallmark of MIST principles, keeping quality education as our professed goal. MIST has come up through many hurdles. It has accomplished its initial mission and is destined to achieve yet more laurels. Imbued with its motto 'Technology for Advancement', MIST is on a steady program, ardently pursuing to achieve its goal as 'Centre of Excellence' and assume a prestigious position in the educational arena of Bangladesh.

ROUTE MAP OF MIST TRANSPORT

Not to Scale

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Address : Mirpur Cantonment, Dhaka-1216
Web Site : www.mist.ac.bd
e-mail : info@mist.ac.bd

Important Contact Numbers
Admission Officer:
Mobile: 01769024054, 01769024056
Telephone: 8035419
Military Phone: 803111 Ext-3842
Fax: 88-02-9011311

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