PROSPECTUS
MIST 2020

TECHNOLOGY FOR ADVANCEMENT
CENTER OF EXCELLENCE

MILITARY INSTITUTE OF SCIENCE AND TECHNOLOGY

under GRADUATION
post GRADUATION

MILITARY INSTITUTE OF SCIENCE AND TECHNOLOGY (MIST)

MIRPUR CANTONMENT

INAUGURAL CEREMONY OF MIST

ON 19 APRIL 1998

HONOURABLE PRIME MINISTER OF PEOPLE'S REPUBLIC OF BANGLADESH

SHEIKH HASINA

UNVEILING THE FOUNDATION PLAQUE

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IMPORTANT POINTS TO REMEMBER

DOs

1. Be punctual in every aspects.
2. Respect your elders and show mercy to the youngers.
3. Participate spontaneously in all activities in MIST.
4. Follow all instructions related to dress code.
5. Be polite & gentle in behavior and appearance.
6. Inform your course coordinator for any issues/ problem.
7. Attend classes regularly. Failure to attend 90% and 75% classes will make you to pay penalties and disqualified in term-end exam respectively.
8. Students must return to dormitory/ hostel by 2030 hours in summer and 2000 hours in winter.
9. Wearing helmet is compulsory for motorcycle riding. Ensure proper parking of your self-driven vehicle. Obey the instructions of Military Police (MP).
10. Clear your dues/ bills in time.
11. Clear dormitory/ hostel charge by 10th of each month, to avoid cancellation of seat.
12. Complete Identity Card formalities within stipulated time.
13. To avail the library facilities, complete necessary membership formalities as early as possible.
14. Return books to the library in time as per the instructions to avoid fine.

DON'Ts

1. Entry of male students to female student's hostel and vice versa are strictly prohibited.
2. Non-residential students are not allowed to stay in Osmany Hall.
3. Say "NO" to Drugs, Eve-teasing and Ragging. MIST shows "Zero Tolerance" to those.
4. No entry of vehicle in MIST without BRTA registration.
5. No discussion on political, business and other controversial issues in officer's mess/ hostel/ hall.
6. Avoid engaging in any kind of disputed matters.
7. No indiscipline activities in cafeteria/ library is allowed.
8. No loan or borrowing money is allowed in MIST.

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 since 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 and their year of operation are shown below:

Ser	Program/Department	Year of Commencement
1.	Civil Engineering (CE)	1999
2.	Computer Science and Engineering (CSE)	2001
3.	Electrical, Electronic and Communication Engineering (EECE)	2003
4.	Mechanical Engineering (ME)	2003
5.	Aeronautical Engineering (AE)	2009
6.	Naval Architecture and Marine Engineering (NAME)	2013
7.	Architecture (Arch)	2015
8.	Biomedical Engineering (BME)	2015
9.	Nuclear Science and Engineering (NSE)	2015
10.	Environmental, Water Resources and Coastal Engineering (EWCE)	2015
11.	Industrial and Production Engineering (IPE)	2016
12.	Petroleum and Mining Engineering (PME)	2016

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

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

Foreign students were admitted 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 pursue standard curriculum leading to graduation and post-graduation degrees. MIST offers scholarship and stipends to the students for their outstanding results. Total 4027 students have graduated so far 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 2952 students out of which 83% is civil students and rest 17% is military.

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 job training.
- ✓ Emphasis on code of conduct and dress code.
- ✓ Focus to develop students as good human with all possible attributes of 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 personnel and civil 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 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 civil) including memoranda 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 programs 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 programs (masters and PhD)
✓ To conduct diploma and certificate programs in Civil Engineering, Computer Science & Engineering, Electrical & Electronics Engineering and Mechanical Engineering, Aeronautical Engineering, Naval Architecture and Marine Engineering, Bachelor of Architecture, Biomedical Engineering, Nuclear Science and Engineering, Environmental, Water Resources and Coastal Engineering, Industrial and Production Engineering, Petroleum and Mining Engineering.
✓ To conduct research and professional advanced programs / courses for Armed Forces in different fields of Military Science & Technology as requirement arises.

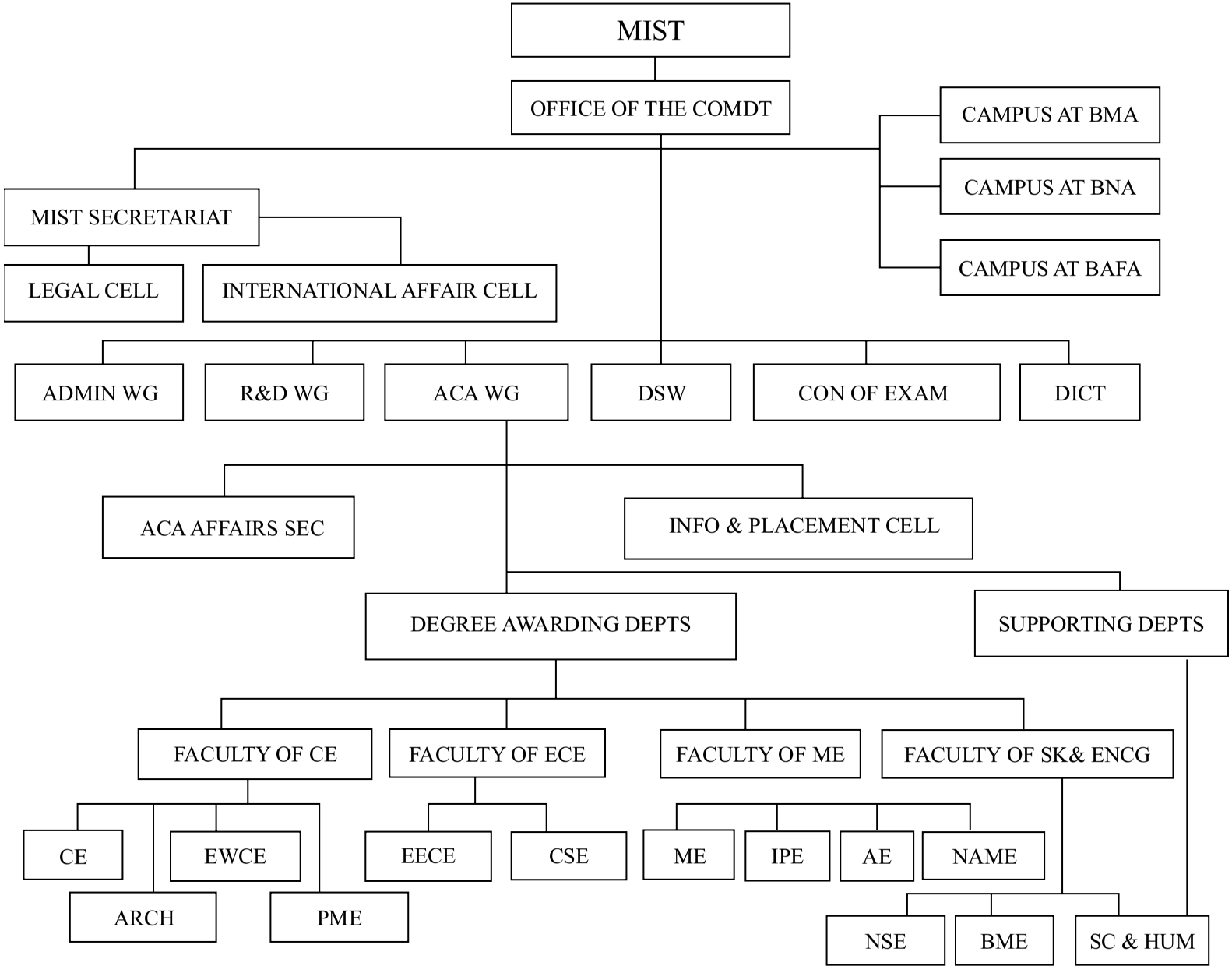
AFFILIATION

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 that 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


MIST
OFFICE OF THE COMDT
CAMPUS AT BMA
CAMPUS AT BNA
CAMPUS AT BAFA
MIST SECRETARIAT
LEGAL CELL
INTERNATIONAL AFFAIR CELL
ADMIN WG
R&D WG
ACA WG
DSW
CON OF EXAM
DICT
ACA AFFAIRS SEC
INFO & PLACEMENT CELL
DEGREE AWARDING DEPTS
SUPPORTING DEPTS
FACULTY OF CE
FACULTY OF ECE
FACULTY OF ME
FACULTY OF SK& ENCG
CE
EWCE
EECE
CSE
ME
IPE
AE
NAME
ARCH
PME
NSE
BME
SC & HUM

FACULTIES AND DEPARTMENTS

Faculty of Civil Engineering:

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

Faculty of Electrical and Computer Engineering:

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

Faculty of Mechanical Engineering:

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

Faculty of Science and Engineering:

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

Presently MIST has 12 departments to conduct B.Sc. Engineering Course under four different engineering faculties. The departments impart education basing on common objectives and outcomes set by MIST and have defined program objectives and outcomes, specific to the departments respectively.

Faculty of Civil Engineering

Civil Engineering (CE) Department

The CE Department of MIST, building itself on the four pillars of morale: fundamentals, innovation, excellence and advancements. It holds its glory of being the pioneer department of MIST. Since its uprising in 1999 and Focusing on creating a positive, interactive learning environment, the department of CE produces top-notch engineers and leaders for the next generation. The department started its journey as pioneer department with 40 military students in 1999. After 17 year of its inception, the department has again pioneered in introducing Post Graduate Degree in CE since October, 2012. At present 26 faculties are serving in this department of whom 7 are PhD qualified. It is now providing the most sophisticated and updated technological support in the field of civil engineering. In addition, the program's emphasis on engineering sciences and design; provides 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 is enriched with highly experienced and

disciplined teaching staffs having wide vision. The department plays a very important role in the country's infrastructural development. Many important construction works and projects in the field of structural, geotechnical, transportation and environmental engineering are carried out with the consultancy services of this department.

Department of Architecture (Arch)

The Department of Architecture in MIST started its journey since 2015. It has been only four years, but since the very beginning the department strives to meet the global standard in architecture education and practice. The department aims to educate and develop the future professional architects with high level of knowledge profile, technical competence, design skill and complex-problem solving ability steered by core values of critical thinking, intellectual curiosity, discipline and morality. 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 the process of availing eight state-of the art laboratories that includes Architectural Design Lab, Building Technology Lab, Photography and 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 cocurricular programs such as exhibition, seminar, design charrette, workshop, guest lecture, excursion etc. are arranged by the department regularly.

The school is new, yet 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. With its competent strength the department strives to achieve excellence in all its endeavors to nurture globally competent students.

Environmental, Water Resources and Coastal Engineering (EWCE) Department

With the vision of developing specialized personnel on Environmental Engineering, Water Resources Engineering and Coastal Engineering fields, EWCE department has been established in MIST in January 2015. Currently the department is offering undergraduate programs in Civil and Environmental Engineering and Civil and Water Resources Engineering. The department has subsequent plan to offer the degree in Civil & Coastal Engineering. In future this department will offer Master's and Doctorate program on Environmental, Water Resources and Coastal Engineering fields. In Bangladesh, environmental pollution in terms of water, air and soil; waste management; health hazard and other environmental issues need to be addressed as well as assessed properly.

Besides, environmental aspects of large scale civil engineering projects should be given special attention to mitigate their adverse impacts on environment. On the other hand, the vast water resources of the country should be utilized carefully maintaining ecological balance. Water structures like bridges, culverts, dams and embankments should be designed properly maintaining river morphology. Again, Bangladesh has the longest coastal belt in the world. The coastal zone of the country is provided with enormous marine resources. Specialized study program and comprehensive long term research on marine environment are required for understanding the unique and dynamic nature of the coastal belt as well as for sustainable development projects along the coastal region of the country. Now, it is high time for comprehensive study and research on all the issues mentioned above regarding water resources, coastal zones and overall environment. Addressing the importance of these issues and with a view to contributing to the socio-economic condition of the country, EWCE department of MIST has taken the time stipulated step to nourish the development of promising researchers, experts as well as leaders in these specialized fields. The department is run by well experienced, energetic and motivated group of faculties and staffs. There are two well established laboratories in this department namely WRE laboratory and Environmental Engineering laboratory. They are equipped with modern and sophisticated equipments. These laboratories provide research as well as consultancy services. It is expected that field specific studies and researches on environment, water resources and coastal engineering, initiated by this new department in MIST, will foster better understanding and enhance knowledge in those fields.

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 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 is 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

Computer Science and Engineering (CSE) Department

Department of CSE started its journey from academic session 2000-2001. The department is currently offering undergraduate program B.Sc. in CSE as well as graduate and postgraduate programs (Ph.D, M.Sc. and M.Engg) in CSE. With its excellent professional competence, pragmatic curricula, expert teaching viewpoints and capabilities of training, B.Sc. in CSE degree program has achieved accreditation from BAETE (lEB) on 22 Nov 2017 with a grade as “B" (Good). This department produces highly qualified and skilled computer science graduates. Over the years, this rapidly flourishing department has been providing the technical foundation, scholarly guidance and leadership skills to the undergraduate and postgraduate students who proved their potentiality at home and abroad. Major areas of specialties of department of CSE are Software, Hardware, Networking, Computer Graphics & Image Processing, Artificial Intelligence & Robotics, System Analysis, Design & Development, Information Systems Security etc. Currently, 26 faculties (civil, military and foreign) specialized from different fields are serving in this department. In addition, a good number of senior faculties from renowned universities like BUET, Dhaka University conduct courses as Adjunct faculties. The department offers adequate facilities for carrying out innovative research works in the field of ICT.

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 a guest faculty. Around 267 undergraduate and 144 postgraduate students are currently studying in the department. The department offers a diverse educational experience with a focus on traditional areas as well as emerging areas. The faculties are always engaged in numerous research arenas including satellite navigation space engineering, 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 35 faculties 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 since September 2010. Post graduate program under this department started functioning since October 2013.

Faculty of Mechanical Engineering

Mechanical Engineering (ME) Department

The field in which mechanical engineers operate is stunningly diverse. They analyze and design massive power conversion units that are used in near-supersonic aircraft and then again they design micro-robots that travel through blood vessels to perform delicate operations. Moreover, that field has changed in recent years: while they once worked mainly on mechanisms and machines, now they are more interested in the study of advanced materials, biological systems and micro/nano devices. Mechanical engineers can be found working in analysis, construction, consulting, design, development, maintenance, management, manufacturing, marketing, research and sales. The mechanical engineer's knowledge and skills are needed in a remarkable range of industries: automotive and aerospace, energy and environmental, communication, materials and manufacturing, food and chemical processing, medical and biomechanical, resource industries, transportation and others.
Mechanical Engineering department of MIST started its journey in January 2003 with 45 students in B.Sc. in ME program and till January 2019, 711 students have graduated as Mechanical Engineers from this department. The department offers degree of B.Sc., M.Sc., M.Eng., M.Phil. and Ph.D. in Mechanical Engineering. Currently, 263 students are enrolled in B.Sc. program while 67 students are pursuing post-graduation. This department aims to provide high-quality Mechanical Engineering education and contribute new knowledge through research in Mechanical Engineering and allied disciplines. Mechanical Engineering curriculum of MIST provides a solid foundation in the basic engineering sciences of solid mechanics and dynamics, materials engineering, fluid mechanics, thermodynamics and heat transfer. Since its inception, the department of ME has not only been producing excellent mechanical engineers to serve the industry but also inspiring many students to be researchers who are showing extra-ordinary capabilities at home and abroad. Department of ME conducts various Seminars/ Short Courses to equip the students with essential knowledge that would make them fit for the industry. Recently, department of ME has conducted short courses and seminars on various topics such as Air Conditioning Design, Transportation System, Hydraulics System, Automotive Vehicle, CFD, PLC etc. Concerning co and extra-curricular activities, students of this department are regularly participating and winning in various robotics, engineering, sports, and cultural competitions.

BSc in Mechanical Engineering (BSc ME) degree program of MIST was accredited by BAETE, IEB back in March 2010 with a grade as 'Good' because of its excellent professional views and capabilities of teaching. It was accredited again in April 2018 and this time also it was graded as 'Good'.

Aeronautical Engineering (AE) Department

AE department started its journey from 1st February 2009. The department is currently offering B.Sc, M.Sc and PhD in AE program. The aim of AE Department is to provide students with keen knowledge in the areas of aerodynamics, aerospace propulsion, aircraft loading and structural analysis, aerospace vehicle design, space engineering, advance aerospace technology, avionics and analysis of fundamentals as well as applied problems. The department is organized into two major divisions: Aerospace and Avionics with a total of 210

students currently studying here. Overseas students from different countries like Palestine, Maldives, Nepal pursued their bachelor degree from this department which was the beginning of wide opportunities for international students. The department is running its 11th batch with successful graduation of 7 batches of 400 students. 26 faculties specialized from different background (both civil, & military) are serving in this department. Out of them two are from Indian Air Force.

Within only about ten years, the department has participated in many national and international competitions and has clinched praise-worthy results. Mentionable are NASA Lunabotics Mining Competition 2013 (USA), DBF Competition 2013 (USA), SAE Aero-design competition 2013 (USA), NASA Lunabotics Mining Competition 2013 (USA), SAE Aero-design competition 2014 (USA), DBF Competition 2014(USA), Future Flight Design (FFD) 2015 (Turkey), DBF Competition 2019(USA). Aeronautical Engineering Department of MIST has organized 1st National Aero Design Competition in 2014 which is a milestone in the era of aviation in Bangladesh. The Department has also organized several job fairs, workshops and short courses to enlighten the interested people from diverse background about different aspects of Aeronautical Engineering.

The Board of Accreditation for Engineering & Technical Education (BAETE) approved Aeronautical Engineering program of MIST in 2016. AE Department has already signed MoU with Biman Bangladesh airlines. The department is in the process of concluding MoU with Civil Aviation Authority of Bangladesh (CAAB), US Bangla airlines, SPARSO, Beijing University of Aeronautics and Astronautics (China) and other universities/organizations at home and abroad for the improvement of its academic capabilities.

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, we need to produce human resources qualified with design, construction, repair and maintenance of ships and offshore structures. In this context, 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. this year (2018-2019).

NAME is a very interesting branch of study. Graduates in this field of study have actually duel degrees. In one way these graduates are naval architects and another way they are marine engineers. Study in NAME 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. It can be said that naval architects connect nation to nation and civilization to civilization through seas and oceans. Basically, a good naval architect is one who can acquire required knowledge of designing marine vehicles and structure satisfactorily, and utilize such knowledge for the benefit of mankind. A good naval architects has to build ship which must possess good S3 i.e. strength, stability and speed and good C3 i.e. comfort, communication and control that meet national and international rules and regulations. Marine design remains always as especial one in terms of quality, reliability and appearance.

Due to versatility of the field of study, the graduates of naval architecture and marine engineering have a wide range of employment and research opportunities worldwide. Moreover naval architects have

stake relations with certain organizations like shipyards, classification societies, fleet owners, flag states, authorities, shipping authorities, petroleum companies operating at offshore, defense forces and so on. Depending on their qualifications, capabilities and personal interests, they may become specialized in one field or develop broad experience in several areas. It is no way less effective to working as a marine engineer than that of a naval architect. The government organizations in Bangladesh where a NAME graduates may be consumed are Department of Shipping (DOS), Bangladesh Inland Water Transport Authority (BIWTA), Bangladesh Inland Water Transport Corporation (BIWTC),Bangladesh Shipping Corporation (BSC), Chittagong, Chittagong Port Authority (CPA), Mongla Port Authority (MPA), Payra Port Authority (PPA) Bangladesh Power Development Board (BPDP), Bangladesh Water Development Board (BWDB), Roads and Highways, Bangladesh Army, Bangladesh Navy, Bangladesh Coast Guard, Khulna Shipyard (KSY), Dockyard and Engineering Works (DEW) Narayanganj, Chittagong Dry Dock (CDD) etc. Beside the government organization, a good number of private organization and classification societies are available in Bangladesh to provide jobs for the NAME graduates. Once experience is gathered, it is possible for naval architects and marine engineers to gain promotion to senior technical and management positions in the industry, commerce and government.

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 undergraduate program in IPE are manufacturing, quality, process design, productivity improvement and management to meet the emerging technical needs of the industry. Education in IPE is very much leaned to practical situations and the relationship of the department with the industries will be strengthened through their involvement in curriculum development and various programs such as 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.

Improvising the stereotypical under-graduate course on Industrial and Production Engineering which emphasizes on manufacturing and improvement of productivity, our students will also learn trends of dynamics and control and hence will 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

Biomedical Engineering (BME) Department

In 2014, the Department of Biomedical Engineering was founded and began offering students undergraduate degree. A set of undergraduate students were selected and in February 2015 the first batch students were enrolled in Biomedical Engineering department. Following the same, the request for independent M.Sc and Ph.D degrees in BME was approved at the highest forum and BME department has began to receive graduate students in this field from October

2015. BME aims to improve human health by applying engineering principles and methods to medical problems. Although Biomedical Engineering is a very recent subject being introduced in our country, it is already a highly demanding field of study. Students get versatile means for career development after completing the degree. Today biomedical engineers are employed in industries, hospitals, research facilities, government regulatory agencies etc. BME is a broad interdisciplinary field that applies the art of engineering principles and design concepts to problems in biology, medicine, and biotechnology for healthcare purposes e.g diagnostic or therapeutic. The field seeks to close the gap between engineering and medicine. All the life saving devices like cardiac pacemakers, defibrillators, artificial kidneys, blood oxygenators, prosthetic hearts, and joints 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 outcome of BME.

The undergraduate program in BME provides a strong foundation in the basic sciences, mathematics, engineering and life sciences. The goal is to enable participants to compete successfully for engineering-related positions immediately upon graduation or to pursue post-graduate education in engineering, science, or medicine. Undergraduates will have the ability to contribute significantly to the development of new knowledge, understanding, and innovative solutions in the health care industry and across a wide variety of health care related research applications.

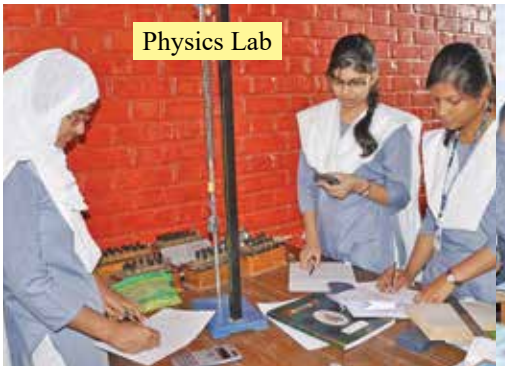
Nuclear Science and Engineering (NSE) Department

The decision of peaceful application of nuclear energy to address the increasing demand for the country's electricity sector is an intelligent, courageous and timely step of the present Government, the Peoples Republic of Bangladesh. Honorable Prime Minister approved the Ruppur Nuclear Power Plant project on December 6, 2016 in ECNEC. In order to become a proud partner of the government's nuclear energy development, Department of Nuclear Science and Engineering was established in December 2014 in this institute. Faculty members of this department are committed to address different infrastructural issues of the Rooppur Nuclear power Plant Project. Presently the main focus of the department is to formulate the security policies of this project. At present 153 undergraduate, 33 MSc and 3 PhD students are studying in this department. They are doing research work in the field of Nuclear safety, security and safeguards, Radiation Physics, Neutronics, Thermal Hydraulics, TRIGA Mark-II Research Reactor, Nuclear and Radiological Emergency Preparedness, Health physics by using different Nuclear Materials simulator and software etc. The education programs of this department are conducted considering the curriculum of the top universities of the world, guidelines of the International Atomic Energy Agency (IAEA) and the current demands of the Nuclear Industry. As a result, our graduates will enter the workforce in job-ready condition. They will be working as a professional nuclear engineer in the field of Nuclear Science and Engineering.

Science and Humanities (Sc & Hum) Department

Science & Humanities department has started its journey since 1999 with the inception of MIST. From the very beginning, this department has always been playing a vital role in laying the foundation of science and humanities for the potential engineers. Drawing upon the most recent thinking in the creative world each subject considers theoretical exposure, examines existing realities, includes essential elements, and offers a concise but indispensable portion of knowledge to prepare the students for the future world. There are modern and well equipped Physics and Chemistry laboratories to impart practical knowledge to the engineering students. Besides undergraduate programs, Post-Graduate Programs (MPhil & PhD) are active the department of Mathematics, Physics and Chemistry. Numbers of research works are in progress under these departments.

Humanities Department is a multidisciplinary department (comprising English, Economics, Sociology and Accounting divisions) aims at developing such capacity in the students which would help them to adapt themselves in this predominantly advanced world. A Material Research laboratory for Physics department is in progress funded by The World Academy of Sciences (TWAS), Italy for Nanotechnology applications. A set of highly qualified Faculties is committed in these departments for imparting quality education to the future Engineers, among them 10 faculties are PhD qualified in their respective fields. Thus Science and Humanities department is playing its due role in producing competent Engineers, Architects and Planners who in practical life prove themselves successful and famous.


Physics Lab


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 Dean's 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

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

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 form 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

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.

Library MIST has a well-arranged library enriched with about 52,000 books and a good number of periodicals, journals and magazines from home and abroad. It also subscribes a number of Bengali and English newspapers, periodicals and e-journals. Library has cyber cafe with Wi-Fi facilities. In addition to that each department has its own library enriched with adequate text and reference books.

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 meal with different types of cuisine within reasonable price.

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

Sports and Recreation MIST has got 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 befitting manner.

MIST Debate Society MIST Debate Society (MISTDS) arranges debate competition on regular basis.

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 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 our culture via organizing various workshops, events etc. MIST Literature and Cultural Club believes technology and creativity do not contradict each other's-rather both of them contribute to proper manifestation of a student. To uphold this belief, MIST Literature and Cultural Club has gloriously treated 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 Aeronautic and Astronautic Club MIST Aeronautic and Astronautic Club is supervised by the Department of Aeronautical Engineering. Its aim is to widen the knowledge of 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 wins 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 dept. 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.

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. By using updated and advanced technology, this unit will surely serve to make the institution a "Centre of Excellence".

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 students with ample opportunity to utilize their knowledge into practice by solving real-world problem. It also provides necessary technical support to different governmental organization regarding type approval of motor vehicles and other tests.

Computer Repair and Maintenance Centre The "Computer Repair and Maintenance Centre" was inaugurated on 01 December 2013. MIST has well enriched "Computer Repair and Maintenance Centre" for repairing 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 on 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 her 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 welcome all the young engineering students including their guardians in this ceremony. There are interactive session of 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.

MoU

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

Serial	University/ Institution	Year	Remark
1.	Two Faculties from Indian Air Force are under Faculty Exchange Program, India	2009	MoU is completed
2.	PLA (People's Liberation Army) University of Science and Technology (Nanjing), China	2012	MoU is completed
3.	Water-Aid Bangladesh- for Rainwater Harvesting System, Bangladesh	2013	MoU is completed
4.	United States Naval Academy- for exchanging faculty and Joint Research Program, USA	2013	MoU is completed
5.	United States Naval Academy (USNA), Annapolis, USA	2014	MoU is completed
6.	General Sir Kotelewala Defence University, Sri Lanka	2014	MoU is completed
7.	Stamford University Bangladesh	2014	MoU is completed
8.	Port City International University, Bangladesh	2014	MoU is completed
9.	University Kebangsaan Malaysia (UKM)	2014	MoU is completed
10.	Institute of Information Technology (IIT) & Jahangirnagar University (JU), India	2014	MoU is completed
11.	University Technology Malaysia (UTM), Malaysia	2014	MoU is completed
12.	International Islamic University Malaysia (IIUM)	2014	Letter of Collaboration is Completed
13.	The Ohio State University, Columbus, Ohio, United States	2015	MoU is completed
14.	Dockyard & Engineering Works Ltd, Sonakanda, Bandar, Narayanganj, Bangladesh	2015	MoU is completed
15.	University Technology Mara (UITM), Malaysia	2015	MoU is completed
16.	University of Malaya, Malaysia	2015	MoU is completed
17.	Bangabandhu Sheikh Mujibur Rahman Maritime University, Bangladesh	2015	MoU is completed
18.	Active Fine Chemicals, Bangladesh	2015	MoU is completed
19.	Biman Bangladesh Airlines, Bangladesh	2015	MoU is completed
20.	ICT Division, Ministry of Post & Telecommunications & Information technology, Bangladesh	2015	MoU is completed
21.	Indian Institute of Engineering Science & Technology (IIEST), Shibpur, India	2015	MoU is completed
22.	Gono Bishwabidyalay, Bangladesh	2016	MoU is completed
23.	Global Institute of Science and Technology (GIST), Australia	2016	MoU is completed
24.	Rosatom Technical Academy Russian Federation, Russia	2018	MoU is completed
25.	Defence Institute of Advanced Technology (DIAT), India	2019	MoU is completed

SEMINARS/ WORKSHOPS/ SHORT COURSES

Following are the seminars conducted by various departments of MIST from 2014 to 2019

Ser	Seminar/ Workshop / Short Course	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.	Building Construction and structural safety	CE
4.	Certificate Course on Professional GIS	CE
5.	Certificate Course on Professional Building and Bridge Design using ETABS and SAP 2000	CE
6.	Professional Training Program on Environmental Management in Export Processing Zones of Bangladesh	CE
7.	Building Construction and quality control	CE
8.	Workshop on Seismic Performance Assessment and Design of Structure'	CE
9.	Professional Training Course on Promotion of Industrial, Social and Environmental Standards in EPZs of Bangladesh	CE
10.	Workshop on ABET accreditation	CE
11.	Short Course on Advance Bridge Design 2017	CE
12.	Short Course on Retrofitting of Structures	CE
13.	Trg prog on Occupational Safety, Health and Environmental Management in EPZS of Bangladesh, BEPZA-MIST.	CE
14.	Lec Session on BAETE Accreditation.	CE
15.	Workshop on "Transport Planning Design and Modelling".	CE
16.	Short Course on Design of Tall Building	CE
17.	Short Course on Construction Management	CE
18.	Workshop on Seismic Performance Assessment and Design of Structures	CE
19.	Short Course on Analysis of Design of Box Girder Bridges	CE
20.	Contemporary Structural Engineering Challenges	CE
21.	Seminar on Performance Assesment of Buried Pipelines	CE
22.	Short Course on ANSYS (CIVIL)	CE
23.	Innovative form Work	CE
24.	Workshop on Outcome Based Education (OBE) System	CE
25.	Seminar on Landslide and Ground Movement Effects on Onshore and Offshore Structure	CE
26.	Guest Lecture on Application of High-Strength Steel in High-Strength Concrete Columns	CE
27.	Post Graduate Diploma on Project Planning, Development and Management	CE
28.	Workshop on "Transport Planning & Policy"	CE
29.	Seminar on "Seismic Design of Structure –ASCE-7"	CE
30.	Seminar on "Applications of Geo-physical Methods for Non-destructive Soil Investigation"	CE
31.	Seminar on "Challenges due to problematic Soils"	CE
32.	Seminar on "Scope and Challenges of Higher Studies in Top Universities of World"	CE

33.	Seminar on “Applying for higher degree research scholarships in Australia”	CE
34.	Workshop on “Performance Based Sesmic Design of Structures”	CE
35.	Seminar on “Cyber Security”	CSE
36.	Technical Session on Innovation for Smart Green Building Project	CSE
37.	18th International Conference on Computer and Information Technology (ICCIT-2015)	CSE
38.	Cloud Technology- A New Dimension in Computing	CSE
39.	Short Course on “Mobile Apps Development”	CSE
40.	Workshop on “BD Apps” by Robi Axiata Limited	CSE
41.	Seminar on “ Cloud Computing”	CSE
42.	Seminar on “ Global Navigation Satellite System (GNSS)”	CSE
43.	Campaigning on EATL Prothom Alo “Apps Contest 2016”	CSE
44.	Short Course on “Office Automation System” for BEPZA officials	CSE
45.	Short Course On Cisco Certified Network Associate (CCNA)	CSE
46.	Training On Server & Storage Technologies	CSE
47.	Short Course On C Programming Language	CSE
48.	Short Course On CompTIA A+ Certification Training	CSE
49.	Short Course On Mobile Apps Development	CSE
50.	Trg on Cyber Security and E-Filling Systems for BEPZA Personal	CSE
51.	Capsule Trg on Unicode-2017	CSE
52.	1st Industrial Advisory Panel (IAP) Meeting	CSE
53.	Workshop on ‘Cloud Computing’ by Bangladesh Research and Education Network (BdREN)	CSE
54.	On-site Training on Outcome Based Education (OBE)	CSE
55.	Seminar on Internet of Things (IoT)	CSE
56.	Short Course on Microsoft Office	CSE
57.	Short Course on Microcontroller and Robotics	EECE
58.	International Conference on Electrical Engineering and Information & Communication Technology (iCEEiCT-2014)	EECE
59.	Workshop on Technique Electrical Power Quality Understanding, Standard, Events, Analysis and Mitigation Techniques	EECE
60.	Effective Academic and Review Manuscript Writing	EECE
61.	International Conference on Electrical Engineering and Information & Communication Technology (iCEEiCT-2015)	EECE
62.	International Conference on Electrical Engineering and Information & Communication Technology (iCEEiCT-2016)	EECE
63.	Workshop on Line Following Robot (LFR)	EECE
64.	Short Course on “AutoCAD for Electrical Service Design”	EECE
65.	Robolution-2017	EECE
66.	Seminar on “Student Professional Awareness & Appearance”	EECE
67.	Seminar on “Free Seminar on the Aspects of IEEE”	EECE
68.	4th International Conference on Electrical Engineering and Information & Communication Technology (iCEEiCT 2018)”	EECE
69.	“5 MVA Substation Planning, Designing & Simulation Using Power System Analysis Software (ETAP)”	EECE
70.	“AutoCAD For Electrical Service Design”	EECE

71.	Electrical Service Design”	EECE
72.	‘‘Comptia A+’ - 2018”	EECE
73.	“Power Sector of Bangladesh and Employment Opportunities Overview”	EECE
74.	“Lightning and Thunderstorm: Forecasting, Awareness & Protection”	EECE
75.	“Basic Internet Networking and Fellowship for Students Related to Internet Networking”	EECE
76.	“Internet Connectivity on Perspective of Bangladesh and Basic Internet Networking for Beginners”	EECE
77.	“Research Paper Writing”	EECE
78.	Past, Present and Future Trend of Automobiles	ME
79.	Scope of Mechanical Engineers in Power Plant	ME
80.	1st International Conference on Mechanical Engineering and Applied Science	ME
81.	Short Course on Programmable Logic Controller	ME
82.	Short Training on Assessment Capability Development of Commercial HVAC Layout	ME
83.	1st International Conference on Mechanical Engineering and Applied Science	ME
84.	Prospect of Low Carbon Energy Technologies Around the World and its Transition	ME
85.	Short Course on Basic Solid Works	ME
86.	Short Course on ANSYS	ME
87.	On Site Training on Outcome Based Education (OBE)	ME
88.	Short Course on Air Conditioning and Duct Design.	ME
89.	Seminar on Safety Ground Transportation Systems in Bangladesh.	ME
90.	Short Course on Hydraulics System Design.	ME
91.	Short Course on Modern Features of Automotive Vehicle and Vehicle Inspection Procedure	ME
92.	Short Course on ANSYS	ME
93.	Short Course on Programmable Logic Controller.	ME
94.	Workshop on Remote Controlled Aircraft Design, Fabrication and Operation	AE
95.	Training on Outcome Based Education System-2018	AE
96.	Training on Outcome Based Education System-2019	AE
97.	Seminar on ‘‘Mechanical Behavior of High Temperature Ceramics for Space Applications”	AE
98.	Seminar on ‘‘Cloud Computing”	AE
99.	Cfd Short Course-2018	AE
100.	Seminar on “Accident in Bangladesh inland waterways: causes and remedies”	NAME
101.	Short course on ship design using MAXSURF software	NAME
102.	Short course on ship design using software MAXSURF and Rhino 3D	NAME
103.	Seminar on “Prospect of Ship Building Industries & Opportunities of Naval Architects in Bangladesh”	NAME
104.	A Workshop on “Nondestructive testing (NDT) and condition monitoring (CM) Application in shipbuilding industry”	NAME
105.	Seminar on “Implementation of classification societies(IACS) rules in ship construction in Bangladesh: Importance and challenges”	NAME
106.	Workshop on “Towing Tank-Ship model testing facilities and its prospect in Bangladesh”	NAME

107.	Seminar on Quality Assurance and Career Talk	NAME
108.	Architectural Festival	Architecture
109.	Design Charrette	Architecture
110.	Architecture Lecture Series 2018	Architecture
111.	The Essential Prerequisite for Effective Healthcare in Bangladesh	BME
112.	Seminar on Bio Safety Awareness: A Pathway to Improved Public Health	BME
113.	A Presentation on: 'Career Brief'	BME
114.	1st Meeting of: 'Industial Advisory Panel'	BME
115.	Short Course on: 'Rapid Prototyping: A Robust platform for Advanced Biomanufacturing'	BME
116.	Seminar on: 'Regenarative Medicine'	BME
117.	Challenges and Future Prospects in the Sectors of Environment, Water Resources, and Coastal Zones: Perspective from Potential Engineers	EWCE
118.	1st International Conference on Climate Change and Water Security	EWCE
119.	Certificate Course on Tubewell Design	EWCE
120.	Short Course on "Plumbing Design: Theory and Practice"	EWCE
121.	AQUAwareness- A Seminar and Exhibition on the Occasion of World Water Day 2018	EWCE
122.	Perspective Future of Nuclear Engineering in Bangladesh	NSE
123.	Seminar on "Nuclear Energy in Bangladesh and Safety Issues	NSE
124.	Workshop on "Nuclear Engineering"	NSE
125.	Workshop on PCTran Nuclear Power Plant Simulator	NSE
126.	Seminar on "VVER Technology Based Nuclear Power Plant and Preparation for New Comer Countries"	NSE
127.	Post Graduate Thesis Seminar	NSE
128.	Workshop on PCTran Nuclear Power Plant Simulator	NSE
129.	Workshop on COMSOL Multiphysics Software	NSE
130.	Seminar on "Present Status of Nuclear Energy Development in Bangladesh"	NSE
131.	Workshop on 'Nuclear Reactor Core and Fuel Analysis'	NSE
132.	Seminar on "Energy Scenario and Prospect of Petroleum & Mining Engineering in Bangladesh"	PME
133.	Short Course on "LPG Plant Construction and Operation"	PME
134.	Short Course on "Petroleum Reservoir Modeling by Eclips and Petrel"	PME
135.	Short Course on "Python in Industrial Engineering Data camp"	IPE
136.	Short Course on "Design and development of Prototype using Computer Integrated Manufacturing Process"	IPE
137.	Technical Seminar on "Design and Manufacturing of Variable Stiffness Cellular Architecture	IPE
138.	Seminar on "IPE & Supply Chain Discovering the Link Within	IPE

LABORATORY FACILITIES

CE Department

- Transportation Engineering Laboratory
- Geotechnical Engineering Laboratory
- Concrete Laboratory
- Solid Mechanics Laboratory
- Survey and Mapping Laboratory
- Computer Aided Design Laboratory
- 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

- Model Making Laboratory
- Urban Design Laboratory
- Computer Application Laboratory
- Building Material and Construction Laboratory
- Landscape Architecture Laboratory
- Heritage and Conservation Laboratory

CSE Department

- Digital Laboratory
- Multimedia and Graphics Laboratory
- Network Laboratory
- Software Engineering Laboratory
- Artificial Laboratory
- Micro Processor & Micro Controller Laboratory
- Postgraduate Research Laboratory
- Mobile App and Game Testing Laboratory
- Information Security and digital Forensic Laboratory

EECE Department

- Electronics and Digital Electronics Laboratory
- Power Electronics Laboratory
- Analog and Digital Communication Laboratory
- VLSI Laboratory
- Numerical Technique Laboratory
- Digital Signal Processing Laboratory
- Electrical and Electronic Circuit Simulation Laboratory
- Computer Programming and Networking Laboratory
- Data Acquisition Laboratory
- Microprocessor and Interfacing Laboratory
- Electrical Circuit Laboratory
- Electrical Services and Design Laboratory
- Electrical Machine Laboratory
- Power System Laboratory
- Switchgear & protection Laboratory
- Control System Laboratory
- High Voltage Laboratory
- Measurement & Instrumentation System Laboratory
- Satellite Communication and Microwave Engineering Laboratory
- Radio Antenna Laboratory
- Mobile Cellular Communication System Laboratory
- Optical Communication Laboratory
- Electronic Warfare Laboratory
- Sonar and Underwear Engineering
- Guided Weapon System Laboratory

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 and Ground Electronics Laboratory
- Aero-structure Laboratory

NAME Department

- Computer Aided Ship Design & Ship Drawing Laboratory
- Ship Structure and Model Fabrication Laboratory
- Marine Engine, Refrigeration & Auxiliary Machinery Laboratory
- Ship's Instrument and Marine Transportation Laboratory
- Ship Resistance and Propulsion Laboratory
- Towing Tank and Stability Test Laboratory
- Hydrodynamics Laboratory
- Damage Control, Fire Fighting & Life Saving Equipment Laboratory

IPE Department

- Computer Integrated Manufacturing (CIM) Laboratory
- Conventional and Advanced Machine Tools Laboratory
- Production Process Laboratory
- Instrumentation and Quality Control Laboratory
- Material Handling Laboratory
- Simulation Laboratory

NSE Department

- Modeling and Simulation Laboratory
- Health/Nuclear Physics Laboratory
- Radiation/Medical Physics Laboratory
- Radiochemical Laboratory

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 faculties drawn from military as well as from civil society including international arena are relentlessly engaged in imparting knowledge to the students. In addition, teachers from reputed universities take classes on particular subjects / courses. Guest speakers / teachers from various organisations / institutions / universities are also invited to participate in teaching programs, lecturers, seminars etc. At present, the state of Instructors / teachers of MIST are as follows:

Appt	Armed Forces	Civil Faculty Members			From Other Universities	Total
		Permanent	Contract	Adjunct		
Col & Above / Professor	21	03	16	02	62	104
Lt Col / Associate Professor	22	-	09	-	18	49
Maj / Assistant Professor	24	05	14	02	10	55
Capt / Lecturer	21	01	26	92	03	143
Total	88	09	65	96	93	351

RECOGNITION OF ACADEMIC PERFORMANCE

Osmany Memorial Gold Medal

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

MIST Medal

Awarded to the first position holder among graduating regular students of each department, who possesses a good discipline

Front View

Rear View

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 applicants who passed the examination in 2017 and 2016 in Science Group obtaining a minimum GPA 4.00 (without fourth subject) in the scale of 5.0 can apply.

b. HSC Examination (or Equivalent) The applicants who passed in 2019 and 2018 obtaining a minimum total grade point 17 in four subjects (Mathematics, Physics, Chemistry and English) can apply.

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

(1) The applicants who passed in 2017 and 2016 with minimum 'B' grade in five subjects including Mathematics, Physics, Chemistry and English in GCE 'O' Level can apply.
(2) The applicants who passed in 2019 and 2018 with minimum 'B' grade in Mathematics, Physics and Chemistry in GCE 'A' Level can apply.

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.

NUMBER OF SEATS

The highest number of seats for 4 (four) years' Bachelor Degree in Engineering Programs (Unit-A) and 5 (five) years' Bachelor Degree of Architecture Program (Unit-B) is given below with Admission Test Units:

Ser	Unit	Department	Seats
1	A	Civil Engineering (CE)	60
2		Computer Science and Engineering (CSE)	60
3		Electrical, Electronic and Communication Engineering (EECE)	60
4		Mechanical Engineering (ME)	60
5		Aeronautical Engineering (AE)	50
6		Naval Architecture and Marine Engineering (NAME)	40
7		Biomedical Engineering (BME)	40
8		Nuclear Science and Engineering (NSE)	40
9		Environmental, Water Resources and Coastal Engineering (EWCE)	60
10		Industrial and Production Engineering (IPE)	50
11		Petroleum and Mining Engineering (PME)	25
12	B	Architecture (ARCH)	25
Total			570

SUBMISSION OF APPLICATION - 2020

Instructions for Submission of e-Application

Application for the **Admission Test-2020** in MIST will be accepted only through online system from **01 September to 26 September 2019**. No manual application will be accepted unless there is some system difficulty in application process. An applicant needs to deposit **Tk. 900 (Nine Hundred) for unit A and Tk 1100 (One Thousand and One Hundred) for B and A+B** units only as application fee through SMS from Teletalk prepaid mobile phone. No fee will be accepted by MIST other than through SMS system. Cash will not be accepted. To complete the online application, an applicant must upload a copy of recent passport size colored photograph (exactly 300X300 pixel and maximum 100 KB size) and signature (exactly 300X80 pixel and maximum 60 KB size). Both photograph and signature should be in jpg format. Applicants must read the details given in the 'Instructions and Information for MIST Admission Test' very carefully. They may also take the printout of the instructions. Steps to be followed to submit the application for the MIST **Admission Test-2020**. For female candidates the words he and his will mean she and her in the application form.

Step 1: Filing up Online Application Form

Go to MIST website **www.mist.ac.bd** and click '**Online Application**' box. From 'Online Application' box, select 'Online Application Form for General Education (HSC or Equivalent) Examination Applicants' or 'Online Application Form for GCE (A Level or Equivalent) Applicants'. Then Click '**Next**'.

1. For General Education (HSC or Equivalent) Examination Applicants

a. Applicant's Academic Information In the 'Application' box, put your roll number, registration number, name of board and year of passing for both SSC and HSC examinations. Then select 'Next'.

b. Applicant's Personal Information In the next screen, applicant's name, date of birth, gender, father's name, mother's name and nationality will be displayed. Applicant's educational qualifications of SSC or Equivalent and HSC or Equivalent will also be displayed. In this screen, the applicant needs to fill up certain information. These are:

i. **Choice of Units** An applicant needs to select ONE unit from the pull down menu among Unit A (Engineering Programmes), Unit B (Architecture Programme) and Unit A+B (Engineering and Architecture Programmes).
ii. **Category of Candidature** There are four options: General, Children of Freedom Fighters, Tribal Citizens and Children of Military Personnel. An applicant needs to select one from pull down menu according to his category of candidature.
iii. **Address** An applicant needs to type his address. He is to select District and Upazilla from the 'Pull Down' menu.
iv. **Contact Cellphone Number** The applicant must give a valid contact number (cell phone) of any operator (GP, Banglalink, Airtel, TeleTalk etc.) for making subsequent communication. This mobile number is very important for confirmation of receipt of application, list of eligible candidates for admission test, admission test results and final admission to MIST.
v. **Upload Photo and Signature** An applicant is required to prepare two jpg format files each containing Passport size photo (with exactly 300 x 300 pixel and maximum 100 KB size) and his signature (with exactly 300 x 80 pixel and maximum 60 KB size). Candidate needs to select 'Browse' button and upload the photo and signature from the drive / location. Applicant can take help to resize from the web link www.picresize.com.

vi. **Validation Code** There will be a validation code on the left side of the blank space. Type this code on the blank space.

vii. **Declaration** Read the statement of confirmation declaring the correctness of the given information. Applicant needs to agree to the statement and check the button. Then click on the '**Submit**' button.

2. For GCE (A Level/ Equivalent) Applicants

a. **Applicant's Required Information** The applicant needs to type his name, father's name, mother's name etc. He needs to select date of birth from the 'Pull Down' menu. He also needs to select the Gender 'Radio' button. Then click '**Next**'.

b. **Choice of Units** An applicant needs to select **one unit** from the pull down menu among Unit A (Engineering Programmes), Unit B (Architecture Programme) and Unit A+B (Engineering and Architecture Programmes).

c. **Category of Candidature** There are four options: General, Children of Freedom Fighters, Tribal Citizens and Children of Military Personnel. An applicant needs to check the appropriate button according to his category of candidature.

d. **Address** The applicant needs to type his address. He is to select District and Upazilla from the 'Pull Down' menu.

e. **Contact Number** The applicant must give a valid contact number (cell phone) of any operator (GP, Banglalink, Airtel, TeleTalk etc.) for making subsequent communication. This mobile number is very important for confirmation of receipt of application, list of eligible candidates for admission test, admission test results and final admission to MIST.

f. **Educational Qualification** Type the name of the Institution and select year of passing, grade of subjects from the 'Pull Down' menu for both 'O' level and 'A' level examinations.

g. **Upload Photo and Signature** An applicant is required to prepare two jpg format files each containing Passport size photo (with exactly 300 x 300 pixel and maximum 100 KB size) and his signature (with exactly 300 x 80 pixel and maximum 60 KB size). Candidate needs to select 'Browse' button and upload the photo and signature from the drive / location. Applicant can take help to resize from the web link www.picresize.com.

h. **Validation Code** There will be a validation code on the left side of the blank space. Type this code on the blank space.

j. **Declaration** Read the statement of confirmation declaring the correctness of the given information. Applicant needs to agree to the statement and check on the 'Radio' button. Then click on the 'Submit' button.

3. Then the applicant will see a preview page with his photo and signature along with other information. The applicant will get a user ID. This user ID will be required to deposit the application fee as instructed on earlier section. The applicant will get a confirmation message that the applicant completed step 1 in submitting the application. It is to be noted that the application process will not be completed until the application fee is deposited through SMS from TeleTalk prepaid mobile phone within **24 (Twenty Four)** hours from time of application as mentioned in your receipt (Applicant's Copy).

Step 2: Depositing Application Fee through SMS

4. Application Fees

Each applicants needs to deposit Tk. 900 (Nine hundred) for UNIT A (ONLY ENGINEERING PROGRAMS) and 1100 (Eleven Hundred) for UNIT B (ARCHITECTURE) and A+B both units only as application fee through SMS from TeleTalk prepaid mobile phone within 24 (Twenty Fours) hours after submitting application. Following steps are to be followed to deposit application fee:

a. Go to SMS option in TeleTalk prepaid mobile phone. Then type MIST <space> user ID. Then send to 16222. Example: Type MIST 666666 (six digit pin) then send to 16222. The applicant needs to type his user ID in place of 666666.
b. If the SMS is sent correctly, the applicant will receive a six digit PIN along with his Name and amount of application fee. The applicant will be asked to confirm the process of depositing the application fee.
c. To confirm the process of depositing the Application Fee, type MIST <space> YES <space>PIN and send to 16222. Example: Type MIST YES 777777 then send to 16222. The applicant needs to type his PIN in place of 777777.

5. **Confirmation** The applicant will then receive a confirmation SMS from MIST in his given contact mobile number that the application is finally submitted to MIST. He will also receive a User Name and a Password. This will be required for eligible applicants to download admit card.

6. Physical Submission of Certificates

Applicants under the categories of Children of Freedom Fighters (FF), Tribal Citizen (TC) and Children of Military Personnel (MW) must send a scan copy of required certificate / documents to ugadmission@mist.ac.bd or submit to **MIST admission Section physically within 1430 hours by 30 September 2019.** Required certificate/ documents are:

a. For Freedom Fighter Related Bangladesh Gazettes/ temporary certificate issued by Ministry of Liberation War Affairs/ Lal Muktibarta/ Indian List/ Certificate from Bangladesh Mukti Joddha Sangsad and relationship certificate with freedom fighter.

b. For Military Ward (Children of Military Personnel)

(1) Serving: Certificate from CO/ equivalent/ his representatives.

(2) Retired: * Officers: Certificate/ Certificate from CORO/ Naval Secretariat/ Air Secretariat.
* JCO/ OR/ NC (E) of Army/ Navy/ Air Forces: Certificate/ Service Record Book from respective Arms/Service's Record Offices/ Drafting office.

c. For Tribal Citizen Certificate issued by local Upazilla Chairman and counter signed by District Commissioner.

d. The submission of application of applicants i.e. Children / grand- children of Freedom Fighters, Tribal Citizen and Children of Military Personnel will not be completed without submitting the required certificates / documents by **30 September 2019.**

7. Contact (in Case of any Difficulty) In case of any difficulty for filling up the online application, the applicants are requested to contact the 'Admission Help Desk' (Room 201, 2nd Floor, Tower Building-1). Contact: mist website: www.mist.ac.bd and Phone: +88-01769-023842,+88-01769-024054, +88-01769-024056, +88-01769-024090, +88-01769-024094, email: admission@mist.ac.bd

ADMISSION TEST AND SELECTION PROCEDURE

Selection of Candidates

1. Candidates will be short-listed on the basis of total marks / GPA obtained in Mathematics, Physics and Chemistry in HSC/Equivalent examination. In case of tie, order of priority for finding the eligible candidates will be: marks / GPA in Mathematics, Physics and then Chemistry. **Two separate lists** (one for current year and one for last year's candidate) will be generated for selection purpose to appear written test only. Short-listed candidates will be allowed to take part in the written admission test of 03 (three) hours (For Unit A) and 3+1= 04 hours (for Unit B and Unit A+B). All eligible candidates of reserved seats (Children of Military Personnel, Children/ grand-children of Freedom Fighters, Tribal Citizens) and all eligible candidates with GCE 'A' Level/ Equivalent of current and previous year (last year only) will be allowed to seat for Admission Test. The list of eligible candidates to appear admission test will be displayed in the notice board and website of MIST **www.mist.ac.bd** and will be intimated to individual through SMS to the contact mobile number given by the applicant.

Examination System

2. There will be no multiple choice type questions (MCQ), questions will be in both English and Bangla and applicants can answer in English or Bangla. The marks distributions for both units are as follows:

Ser	Module	Subject	Marks	Remarks
1	Unit A Engineering	Mathematics	80	Total Marks: 200 Exam Duration: 3 hours
2		Physics	60	
3		Chemistry	40	
4		English	20	
5	Unit B Architecture	Drawing and Architecture related topics	100	Total Marks: 200+100= 300 Exam Duration: (3+2) hrs

3. For Unit A only, candidates will sit for the written test of 3 hours. For Unit B (Architecture) only / both A and B (Engineering and Architecture) candidates will sit for the written test of 5 hours (3 hours + 2 hours) with a break in between.

4. **Important Dates**

Application Submission	From 01 September to 26 September 2019 (up to 2400 BST)
List of Eligible Candidates	01 November 2019
Written Admission Test. For unit A	0900 – 1200 hours on 01 November 2019 (Friday)
Written Admission Test. For Unit B and (A+B)	0900 – 1200 hours and 1500 - 1700 hours on 01 November 2019 (Friday)

FINAL SELECTION

1. Minimum qualifying marks in the written test is 40% for both Unit A and Unit B. All applicants must obtain 40% of allocated marks separately for question module 1 and 2. In exceptional circumstances for fulfillment of specified number of seats, President Admission Committee will apprise the Commandant. Commandant, MIST may consider relaxation of this condition. Merit list of the candidates for final selection for admission to MIST will be prepared on the basis of Written Test only. Biology at HSC/ Equivalent level is must for applicants of Biomedical Engineering with a grade of minimum 'A-' and minimum grade point 'C' for GCE/ Equivalent level.

2. In case of tie, merit position will be determined on the basis of marks obtained in admission test in Mathematics, Physics, Chemistry and English respectively. Further dispute may be solved giving priority of result to HSC over SSC examination.

3. 5% marks will be deducted from the Written Test for the previous year's (last year only) candidates. Thereafter, Combined Merit List (current plus last year's candidate) will be prepared for the admission and department allocation.

ADMISSION PROCEDURE

Medical Check-up

Provisionally selected civil candidates are to undergo medical check-up at MIST medical center. They will have to produce test reports of urine for R/E, blood for HBs Ag and blood grouping before the MIST medical authority. The medical authority will decide on the physical fitness of candidates for admission in MIST.

Admission

Candidates finally selected for admission will have to adhere to the following rules and procedures:

a. Candidates have to complete admission formalities within a fixed period of time as decided by admission committee.
b. Any candidate failing to complete admission formalities within the prescribed time, selection will be automatically cancelled.
c. Any student failing to attend the class within two weeks of the commencement of the academic program will warrant cancellation of his / her admission and forfeiture of all fees including security deposit.
d. Waiting lists will be prepared and displayed by the admission committee as per merit and be notified as per requirement.

Following 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 introducing 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 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

Civil 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**
Ash coloured half sleeve shirt (tucked in), Black coloured full pant, Black Oxford shoes and Black socks.	Ash coloured full sleeve shirt (tucked in), 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 is going to introduce course system for undergraduate studies from the academic session 2017-18. Therefore, the rules and regulations mentioned in this paper will be applicable to students for administering undergraduate curriculum through the Course System. This will be 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 5 in each term. However, with the recommendation of course coordinator and Head of the Department, Comdt MIST may allow relaxation in this regard.
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 (Term I and Term II) in an academic year. In addition to these two regular terms there will be a short term after the Term II of each academic year. During the short term, students can take only failed courses to cover up the credit deficiencies.

6. Respective departments will take the decisions about courses to be offered during each short term depending upon the availability of course teachers and number of students willing to take a particular course.

Duration of Terms

7. The duration of each of Term I and Term II (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

8. The duration of a Short Term will be around 7 weeks of which about 6 weeks will be spent for class lectures and one week for Term Final Examination. The duration for Short Term and Examination will be as under:

1.	Short term/ Preparatory Leave	6 weeks
2.	Examination	1 week
Total		**7 Weeks**

Course Pattern and Credit Structure

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

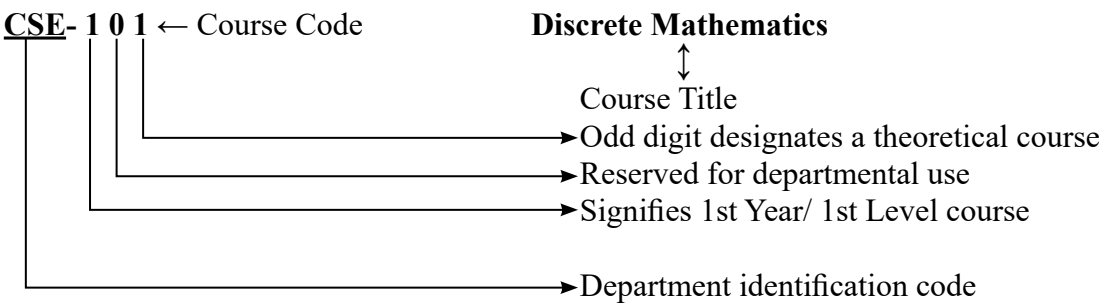
Course Designation System

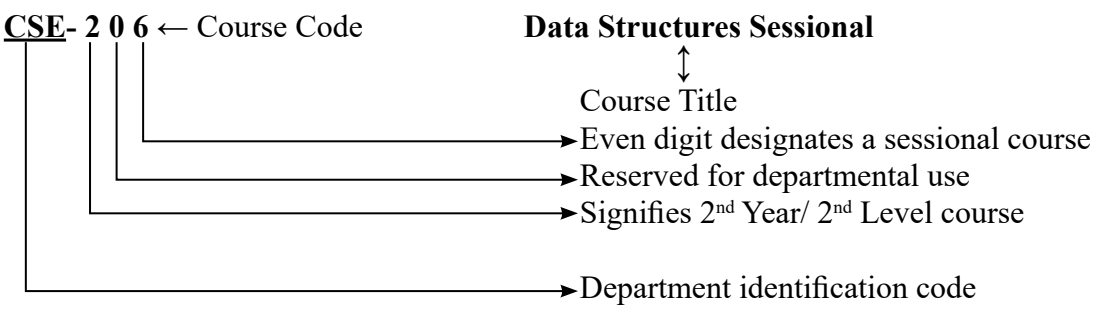
10. Each course is designated by a maximum of four letter code identifying the department offering the course followed by a three-digit number having the following interpretation:

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.





Assignment of Credits

12. 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

13. 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

14. 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 the respective department (BUGS).

15. 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

16. 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

17. 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.

18. 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.

19. 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

20. 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.

21. 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 advisor. The date, time and venue of registration

are announced in advance by the Registrar's Office. It is absolutely essential that all the students be present for registration at the specified time.

22. 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.

23. 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.

24. 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

25. 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.

26. 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 Comdt, a lesser number of credit hours to suit individual requirements. Such cases are also applicable to students of Level 4 requiring less than 15 credit hours for graduation.

Course Add/Drop

27. A student has some limited options to add or delete courses from the registration list. Addition of courses is allowed only within the first three weeks of a regular term and only during the first week of a short term. Dropping a course is permitted within the first four weeks of a regular term and two weeks of a short term.

28. Any student willing to add or drop courses has to fill up a Course Adjustment Form that is available in the Registrar's Office. 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.

29. 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

30. 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 years.

The Grading System

31. The total performance of a student in a given course is based on a scheme of continuous assessment theory courses this continuous assessment is made through a set of quizzes, class evaluation, class participation, homework assignment and a term final examination. The assessments for laboratory 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
Incomplete	I	-
Withdrawal	W	-
Project/ Thesis continuation	X	-

* 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

32. Theory. Forty percent (40%) of marks of a theoretical course shall be allotted for continuous assessment, i.e. quizzes, home assignments, class tests, observations/ class performance. 40% 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 Test/ Assignment	20%
Mid Term Assessment (Exam/ Project)	15%
Final Examination (Section A & B)	60%
Total	**100%**

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 students at 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 week 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.

33. Sessional/ Practical Examinations Sessional courses are designed and conducted by the concerned departments. Examination on 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 (all or as decided by the ESC):

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%**

34. 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%**

35. Class Attendance Class Attendance may be considered as a part of continuous assessment.

Collegiate and Non-collegiate

36. Students having class attendance of 90% or above in individual subject will be treated as collegiate and less than 90% and up to 75% 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 75% 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

37. 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

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

$$= \frac{Summation\ of\ (Credit\ hours\ in\ a\ course * Grade\ point\ earned\ in\ that\ course)}{Total\ number\ of\ credit\ hours\ completed}$$

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

38. 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 eight 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

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

Minimum Earned Credit and GPA Requirement for Obtaining Degree

39. Minimum credit hour requirements for the award of bachelor's degree in engineering (B.Sc. Engineering) and other discipline will be decided as per existing rules. The minimum GPA requirement for obtaining a Bachelor's degree in Engineering and Architecture is 2.20.

Impacts of Grade Earned

40. 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.

41. 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.

42. 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.

43. 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.

44. 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

45. 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

46. 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.

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

Performance Evaluation

48. 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.

49. 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.

50. 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.

Rules for Self-Study Courses

51. A self-study course is among the regular courses listed in the course catalog. This type of course is offered only in exceptional cases. The following rules are applicable to all self study courses:

a. Whether a course is to be floated as a self study course will be decided by the Head of the concerned department in consultation with the teacher/course coordinator concerned. Such a decision also has to be reported to the Academic Council.
b. A self study course may be offered in a particular term only if the course is not running in that term as a regular course.
c. The self study course is offered to a student in his/her graduating term if it helps him/her to graduate in that term.
d. A student is allowed to register for a maximum of two theory courses on a self-study basis.
e. Students should have 75% class attendance.
f. Normally no lecture will be delivered for a self study course but laboratory/design classes may be held if they form part of a course.
g. The course coordinator/course teacher will assign homework, administer quizzes, and final examination for giving assessments at the end of the term.
h. No Laboratory/Sessional Course can be taken as self study course.

Rules for Courses Offered in Short Term

52. A Short Term course will be conducted after one week of completion of Term II Final Examination in each year. The following rules are applicable to Short Term courses:
a. The courses to be run during the short term shall be decided on the recommendations of departments on the basis of essential deficiencies to be made up by a group of students. Once floated, other students could be allowed to register in those courses subject to the capacity constraints and satisfaction of prerequisites.
b. Student will be allowed to register in a maximum of three theory courses during the Short Term.
c. Graduating students may register for Short Term examinations after finalization of result of Term 2 final examination.
d. A certain fee for each credit hour to be registered to be borne by the students who enroll during Short Term.

Minimum Earned Credit and GPA Requirement for Obtaining Degree

53. Minimum credit hour requirements for the award of bachelor's degree in engineering (B Sc. Engg) and architecture (B. Arch.) will be decided by the respective department (BUGS). However, at least 157 credit hours for engineering and 189 credit hours for architecture must be earned to be eligible for graduation, and this must include the specified core courses. The minimum GPA requirement for obtaining a Bachelor's degree in engineering and architecture is 2.20.

54. A student may take additional courses with the consent of his/her Adviser in order to raise GPA, 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

55. 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

56. A student must complete his studies within a maximum period of six years for engineering and seven years for architecture.

Attendance, Conduct and Discipline

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

58. Attendance All students are expected to attend classes regularly. The university 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.

59. 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

60. 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

61. 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 coordinator(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

62. 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

63. 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. **Short Term Examination** Short Term may be conducted after one week completion of Term 2 final examination. Students will be allowed to take maximum three theoretical courses in the Short Term. Examination will be conducted at the end of Short Term (6thweek class). However, Head of concerned department with the approval of Commandant may decide to take Supplementary Examination instead of Short Term. No Laboratory/Sessional Courses can be taken in short term.

c. **Supplementary Examination** It will take place once in a year, after each term-I final break. It should be completed within first 3 weeks of a new term. Students will be allowed to appear this examination

for two subject at a time. Graduating students will be allowed to appear maximum three subjects during supplementary examination in their last Term. However, Head of the concerned department with the approval of Commandant may decide to take another Supplementary Examination instead of Short Term. In that case, a student will be allowed to take maximum three failed course or Improvement courses in the particular Supplementary Examination. This examination will be conducted in the previous week of the beginning of Term I. Highest achieved grade for all courses of Supplementary Examination will be B+.

d. **Improvement Examination** It will be taken during supplementary and short term examination. Questions will be same as the question of the regular examination of that Short Term Final Examination (if any). Student can take maximum three subjects at a time 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,e previous to improvement examination, shall be reflected in the transcript.

e. **Self-Study Course Examination** Only graduating students (level-4) will be allowed to appear at Self Study course examination. It will be taken with Term Final Examination. No regular class will be arranged for this, but teachers will be assigned for supervising and guiding the students for study, conducting class test/quiz and regular assessment for 30% marks. Maximum two theory courses may be taken as self-study course by a student. Highest achieved grade for these courses will be B+. In that case a student will be allowed to take maximum 24 credit instead of 15 in the last Term of his/her graduation.

f. **Special Referred Examination** Since course system will start from 1st Term of 2018, for all casualty cases like referred, backlog, failed courses, level repeat students will be given chance to clear their respective all failed courses by appearing in this examination. It will be held after the confirmation of the result of Term-II Final Examination of 2017 and before starting of the class of the Term-I of 2018. Students of all levels, failed in any courses even after appearing in Special Referred Examination-1, will be allowed to re-appear again in the failed courses during Special Referred Examination-2 to be held during Mid Term break of Term-1 of 2018. Student of Level-4 of 2017, failed in any courses even after appearing in these two referredexaminations, will be allowed to clear failed courses as a last chance, during Term-1 final examination of 2018 (as a Special Referred Examination-3). Students of other levels, failed in any courses even after appearing in two Special Referred Examinations, will be allowed to clear these failed courses as per normal rules of course system (either by retaking these courses or appearing at the supplementary Examination). Highest grade for courses in all these examinations will be 'B+'.

Rules of Different Examinations

64. Term Final Examination Following rules to be followed:

a. Registration to be completed before commencement of the class. 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 one week 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.

65. Short Term Examination Following rules to be followed:

a. Short Term for period of 6 weeks may be offered by a department afterone week of completion of Term

II Final Examination.
b. Short Term Final Examination is to be conducted on 7th week of Short Term.
c. Only repeat course can be offered, not any fresh course.
d. Classes will be arranged for the students who register a failed course in the Short Term.
e. After 6 (six) weeks of class, in the 7th week short Term Examination will be held. Academic calendar for this Short Term will be declared by the Department during the Mid-Term break of Term-II.
f. One student can take only three(failed/improvement) courses at a time in the Short Term.
g. Students will have to complete registration of course for Short Term by paying all the fees, before starting of the Term-II final Exam.
h. Graduating students may register for Short Term examinations after finalization of result of T 2 final examination.
j. Maximum grading will be 'B+'.
k. Question Setting, Moderation, Result Publication will be done following the same rules of Term Final Exam as per Exam Policy. Separate Tabulation sheet will be made for this examination.
l. However, Head of concerned department with the approval of Commandant may decide to take Supplementary Examination instead of Short Term. Students will be allowed to take maximum three failed courses/Improvement courses in that Supplementary Examination.

66. Supplementary Examination Following rules to be followed:

a. After the final break of every Term-I, Supplementary Examination will be held (once in a year).
b. Examination will be taken on 70% marks like Term Final examination. Remaining 30% marks on continuous assessment earned previously in that particular course will be counted. If a student fails in a course more than once in regular terms, then best one of all continuous assessment marks will be counted.
c. A student will be allowed to take maximum two courses at a time for each supplementary examination, but in the graduating Term one student can take maximum three courses if required.
d. Highest grade of supplementary examination will be 'B+'.
e. Registration for supplementary courses to be done during the mid-term break of Term 1, paying the required fees.
f. Examination will be completed after Term I End break within three weeks of Term II.
g. 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. Anyone fails twice in a course, can only retake it in regular or short term for appearing third time. But if anyone fails even after appearing third time, he has to take approval from Academic Council of MIST for appearing last time in a course.
h. If anyone fails in the sessional course, that course cannot be cleared in the supplementary examination.
j. Question setting, Moderation, Result Publication will be done following the same rules of Term Final Examination as per Examination Policy.
k. However, Head of the concerned department with the approval of Commandant may decide to take another Supplementary Examination instead of Short Term. In that case, a student will be allowed to take maximum three failed courses or Improvement courses in that particular Supplementary Examination. This examination will be conducted in the previous week of the beginning of Term 1. Registration of that Supplementary Examination should be completed during registration of Short Term course.

67. Improvement Examination Following rules to be followed:

a. 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.
b. Highest grade of Improvement examination will be 'B+'.
c. One student is allowed to appear at Improvement exam in 6 (six) courses in his whole graduation period taking maximum three courses at a time.
d. For Improvement examination, registration is to be done before Term 2 Final Examination with the

Short Term Courses or, during the registration of Supplementary Courses by paying all the fees.
e. Improvement examination to be taken during the supplementary and short term examinations.
f. Choice of Improvement course is restricted within the offered courses of that Short Term by the Departments and in two courses at a time.
g. Question Setting, Moderation and Result Publication to be done withcourses of regular Term Final Examination.

68. Self-Study Course and Examination Following Rules to be followed:

a. An irregular student for completion of his graduation, can take maximum two repeat courses as self-study course in the graduating Term if he desires and is accepted by department.
b. One student can take maximum 24 credit hours course in the graduating Term to complete his graduation.

c. Registration for self-study course by paying all fees, must be completed with other course of regular Term.
d. To run the self-study course, concerned Department will assign one teacher each for every self-study course offered. No regular theory class will be held, but that assigned teacher will take necessary class Tests, Quiz Test and give attendance and observation marks to give 30% marks at the end of the Term. For remaining 70% marks written examination will be taken with the Term Final Examination.
e. Assigned teacher for self-study examination will be responsible for setting questions of 70% marks and other examination formalities.
f. Question Setting, Moderation, and Result Publication to be done with courses of Term Final Examination.
g. Grading of Self Study course and examination will be maximum 'B+'.

69. Special Referred Examination Following rules will be followed:

a. Immediately after the finalization of result of Term-2 final exam of 2017, for all failed/leftover courses, special referred examination will be arranged and students will have to register the courses for the examination by paying required fees and charges. Following the registration, Admit Card will be issued.
b. Examination will be held before commencement of Term-1 of 2018.
c. One student can appear at all of his failed courses (Referred/Backlog) in the Referred Examination including present level-repeat students.
d. Highest grade for all courses in this Examination will be 'B+'.
e. Question Setting, Moderation and Result Publication will be done following the same rules of Term Final Examination as per Examination Policy.
f. Separate Tabulation Sheet will be made for this special referred examination.

Irregular Graduation

70. If any graduating student clears his/her failed course in Term-1 and his graduation requirements are fulfilled, his graduation will be effective from the result publication date of Term-1 and that student will be allowed to apply for provisional certificate.

Conclusion

71. Most of the universities of the world follow course system. As such this will also help MIST to follow accreditation requirements. The new system is required to be understood by all faculties by heart in order to advise students properly.

DISTRIBUTION OF CREDIT HOURS

FACULTY OF CIVIL ENGINEERING

CE Department

Level	Term	Credit Hour
1	I	19.00
	II	21.00
2	I	20.00
	II	21.00
3	I	20.00
	II	20.50
4	I	20.50
	II	20.00
Total Credit Hours:		**162.00**

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	20.50
2	I	20.50
	II	19.50
3	I	21.50
	II	22.00
4	I	20.00
	II	19.00
Total Credit Hours:		**162.50**

PME Department

Level	Term	Credit Hour
1	I	19.50
	II	19.50
2	I	19.75
	II	19.50
3	I	19.50
	II	21.75
4	I	20.50
	II	21.50
Total Credit Hours:		**161.50**

FACULTY OF ELECTRICAL AND COMPUTER ENGINEERING

CSE Department

Level	Term	Credit Hour
1	I	19.00
	II	19.50
2	I	20.25
	II	20.00
3	I	20.50
	II	20.50
4	I	19.25
	II	21.00
Total Credit Hours:		**160.00**

EECE Department

Level	Term	Credit Hour
1	I	19.50
	II	20.50
2	I	18.50
	II	20.50
3	I	21.00
	II	22.00
4	I	19.50
	II	19.50
Total Credit Hours:		**161.00**

FACULTY OF MECHANICAL ENGINEERING

ME Department

Level	Term	Credit Hour
1	I	18.75
	II	20.25
2	I	18.75
	II	18.50
3	I	21.00
	II	23.25
4	I	19.50
	II	21.00
Total Credit Hours:		**161.00**

AE Department

Level	Term	Credit Hour	
		Aerospace	Avionics
1	I	20.25	20.25
	II	20.25	20.25
2	I	18.25	21.25
	II	19.50	19.50
3	I	21.75	21.00
	II	21.50	18.25
4	I	21.75	21.75
	II	18.75	19.75
Total Credit Hour:		**162.00**	**162.00**

NAME Department

Level	Term	Credit Hour
1	I	20.00
	II	21.00
2	I	20.25
	II	21.25
3	I	19.50
	II	19.50
4	I	20.00
	II	20.25
Total Credit Hours:		**161.75**

IPE Department

Level	Term	Credit Hour
1	I	21.00
	II	20.50
2	I	20.25
	II	18.25
3	I	20.50
	II	20.75
4	I	19.50
	II	19.25
Total Credit Hours:		**160.00**

FACULTY OF SCIENCE AND ENGINEERING

BME Department

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

NSE Department

Level	Term	Credit Hour
1	I	18.75
	II	20.25
2	I	18.75
	II	20.50
3	I	20.00
	II	20.25
4	I	22.50
	II	20.00
Total Credit Hours:		**161.00**

DISTRIBUTION OF MARKS

Theory Courses

Thirty percent (30%) of marks shall be allotted for continuous assessment i.e, class participation / observation, class attendance, homework, assignment and class tests. The remaining 70% marks will be allotted to term final examination, which will be conducted centrally by the Institute. There will be internal and external examiners for each course in the term final examination. The distribution of marks for a given course is as follows:

Class Participation/Observations	5%
Class Attendance	5%
Homework Assignment and Class Test	20%
Final Examination (Sec A + Sec B)	70%
Total:	100%

Marks in Attendance

Basis for awarding marks for class participation and attendance is as follows:

Attendance	Marks
90% and above	100%
85% to less than 90%	80%
80% to less than 85%	60%
75% to less than 80%	40%
Below 75%	0%

Sessional Courses

The sessional or part of sessional courses will be conducted and assessed throughout the term. In addition, the concerned teacher shall arrange final quiz/ examination.

PHOTO GALLERY

Launching Ceremony of Session 2018-19

Farewell Festival 2019

Graduation Ceremony 2019

Regulatory Bodies Meeting 2019

Robolution-2019

MIST Project Fair-2019

Observance of National Mourning Day

Seminar on World Birth Defects Day: Social Awareness and Prevention

Seminar on Present Status of Nuclear Energy Development in Bangladesh

Observance of Birthday of Father of the Nation and National Children Day

Seminar on Growing Cyber Threats around the World and Preparedness for Bangladesh

Seminar on Seismic Design of Structure by ASCE 7

Workshop on Integrated Design Project and Capstone Project

Workshop on 1st Datathon 2019

Workshop on Performance Based Seismic Design of Structures

Short Course on MAXSURF Ship Design Using Software

Short Course on Introduction to MATLAB

Workshop on Biomedical Imaging

Workshop on "Environmental Club Activities"

Training Program at Geological Survey of Bangladesh (GSB)

Guest Lecture on "Mine Ventilation and Mine Safety"

Guest Lecture on "Longwall Mining Method"

2nd Industrial Advisory Panel (IAP) Meeting of EECE Department

2nd Industrial Advisory Panel (IAP) Meeting of ME Department

2nd Industrial Advisory Panel (IAP) Meeting of CSE Department

2nd Industrial Advisory Panel (IAP) Meeting of AE Dept

Industrial Training Visit of PME Department to Barapukuria Coal Mining Company Limited (BCMCL)

Industrial Training Visit of EWCE Department to Central Effluent Treatment Plant, Savar

Industrial Training Visit of ME Department to Legacy Footwear

Inter University Programming Contest (IUPC 2019)

Inter Department Debate Competition 2019

Quiz Competition 2019

Participation in Debate and News Casting Competition in Indonesia

Inter Department Athletics Competition 2019

Inter Department Cricket Competition 2019

Inter Department Volleyball Competition 2019

Inter Department Volleyball Competition 2019

Inter Department Basketball Competition 2019

Inter Department Football Competition 2019

Boshonto Boron 2019

Inter Department Cultural Competition and Nobin Boron 2019

Bangla New Year 1426

Barsha Utshab 1426

Campus Hour

MIST Central Library

Reading Room

Newspaper Reading Corner

Medical Centre

Fitness Centre

MIST Cafeteria

STUDENTS' ACCOMMODATION (OSMANY HALL)

MALE WING

FEMALE WING

FACULTY ACCOMMODATION

SHAPLA

POLASH

SYLLABUS OF ALL DEPARTMENTS

FACULTY OF CIVIL ENGINEERING

DEPT OF CIVIL ENGINEERING

Total Credit Hours: 162

Level-1, Term-I

Course Code	Course Name	Type of Course	Contact Hour	Credits
Phy 101	Physical Optics, Waves and Oscillation, Heat and Thermodynamics	Theory	3	3
Math 137	Differential and Integral Calculus	Theory	3	3
Chem 103	Chemistry I	Theory	3	3
Hum 155/ Hum 165/ Hum 175	Sociology/ Government/ Moral Philosophy	Theory	2	2
CE 101	Analytical Mechanics	Theory	4	4
	Subtotal (Theory)		**15.00**	**15.00**
Hum 186	Developing English Language Skills I	Sessional	2	1.0
Shop 132	Workshop Sessional	Sessional	3	1.5
CE 100	Civil Engineering Drawing	Sessional	3	1.5
	Subtotal (Sessional)		**8.00**	**4.00**
	Total =		**23.00**	**19.00**

Level-1, Term-II

Course Code	Course Name	Type of Course	Contact Hour	Credits
Hum 153	Accounting	Theory	2	2
Phy 105 / Chem 105	Structure of Matter, Electricity and Magnetism and Modern Physics / Chemistry II	Theory	3	3
Math 139	Differential Equations and Statistics	Theory	3	3
EECE 165	Basic Electrical Technology	Theory	3	3
CE 103	Surveying and spatial information Engineering	Theory	3	3
	Subtotal (Theory)		**14.00**	**14.00**
Hum 188	Developing English Language Skills II	Sessional	2	1.0
Phy 102	Physics Laboratory	Sessional	3	1.5
Chem 114	Inorganic Quantitative Analysis	Sessional	3	1.5
CE 102	Computer Aided Drawing	Sessional	3	1.5
CE 104	Practical Surveying	Field Work	3	1.5
	Subtotal (Sessional & Field Work)		**14.00**	**7.00**
	Total =		**28.00**	**21.00**

***** Equivalent Contact Hours [Duration - 4 Weeks; after Term Final Examination].

Level-2, Term-I

Course Code	Course Name	Type of Course	Contact hours	Credits
Hum 217	Engineering Economics	Theory	2	2
Math 237	Laplace Transform, Vector Analysis and Matrices	Theory	3	3
CE 203	Engineering Geology & Geomorphology	Theory	3	3
CE 211	Mechanics of Solids I	Theory	3	3
CE 261	Fluid Mechanics	Theory	3	3
	Subtotal (Theory)		**14.00**	**14.00**
CE 200	Details of Construction	Sessional	3	1.5
CE 204	Computer Programming Sessional	Sessional	3	1.5
CE 210	GIS and Remote sensing	Sessional	3	1.5
CE 262	Fluid Mechanics Sessional	Sessional	3	1.5
	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
CE 201	Engineering Materials	Theory	3	3
CE 205	Numerical Methods for Engineering	Theory	3	3
CE 207	Applied Mathematics for Engineers	Theory	3	3
CE 209	Professional Practices & Communication	Theory	3	3
CE 213	Mechanics of Solids II	Theory	3	3
	Subtotal (Theory)		**15.00**	**15.00**
CE 206	Engineering Computations Sessional	Sessional	3	1.5
CE 208	Quantity Surveying	Sessional	3	1.5
CE 212	Structural Mechanics & Materials Sessional	Sessional	3	1.5
CE 214	Architectural, Engineering and Planning Appreciation	Sessional	3	1.5
	Subtotal (Sessional)		**12.00**	**6.00**
	Total =		**27.00**	**21.00**

Level-3, Term-I

Course Code	Course Name	Type of Course	Contact hours	Credits
CE 301	Project Planning & Construction Management	Theory	3	3
CE 311	Structural Analysis & Design I	Theory	4	4
CE 315	Design of Concrete Structures I	Theory	3	3
CE 331	Environmental Engineering I	Theory	3	3
CE 341	Principle of Soil Mechanics	Theory	4	4
	Subtotal (Theory)		**17.00**	**17.00**
CE 332	Environmental Engineering Laboratory	Sessional	3	1.5
CE 342	Geotechnical Engineering Sessional I	Sessional	3	1.5
	Subtotal (Sessional)		**6.00**	**3.00**
	Total =		**23.00**	**20.00**

Level-3, Term-II

Course Code	Course Name	Type of Course	Contact hours	Credits
CE 317	Design of Concrete Structures II	Theory	3	3
CE 319	Design of Steel Structures	Theory	3	3
CE 333	Environmental Engineering II	Theory	4	4
CE 351	Fundamentals of Transportation Engineering	Theory	3	3
CE 361	Open Channel Hydraulics	Theory	3	3
	Subtotal (Theory)		**16.00**	**16.00**
CE 316	Concrete Structures Design Sessional I	Sessional	3	1.5
CE 320	Steel Structures Design Sessional	Sessional	3	1.5
CE 362	Open Channel Hydraulics Sessional	Sessional	3	1.5
	Subtotal (Sessional)		**9.00**	**4.50**
	Total =		**25.00**	**20.50**

Level-4, Term-I

Course Code	Course Name	Type of Course	Contact hours	Credits
CE 411	Structural Analysis & Design II	Theory	3	3
CE 441	Foundation Engineering	Theory	3	3
CE 451	Highway Materials, Pavement Design and Railway Engineering	Theory	4	4
CE 463	Hydrology and Irrigation Engineering	Theory	4	4
Subtotal (Theory)			**14.00**	**14.00**
CE 410	Concrete Structures Design Sessional II	Sessional	3	1.5
CE 452	Highway Materials, Mix Design and Traffic Engineering Sessional	Sessional	3	1.5
CE 400	Thesis	Thesis	3	1.5
CE 450	Integrated Design Project	Project	4	2
Subtotal (Thesis, Sessional & Project)			**13.00**	**6.50**
Total =			**27.00**	**20.50**

Level-4, Term-II

Course Code	Course Name	Type of Course	Contact hours	Credits
CE 403/ CE 405	Socio-economic Aspects of Development Project/Business and Career Development	Theory	2	2
Subtotal (Theory)			**2.00**	**2.00**
CE 400	Thesis	Thesis	6	3
CE 402	Civil Engineering Students' Internship Programme (CESIP)	Internship	2	1
CE 450	Integrated Design Project	Project	6	3
Subtotal (Thesis, Sessional & Project)			**16.00**	**7.00**
Total =			**18.00**	**9.00**

Equivalent Contact Hours [Duration - 4 Weeks; after Term Final Examination].

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

Sl	Course Code	Course Name	Level/ Term	Type of Course	Contact hours	Credits
1.	CE 413	Design of Steel-Concrete Composite Structure	4-II	Theory	2	2
2.	CE 415	Prestressed Concrete	4-II	Theory	2	2
3.	CE 417	Design of Concrete Structures III	4-II	Theory	2	2
4.	CE 419	Introduction to Finite Element Method	4-II	Theory	2	2
5.	CE 421	Dynamics of Structures	4-II	Theory	2	2
6.	CE 423	Structural Safety	4-II	Theory	2	2
7.	CE 425	Seismic Design of Structures	4-II	Theory	2	2
8.	CE 427	Advanced Solid Mechanics	4-II	Theory	2	2
Subtotal (Theory)					**4.00**	**4.00**
9.	CE 412	Computer Aided Analysis and Design of Structures Sessional	4-II	Sessional	3	1.5
Subtotal (Sessional)					**3.00**	**1.50**
Total =					**7.00**	**5.50**

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

Sl	Course Code	Course Name	Level/ Term	Type of Course	Contact hours	Credits
1.	CE 433	Solid and Hazardous Waste Management	4-II	Theory	2	2
2.	CE 435	Environmental Pollution Management	4-II	Theory	2	2
3.	CE 431	Natural Resources and Renewable Energy	4-II	Theory	2	2
4.	CE 437	Climate Change and Disaster Management	4-II	Theory	2	2
5.	CE 439	Environmental Impact Assessment and Sustainability	4-II	Theory	2	2
Subtotal (Theory)					**4.00**	**4.00**
6.	CE 432	Design of Water Supply, Sanitation and Sewerage Systems	4-II	Sessional	3	1.5
Subtotal (Sessional)					**3.00**	**1.50**
Total =					**7.00**	**5.50**

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

Sl	Course Code	Course Name	Level/ Term	Type of Course	Contact hours	Credits
1.	CE 443	Earth Retaining Structures	4-II	Theory	2	2
2.	CE 445	Elementary Soil Dynamics	4-II	Theory	2	2
3.	CE 447	Soil-Water Interaction	4-II	Theory	2	2
4.	CE 449	Numerical Methods in Geotechnics	4-II	Theory	2	2
				Subtotal (Theory)	**4.00**	**4.00**
5.	CE 442	Geotechnical Engineering Sessional II	4-II	Sessional	3	1.5
				Subtotal (Sessional)	**3.00**	**1.50**
				Total =	**7.00**	**5.50**

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

Sl	Course Code	Course Name	Level/ Term	Type of Course	Contact hours	Credits
1.	CE 453	Traffic Engineering Design and Management	4-II	Theory	2	2
2.	CE 455	Pavement Management, Drainage and Airport Engineering	4-II	Theory	2	2
3.	CE 457	Urban Transportation Planning & Management	4-II	Theory	2	2
4.	CE 459	Intelligent Transportation System	4-II	Theory	2	2
5.	CE 461	Railway Engineering	4-II	Theory	2	2
				Subtotal (Theory)	**4.00**	**4.00**
6.	CE 454	Traffic Studies and Pavement Design Sessional	4-II	Sessional	3	1.5
				Subtotal (Sessional)	**3.00**	**1.50**
				Total =	**7.00**	**5.50**

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

Sl	Course Code	Course Name	Level/ Term	Type of Course	Contact hours	Credits
1.	CE 465	Groundwater Engineering	4-II	Theory	2	2
2.	CE 467	Flood Mitigation and Management	4-II	Theory	2	2
3.	CE 469	River Engineering	4-II	Theory	2	2
4.	CE 471	Hydraulic Structures	4-II	Theory	2	2
5.	CE 473	Coastal Engineering	4-II	Theory	2	2
				Subtotal (Theory)	**4.00**	**4.00**
6.	CE 472	Hydraulic Structures Design Sessional	4-II	Sessional	3	1.5
				Subtotal (Sessional)	**3.00**	**1.50**
				Total =	**7.00**	**5.50**

Total = Contact hours: 16+7+7 = 30.00; Credits: 9+5.5+5.5 = 20.00

DEPT OF ARCHITECTURE

Total Offered Credit Hours: 221
Total Required Credit Hours: 189

L-1, T-1			Cr.	Hr.
Core Sessional	Design Studios	ARCH 1102: Design Studio l	6	9
	Design Communication Studios	ARCH 1104: Architectural Graphics l	3	6
	Total		**9**	**15**
Core Theory	General Education	HUM 1111: English	2	2
		MATH 1111: Mathematics	2	2
	Design Related Theories	ARCH 1103: Design Theory I	2	2
		ARCH 1105: Building and Finish Material	2	2
	Technical System			
	History, Human Behavior & Environment	ARCH 1101: Art and Architecture I	2	2
	Practice			
	Total		**10**	**10**
Elective Theory	General Education			
	Technical System			
	Design Related Theories			
	History, Human Behavior & Environment			
	Total		**0**	**0**
Total Credit & Contact Hours of L-1, T-1			**19**	**25**

L-1, T-2			Cr.	Hr.
Core Sessional	Design Studios	ARCH 1202: Design Studio ll *(pre-req. ARCH 1102: Design Studio l)*	6	9
	Design Communication Studios	ARCH 1204: Architectural graphics ll *(pre-req. ARCH 1104: Architectural Graphics l)*	3	6
		ARCH 1230: Computer Application l	1.5	3
	Total		**10.5**	**18**
Core Theory	General Education	HUM 1213: Sociology	2	2
		PHY 1211: Physics	2	2
	Design Related Theories	ARCH 1205: Climate and Design	2	2
		ARCH 1203: Design Theory II	2	2
	Technical System			
	History, Human Behavior & Environment	ARCH 1201: Art and Architecture ll	2	2
	Practice			
	Total		**10**	**10**
Elective Theory	General Education			
	Technical System			
	Design Related Theories			
	History, Human Behavior & Environment			
	Total		**0**	**0**
Total Credit & Contact Hours of L-1, T-2			**20.5**	**28**

L-2, T-1			Cr.	Hr.
Core Sessional	Design Studios	ARCH 2102: Design Studio lll *(pre-req. ARCH 1202: Design Studio ll)*	8	12
	Design Communication Studios	ARCH 2104: Graphic Art & Sculpture	1.5	3
		ARCH 2130: Computer Application ll *(pre-req. ARCH 1230: Computer l)*	1.5	3
	Total		**11**	**18**
Core Theory	General Education			
	Design Related Theories	ARCH 2103: Visual & Sonic Environment	2	2
		ARCH 2105: Basic Planning	2	2
	Technical System	CE 2121: Structure I	2	2
	History, Human Behavior & Environment	ARCH 2101: Art and Architecture lll	2	2
	Practice			
	Total		**8**	**8**
Elective Theory	General Education	HUM 2111: Logic and Philosophy	2	2
		HUM 2113: Psychology and Behavior		
	Technical System			
	Design Related Theories			
	History, Human Behavior & Environment			
	Total		**2**	**2**
Total Credit & Contact Hours of L-2, T-1			**21**	**28**

L-2, T-2			Cr.	Hr.
Core Sessional	Design Studios	ARCH 2202: Design Studio lV *(pre-req. ARCH 2102: Design Studio lll)*	8	12
	Design Communication Studios	ARCH 2204: Photography and Film	1.5	3
		ARCH 2230: Computer Application lII	1.5	3
	Total		**11**	**18**
Core Theory	General Education			
	Design Related Theories	ARCH 2203: Landscape Design	2	2
	Technical System	CE 2221: Structure ll	2	2
		EWCE 2231: Building Services I: Plumbing	2	2
	History, Human Behavior & Environment	ARCH 2201: Art and Architecture lV	2	2
	Practice			
	Total		**8**	**8**
Elective Theory	General Education			
	Technical System			
	Design Related Theories	ARCH 2205: Design in the Tropics	2	2
		ARCH 2207: Green & Sustainable Architecture		
		ARCH 2209: Vernacular Architecture		
	History, Human Behavior & Environment			
	Total		**2**	**2**
Total Credit & Contact Hours of L-2, T-2			**21**	**28**

L-3, T-1			Cr.	Hr.
Core Sessional	Design Studios	ARCH 3102: Design Studio V *(pre-req. ARCH 2202: Design Studio lV)*	8	12
	Design Communication Studios	ARCH 3104: Landscape Design Studio	1.5	3
	Total		**9.5**	**15**
Core Theory	General Education			
	Design Related Theories			
	Technical System	CE 3121: Structure lll	2	2
		ME 3141: Building Services II: Mechanical Equipment	2	2
		ARCH 3161: Construction Method & Details	2	2
	History, Human Behavior & Environment	ARCH 3101: Architecture of Bengal	2	2
	Practice			
	Total		**8**	**8**
Elective Theory	General Education			
	Technical System			
	Design Related Theories	ARCH 3103: Bio-Design and Architecture	2	2
		ARCH 3105: Advanced Construction & Building Technology		
		ARCH 3107: Modular Architecture, Production line & Customization		
	History, Human Behavior & Environment			
	Total		**2**	**2**
Total Credit & Contact Hours of L-3, T-1			**19.5**	**25**

L-3, T-2			Cr.	Hr.
Core Sessional	Design Studios	ARCH 3202: Design Studio Vl *(pre-req. ARCH 3102: Design Studio V)*	8	12
	Design Communication Studios	ARCH 3204: Working Drawing I: Construction Drawing	1.5	3
	Total		**9.5**	**15**
Core Theory	General Education			
	Design Related Theories	ARCH 3203: Urban Design	2	2
	Technical System	CE 3221: Structure lV	2	2
		EECE 3251: Building Services III: Electrical Equipment	2	2
	History, Human Behavior & Environment	ARCH 3201: Art and Architecture V	2	2
	Practice			
	Total		**8**	**8**
Elective Theory	General Education			
	Technical System			
	Design Related Theories	ARCH 3205: Advanced Planning	2	2
		ARCH 3207: Rural Planning		
		ARCH 3209: Transportation and Mobility Design		
	History, Human Behavior & Environment			
	Total		**2**	**2**
Total Credit & Contact Hours of L-3, T-2			**19.5**	**25**

L-4, T-1			Cr.	Hr.
Core Sessional	Design Studios	ARCH 4102: Design Studio Vll *(pre-req. ARCH 3202: Design Studio Vl)*	8	12
	Design Communication Studios	ARCH 4104: Working Drawing II: Production Drawing *(pre-req. ARCH 3204: Working Drawing l)*	1.5	3
	Total		**9.5**	**15**
Core Theory	General Education			
	Design Related Theories	ARCH 4103: Interior Design	2	2
		ARCH 4105: Housing	2	2
	Technical System	ARCH 4161: Cost Estimation & Specification	2	2
	History, Human Behavior & Environment			
	Practice			
	Total		**6**	**6**
Elective Theory	General Education			
	Technical System			
	Design Related Theories			
	History, Human Behavior & Environment	ARCH 4101: Music and Film Appreciation	2	2
		ARCH 4107: Modern Art & Architecture		
		ARCH 4109: Contemporary Architectural Theories		
	Total		**2**	**2**
Total Credit & Contact Hours of L-4, T-1			**17.5**	**23**

L-4, T-2			Cr.	Hr.
Core Sessional	Design Studios	ARCH 4202: Design Studio Vlll *(pre-req. ARCH 4102: Design Studio Vll)*	8	12
	Design Communication Studios	ARCH 4204: Interior Design Studio	1.5	3
		ARCH 4206: Professional Training	0	0
	Total		**9.5**	**15**
Core Theory	General Education	HUM 4211: Economics	2	2
		HUM 4213: Project Management	2	2
	Design Related Theories			
	Technical System	ARCH 4261: Survey Techniques	2	2
	History, Human Behavior & Environment			
	Practice			
	Total		**6**	**6**
Elective Theory	General Education			
	Technical System	ARCH 4203: Ambient Technology and Building Environment	2	2
	Design Related Theories	ARCH 4205: Architecture in Extreme Environments		
		ARCH 4207: Spaces & Forms in Architecture		
	History, Human Behavior & Environment			
	Total		**2**	**2**
Total Credit & Contact Hours of L-4, T-2			**17.5**	**23**

L-5, T-1			Cr.	Hr.
Core Sessional	Design Studios	ARCH 5102: Design Studio lX *(pre-req. ARCH 4202: Design Studio VlII)*	10	15
	Design Communication Studios	ARCH 5104: Seminar	1.5	3
	Total		**11.5**	**18**
Core Theory	General Education	ARCH 5101: Architecture & Society	2	2
		HUM 5111: Accounting	2	2
	Design Related Theories			
	Technical System			
	History, Human Behavior & Environment			
	Practice			
	Total		**4**	**4**
Elective Theory	General Education			
	Technical System			
	Design Related Theories	ARCH 5103: Health Facilities Planning & Design	2	2
		ARCH 5105: Industrial & Commercial Building Design		
		ARCH 5107: Educational, Religious & Recreational Facilities Design		
	History, Human Behavior & Environment			
	Total		**2**	**2**
Total Credit & Contact Hours of L-5, T-1			**17.5**	**24**

L-5, T-2			Cr.	Hr.
Core Sessional	Design Studios	ARCH 5202: Design Studio X / ARCH 5208: Design Studio Xl *(pre-req. ARCH 5102: Design Studio lX)*	12	18
	Design Communication Studios			
	Total		**12**	**18**
Core Theory	General Education			
	Design Related Theories			
	Technical System			
	History, Human Behavior & Environment			
	Practice	ARCH 5273: Professional Practice	2	2
	Total		**2**	**2**
Elective Theory	General Education			
	Technical System	ARCH 5203: Building Safety Design	2	2
		ARCH 5205: Disaster & Post Disaster Responsive Architecture		
	Design Related Theories	ARCH 5207: Architecture for Children and Differently Able People		
		ARCH 5209: Architectural Conservation		
	History, Human Behavior & Environment			
	Total		**2**	**2**
Total Credit & Contact Hours of L-5, T-2			**16**	**22**

DEPT OF ENVIRONMENTAL, WATER RESOURCES AND COASTAL ENGINEERING

Total Credit Hours: 162.50

Level – 1, Term – I

Course Code	Course Name	Contact Hour	Credit
CHEM 101	Chemistry	3.0	3.0
MATH 107	Differential and Integral Calculus, Matrices	3.0	3.0
Hum 107	English	2.0	2.0
EWC 131	Ecology, Environmental Pollution and Management	3.0	3.0
EWC 101	Analytical Mechanics	4.0	4.0
CHEM 102	Inorganic Quantitative Analysis	3.0	1.5
Hum 106	Communitive English	3.0	1.5
EWC 100	Engineering Drawing and CAD Sessional	3.0	1.5
	Total:	**24**	**19.5**

Level – 1, Term – II

Course Code	Course Name	Contact Hour	Credit
PHY 103	Physics	3.0	3.0
EWC 105	Environmental Chemistry	3.0	3.0
Math 109	Differential Equations and Statistics	3.0	3.0
EECE 167	Basic Electrical Technology	3.0	3.0
EWC 103	Surveying	4.0	4.0
PHY 104	Physics lab	3.0	1.5
EWC 104	Practical Surveying	3 weeks	1.5
Shop 142	Workshop Sessional	3.0	1.5
	Total:	**25**	**20.5**

Level – 2, Term – I

Course Code	Course Name	Contact Hour	Credit
HUM 205/ 207/209	Accounting/ Economics / Sociology	2.0	2.0
MATH 201	Laplace Transformation, Vector Analysis and Coordinate Geometry	3.0	3.0
EWC 201	Construction Materials	3.0	3.0
EWC 203	Geology and Geomorphology	3.0	3.0
EWC 205	Numerical Method	2.0	2.0
EWC 211	Mechanics of Solids I	3.0	3.0
EWC 204	Computer Programming Sessional	3.0	1.5
EWC 206	GIS and Remote Sensing Sessional	3.0	1.5
EWC 212	Structural Mechanics and Materials Sessional	3.0	1.5
	Total:	**25**	**20.5**

Level – 2, Term – II

Course Code	Course Name	Contact Hour	Credit
HUM 205/ 207/209	Accounting/ Economics / Sociology	2.0	2.0
MATH 203	Applied Math for Engineering	3.0	3.0
EWC 213	Mechanics of Solids II	3.0	3.0
EWC 261	Fluid Mechanics	3.0	3.0
EWC 263	Surface & GW Hydro	4.0	4.0
EWC 200	Details of Construction & Quantity Surveying	3.0	1.5
EWC 208	Engineering Computations Sessional	3.0	1.5
EWC 262	Fluid Mechanics Sessional	3.0	1.5
	Total:	**24**	**19.5**

Level – 3, Term – I

Course Code	Course Name	Contact Hour	Credit
EWC 311	Structure Analysis and Design I	4.0	4.0
EWC 315	Design of Concrete Structures I	3.0	3.0
EWC 331	Water Supply Engineering	3.0	3.0
EWC 341	Principal of Soil Mechanics	3.0	3.0
EWC 351	Transportation Engineering	4.0	4.0
EWC 332	Environment Engineering Sessional	3.0	1.5
EWC 342	Soil Mechanics Sessional	3.0	1.5
EWC 352	Transport Engineering Sessional I	3.0	1.5
	Total:	**26**	**21.5**

Level – 3, Term – II

Course Code	Course Name	Contact Hour	Credit
EWC 301	Project Planning and Construction Management	3.0	3.0
EWC 317	Design of Concrete Structure II	4.0	4.0
EWC 333	Waste Water Engineering and Sanitation	4.0	4.0
EWC 343	Geotechnical and Foundation Engineering	3.0	3.0
EWC 361	Open Channel Hydraulics	4.0	4.0
EWC 300	Industrial Training	4 Weeks	1.0
EWC 316	Concrete Structure Design Sessional I	3.0	1.5
EWC 362	Open Channel Hydraulic Sessional	3.0	1.5
	Total:	**24**	**22**

Level – 4, Term – I

Course Code	Course Name	Contact Hour	Credit
EWC 401	Professional Practice & Communication	2.0	2.0
EWC 411	Structural Analysis and Design II	3.0	3.0
EWC 431	Environment and Social Impact Assessment	3.0	3.0
EWC 461	River Engineering and Flood Management	3.0	3.0
EWC 471	Basic Coastal Engineering	3.0	3.0
EWC 432	Environmental Engineering design sessional	3.0	1.5
EWC 462	Computer Applications in Water and Environmental Engineering	3.0	1.5
EWC 464	Advanced GIS and RS in Environment and Water Resources Engineering	3.0	1.5
EWC 400	Project and Thesis	-	1.5
	Total:	**23**	**20**

Level – 4, Term – II (Major: Environmental Engg)*

Course Code	Course Name	Contact Hour	Credit	Rmks
EWC 433	Solid and Hazardous Waste Management	3.0	3.0	Major Courses
EWC 435	Air Pollution and Control Engineering	2.0	2.0	
EWC 437	Industrial Waste and waste water treatment	3.0	3.0	
EWC 467	Integrated Water Resource Management (IWRM)	3.0	3.0	Compulsory Courses
EWC 469/ 473/ 475/ 477	Mathematical Modelling in Water Resources Engineering/ Waterway Engineering/ Urban Hydrology/ Climatology	2.0	2.0	Minor Courses
EWC 434	Environmental Modelling sessional	3.0	1.5	Sessional Courses
EWC 436/ 438	Treatment plant design sessional/ Building Service Sessional	3.0	1.5	
EWC 400	Project and Thesis	-	3.0	
	Total:	**19**	**19**	

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

Course Code	Course Name	Contact Hour	Credit	Rmks
EWC 463	Irrigation and Drainage Engineering	3.0	3.0	Major Courses
EWC 465	Design of Hydraulic Structures	3.0	3.0	
EWC 477	Climatology	2.0	2.0	
EWC 467	Integrated Water Resource Management (IWRM)	3.0	3.0	Compulsory Courses
EWC 435/ 439/	Air Pollution and Control Engineering/ Natural Resources & Renewable Energy/ Climate Change & Disaster Management/ Building Service/ Environmental Management System	2.0	2.0	Minor Courses
EWC 466	Hydraulic Structure Design Sessional	3.0	1.5	Sessional Courses
EWC 468	Water Modelling Sessional	3.0	1.5	
EWC 400	Thesis	-	3.0	
	Total:	**19**	**19**	

DEPT OF PETROLEUM AND MINING ENGINEERING

Total Credit Hours: 161.50

LEVEL – 1, TERM – I

Course Code	Course Name	Contact hour/week	Credits
THEORY			
Chem 171	Basic Chemistry	3	3
Hum 171	Fundamental English	2	2
Math 171	Differential Calculus, Integral Calculus and Matrices	3	3
PME 111	Geology for Petroleum and Mining Engineers	3	3
PME 113	Introduction to Petroleum and Mining Engineering	3	3
SESSIONAL / LABORATORY			
ME 178	Engineering Drawing and CAD	3	1.5
ME 176	Workshop Practice	3	1.5
PME 112	Geology Laboratory	3	1.5
Hum 172	Developing English Language Skills	2	1
	Total:	**25**	**19.5**

Contact Hours: 14 (Theo) + 11.00 (Lab) = 25 hours/week
No of Theory Courses = 5
Total Credits = 19.50
No of Laboratory Courses = 4

LEVEL – 2, TERM – I

Course Code	Course Name	Contact hour/week	Credits
THEORY			
EECE 271	Fundamentals of Electrical and Electronic Engineering	3	3
Math 271	Differential Equations, Fourier Analysis, Laplace Transform and Numerical Analysis	4	4
PME 211	Engineering Mechanics	3	3
PME 213	Petroleum Engineering Thermodynamics	3	3
PME 215	Rock Mechanics for Mining and Petroleum Engineers	3	3
SESSIONAL/LABORATORY			
EECE 272	Electrical and Electronic Engineering Laboratory	3	1.5
PME 216	Rock Mechanics Laboratory	3	1.5
PME 218	Drilling Fluid Laboratory	1.5	0.75
	Total:	**23.50**	**19.75**

Contact Hours: 16 (Theo) + 7.50 (Lab) = 23.5 hours/week
No of Theory Courses = 5
Total Credits = 19.75
No of Laboratory Courses = 3

LEVEL – 1, TERM – II

Course Code	Course Name	Contact hour/week	Credits
THEORY			
Chem173	Petroleum Chemistry	3	3
Hum 173	Economics and Accounting	3	3
Math 173	Vector Analysis, Geometry and Engineering Statistics	3	3
Phy 171	Physics	3	3
PME 123	Reservoir Rock and Fluid Properties	3	3
SESSIONAL/LABORATORY			
Chem 172	Chemistry Laboratory	3	1.5
Phy 172	Physics Laboratory	3	1.5
PME 124	Reservoir Rock and Fluid Properties Laboratory	3	1.5
	Total:	**24.00**	**19.50**

Contact Hours: 15 (Theo) + 9.00 (Lab) = 24 hours/week
No of Theory Courses = 5
Total Credits = 19.50
No of Laboratory Courses = 3

LEVEL – 2, TERM – II

Course Code	Course Name	Contact hour/week	Credits
THEORY			
CSE 271	Introduction to Computer Programming	2	2
PME 223	Exploration Geophysics	2	2
ME 271	Fluid Mechanics	3	3
PME 227	Mining system	3	3
PME 229	Strength of Materials	3	3
Hum 271	Sociology	2	2
SESSIONAL/LABORATORY			
CSE 272	Computer Programming Sessional	1.5	0.75
PME 224	Exploration Geophysics Laboratory	3	1.5
PME228	Mining System Laboratory	3	1.5
ME 272	Fluid Mechanics Laboratory	1.5	0.75
	Total:	**24.00**	**19.5**

Contact Hours: 15 (Theo) + 9.00 (Lab) = 24 hours/week
No of Theory Courses = 6
Total Credits = 19.50
No of Laboratory Courses = 4

LEVEL – 3, TERM – I

Course Code	Course Name	Contact hour/week	Credits
	THEORY		
PME 311	Mine Instrumentation and Machinery	3	3
PME 313	Shaft Sinking and Tunneling	3	3
PME 315	Well Logging and Formation Evaluation	3	3
PME 317	Drilling Engineering	3	3
PME 319	Heat Transfer and Mass Transfer	3	3
	SESSIONAL/ LABORATORY		
PME 312	Mine Instrumentation and Machineries Laboratory	3	1.5
PME 316	Well Logging and Formation Evaluation Laboratory	3	1.5
PME 318	Rig Floor Simulation Laboratory	3	1.5
	Total:	**24.00**	**19.50**

Contact Hours: 15 (Theo) + 9.00 (Lab) = 24 hours/week
No of Theory Courses = 5
Total Credits = 19.50
No of Laboratory Courses = 3

LEVEL – 3 (TERM – II)

Course Code	Course Name	Contact hour/week	Credits
	THEORY		
PME 321	Petroleum Production Engineering	3	3
PME 323	Natural Gas Processing and LNG Technology	3	3
PME 325	Reservoir Engineering	4	4
PME 327	Mine Survey	3	3
PME 329	Health, Safety and Environment in Petroleum and Mining Industries	2	2
PME 3211	Rock Blasting and Explosive Technology	3	3
	SESSIONAL/LABORATORY		
PME 324	Natural Gas Processing and LPG Laboratory	3	1.50
PME 328	Mining Survey Laboratory	3	1.50
PME 320	Industrial Training	4 weeks	0.75
	Total:	**24.00**	**21.75**

Contact Hours: 18 (Theo) + 6.00 (Lab) = 24 hours/week
No of Theory Courses = 6
Total Credits = 21.75
No of Laboratory Courses = 3

LEVEL – 4, TERM – I

Course Code	Course Name	Contact hour/week	Credits
	THEORY		
PME 411	Well Test Analysis	3	3
PME 413	Reservoir Modeling and Simulation	3	3
PME 415	Mine Ventilation and Environmental Engineering	3	3
PME 417	Petroleum Refining and LPG Technology	4	4
PME 419	Professional Practices and Communication	2	2
	SESSIONAL/ LABORATORY		
PME 400	Project / Thesis- Part: I	3	1.5
PME 412	Integrated Design Project- Part: I	2	1
PME 414	Reservoir Modeling and Simulation Sessional	3	1.5
PME 416	Mine Ventilation and Environmental Engineering Laboratory	3	1.5
	Total:	**26.00**	**20.50**

Contact Hours: 15 (Theo) + 11.00 (Lab) = 26 hours/week
No of Theory Courses = 5
Total Credits = 20.50
No of Laboratory Courses = 4

LEVEL – 4 (TERM – II)

Course Code	Course Name	Contact hour/week	Credit Hour
	THEORY		
PME 421	Evaluation and Management of Petroleum and Mining Projects	3	3
PME 423	Transmission and Distribution of Natural Gas	3	3
PME 425	Enhanced Oil and Gas Recovery Techniques	2	2
PME 427	Minerals Processing	3	3
PME 429	Ground Water Managements in Mining	2	2
PME 4211	Mine Planning and Design	3	3
	SESSIONAL/LABORATORY		
PME 400	Project / Thesis- Part: II	6	3
PME 412	Integrated Design Project- Part: II	2	1
PME 428	Minerals Processing Laboratory	3	1.5
	Total:	**27.00**	**21.50**

Contact Hours: 16 (Theo) + 11.0 (Lab) = 27.00 hours/week
No of Theory Courses = 6
Total Credits = 21.50
No of Laboratory Courses = 3

FACULTY OF ELECTRICAL AND COMPUTER ENGINEERING

DEPT OF COMPUTER SCIENCE AND ENGINEERING

Total Credit Hours: 160

Level-1, Term-I

Course Code	Course Name	Contact Hour	Credit
CSE-100	Introduction to Computer Systems Sessional	3.00	1.50
EECE-163	Electrical Circuit Analysis	3.00	3.00
EECE-164	Electrical Circuit Analysis Sessional	3.00	1.50
ME-181	Basic Mechanical Engineering	2.00	2.00
MATH-141	Mathematics-I (Differential Calculus and Integral Calculus)	3.00	3.00
PHY-103	Physics	3.00	3.00
PHY-104	Physics Sessional	1.50	0.75
HUM-101	English	2.00	2.00
HUM-102	English Sessional	3.00	1.50
Shop-140	Workshop Practice Sessional	1.50	0.75
	Total:	**25**	**19**

Level-1, Term-II

Course Code	Course Name	Contact Hour	Credit
CSE-101	Discrete Mathematics	3.00	3.00
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	3.00	1.50
CE-150	Engineering Drawing & CAD Sessional	3.00	1.50
CHEM-101	Chemistry	3.00	3.00
MATH-143	Mathematics-II (Ordinary and Partial Differential Equations and Coordinate Geometry)	3.00	3.00
	Total:	**24**	**19.5**

Level-2, Term-I

Course Code	Course Name	Contact Hour	Credit
CSE-201	Digital Logic Design	3.00	3.00
CSE-202	Digital Logic Design Sessional	3.00	1.50
CSE-203	Data Structures	3.00	3.00
CSE-204	Data Structures Sessional	3.00	1.50
CSE-205	Object Oriented Programming Language	3.00	3.00
CSE-206	Object Oriented Programming Language Sessional	3.00	1.50
EECE-269	Electrical Drives and Instrumentation	3.00	3.00
EECE-270	Electrical Drives and Instrumentation Sessional	1.50	0.75
MATH-245	Mathematics-III (Vector Analysis, Matrices and Fourier Analysis)	3.00	3.00
	Total:	**25.5**	**20.25**

Level –2, Term-II

Course Code	Course Name	Contact Hour	Credit
CSE-211	Digital Electronics and Pulse Technique	3.00	3.00
CSE-212	Digital Electronics and Pulse Technique Sessional	1.50	0.75
CSE-214	Numerical Methods Sessional	3.00	1.50
CSE-215	Data Structures and Algorithms-II	3.00	3.00
CSE-216	Data Structures and Algorithms-II Sessional	3.00	1.50
CSE-217	Theory of Computation	3.00	3.00
CSE-220	Object Oriented Programming language Sessional-II	3.00	1.50
CSE-224	Advanced Programming language Sessional	1.50	0.75
HUM-237	Engineering Economics	2.00	2.00
MATH-247	Mathematics-IV (Complex Variable, Laplace, Transform and Statistics)	3.00	3.00
	Total:	**26**	**20**

Level-3, Term-I

Course Code	Course Name	Contact Hour	Credit
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 and Micro-controllers and Assembly Language	4.00	4.00
CSE-306	Microprocessors and Micro-controllers and Assembly Language Sessional	3.00	1.50
CSE-317	Data Communication	3.00	3.00
CSE-318	Data Communication Sessional	1.50	0.75
CSE-323	Computer Architecture	3.00	3.00
	Total:	**25**	**20.5**

Level-3, Term II

Course Code	Course Name	Contact Hour	Credit
CSE-307	Operating System	3.00	3.00
CSE-308	Operating System Sessional	1.50	0.75
CSE-309	Computer Network	3.00	3.00
CSE-310	Computer Network Sessional	3.00	1.50
CSE-313	Mathematical Analysis for Computer Science	3.00	3.00
CSE-315	Digital System Design	3.00	3.00
CSE-316	Digital System Design Sessional	1.50	0.75
CSE-319	Software Engineering	3.00	3.00
CSE-322	Software Development Sessional	3.00	1.50
CSE-350	Industrial Training	04 weeks	1.00
	Total:	**24**	**20.5**

*LEVEL-3 INDUSTRIAL TRAINING

Course Code	Course Name	Contact Hour	Credit
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	Credit
CSE-400	Project or Thesis	6.00	3.00
CSE-401	Information System Design and Development	3.00	3.00
CSE-402	Information System Design and Development Sessional	1.50	0.75
CSE-403	Artificial Intelligence	3.00	3.00
CSE-404	Artificial Intelligence Sessional	1.50	0.75
CSE-415	Human Computer Interaction	3.00	3.00
CSE-416	Human Computer Interaction Sessional	1.50	0.75
HUM-415	Financial and Managerial Accounting	2.00	2.00
CSE-4XO	Option-I	3.00	3.00
Total:		**24.5**	**19.25**

Option-I

Course Code	Course Name	Contact Hour	Credit
CSE-407	Applied Statistics and Queuing Theory	3.00	3.00
CSE-419	Advanced Algorithms	3.00	3.00
CSE-421	Basic Graph Theory	3.00	3.00
CSE-423	Fault Tolerant 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-441	Machine Learning	3.00	3.00

Level-4, Term-II

Course Code	Course Name	Contact Hour	Credit
CSE-400	Project and Thesis*	6.00	3.00
CSE-405	Computer Interfacing	3.00	3.00
CSE- 406	Computer Interfacing Sessional	1.50	0.75
CSE-410	Software Development for Web Apps	1.50	0.75
CSE-413	Computer Graphics	3.00	3.00
CSE-414	Computer Graphics Sessional	1.50	0.75
CSE-429	Computer Security	3.00	3.00
HUM-417	Engineering Management and Ethics	3.00	3.00
CSE-4XO	Option-II	3.00	3.00
CSE-4XE	Option-II Sessional	1.50	0.75
	Total:	**27**	**21**

Option-II

Course Code	Course Name	Contact Hour	Credit
CSE-411	VLSI Design	3.00	3.00
CSE-412	VLSI Design 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- 447	Telecommunication Engineering	3.00	3.00
CSE- 448	Telecommunication Engineering 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-453	Data Ware-housing and Data Mining	3.00	3.00
CSE-454	Data Ware-housing and Data Mining 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 Systems	3.00	3.00
CSE-458	Advanced Database Systems Sessional	1.50	0.75

DEPT OF ELECTRICAL, ELECTRONIC AND COMMUNICATION ENGINEERING

Total Credit Hours: 161

Level–1, Term-I

Course Code	Course Name	Type of Course	Contact Hour	Credit
EECE 101	Electrical Circuits I	Theory	3.00	3.00
PHY 111	Physics I (Waves and Oscillation, Optics and Thermal Physics)	Theory	3.00	3.00
MATH 111	Differential and Integral Calculus	Theory	3.00	3.00
CHEM 101	Chemistry-I	Theory	3.00	3.00
HUM 127	Sociology and Engineering Ethics/ Moral Philosophy	Theory	3.00	3.00
Subtotal (Theory)			**15.00**	**15.00**
EECE 102	Electrical Circuits and Simulation Lab-I	Sessional	3.00	1.50
CHEM 114	Inorganic and Quantitative Analysis Lab	Sessional	3.00	1.50
Subtotal (Sessional)			**6.00**	**3.00**
Total = Contact hours: 21.00; Credit hours: 18.00				

Level–1, Term-II

Course Code	Course Name	Type of Course	Contact Hour	Credit
EECE 105	Electrical Circuits II	Theory	3.00	3.00
PHY 113	Physics II (Electricity and Magnetism, Modern Physics and Mechanics)	Theory	3.00	3.00
MATH 115	Vector analysis, Matrices and Geometry	Theory	4.00	4.00
CSE 109	Computer Programming	Theory	3.00	3.00
HUM 177	Fundamental of Economics	Theory	3.00	3.00
Subtotal (Theory)			**16.00**	**16.00**
EECE 106	Electrical Circuit and Simulation Lab -II	Sessional	3.00	1.50
PHY 114	Physics II Laboratory	Sessional	3.00	1.50
CSE 110	Computer Programming Laboratory	Sessional	3.00	1.50
Subtotal (Sessional)			**9.00**	**4.50**
Total = Contact hours: 25.00; Credit hours: 20.50				

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 263	Fundamental of Mechanical Engineering	Theory	3.00	3.00
Math 211	Ordinary and Partial Differential Equation	Theory	3.00	3.00
HUM 279	Financial and Managerial Accounting	Theory	3.00	3.00
HUM 235	Communicative English	Theory	2.00	2.00
Subtotal (Theory)			**17.00**	**17.00**
EECE 202	Electronics Circuit and Simulation Lab	Sessional	3.00	1.50
ME 264	Fundamental of Mechanical Engineering Lab	Sessional	2.00	1.00
HUM 272	Developing English Skills Laboratory	Sessional	3.00	1.50
Subtotal (Sessional)			**8.00**	**4.00**
Total = Contact hours: 25.00; Credit hours: 21.00				

Level–2, Term-II

Course Code	Course Name	Type of course	Contact hour	Credit
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 Variables and Statistics	Theory	3.00	3.00
IPE 293	Industrial Management	Theory	3.00	3.00
Subtotal (Theory)			**15.00**	**15.00**
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 212	Numerical Technique Laboratory	Sessional	3.00	1.50
Subtotal (Sessional)			**9.00**	**4.50**
Total = Contact hours: 24.00; Credit hours: 19.50				

Level-3, Term-I

Course Code	Course Name	Type of course	Contact Hour	Credit
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
	Subtotal (Theory)		**15.00**	**15.00**
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
EECE 322	Electrical Service Design & CAD Laboratory	Sessional	4.00	2.00
	Subtotal (Sessional)		**13.00**	**6.50**
Total = Contact hours : 28.00 ; Credit hours : 21.50				

Level-3, Term-II

Course Code	Course Name	Type of course	Contact hour	Credit
EECE 307	Microprocessors and Interfacing	Theory	3.00	3.00
EECE 309	Communication Theory	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
EECE 319	Solid State Devices	Theory	3.00	3.00
Subtotal (Theory)			**15.00**	**15.00**
EECE 308	Microprocessor and Interfacing Laboratory	Sessional	3.00	1.50
EECE 310	Communication Laboratory	Sessional	3.00	1.50
EECE 312	Digital signal Processing-I Lab	Sessional	3.00	1.50
EECE 318	VLSI I Lab	Sessional	3.00	1.50
EECE 330	Industrial Training	Sessional	1.00 (6Weeks)	1.00
EECE 350	Capstone Project	Sessional	3.00	1.50
Subtotal (Sessional)			**12.00+1.00 (6weeks)**	**7.00**
Total = Contact hours : 31.00; Credit hours : 23.50				

Level-4, Term-I

Course Code	Course Name	Type of Course	Contact hour	Credit
EECE 401	Control System I	Theory	3.00	3.00
EECE 4**	Elective I	Theory	3.00	3.00
EECE 4 **	Elective II	Theory	3.00	3.00
EECE 4 **	Elective III	Theory	3.00	3.00
Subtotal (Theory)			**12.00**	**12.00**
EECE 400	Thesis		3.00	1.50
EECE 450	Capstone Project		6.00	3.00
EECE 402	Control System I Laboratory	Sessional	3.00	1.50
EECE 4 **	Elective II Laboratory	Sessional	3.00	1.50
Subtotal (Sessional)			**15.00**	**7.50**
Total = Contact hours : 27.00; Credit hours : 19.50				

Level-4, Term-II

Course Code	Course Name	Type of course	Contact hour	Credit
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
EECE 4 **	Elective VI	Theory	3.00	3.00
Subtotal (Theory)			**12.00**	**12.00**
EECE 400	Thesis		6.00	3.00
EECE 4 **	Elective III Laboratory	Sessional	3.00	1.50
Subtotal (Sessional)			**9.00**	**4.50**
Total = Contact hours : 21.00 ; Credit hours : 16.50				

List of Elective Courses

Power

Ser. No.	Course Code	Course Name	Level	Contact Hour	Credit
1	EECE 471	Power System II	4-I/ 4-II	3.00	3.00
2	EECE 473	Power Electronics	4-I/ 4-II	3.00	3.00
3	EECE 474	Power Electronics Laboratory	4-I/ 4-II	3.00	1.50
4	EECE 475	Power Plant Engineering	4-I/ 4-II	3.00	3.00
5	EECE 477	Power System Protection	4-I/ 4-II	3.00	3.00
6	EECE 483	High Voltage Engineering	4-I/ 4-II	3.00	3.00
7	EECE 478	Power System Protection Laboratory	4-I/ 4-II	3.00	1.50
8	EECE 484	High Voltage Engineering Laboratory	4-I/ 4-II	3.00	1.50
9	EECE 479	Power System Reliability	4-I/ 4-II	3.00	3.00
10	EECE 481	Power System Operation and Control	4-I/ 4-II	3.00	3.00
11	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	Credit
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-I/ 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 473	Power Electronics	4-I/ 4-II	3.00	3.00
9	EECE 474	Power Electronics Laboratory	4-I/ 4-II	3.00	1.50

Communication

Ser. No.	Course Code	Course Name	Level	Contact Hour	Credit
1	EECE 403	Telecommunication Engineering	4-I/ 4-II	3.00	3.00
2	EECE 431	Digital Signal Processing II	4-I/ 4-II	3.00	3.00
3	EECE 433	Microwave Engineering	4-I/ 4-II	3.00	3.00
4	EECE 434	Microwave Engineering Laboratory	4-I/ 4-II	3.00	1.50
5	EECE 435	Optical Fiber Communication	4-I/ 4-II	3.00	3.00
6	EECE 437	Digital Communication	4-I/ 4-II	3.00	3.00
7	EECE 438	Digital Communication Laboratory	4-I/ 4-II	3.00	1.50
8	EECE 439	Mobile Cellular Communication	4-I/ 4-II	3.00	3.00
9	EECE 441	Random Signals and Processes	4-I/ 4-II	3.00	3.00
10	EECE 443	Satellite Communication	4-I/ 4-II	3.00	3.00
11	EECE 444	Satellite Communication Laboratory	4-I/ 4-II	3.00	1.50
12	EECE 445	Communications Network	4-I/ 4-II	3.00	3.00
13	EECE 446	Communications Network Laboratory	4-I/ 4-II	3.00	1.50

Interdisciplinary

Ser. No.	Course Number	Course Name	Level	Contact Hour	Credit
1	EECE 421	Control System II	4-I/ 4-II	3.00	3.00
2	EECE 422	Control System II Laboratory	4-I/ 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-I/ 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-I/ 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-I/ 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-I/ 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-I/ 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-I/ 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-I/ 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-I/ 4-II	3.00	1.50

FACULTY OF MECHANICAL ENGINEERING

DEPT OF MECHANICAL ENGINEERING

Total Credit Hours: 161

LEVEL-1, TERM-I

Course Code	Course Name	Type of Course	Contact hours	Credit
ME 161	Introduction to Mechanical Engineering	Theory	3.00	3.00
EECE 159	Fundamentals of Electrical Engineering	Theory	3.00	3.00
Phy 109	Physics-I	Theory	3.00	3.00
Chem 103	Chemistry-I	Theory	3.00	3.00
Math 161	Mathematics-I	Theory	3.00	3.00
			15.00	**15.00**
ME 160	Mechanical Engineering Drawing-I	Sessional	3.00	1.50
EECE 160	Fundamental of Electrical Engineering Sessional	Sessional	1.50	0.75
Chem 114	Inorganic Quantitative Analysis Sessional	Sessional	3.00	1.50
			7.50	**3.75**
Contact hours: **22.50**; Credit hours: **18.75**				

LEVEL-1, TERM-II

Course Code	Course Name	Type of Course	Contact hours	Credit
ME 171	Computer Programming Language	Theory	3.00	3.00
Phy 107	Physics-II	Theory	3.00	3.00
Chem 143	Chemistry-II	Theory	3.00	3.00
Math 165	Mathematics – II	Theory	4.00	4.00
Hum 101	English	Theory	2.00	2.00
			15.00	**15.00**
Shop 162	Workshop Technology Sessional	Sessional	3.00	1.50
ME 172	Computer Programming Language Sessional	Sessional	3.00	1.50
Hum 102	Technical Report Writing and Presentation	Sessional	1.50	0.75
Phy 102	Physics Sessional	Sessional	3.00	1.50
			10.50	**5.25**
Contact hours: **25.50**; Credit hours: **20.25**				

LEVEL-2, TERM-I

Course Code	Course Name	Type of course	Contact hours	Credit
ME 203	Engineering Thermodynamics	Theory	3.00	3.00
ME 245	Engineering Mechanics-I	Theory	3.00	3.00
EECE 259	Electrical and Electronics Technology	Theory	3.00	3.00
Math 265	Mathematics-III	Theory	4.00	4.00
Hum 233	Principles of Accounting	Theory	2.00	2.00
			15.00	**15.00**
EECE 260	Electrical and Electronics Technology Sessional	Sessional	3.00	1.50
ME 260	Mechanical Engineering Drawing –II	Sessional	3.00	1.50
ME 204	Engineering Thermodynamics Sessional	Sessional	1.50	0.75
			7.50	**3.75**
Contact hours: **22.50**; Credit hours: **18.75**				

LEVEL-2, TERM-II

Course Code	Course Name	Type of course	Contact hours	Credit
ME 243	Mechanics of Solids	Theory	3.00	3.00
ME 247	Engineering Mechanics - II	Theory	3.00	3.00
ME 293	Engineering Materials	Theory	3.00	3.00
Math 267	Mathematics - IV	Theory	4.00	4.00
Hum 237	Engineering Economics	Theory	2.00	2.00
Hum 235	Sociology and Engineering Ethics	Theory	2.00	2.00
			17.00	**17.00**
ME 244	Mechanics of Solids Sessional	Sessional	1.50	0.75
ME 294	Engineering Materials Sessional	Sessional	1.50	0.75
			3.00	**1.50**
Contact hours: **20.00**; Credits hours : **18.50**				

LEVEL-3, TERM-I

Course Code	Course Name	Type of course	Contact hours	Credit
ME 305	Heat and Mass Transfer	Theory	4.00	4.00
ME 321	Fluid Mechanics – I	Theory	3.00	3.00
ME 341	Machine Design –I	Theory	3.00	3.00
ME 345	Mechanics of Machinery	Theory	3.00	3.00
ME 361	Instrumentation and Measurement	Theory	3.00	3.00
			16.00	**16.00**
ME 306	Heat and Mass Transfer Sessional	Sessional	3.00	1.50
ME 322	Fluid Mechanics Sessional – I	Sessional	1.50	0.75
ME 366	Integrated Design Project I	Sessional	4.00	2.00
ME 346	Mechanics of Machinery Sessional	Sessional	1.50	0.75
			10.00	**5.00**
Contact hours: **26.00** ; Credit hours : **21.00**				

LEVEL-3, TERM-II

Course Code	Course Name	Type of course	Contact hours	Credit
ME 307	Heat Transfer Equipment Design	Theory	3.00	3.00
ME 323	Fluid Mechanics – II	Theory	3.00	3.00
ME 343	Machine Design – II	Theory	3.00	3.00
ME 363	Numerical Analysis	Theory	3.00	3.00
ME 333	Manufacturing Technology	Theory	4.00	4.00
			16.00	**16.00**
ME 324	Fluid Mechanics Sessional – II	Sessional	1.50	0.75
ME 364	Numerical Analysis Sessional	Sessional	3.00	1.50
ME 334	Manufacturing Technology Sessional	Sessional	1.50	0.75
ME 368	Engineering Simulation Sessional	Sessional	1.50	0.75
ME 366	Integrated Design Project II	Sessional	4.00	2.00
ME 372*	Industrial Training	Training	6 weeks	1.50
			11.5+ 6 weeks	**7.25**
Contact hours: **27.50** + **06** Weeks; Credit hours : **23.25**				

* Will be conducted after the completion of Level- 3, at any convenient time as can be arranged by the Department.

LEVEL- 4, TERM-I

Course Code	Course Name	Type of course	Contact hours	Credit
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[1]	Selected from prescribed optional subjects	Theory	3.00	3.00
Optional II[1]	Selected from prescribed optional subjects	Theory	3.00	3.00
			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
			9.00	**4.50**
Contact hours: **24.00**; Credit hours: **19.50**				

LEVEL- 4, TERM – II

Course Code	Course Name	Type of course	Contact hours	Credit
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[2]	Selected from prescribed optional subjects	Theory	3.00	3.00
Optional IV[2]	Selected from prescribed optional subjects	Theory	3.00	3.00
			15.00	**15.00**
ME 404	Power Plant Engineering Sessional	Sessional	1.50	0.75
ME 468	Automobile Engineering Sessional	Sessional	3.00	1.50
ME 486	Engineering Research & Business Communication Sessional	Sessional	1.50	0.75
ME 400	Project and Thesis II	Sessional	6.00	3.00
			12.00	**6.00**
Contact hours : **27.00** ; Credit hours : **21.00**				

AERONAUTICAL ENGINEERING

Total Credit Hours: Aerospace 162.00 & Avionics 162.00

LEVEL-1, TERM-I (Aerospace & Avionics)

Course Code	Course Name	Contact Hour	Credits
Phy 115	Physics I (Waves and Oscillation, Optics and Thermal Physics)	3	3
AEAV 101	Electrical Circuit Analysis-I	3	3
Math 121	Math I (Differential and Integral Calculus)	3	3
Math 127	Math II (Vector Analysis, Matrix and Coordinate Geometry)	3	3
AEAS 103	Fundamentals of Aeronautical Engineering	3	3
	Subtotal (Theory)	**15**	**15**
Phy 116	Physics Sessional	3	1.5
AEAV 102	Electrical Circuit Analysis-I Sessional	3	1.5
SHOP 108	Workshop Technology Sessional -I	1.5	0.75
AEAS 110	Aeronautical Engineering Drawing-1	3	1.5
	Subtotal (Sessional)	**10.5**	**5.25**
	Total:	**25.5**	**20.25**

LEVEL 1, TERM-II (Aerospace and Avionics)

Course Code	Course Name	Contact Hour	Credits
Phy 117	Phy II (Electricity and Magnetism, Modern Physics and Mechanics)	3	3
Chem 107	Chemistry (Atomic Structure, Thermo-chemistry and Chemistry of Engineering Materials)	3	3
Math 129	Math III (Ordinary and Partial Differential Equations)	3	3
AEAV 103	Computer Programming and Applications	3	3
Hum 111	English	3	3
	Subtotal (Theory)	**15**	**15**
Hum 112	Technical Report Writing and Presentation	3	1.5
Chem 108	Chemistry Sessional	3	1.5
AEAV 104	Computer Programming and Applications Sessional	3	1.5
SHOP 112	Workshop Technology Sessional - II	1.5	0.75
	Subtotal (Sessional)	**10.5**	**5.25**
	Total:	**25.5**	**20.25**

LEVEL-2, TERM-I (Aerospace)

Course Code	Course Name	Contact Hour	Credits
AEAS-201	Engineering Mechanics (Statics and Dynamics)	4	4
AEAV-205	Numerical Analysis and Application	3	3
AEAV 203	Electronics-I	3	3
Math-223	Math IV (Complex Variable and Laplace Transform)	3	3
HUM 211	Principles of Accounting	3	3
	Subtotal (Theory)	**16**	**16**
AEAV-206	Numerical Analysis and Application Sessional	3	1.5
AEAV-204	Electronics-I Sessional	1.50	0.75
	Subtotal (Sessional)	**4.5**	**2.25**
	Total:	**20.5**	**18.25**

LEVEL-2, TERM-I (Avionics)

Course Code	Course Name	Contact Hour	Credits
AEAV 203	Electronics – I	3	3
AEAV 201	Electrical Circuit Analysis-II	3	3
AEAV 205	Numerical Analysis and Applications	3	3
AEAS 201	Engineering Mechanics (Statics and Dynamics)	4	4
Math 223	Math IV (Complex Variable and Laplace Transform)	3	3
Hum 211	Principles of Accounting	3	3
	Subtotal (Theory)	**19**	**19**
AEAV 202	Electrical Circuit Analysis-II Sessional	3.0	1.5
AEAV 206	Numerical Analysis and Applications Sessional	1.5	0.75
	Subtotal (Sessional)	**4.5**	**2.25**
	Total:	**23.5**	**21.25**

LEVEL-2, TERM-II (Aerospace)

Course Code	Course Name	Contact Hour	Credits
AEAS-203	Fundamentals of Fluid Mechanics	3	3
AEAS-205	Mechanics of Solids	3	3
AEAS-207	Thermodynamics	3	3
AEAS 215	Aircraft Systems	3	3
Math-225	Math V (Fourier Analysis and Statistics)	3	3
	Subtotal (Theory)	**15**	**15**
AEAS-206	Mechanics of Solids Sessional	3	1.5
AEAS-204	Fundamentals of Fluid Mechanics Sessional	1.5	0.75
AEAS-208	Thermodynamics Sessional	1.5	0.75
AEAS-210	Aeronautical Engineering Drawing-II	3	1.5
	Subtotal (Sessional)	**9**	**4.5**
	Total:	**24**	**19.5**

LEVEL-2, TERM-II (Avionics)

Course Code	Course Name	Contact Hour	Credit Hour
AEAV 215	Electronics-II	3	3
AEAV 209	Electro-Mechanical System	3	3
AEAS 203	Fundamentals of Fluid Mechanics	3	3
AEAS 207	Thermodynamics	3	3
Math 225	Math V (Fourier Analysis and Statistics)	3	3
	Subtotal (Theory)	**15**	**15**
AEAV 216	Electronics-II Sessional	3	1.5
AEAV 210	Electro-Mechanical System Sessional	1.5	0.75
AEAS 208	Thermodynamics Sessional	1.5	0.75
AEAS 210	Aeronautical Engineering Drawing-II	3	1.5
	Subtotal (Sessional)	**9**	**4.5**
	Total:	**24**	**19.5**

LEVEL-3, TERM-I (Aerospace)

Course Code	Course Name	Contact Hour	Credits
AEAS-301	Heat Transfer	3	3
AEAS 335	Applied Aerodynamics	3	3
AEAS-337	Aerospace Propulsion	3	3
AEAS-307	Aircraft Loading & Structure Analysis	3	3
AEAS 331	Material Science and Aerospace Materials	3	3
HUM 305	Economics	3	3
	Subtotal (Theory)	**18**	**18**
AEAS-336	Applied Aerodynamics Sessional	1.5	0.75
AEAS-338	Aerospace Propulsion Sessional	1.5	0.75
AEAS-322	Heat Transfer Sessional	3	1.5
AEAS 332	Material Science and Aerospace Materials Sessionals	1.5	0.75
	Subtotal (Sessional)	**7.5**	**3.75**
	Total:	**25.5**	**21.75**

LEVEL- 3, TERM – I (Avionics)

Course Code	Course Name	Contact Hour	Credits
AEAV 301	Digital Systems	3	3
AEAV 303	Signals and Systems	3	3
AEAS 337	Aerospace Propulsion	3	3
AEAV 309	Aircraft Avionics Systems	3	3
AEAS 335	Applied Aerodynamics	3	3
HUM 305	Economics	3	3
	Subtotal (Theory)	**18**	**18**
AEAV 302	Digital Systems Sessional	3	1.5
AEAS 338	Aerospace Propulsion Sessional	1.5	0.75
AEAS 336	Applied Aerodynamics Sessional	1.5	0.75
	Subtotal (Sessional)	**6**	**3**
	Total:	**25**	**21**

LEVEL-3, TERM-II (Aerospace)

Course Code	Course Name	Contact Hour	Credits
AEAS-313	High Speed Aerodynamics	3	3
AEAS-315	Aerospace Vehicle Stability and Control	3	3
AEAS-317	Mechanics of Structures, Structural Vibration and Aero Elasticity	4	4
AEAS-319	Machine Design	3	3
AEAV 329	Measurement and Aircraft Instruments	3	3
AEAS-325	Computational Fluid Dynamics	3	3
	Subtotal (Theory)	**19**	**19**
AE-300	Industrial Training	8 Weeks	1
AEAV 330	Measurement and Aircraft Instruments vSessional	1.5	0.75
AEAS 326	Computational Fluid Dynamics Sessional	1.5	0.75
	Subtotal (Sessional)	**3+8 weeks**	**2.5**
	Total:	**22 + 8 weeks**	**21.5**

LEVEL-3, TERM – II (Avionics)

Course Code	Course Name	Contact Hour	Credits
AEAV 305	Communication Engineering	3	3
AEAV-307	Electro-Magnetic Field Theory	3	3
AEAV-313	Digital Signal Processing	3	3
AEAV 329	Measurement and Aircraft Instruments	3	3
AEAS 315	Aerospace Vehicle Stability and Control	3	3
	Subtotal (Theory)	**15**	**15**
AE-300	Industrial Training	8 weeks	1
AEAV 306	Communication Engineering Sessional	1.5	0.75
AEAV-324	Digital Signal Processing Sessional	1.5	0.75
AEAV 330	Measurement and Aircraft Instruments Sessional	1.5	0.75
	Subtotal (Sessional)	**4.5+8 weeks**	**3.25**
	Total:	**19.5 + 8 weeks**	**18.25**

LEVEL-4, TERM-I (Aerospace)

Course Code	Course Name	Contact Hour	Credits
AEAS 437	Aerospace Vehicle Design	3	3
AEAS 439	Rotor Dynamics and Aircraft Performance	3	3
AEAS 447	Space Engineering	3	3
AEAV 411	Control System Engineering	3	3
AEAS-XXX	Selected from prescribed optional courses	3	3
	Subtotal (Theory)	**15**	**15**
AEAS-450	Capstone Project/Integrated Design Project (IDP)	6	3
AEAS-480	Thesis	3	1.5
AEAS-412	Control Systems Engineering Sessional	1.5	0.75
AEAS 438	Aerospace Vehicle Design Sessional	3	1.5
	Subtotal (Sessional)	**13.5**	**6.75**
	Total:	**28.5**	**21.75**

LEVEL-4, TERM – I (Avionics)

Course Code	Course Name	Contact Hour	Credits
AEAV-401	Microwave Engineering	3	3
AEAV 411	Control Systems Engineering	3	3
AEAV 407	Radar Engineering	3	3
AEAS 447	Space Engineering	3	3
AEAV-XXX	Selected from prescribed optional courses	3	3
	Subtotal (Theory)	**15**	**15**
AEAV-450	Capstone Project/Integrated Design Project (IDP)	6	3
AEAV-480	Thesis	3	1.5
AEAV 408	Radar Engineering Sessional	1.5	0.75
AEAV 412	Control Systems Engineering Sessional	1.5	0.75
AEAV 442	Microwave Engineering Sessional	1.5	0.75
	Subtotal (Sessional)	**13.5**	**6.75**
	Total:	**28.5**	**21.75**

LEVEL-4, TERM-II (Aerospace)

Course Code	Course Name	Contact Hour	Credit
AEAS-407	Turbo Machinery	3	3
AEAS 445	Industrial and Business Management	3	3
HUM 421	Engineering Ethics and Society	3	3
AEAS-YYY	Select from prescribed optional courses	3	3
Subtotal (Theory)		**12**	**12**
AEAS-450	Capstone Project/Integrated Design Project (IDP)	6	3
AEAS-480	Thesis	6	3
AEAV 408	Turbo Machinery Sessional	1.5	0.75
Subtotal (Sessional)		**13.5**	**6.75**
Total:		**25.5**	**18.75**

LEVEL- 4, TERM – II (Avionics)

Course Code	Course Name	Contact Hour	Credit
AEAV 443	Aircraft Communication and Navigation	4	4
AEAS 445	Industrial and Business Management	3	3
AEAV-YYY	Select from prescribed optional courses	3	3
HUM 421	Engineering Ethics and Society	3	3
Subtotal (Theory)		**13**	**13**
AEAV -450	Capstone Project/ Integrated Design Project (IDP)	6	3
AEAV -480	Thesis	6	3
AEAV-444	Aircraft Communication and Navigation Sessional	1.5	0.75
Subtotal (Sessional)		**13.5**	**6.75**
Total:		**26.5**	**19.75**

DEPT OF NAVAL ARCHITECTURE AND MARINE ENGINEERING

Total Credit Hours: 161.75

Level–1, Term-I

Course Code	Course Name	Contact Hour	Credit
Theoretical Courses			
Chem 121	Engineering Chemistry	3	3
Hum 131	English	2	2
Math 151	Differential Calculus and Integral Calculus	3	3
Phy 121	Structure of Matter, Electricity, Magnetism and Modern Physics	3	3
NAME 107	Introduction to Naval Architecture and Marine Engineering	3	3
Sessional Courses			
Hum 132	English Sessional	3	1.5
NAME 150	Mechanical Engineering Drawing	3	1.5
Chem 122	Engineering Chemistry Sessional	3	1.5
Shop 180	Workshop Practice (Foundry, Welding and Machine Shop Sessional)	3	1.5
	Total (5T + 4S)	**26.00**	**20.00**

LEVEL-1, TERM-II

Course Code	Course Name	Contact Hour	Credit
Theoretical Courses			
Phy 123	Waves and Oscillations, Geometrical Optics and Wave Mechanics	3	3
Math 153	Ordinary and Partial Differential Equation	3	3
NAME 157	Hydrostatics and Stability	3	3
NAME 177	Thermal Engineering	3	3
NAME 115	Computer Programming Language	3	3
Sessional Courses			
Phy 124	Physics Sessional	3	1.5
NAME 158	Ship Design and Drawing -I	3	1.5
NAME 178	Thermal Engineering Sessional	3	1.5
NAME 116	Computer Programming Lab	3	1.5
	Total (5T+4S)	**27**	**21**

LEVEL-2, TERM-I

Course Code	Course Name	Contact Hour	Credit
Theoretical Courses			
Math 251	Vector Analysis and Coordinate Geometry	3	3
NAME 205	Shipbuilding Materials and Metallurgy	3	3
NAME 213	Fluid Mechanics	3	3
NAME 201	Mechanics of Structure	3	3
NAME 207	Ship Design - I	3	3
Sessional Courses			
NAME 206	Shipbuilding Materials and Metallurgy Sessional	1.5	0.75
NAME 208	Ship Design and Drawing -II	3	1.5
NAME 214	Fluid Mechanics Sessional	3	1.5
NAME 226	Computer Aided Design (CAD)	3	1.5
	Total (5T+4S)	**25.5**	**20.25**

LEVEL- 2, TERM- II

Course Code	Course Name	Contact Hour	Credit
Theoretical Courses			
NAME 215	Ship Construction and Welding Technology	3	3
Math 253	Statistics, Laplace Transform and Matrices	3	3
NAME 253	Marine Hydrodynamics	3	3
NAME 281	Marine Electrical and Electronics	4	4
HUM 223	Economics and Sociology	3	3
Sessional Courses			
NAME 228	Mechanics of Structure Sessional	1.5	0.75
NAME 254	Marine Hydrodynamics Sessional	3	1.5
NAME 258	Ship Design and Drawing -III	3	1.5
NAME 282	Marine Electrical and Electronics Sessional	3	1.5
	Total (5T+4S)	**26.50**	**21.25**

LEVEL- 3, TERM- I

Course Code	Course Name	Contact hours	Credit
Theoretical Courses			
NAME 301	Ship Structure	3	3
NAME 309	Marine Engineering -I	3	3
NAME 363	Numerical Methods	3	3
NAME 353	Theories of Resistance and Propulsion	3	3
	Optional -1*	3	3
Sessional Courses			
NAME 300	Ship Design Project	3	1.5
NAME 302	Ship Structure Sessional	1.5	0.75
NAME 308	Application of ship design software	3	1.5
NAME 354	Resistance and Propulsion of Ships Sessional	1.5	0.75
	Total (5T+4S)	**24**	**19.50**

LEVEL- 3, TERM- II

Theoretical Courses			
Course Code	**Course Name**	**Contact hours**	**Credit**
Math 351	Fourier Analysis, Harmonic Function and Complex Variable	3	3
NAME 369	Heat Transfer	3	3
NAME 307	Ship Design - II	3	3
NAME 311	Theory of Machines and Machine Elements Design	3	3
	Optional 2*		
Sessional Courses			
NAME 300	Ship Design Project	3	1.5
NAME 360	Marine Engineering Sessional-1	3	1.5
NAME 364	Numerical Methods Sessional	3	1.5
	Total (5T+3S)	**24**	**19.50**

* Optional Courses will be offered as required from the subjects mentioned in para 4.4.
** 04 Weeks Industrial/Shipyard Training course will be conducted as NAME-450 on completion of level 3 before commencing level 4.

LEVEL- 4, TERM- I

Course Code	Course Name	Contact hours	Credit
Theoretical Courses			
NAME 403	Dynamics of Marine Vehicles	3	3
NAME 409	Marine Engineering II	3	3
NAME 479	Engineering Management	3	3
Hum 413	Principles of Accounting	2	2
	Optional -3*	3	3
Sessional Courses			
NAME 400	Thesis	6	3
NAME 430	Application of Computer Programming for Optimization of Ship Design	3	1.5
Training course/Internship **			
NAME 450	Shipyard Practice/Industrial Training (4 Weeks)	4 Weeks	1.5
	Total (5T+3S)	**23.00+ 4 Weeks**	**20**

LEVEL- 4, TERM- II

Course Code	Course Name	Contact hours	Credit
Theoretical Courses			
NAME 457	Maritime Economics and Management	3	3
NAME 459	Marine Maintenance and Repair Engineering	3	3
	Optional-4*	3	3
	Optional-5*	3	3
	Optional-6*	3	3
Sessional Courses			
NAME 400	Thesis	6	3
NAME 460	Marine Engineering Sessional-II	3	1.5
NAME 490	Bangladesh Studies for Naval Architects	1.5	0.75
	Total (5T+2S)	**25.5**	**20.25**

List of Optional Courses

a. One theoretical course will be registered for each term at level 3 as offered from the following list (Optional 1 and Optional 2):

Optional courses for level 3 (one for each term as offered)			
NAME 305	Composite Materials	3	3
NAME 315	Port and Harbor Engineering	3	3
NAME 321	Finite Element Method for Ship Structure	3	3
NAME 373	Computational Fluid Dynamics (CFD)	3	3
NAME 389	Marine Production and Planning	3	3

b. One theoretical course will be registered at the first term of level four and three courses at the second term of level four as offered from the following list (Optional 3, 4, 5, 6):

Optional courses for level 4 (as offered)			
NAME 431	Ship Hull Vibration 3 3	3	3
NAME 435	Computer Aided Ship Production	3	3
NAME 437	Inland Water Transportation System	3	3
NAME 445	Dredger and Dredging Technology	3	3
NAME 447	Maritime Transportation System	3	3
NAME 453	Power and Propulsion System	3	3
NAME 463	Ship Performance	3	3
NAME 465	Marine Safety and Pollution	3	3
NAME 477	Control Engineering	3	3
NAME 481	Optimization Method in Ship Design	3	3
NAME 483	Theory of Hydrofoils	3	3
NAME 489	Introduction to Offshore Structure	3	3
NAME 493	Marine Acoustics	3	3
NAME 499	Shipyard Management	3	3

DEPT OF INDUSTRIAL AND PRODUCTION ENGINEERING

Total Credit Hours: 160

Level 1, Term I

Course Code	Course Name	Contact Hours	Credit
PHY 131	Structure of Matter, Electricity and Magnetism, and Modern Physics	**3**	**3.00**
CHEM 107	Chemistry	3	3.00
MATH 101	Differential and Integral Calculus	3	3.00
HUM 103	Industrial Sociology	3	3.00
IPE 101	Introduction to Industrial and Production Engineering	3	3.00
Total Theoretical		**15.00**	**15.00**
ME 160	Mechanical Engineering Drawing	3	1.50
SHOP 172	Machine Shop Practice	3	1.50
CHEM 108	Inorganic Quantitative Analysis Sessional	3	1.50
HUM 186	English Language Practice	3	1.50
Total Sessional:		**12.00**	**6.00**
Grand Term Total:		**27.00**	**21.00**

Level 1, Term II

Course Code	Course Name	Contact Hours	Credit
MATH 103	Vector, Matrix and Geometry	3	3.00
PHY 133	Waves and Oscillations, Optics and Wave Mechanics	3	3.00
IPE 105	Engineering Materials	4	4.00
HUM 119	Managerial Accounting and Economics	3	3.00
EECE 171	Basic Electrical & Electronic Circuit	3	3.00
Total Theoretical		**16.00**	**16.00**
PHY 132	Physics Laboratory	3	1.50
EECE 172	Basic Electrical & Electronic Circuit Sessional	3	1.50
IPE 106	Engineering Materials Sessional	3	1.50
Total Sessional:		**9.00**	**4.50**
Grand Term Total:		**25.00**	**20.50**

Level 2, Term I

Course Code	Course Name	Contact Hours	Credit
MATH 201	Differential Equation and Laplace Transform	3	3.00
EECE 271	Electrical Machines and Electronics	3	3.00
CSE 281	Computer Programming Techniques	3	3.00
IPE 201	Manufacturing Processes I	3	3.00
ME 271	Engineering Mechanics and Theory of Machines	3	3.00
Total Theoretical		**15.00**	**15.00**
EECE 272	Electrical Machines and Electronics Sessional	3	1.50
CSE 282	Computer Programming Techniques Sessional	3	1.50
IPE 202	Manufacturing Processes I Sessional	3/2	0.75
IPE 200	Engineering Graphics and Introduction to CAD Sessional	3	1.50
Total Sessional:		**10.50**	**5.25**
Grand Term Total:		**25.50**	**20.25**

Level 2, Term II

Course Code	Course Name	Contact Hours	Credit
IPE 203	Manufacturing Process II	3	3.00
IPE 205	Probability and Statistics	4	4.00
IPE 207	Engineering Economy	3	3.00
ME 243	Mechanics of Solids	3	3.00
ME 251	Thermodynamics and Heat Transfer	3	3.00
Total Theoretical		**16.00**	**16.00**
IPE 204	Manufacturing Processes II Sessional	3/2	0.75
ME 244	Mechanics of Solids Sessional	3/2	0.75
ME 252	Thermodynamics and Heat Transfer Sessional	3/2	0.75
Total Sessional:		**4.50**	**2.25**
Grand Term Total:		**20.50**	**18.25**

Level 3, Term I

Course Code	Course Title	Contract Hour	Credit
ME 351	Fluid Mechanics & Machinery	3	3.00
IPE 301	Measurement, Instrumentation and Control	3	3.00
IPE 303	Product Design I	3	3.00
IPE 305	Operations Research	4	4.00
IPE 317	Ergonomics and Safety Management	3	3.00
Total Theoretical:		**16.00**	**16.00**
ME 352	Fluid Mechanics & Machinery Sessional	3	1.50
IPE 302	Measurement, Instrumentation and Control Sessional	3/2	0.75
IPE 304	Product Design I Sessional	3	1.50
IPE 318	Ergonomics and Safety Management Sessional	**3/2**	**0.75**
Total Sessional:		**9.00**	**4.50**
Grand Term Total:		**25.00**	**20.50**

Level 3, Term II

Course Code	Course Title	Contract Hour	Credit
IPE 307	Product Design II	3	3.00
IPE 309	Material Handling and Maintenance Management	3	3.00
IPE 311	Operations Management	3	3.00
IPE 313	Quality Management	3	3.00
IPE 315	Numerical Analysis	3	3.00
	Total Theoretical:	**15.00**	**15.00**
IPE 308	Product Design II Sessional	3	1.50
IPE 310	Material Handling and Maintenance Management Sessional	3/2	0.75
IPE 314	Quality Management Sessional	3/2	0.75
IPE 300	Business Communication Seminar-I	3/2	0.75
IPE 320	Industrial Practice	4 Weeks	2.00
	Total Sessional:	**7.50**	**5.75**
	Grand Term Total:	**22.50**	**20.75**

Level 4, Term I

Course Code	Course Title	Contract Hour	Credit
IPE 405	Supply Chain Management	3	3.00
IPE 415	Project Management	3	3.00
IPE 417	Industrial Automation	3	3.00
IPE 419	Modeling and Simulation	3	3.00
IPE ---	Optional-I	3	3.00
	Total Theoretical :	**15.00**	**15.00**
IPE 400	Project and Thesis	6	3.00
IPE 420	Modeling and Simulation Sessional	**3/2**	**0.75**
IPE 418	Industrial Automation Sessional	3/2	0.75
	Total Sessional :	**9.00**	**4.50**
	Grand Term Total:	**24.00**	**19.50**

Level 4, Term II

Course Code	Course Title	Contract Hour	Credit
IPE 421	Machine Tools	4	4.00
IPE 411	CAD/CAM	3	3.00
IPE 413	Industrial and Business Management	3	3.00
IPE ---	Optional II	3	3.00
	Total Theoretical :	**13.00**	**13.00**
IPE 400	Project and Thesis	6	3.00
IPE 422	Machine Tools Sessional	3	1.50
IPE 412	CAD/CAM Sessional	3/2	0.75
IPE 450	Business Communication Seminar II	2	1.00
	Total Sessional :	**13.50**	**6.25**
	Grand Term Total:	**26.50**	**19.25**

FACULTY OF SCIENCE AND ENGINEERING

DEPT OF BIOMEDICAL ENGINEERING

Total Credit Hours: 160

Level-1 Term-I

Course Code	Course Name	Contact Hour	Credits
BME 101	Introduction to Biomedical Engineering	3	3.0
PHY 191	Waves and Oscillations, Optics and Thermal Physics	3	3.0
PHY 192	Physics Sessional	3	1.5
MATH 191	Calculus	3	3.0
CHEM 191	Organic & Inorganic Chemistry	3	3.0
CHEM 192	Organic & Inorganic Chemistry Sessional	3	1.5
HUM 191	English	3	3.0
HUM 192	English Skills Sessional	3	1.5
	Total:	**24.0**	**19.5**

Level-1 Term-II

Course Code	Course Name	Contact Hour	Credits
BME-103	Introduction to Living Cells and Human Anatomy	3	3.0
PHY 193	Structure of Matter, Modern Physics and Mechanics	3	3.0
MATH 193	Complex Variables and Linear Algebra	3	3.0
CHEM 193	Physical Chemistry	3	3.0
CHEM 194	Physical Chemistry Sessional	3	1.5
EECE 191	Electrical Circuits	3	3.0
EECE 192	Electrical Circuits Sessional	3	1.5
BME-106	CAD in Biomedical Engineering Sessional	3	1.5
	Total:	**24**	**19.5**

Level-2 Term-I

Course Code	Course Name	Contact Hour	Credits
BME-201	Bioelectricity	3	3.0
MATH 291	Differential Equations	3	3.0
EECE 291	Electronic Devices and Circuits	3	3.0
EECE 292	Electronic Devices and Circuits Sessional	3	1.5
BME- 203	Biofluid Mechanics and Heat Transfer	3	3.0
BME- 204	Biofluid Mechanics and Heat Transfer Sessional	3	1.5
CSE 291	Computer Programming	3	3.0
CSE 292	Computer Programming Sessional	3	1.5
HUM 291	Economics	2	2.0
	Total:	**26**	**21.5**

Level-2 Term-II

Course Code	Course Name	Contact Hour	Credits
BME- 205	Human Physiology	3	3.0
BME- 206	Human Physiology Sessional	3	1.5
CHEM 291	Biochemistry	3	3.0
EECE 293	Electrical Machines	3	3.0
EECE 294	Electrical Machines Sessional	3	1.5
BME 207	Biomedical Instrumentation and Measurements	3	3.0
BME 208	Biomedical Instrumentation and Measurements Sessional	3	1.5
MATH 293	Probability & Statistics	3	3.0
	Total:	**24**	**19.5**

Level-3 Term-I

Course Code	Course Name	Contact Hour	Credits
BME 301	Principles of Diagnostic and Therapeutic Equipment	3	3.0
EECE 391	Digital Electronics	3	3.0
EECE 392	Digital Electronics Sessional	3	1.5
BME 303	Biomaterials	3	3.0
BME 305	Biomechanics	3	3.0
BME 306	Biomaterials and Biomechanics Sessional	3	1.5
EECE 393	Digital Signal Processing	3	3.0
EECE 394	Digital Signal Processing Sessional	3	1.5
BME 308	Biomedical Engineering Design-I Sessional	3	1.5
	Total:	**27**	**21.0**

Level-3 Term-II

Course Code	Course Name	Contact Hour	Credits
BME 309	Embedded Systems and Interfacing	3	3.0
BME 310	Embedded Systems and Interfacing Sessional	3	1.5
HUM 391	Sociology	2	2.0
EECE 395	Random Signals & Processes	3	3.0
EECE 397	Solid State Devices	3	3.0
BME 311	Medical Imaging	3	3.0
BME 312	Medical Imaging Sessional	3	1.5
BME 314	Industrial Training / Attachment	¾ weeks	1.5
	Total:	**20**	**18.5**

BME 314 (Industrial Training / Attachment) will be conducted at any convenient time after the term end exam of term-2 for a duration of ¾ weeks as applicable or decided by the department.

Level-4 Term-1

Course Code	Course Name	Contact Hour	Credit Hour
BME 401	Physiological Control Systems	3	3.0
BME 402	Physiological Control Systems Sessional	3	1.5
BME 403	Molecular Biology for Engineers	3	3.0
BME 405	Motion Analysis and Rehabilitation Engineering	3	3.0
BME 406	Motion Analysis and Rehabilitation Engineering Sessional	3	1.5
BME 4**	Elective 1	3	3.0
BME 4**	Elective 2	3	3.0
BME 400	Project/ Thesis	6	3.0
	Total:	**27**	**21.0**

Level-4 Term-II

Course Code	Course Name	Contact Hour	Credit
BME 407	Hospital Planning and Management	3	3.0
BME 409	Professional Ethics	3	3.0
BME 411	Biomedical Transport Fundamentals	3	3.0
BME 412	Biomedical Engineering Design-II Sessional	3	1.5
BME 4**	Elective 3	3	3.0
BME 4**	Elective 4	3	3.0
BME 400	Project & Thesis	6	3.0
Total:		**24**	**19.5**

DEPT OF NUCLEAR SCIENCE AND ENGINEERING

Total Credit Hours: 161.00

Level – 1, Term – I

Course Code	Course Name	Contact Hour	Credits
NSE 101	Introduction to Nuclear Science and Engineering	3	3.0
Phy 151	Structure of Matter, Modern Physics and Wave Mechanics	3	3.0
Math 191	Differential and Integral Calculus	3	3.0
ME 153	Basic Engineering Thermodynamics	3	3.0
EECE 119	Fundamental of Electrical Engineering	3	3.0
	Theory Total	**15**	**15.0**
Phy 152	Physics Sessional	3	1.5
EECE 120	Fundamental of Electrical Engineering Sessional	3/2	0.75
Shop 114	Foundry, Welding and Machine Shop	3	1.5
	Sessional Total	**7.5**	**3.75**
	Term Total:	**22.5**	**18.75**

Level – 1, Term – II

Course Code	Course Name	Contact Hour	Credits
CSE 121	Introduction to Computer Science and Programming Language	3	3.0
NSE 153	Fundamental of Nuclear Physics	3	3.0
Chem 171	Introduction to Chemistry	3	3.0
Math 193	Differential Equations (ODE & PDE)	3	3.0
Hum 105	English and Communication Skill	3	3.0
Theory Total		**15**	**15.0**
CSE 122	Computer Science & Programming Language Sessional	3/2	0.75
ME 180	Basic Engineering Drawing	3	1.5
Chem 172	Inorganic Quantitative Analysis Sessional	3	1.5
Hum 106	English and Communication Skill Sessional	3	1.5
Sessional Total		**10.5**	**5.25**
	Term Total:	**25.5**	**20.25**

Level – 2, Term – I

Course Code	Course Name	Contact Hour	Credits
NSE 201	Neutron Transport and Reactor Physics	3	3.0
NSE 241	Introduction to Thermal Engineering	3	3.0
Math 291	Vector Analysis, Matrices and Coordinate Geometry	3	3.0
NSE 273	Introduction to Nuclear and Radio Chemistry	3	3.0
EECE 219	Electronics, Signals and measurement	3	3.0
	Theory Total	**15**	**15.0**
NSE 242	Thermal Engineering Sessional	3/2	0.75
EECE 220	Electronics, Signals and Measurement Sessional	3	1.5
NSE 274	Nuclear and Radio Chemistry Lab	3/2	0.75
Hum[1]	Select from the prescribed courses	3/2	0.75
	Sessional Total	**7.5**	**3.75**
	Term Total:	**22.5**	**18.75**

Level – 2, Term – II

Course Code	Course Name	Contact Hour	Credits
NSE 261	Numerical Methods in Nuclear Engineering Analysis	3	3.0
NSE 281	Nuclear Materials	3	3.0
ME 253	Engineering Mechanics	3	3.0
Math 293	Fourier Analysis, Harmonic functions, Laplace Transform and Complex variable	4	4.0
Hum 207	Principle of Accounting	3	3.0
Theory Total		**16**	**16.0**
NSE 262	Modeling and Simulation sessional	3	1.5
NSE 282	Nuclear Materials Sessional	3	1.5
ME 254	Engineering Mechanics Sessional	3/2	0.75
Hum[2]	Select from the prescribed courses	3/2	0.75
	Sessional Total	**9.0**	**4.5**
	Term Total:	**25.0**	**20.5**

Level – 3, Term – I

Course Code	Course Name	Contact Hour	Credits
NSE 301	Radiation Detection and Measurement	3	3.0
NSE 305	Nuclear Reactor Thermal Hydraulics	3	3.0
NSE 309	Nuclear Fuel Cycle and Radioactive Waste Management	3	3.0
NSE 313	Reactor Instrumentation and Control	3	3.0
ME 373	Mechanics of Materials	3	3.0
Hum307	Engineering Economics	2	2.0
Theory Total		**17**	**17.0**
NSE 302	Radiation Detection and Measurement Sessional	3/2	0.75
NSE 306	Nuclear Reactor Thermal Hydraulics Sessional	3	1.5
ME 374	Mechanics of Materials Sessional	3/2	0.75
Sessional Total		**6**	**3.0**
Term Total:		**23**	**20.0**

Level – 4, Term – I

Course Code	Course Name	Contact Hr	Credits
NSE 403	Nuclear Power Plant Engineering	3	3.0
NSE 453	Radiation Protection and Environmental Monitoring of NPPs	3	3.0
-	Elective Course-1	3	3.0
ME 497	Industrial Management	3	3.0
NSE 419	Nuclear Reactor Design and Features I	3	3.0
NSE 431	Power Generation and Grid Stability	3	3.0
Theory Total		**18.0**	**18.0**
NSE 420	Nuclear Reactor Laboratory Sessional	3	1.5
NSE 400	Thesis	6	3.0
Sessional Total		**9.0**	**4.5**
Term Total:		**27.0**	**22.5**

Level – 3, Term – II

Course Code	Course Name	Contact Hour	Credits
NSE 325	Fluid Mechanics and Machinery	3	3.0
NSE 329	Reactor Operation and Safety	3	3.0
NSE 357	Nuclear Security and Safeguard Engineering	3	3.0
NSE 375	Automation, Robotics and Control	3	3.0
NSE 391	Engineering Ethics	2	2.0
NSE 393	Reactor Theory and Analysis	3	3.0
Theory Total		**17.0**	**17.0**
NSE 326	Fluid Mechanics and Machinery Sessional	3/2	0.75
NSE 384	Project	3	1.5
NSE 320	Industrial Training	4 Weeks	1.0
Sessional Total		**4.5 +4 Weeks**	**3.25**
Term Total:		**21.5+4 Weeks**	**20.25**

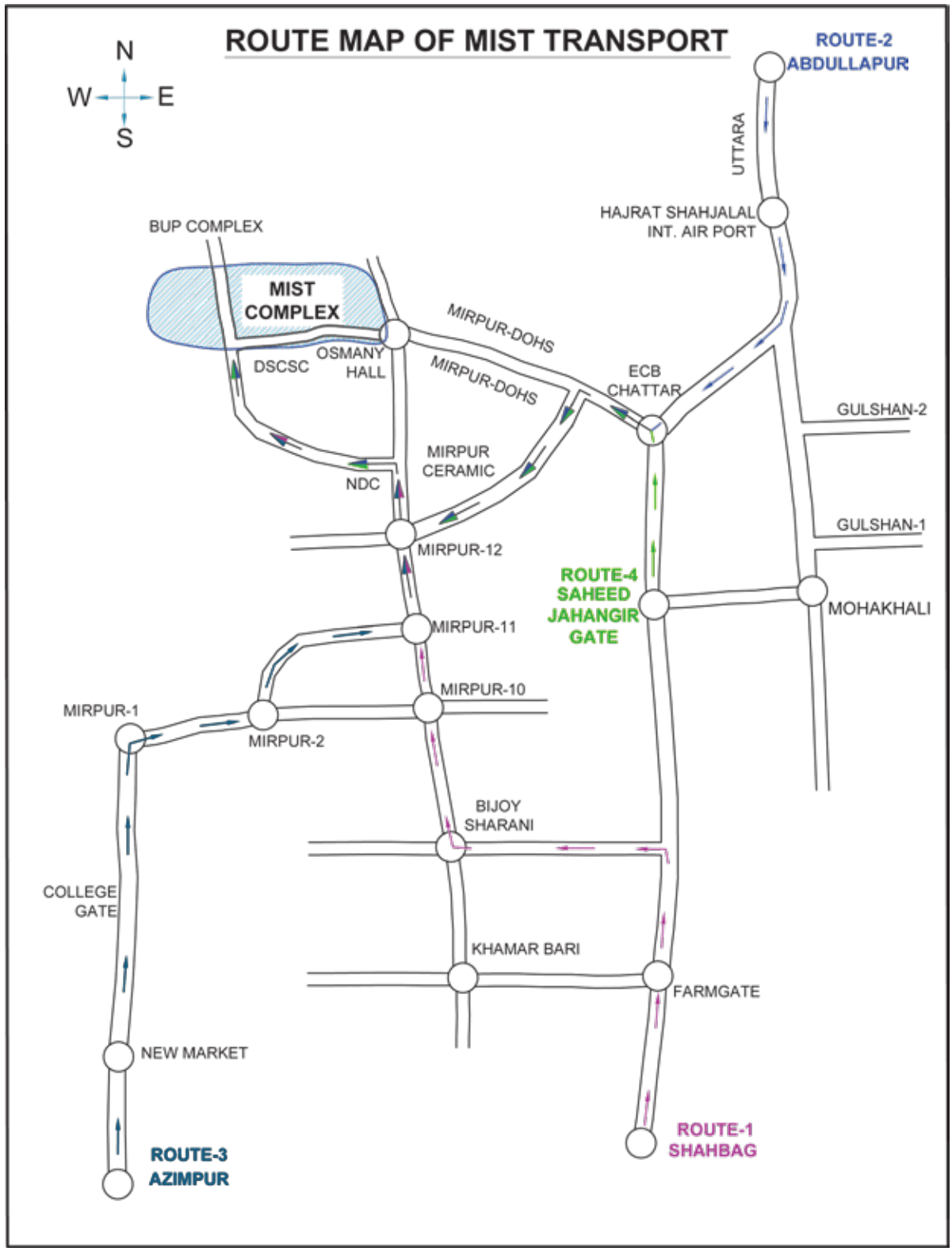
Level – 4, Term – II

Course Code	Course Name	Contact Hour	Credits
NSE 429	Nuclear Reactor Design and Features II	3	3.0
NSE 437	Nuclear Accidents Analysis and Radiological Emergency	3	3.0
-	Elective Course-2	3	3.0
-	Elective Course-3	3	3.0
NSE 475	In-core Fuel Management	3	3.0
NSE 481	Radiation Interactions and Shielding	2	2.0
NSE 400	Thesis	6	3.0
Term Total:		**23.0**	**20.0**

*The minimum credit hour requirement for B. Sc. Engg. (NSE) degree is 160

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.



IMPORTANT CONTACT NUMBERS

Admission Officer:

Mobile: 01769-024054, 01769-024056

Telephone: 8035419

Military Phone: 803111 Ext-3842

Fax: 88-02-9011311

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