

# MILITARY INSTITUTE OF SCIENCE AND TECHNOLOGY



## PROSPECTUS MIST 2017

TECHNOLOGY FOR ADVANCEMENT  
CENTER OF EXCELLENCE

under  
GRADUATION  
post



## **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**

## 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 on engineering education and research in Bangladesh. 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 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:

Serial	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 in contributing to the wider spectrum of national educational arena. It plays a significant role in the development of human resources and gradually pursuing its goal to grow into a 'Centre of Excellence'.

Foreign students were admitted first time in session 2008-09. Since then total seven 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. Total 2266 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 2024 students out of which 84% is civil students and rest 16% 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.
- ✓ Flexibility in choosing competent faculties through outsourcing.
- ✓ 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 purpose.
- ✓ 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.

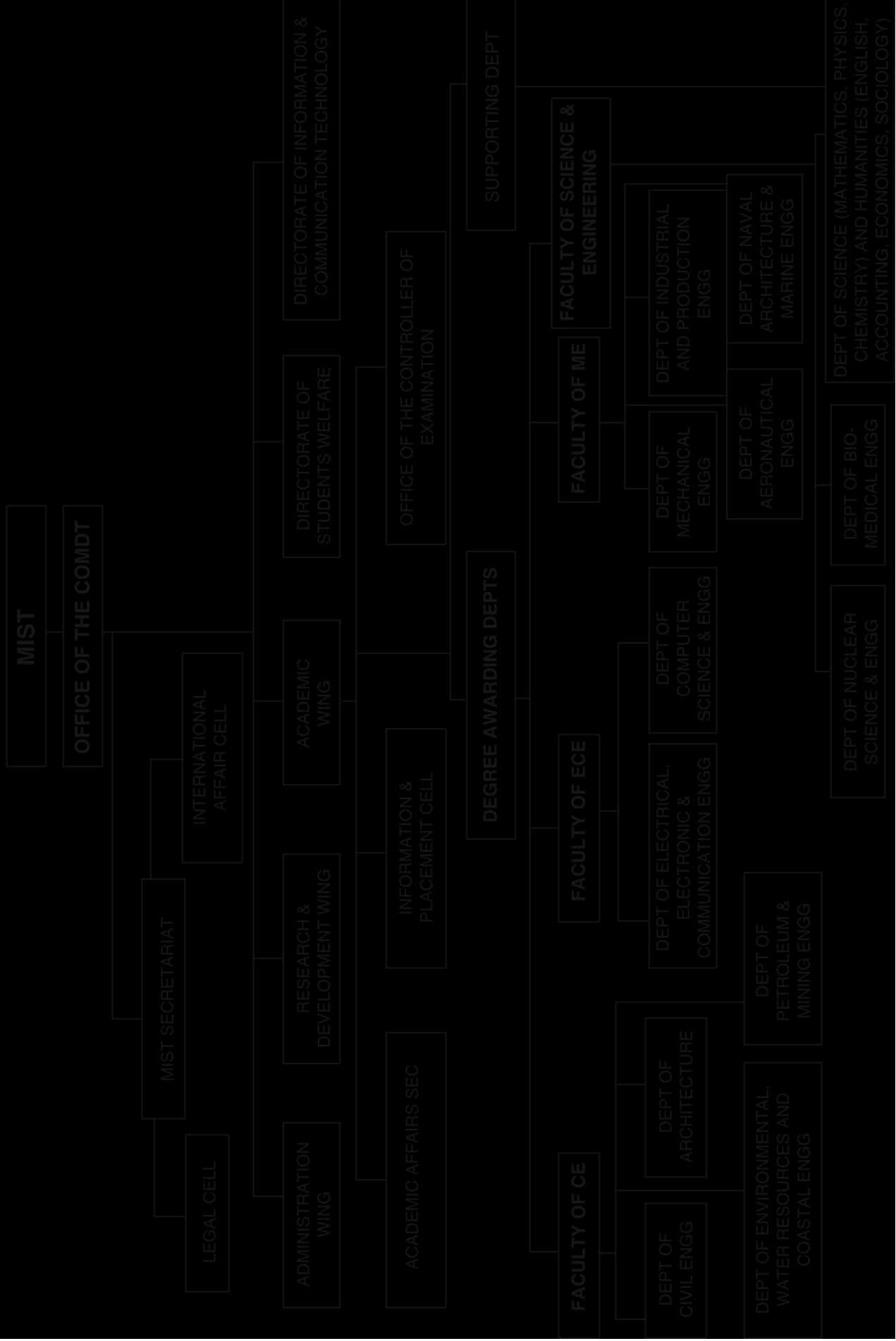
## CAPABILITIES

- ✓ 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.
- ✓ 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.

# ORGANOGRAM



## 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 (twelve) 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

## 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, 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)



Department of Architecture has started its' journey in 2015. The department has all the capability to face any hardship. All enrolled students for the Bachelor of Architecture (B.Arch.) programme shall have to complete five (5) years' & minimum 189 credit hours. There will be General Education, History, Human behaviour and environment courses, Design support sessionals, Design communication studio course, Technical system course. Students of the programme need to earn minimum CGPA of 2.20 in the theory courses and complete the thesis/project satisfactorily under the supervision of a designated supervisor within the stipulated time duration.

## 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 introduced in MIST since January 2015 session. Currently the department is offering undergraduate programs in Environmental Engineering and Water Resources Engineering. The Dept also has subsequent plan for offering higher studies.

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 in an integrated and sustainable manner in order to maintain ecological balance. Water structures, like bridge, culverts, dam, and embankments should be designed properly maintaining river morphology and allowing proper navigation. Again, Bangladesh has the longest coastal belt in the world. The coastal zone of the country provide 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 researcher, experts as well as leaders in these specialized fields.



Being a very new department in MST, currently it has 126 students, and 10 highly dedicated and experienced instructors. It has the laboratory facilities on environmental engineering and water resources engineering. These laboratories provide research as well as consultancy services. The department has also a library whose facilities will be extended further. It is expected that field specific studies and researches on environment, water resources and coastal engineering, initiated by this new department in MST, will foster better understanding and enhance knowledge on 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 the top university level programs among the engineering universities in Bangladesh. The Department of Petroleum & Mining Engineering has started its academic work from 03 February 2016 with the objective to produce qualified personnel in the field of Petroleum & Mining Engineering, skilled enough to quantify the resources, and to develop those resources for proper exploitation. The program is designed to prepare graduates for national and international field of Petroleum and Mining Engineering.



The mission of the Department of Petroleum and Mining Engineering is to guide all efforts aiming to build, sustain, incorporate, convey and apply petroleum and mining engineering knowledge, and to augment the human resources of these disciplines and thus to help ensuring the nation an energy-secure future that balances environmental impact and affordable energy supply.

To fulfill this mission, the PME department committed to pursue excellence in Reservoir Engineering, Production Engineering, Well Drilling and Completions, Mine Surveying, Rock Mechanics, Integrated Reservoir Characterization, Fit-for-purpose Reservoir Management Techniques, and Mining Engineering with balance environmental impact.

The vision of the department is to remain as the number one petroleum and mineral resources engineering program in the nation and in the region, so that its graduates are globally admired, respected and fit-for-purpose professionals within the industry.

## 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 (IEB) on 23 Aug 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, 34 faculties specialized from different (civil, military and foreign) background 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 & Computer Engineering. The department is offering both undergraduate and postgraduate programs. 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 342 undergraduate and 142 post

graduate students are currently studying in the department. The Department offers a diverse educational experience with a focus on traditional areas as well as in emerging areas. The faculties are always engaged in numerous research areas including satellite navigation, radar detection and tracking, optical fiber communicate broadband wireless communications, renewable energy and thin film technology. At present, there are 27 faculties in this department. The department frequently arranges international conference, seminars and project competition to enhance the knowledge of the students. The students of this department participate in various national and internal competitions throughout the year. Under this department, MIST robotics club and IEEE student branch are performing. The department got accreditation from BAETE in September 2010. Post graduate program under this department started functioning since October 2013.

## Faculty of Mechanical Engineering

### Mechanical Engineering (ME) Department

The department of ME started its journey from January 2003. The aim of the department is to provide mechanical engineering with high-quality engineering education and contribute new knowledge through research in mechanical engineering and allied disciplines. Mechanical Engineers apply the principles of mechanics and energy to the design of machines and devices. They must be able to control mechanical systems and usually work with other professionals in designing these systems. A few systems and devices requiring mechanical engineering knowledge are used in industries like Automobiles, engines, heating and air-conditioning system, gas and steam turbines, air and space vehicles, trains, ships, servomechanisms, transmission mechanisms, machine tools, material handling systems, elevators and escalators, and robots.



The department of ME offers modern and dynamic educational programs. The faculty also provides quality engineering education using the most up to date techniques. The department offers studies leading to the B. Sc. in ME, M. Sc. in ME and the Ph.D.

### Aeronautical Engineering (AE) Department

AE department started its journey from 1st February 2009. The department is currently offering B.Sc and MSc in AE program. The Department is intending to start PhD in AE program from April 2018. The aim of AE Dept is to provide students with keen knowledge in the areas of aerodynamics, aerospace propulsion, aircraft loading & 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 234 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 9th batch with successful graduation of 5 batches of 289 students. 23 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 nine 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). 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 Dept 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

The department of NAME started its journey with undergraduate program from 27 January 2013 consisting of 30 students. The department is organized into two major divisions: Naval Architecture and Marine Engineering. Naval Architecture acknowledges the capability to design various types of ships & offshore structure with optimum design features. Marine engineering is related with design, operation & maintenance of propulsion system & machinery of ships.

The aim of NAME Dept. is to provide students keen knowledge about designing of ships & offshore structures, determining the optimum/efficient shape for the hull/structure, supervision of construction work etc. On this premise, the department had organized several seminars, short courses and industrial visits within last four years to hone the knowledge of the students through the exposure to practical training. The department has made an MOU with US Naval Academy and is in the process of concluding MOU with several other national and international institutes.

The various industry positions where the students may be employed include ship design firms, dockyards, shipyards, shipping companies, classification societies, Ministry of Shipping, BIWTA and BIWTC, Port Authorities etc. At present, 181 students in four levels are studying & 13 faculties, specialized from different background (Military & Civil) are serving in this department. NAME department have plan to start M. Sc. Program from session 2018-2019.



## **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 is on 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

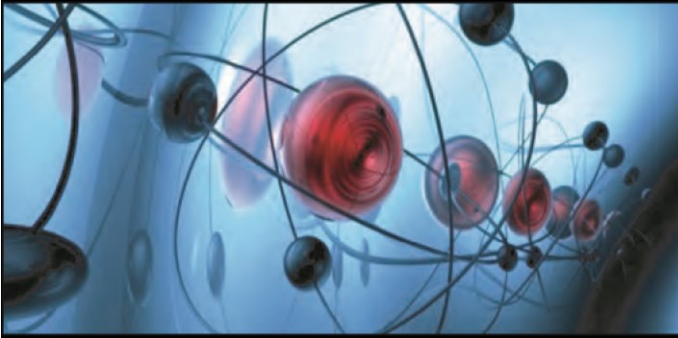
In 2014, the Department of Biomedical Engineering was founded and began offering students undergraduate degree. A set of undergraduate students were selected and in February 2015 the first students were enrolled in Biomedical Engineering department. Following the same, the request for independent M.Sc and Ph.D degrees in BME was approved at the highest forum and BME department has begun 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 industry, in hospitals, in research facilities, in 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 Department of NSE provides education for students interested in developing the peaceful applications of nuclear science and engineering for societal needs. Given the global climate change and fuel supply security concerns, nuclear energy is emerging as an important national energy policy element. The applications of other nuclear technologies in medicine and industry have focused attention on the value of strong nuclear

science and engineering program. In response to this demand, MIST has developed a new discipline-focused program of study that prepares professionals for the many diverse applications of nuclear science and engineering. Most of the applications fall within the following areas: Modeling and simulation, Nuclear energy, Thermal hydraulics, Radiation shielding, Health Physics, Radioactive waste management, Nuclear security and safeguards with MCNP, RELAP5, Scale, RASCAL, etc. computer code. Problems of military and national importance have consequently received great emphasis in the activities of this department.

## Science (Mathematics, Physics, Chemistry) and Humanities (Sc & Hum) Department

**PHYSICS LAB**



**CHEMISTRY LAB**



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 on in 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.

## 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, MOD
  - Vice Chancellor (VC), BUP
  - Engineer in Chief (E in C), Army Headquarters (AHQ)
  - Commandant, MIST
  - Commandant, BMA
  - Commandant, BNA
  - Commandant, BAFA
  - Representative of the VC (Prof eqvt), Faculty of Science, DU
  - Representative of the VC (Prof eqvt), 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
- ❖ **Member 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

## REGULATORY BODIES

### Academic Council of MIST

❖ **Chairman:** Commandant, MIST

❖ **Members:**

- Representative of the VC, Faculty of Science, DU
- Representative of the VC of BUET
- Representative of the VC of BUP
- All Deans of Faculty (CE, ECE, ME, and Sc & Engg), MIST
- Representative of Commandant, Engineering Faculty, BMA
- Representative of Commandant, Engineering Faculty, BNA
- Representative of Commandant, Engineering Faculty, BAFA
- Director, Research & Development (R&D), MIST
- Heads of all Departments, MIST
- Colonel Staff, MIST
- Controller of Exam, MIST
- 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 558 students (male 260 and female 298). 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 staffs 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 four 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. In this year MIST Career Fest-2016 was held on 13th 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 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 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.

**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-3, 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), International Islamic University Malaysia (IIUM), Universiti Kebangsaan Malaysia (UKM), Universiti Tenaga Nasional (UNITEN), Kotelawala Defence University (KDU) Srilanka, United States Naval Academy (USNA) 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	2009	MoU is completed
2	PLA University of Science and Technology (Nanjing)	2012	MoU is completed
3	Water-Aid Bangladesh- for Rainwater Harvesting System	2013	MoU is completed
4	United States Naval Academy- for exchanging faculty and Joint Research Program	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	2014	MoU is completed
9	University Kebangsaan Malaysia (UKM)	2014	MoU is completed
10	University Technology Malaysia (UTM), Malaysia	2014	Letter of Collaboration is Completed
11	International Islamic University Malaysia (IIUM)	2014	Letter of Collaboration is Completed
12	The Ohio State University, Columbus, Ohio, United States	2015	MoU is completed
13	Dockyard & Engineering Works Ltd, Sonakanda, Bandar, Narayanganj	2015	MoU is completed
14	University Technology Mara (UITM)	2015	MoU is completed
15	University of Malaya	2015	MoU is completed
16	Bangabandhu Sheikh Mujibur Rahman Maritime University, Bangladesh	2015	MoU is completed
17	Active Fine Chemicals	2015	MoU is completed
18	Biman Bangladesh Airlines	2015	MoU is completed
19	ICT Division, Ministry of Post & Telecommunications & Information technology	2015	MoU is completed
20	Indian Institute of Engineering Science & Technology (IEST), Shibpur, India	2015	MoU is completed
21	Gono Bishwabidyalay	2016	MoU is completed
22	Global Institute of Science and Technology (GIST)	2016	MoU is completed

## SEMINAR / WORKSHOP / SHORT COURSE

Following are the seminars conducted by various departments of MIST in 2014 - 2017

Serial	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.	Seminar on "Cyber Security"	CSE
17.	Technical Session on Innovation for Smart Green Building Project	CSE
18.	18th International Conference on Computer and Information Technology (ICCIT-2015)	CSE
19.	Cloud Technology- A New Dimension in Computing	CSE
20.	Short Course on "Mobile Apps Development"	CSE
21.	Workshop on "BD Apps" by Robi Axiata Limited	CSE
22.	Seminar on " Cloud Computing"	CSE
23.	Seminar on " Global Navigation Satellite System (GNSS)"	CSE
24.	Campaigning on EATL Prothom Alo "Apps Contest 2016"	CSE
25.	Short Course on "Office Automation System" for BEPZA officials	CSE
26.	Short Course On Cisco Certified Network Associate (CCNA)	CSE
27.	Training On Server & Storage Technologies	CSE
28.	Short Course On C Programming Language	CSE
29.	Short Course On CompTIA A+ Certification Training	CSE
30.	Short Course On Mobile Apps Developmen	CSE

Serial	Seminar/ Workshop / Short Course	Organizing Department
31.	Trg on Cyber Security and E-Filling Systems for BEPZA Personal	CSE
32.	Capsule Trg on Unicode-2017	CSE
33.	Short Course on Microcontroller and Robotics	EECE
34.	International Conference on Electrical Engineering and Information & Communication Technology (ICEEICT-2014)	EECE
35.	Workshop on Technique Electrical Power Quality Understanding, Standard, Events, Analysis and Mitigation Techniques	EECE
36.	Effective Academic and Review Manuscript Writing	EECE
37.	Workshop on Line Following Robot (LFR)	EECE
38.	Short Course on "AutoCAD for Electrical Service Design"	EECE
39.	Robolution-2017	EECE
40.	Seminar on "Student Professional Awareness & Appearance"	EECE
41.	Seminar on "Free Seminar on the Aspects of IEEE"	EECE
42.	Past, Present and Future Trend of Automobiles	ME
43.	Scope of Mechanical Engineers in Power Plant	ME
44.	1st International Conference on Mechanical Engineering and Applied Science	ME
45.	Short Course on Programmable Logic Controller	ME
46.	Short Training on Assessment Capability Development of Commercial HVAC Layout	ME
47.	Workshop on Remote Controlled Aircraft Design, Fabrication and Operation	AE
48.	Short Course on Ship Design Using Software (MAXSURF)	NAME
49.	The Essential Prerequisite for Effective Healthcare in Bangladesh	BME
50.	Seminar on Bio Safety Awareness: A Pathway to Improved Public Health	BME
51.	Challenges and Future Prospects in the Sectors of Environment, Water Resources, and Coastal Zones: Perspective from Potential Engineers	EWCE
52.	1st International Conference on Climate Change and Water Security	EWCE
53.	Perspective Future of Nuclear Engineering in Bangladesh	NSE
54.	Seminar on "Nuclear Energy in Bangladesh and Safety Issues	NSE
55.	Workshop on "Nuclear Engineering"	NSE
56.	Seminar on "Energy Scenario and Prospect of Petroleum & Mining Engineering in Bangladesh"	PME

# LABORATORY FACILITIES

## CE Department

- Transportation Engineering Laboratory
- Geotechnical Engineering Laboratory
- Concrete Laboratory
- Solid Mechanics Laboratory
- Survey and Mapping Laboratory
- Drawing Laboratory
- GIS Laboratory

## CSE Department

- Digital Laboratory
- Multimedia and Graphics Laboratory
- Network Laboratory
- Software Engineering Laboratory
- Artificial Laboratory
- Micro Processor & Micro Controller Laboratory
- Postgraduate Research Laboratory

## EECE Department

- Electrical Circuit Laboratory
- Electrical and Electronic Circuit Simulation Laboratory
- Computer Programming and Network Laboratory
- Electrical Machine Laboratory
- Power System Laboratory
- Electronics & Digital Electronics Laboratory
- Power Electronics Laboratory
- Instrumentation & Measurement Laboratory
- Analog and Digital Communication Laboratory
- Digital Signal Processing Laboratory
- Microprocessor and interfacing Laboratory
- Control System Laboratory
- Switch Gear & Protection Laboratory
- VLSI Laboratory
- Satellite Communication and Microwave Engineering Laboratory
- Numerical Methods Laboratory
- High Voltage Engineering Laboratory

## ME Department

- Measurement & Quality Control Laboratory
- Thermodynamics Laboratory
- Refrigeration & Air Conditioning Laboratory
- Heat Transfer Laboratory
- Automobile Laboratory
- Machine Tools Laboratory
- Materials and Metallurgy Laboratory
- Drawing Shop (CAD Lab)
- 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 and Ship Drawing Lab
- Ship Structure and Model Fabrication Lab
- Marine Engine, Refrigeration & Auxiliary Machinery Lab
- Ship's Instrument, Fire Fighting and Life Saving Equipment Testing Lab
- Ship Resistance and Propulsion Lab
- Hydrodynamics Lab
- Towing Tank and Stability Test Lab
- Damage Control, Fire Fighting and Life Saving Equipment Lab

## NSE Department

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

### Arch Department

- Design Studios
- Computer Laboratory

### EWCE Department

- Environmental Engineering Laboratory
- Water Resource Engineering Laboratory

### BME Department

- BME Teaching Laboratory
- BME Instrumentation Laboratory
- Bio-Chemistry Laboratory
- Bio-Materials Laboratory
- Drug Development Laboratory

### PME Department

- Geology Laboratory
- Petroleum Laboratory

### IPE Department

- Material Hand and Maintenance Laboratory
- Ergonomics and Safety Laboratory
- Simulation Laboratory

### Science (Mathematics, Physics, Chemistry) & Humanities

- 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 Faculties			From Other Universities	Total
		Permanent	Contract	Adjunct		
Professor	24	05	07	06	30	72
Associate Professor	28	-	02	02	06	38
Assistant Professor	33	04	08	-	06	51
Lecturer	22	03	19	66	01	111
<b>Total</b>	<b>107</b>	<b>12</b>	<b>36</b>	<b>74</b>	<b>43</b>	<b>272</b>

## RECOGNITION OF PERFORMANCE

### Osmany Memorial Gold Medal

Awarded to the best student amongst all the MIST Medal winners.

### MIST Medal

Awarded to the students of level-4 of each dept at the end of all programs and the first position holder in each department earning a minimum CGPA of 3.80 out of 4.00

### Commandant's List

- All students earning  $CGPA \geq 3.8$  at the end of each academic level for level 1, 2 and 3
- All graduating students earning  $CGPA \geq 3.8$  considering results of entire program (level 1 to 4)

### Dean's List

- All students earning  $3.7 \leq CGPA < 3.8$  at the end of each academic level for level 1, 2 and 3
- All graduating students earning  $3.7 \leq CGPA < 3.8$  considering results of entire program (level 1 to 4)

### Scholarships and Stipends

- MIST Scholarship
- MIST Stipends
- Osmany Memorial Trust Scholarship
- Chief of Army Staff Stipend
- Chief of Naval Staff Stipend
- Chief of Air Staff Stipend

### Research Prizes

- MIST Project Medal
- MIST Research Medal - Student
- MIST Research Medal - Faculty

## ELIGIBILITY FOR APPLICATION

### Bangladeshi Students

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

#### a. SSC Examination (or Equivalent).

The applicant must have passed the examination in Science Group obtaining a minimum GPA 4.00 (without fourth subject) in the scale of 5.0 (Only the applicants who passed SSC or Equivalent Examination in 2014 and 2015 can apply).

#### b. HSC Examination (or Equivalent).

The applicants passed in 2017 and 2016 must obtain minimum total grade point 17 in four subjects (Mathematics, Physics, Chemistry and English) having minimum 'A' grade in any two subjects out of Mathematics, Physics and Chemistry (Only the applicants who passed HSC/Equivalent Examination in 2016 and 2017 can apply).

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

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

(2) The applicant must have minimum 'B' grade in Mathematics, Physics and Chemistry in GCE 'A' Level or equivalent background of current year (2017) and last year (2016).

### 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 Programmes (Unit-A) and 5 (five) years' Bachelor Degree of Architecture Programme (Unit-B) is given below with Admission Test Units:

Serial	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		Civil & Environmental Engineering Civil & Water Resources Engineering	60
10		Industrial and Production Engineering (IPE)	50
11		Petroleum and Mining Engineering (PME)	25
12		Architecture (ARCH)	25
	B	<b>Total</b>	<b>570</b>

In general, maximum 50% seats will be kept reserved for military officers. However, after allocation of vacancies for military officers, the rest seats / vacancies will be distributed as under

Ser	Category	Candidates (%)	Remarks
1	General Candidates	54.0	
2	Children of Military Personnel (Serving or Retired)	40.0	
3	Children/Grand Children of Freedom Fighters	2.0	Grand children of Freedom Fighters will only be considered when quota for children of Freedom Fighters are not filled up
4	Tribal Citizen	1.0	
5	Foreign students (Civil / Military)	3.0	
	<b>Total</b>	<b>100 %</b>	

**Note:** The distribution of percentage is just a guideline only. In case of non-availability of qualified candidates against reserved seats (Children of Military Personnel, Children / Grand Children of Freedom Fighters, Tribal Citizen and Foreign students), the vacancies will filled up by the general candidates as per merit.

## SUBMISSION OF APPLICATION - 2017

### Instructions for Submission of e-Application

Application for the Admission Test-2017 in MIST will be accepted only through online system from 08 October to 20 October 2017. Manual application will not be accepted unless there is some system difficulty in application process. Applicants need to deposit Tk. 800 (Eight hundred) for unit A and 1100 (Eleven Hundred) for B and A+B units only as application fee through SMS from Teletalk prepaid mobile phone. 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 provided 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-2017. 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](http://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'. 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](http://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](http://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. The applicant will see a preview page with his/her 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. The applicant will get a confirmation message after completing step 1. 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 Fours) hours from time of application as mentioned on the receipt (Applicant's Copy).

## **Step 2: Depositing Application Fee through SMS**

### **4. Application Fees.**

Each applicants needs to deposit Tk. 800 (Eight 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 from 05 November 2017 onwards.

### **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](mailto:ugadmission@mist.ac.bd) or submit to MIST admission desk (Room 201, Tower Building-1) physically within 1430 hours by 24 October 2017. Required certificate/ documents are:

a. **For freedom Fighter Quota.** 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 CO/ 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 Quota.** Certificate issued by local Upazilla Chairman and counter signed by District Commissioner.

d. The submission of application of quota 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 24 October 2017.

**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 'MIST Admission Desk' (Room 201, Tower Building-1). Contact: mist website: [www.mist.ac.bd](http://www.mist.ac.bd) and Phone: +88-01769023842, +88-01769-024090, +88-01769-024094, +88-02-8035419, email: [admission@mist.ac.bd](mailto: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. However, approximately 10,000 (Ten thousand) short listed candidates will be allowed to appear written test. These 10,000 candidates include, candidates passed in current year and maximum 20% (not exceeding 2000) candidates passed HSC / Equivalent in the last year. Short-listed candidates will be allowed to take part in the written admission test of 03 (three) hours (For Unit A) and (3+1=) 4 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](http://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). Question for written test will be based on the current syllabus of HSC examination. The marks distribution for both units is as follows:

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

3. Candidates of Unit A will only sit for the written test of Question Module 1 for 3 hours. Candidates of Unit B (Architecture) and both A and B (Engineering and Architecture) will appear Question Module 1 and 2 with an adequate break.

#### **4. Important Dates**

Application Submission	From 08 October to 20 October 2017 (up to 2400 BST)
List of eligible candidates	01 November 2017
Written admission test. For unit A	0900 - 1200 hours on 10 November 2017 (Friday)
Written Admission test. For Unit B and (A+B)	0900 - 1200 hours and 1500-1600 hours on 10 November 2017 (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 centre. 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 programme 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.

## **WITHDRAWAL POLICY**

The MIST has been established with an aim of providing quality education in various disciplines of Engineering leading to B.Sc. Engineering to be conferred by BUP. 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.

## **DEFINITION OF TERMS**

### Permanent Withdrawal

It will imply a complete/permanent discontinuity from any course/program of the institute.

### Temporary Withdrawal

It 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 as set by the authority.

### Permanent Expulsion

It 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.

### Temporary Expulsion

It 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 fulfillment of other terms and conditions (if any) as set by the authority while approving the temporary expulsion order.

## GENERAL POLICY OF WITHDRAWAL

The under graduate (B.Sc) Engineering programs for all engineering disciplines are planned for 04 regular levels, comprising of 08 regular terms for Architecture programme it is planned for 3 & 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 at supplementary/ short course/ 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. 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.
- d. 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 term 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.
- e. Minimum credit have requirement for the award of bachelor's degree in Engineering (Bc Engg) and Architecture (B. Arch) will be 157 and 159 respectively. However the minimum CGPA requirement for obtaining a bachelor degree in engineering and Architecture is 2.20
- f. A student may be placed as academic probation when his/her terms falls below 2.20. A student on academic probation who fails to maintain a GPS of at 2.20 during connective academic years may be responded from MIST.
- g. Whatever may be the cases, students will have to complete the whole undergraduate Program within 06 (six) (for Architecture 07 academic years) from the date of registration.

## EXPULSION/ WITHDRAWAL ON DISCIPLINARY GROUND

### 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:

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

### 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.

### 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.

### 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

### Permanent Withdrawal

A Student who has already completed some courses and has not performed satisfactory may apply for a permanent withdrawal.

### 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.

## EXAMINATION SCHEDULE

Examination schedule of all programs run at MIST is strictly adhered to and is not changed under any circumstance. Students failing to appear at any examination will miss the grading / credit of the same.

## FACULTY-STUDENT INTERACTIONS

The academic system in MIST encourages students to come in close contact with the faculties. For promotion of high level of faculty-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 faculties any time for help and guidance for academic matters. Heads of the departments, Col Staff, Director of Administration, Director of Students' Welfare (DSW), Dean and Commandant address the students at some intervals. More so, monthly Commandant's Parade is organised in MIST where all faculty members, staffs and students are formed up, thereby increasing teacher-student interaction.

## 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 organisation 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.

## 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 pants, Black Oxford shoes and Black socks.	Ash coloured full sleeve shirt (tucked in), Black coloured full pants, 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 (Normal)**



## 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. 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

4. 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.

5. 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

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

<b>Ser</b>	<b>Events</b>	<b>Durations</b>
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

7. 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**

8. 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**

9. 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.

10. The course designation system is illustrated as Follows:



### **Assignment of Credits**

11. 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

12. The types of courses included in the undergraduate curricula are divided into the following groups:
- 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.
  - Prerequisite Courses: Some of the core courses are identified as prerequisite courses for a specific subject.
  - 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

13. 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).

14. 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

15. 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

16. 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.

17. 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.

18. 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

19. Registration Procedure. At the commencement of each term, each student has to register for courses online in consultation with and under the guidance of his/her 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.

## **20. Pre-conditions for Registration.**

- a. For first year students, department-wise enrollment/admission is mandatory prior to registration. At the beginning of the first term, an orientation program will be conducted for them where they are handed over with the registration package on submission of the enrolment slip.
- b. Any student, other than the new batch, with outstanding dues to the MIST or a hall of residence is not permitted to register. Each student must clear their dues and obtain a clearance certificate, upon production of which, he/she will be given necessary Course Registration Forms to perform course registration.
- c. A student is allowed to register in a particular course subject to the class capacity constraints and satisfaction of pre-requisite courses. However, even if a student fails in a pre-requisite course in any term, the concerned department (BUGS) may allow him/her to register for a course which depends upon the pre-requisite course provided that his/her attendance and performance in the continuous assessment of the mentioned pre-requisite course is found to be satisfactory.

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

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

## **Limits on the Credit Hours to be taken**

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

24. In special cases where it is not possible to allot the minimum required 15 credit hours to a student, the concerned department (BUGS) may permit with the approval of the 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**

25. 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.

26. 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.

27. All changes must be approved by the adviser and the Head of the concerned department. The Course Adjustment Form has to be submitted after being signed by the concerned persons. The respective course teacher's consent is also required.

### Withdrawal from a Term

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

### The Grading System

29. The total performance of a student in a given course is based on a scheme of continuous assessment, for theory courses this continuous assessment is made through a set of quizzes, class 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 have to be acquired in order to qualify for the degree. Letter grades and corresponding grade points will be given as follows:

<b>Numerical Markings</b>	<b>Grade</b>	<b>Grade Points</b>
80% and above	A+	4.0
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

30. Theory. Thirty percent (30%) of marks of a theoretical course shall be allotted for continuous assessment, i.e. quizzes, home assignments, class tests, observations/ class participation and class attendance. 30% 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 Participation/Observation	5%
Class Attendance	5%
Homework assignment/Quizzes/CTs	20%
Final Examination (Section A & B)	70%
<b>Total</b>	<b>100%</b>

31. **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. Class Attendance -	5
b. Class performance/observation -	5
c. Lab Test/Report Writing/project work/Assignment -	50
d. Quiz Test. -	30
e. Viva Voce -	10
<b>Total</b>	<b>100%</b>

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

a. Class Attendance -	5
b. Class performance/observation -	5
c. Written Assignment -	15
d. Oral Performance -	25
e. Listening Skill -	10
f. Group Presentation -	30
g. Viva Voce -	10
<b>Total</b>	<b>100%</b>

33. **Basis for awarding marks for class attendance.** This will be as follows:

	<u>Marks</u>
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%

### **Collegiate and Non-collegiate**

34. Students having class attendance of 90% in individual subject and above 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 at 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 at 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.

### Minimum Earned Credit and GPA Requirement for Obtaining Degree

35. Minimum credit hour requirements for the award of bachelor's degree in engineering (B.Sc. Engineering) will be 157 and in architecture 189. The minimum GPA requirement for obtaining a Bachelor's degree in engineering is 2.20.

### Impacts of Grade Earned

36. 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.

37. 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.

38. 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. Maximum grade will be 'B+'.

39. A student will be permitted to repeat for grade improvement purposes a maximum of six courses in BSc. Engineering programs and a maximum of seven courses in B. Arch. Program.

40. 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

41. 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.

### Rules for Self-Study Courses

42. Self Study 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. This course is offered to a student in his/her last term if it helps him/her to graduate in that term.
- d. A student is allowed to register for a maximum of two courses on a self-study basis.
- e. Students should have 75% class attendance.
- f. Normally no lecture will be delivered for a special 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. Total duration for graduation will not exceed 6 years.

### **Rules for Courses Offered in Short Term**

43. A Short Term course will be conducted after one week completion of Term II Final Examination of 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 courses during the Short Term.
- c. Graduating students (L 4) may register for Short Term examinations after finalization of result of T II Final Examination.
- d. A certain fee for each credit hour to be registered to be borne by the students who enroll during Short Term.

### **Application for Graduation and Award of Degree**

44. 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**

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

### **Attendance, Conduct and Discipline**

46. **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.

47. **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.

### **Absence during a Term**

48. 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**

49. 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 Final Examination**

50. All types of examinations will be regulated by the 'Rules of Different Examinations'. Rules are available at the office of the Controller of Examination and all Departments. 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 Term Final Examination will be held.
- b. **Short Terms Examination:** Short Term may be conducted after one week of completion of Term II 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 (6th weeks class). However, Head of concerned department with the approval of Commandant may decide to take Supplementary examination instead of 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 Term II. Students will be allowed to appear this examination for one subject at a time. Graduating students will be allowed to appear maximum two 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 only one failed course in that particular Supplementary examination. This examination will be conducted in the previous week of the beginning of Term I. Registration of that Supplementary examination should be completed during registration of Short Term course.
- d. **Improvement Examination:** It will be taken both during supplementary and short term examination. Questions will be same as the question of the examination of that Short Term Examination (if any). Student can take two subject 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 than '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.

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 sessional and regular assessment for 30% marks. Maximum two 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.

### Irregular Graduation

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

### Conclusion

52. 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

### CE Department

Level	Term	Credit Hour
1	I	18.50
	II	22.00
2	I	20.00
	II	21.00
3	I	20.50
	II	22.50
4	I	21.50
	II	16.00
<b>Total Credit Hours:</b>		<b>162.00</b>

### AE Department

Level	Term	Credit Hour	
		Aerospace	Avionics
1	I	20.25	20.25
	II	21.25	21.25
2	I	18.25	21.25
	II	21.75	19.50
3	I	21.50	20.50
	II	20.00	19.00
4	I	20.25	20.25
	II	18.75	20.25
<b>Total Credit Hour</b>		<b>162.00</b>	<b>161.50</b>

### 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	19.50
4	I	19.25
	II	21.00
<b>Total Credit Hours:</b>		<b>160.00</b>

### NAME Department

Level	Term	Credit Hour
1	I	19.50
	II	20.25
2	I	20.25
	II	20.25
3	I	20.25
	II	20.25
4	I	21.00
	II	19.50
<b>Total Credit Hours</b>		<b>161.25</b>

### EECE Department

### BME Department

**Arch Department**

eve	erm	Credit our -
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
<b>ota Credit }ours</b>		<b>161.00</b>

eve	erm	Credit our -
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
<b>otal Credit Hours</b>		<b>160.00</b>

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eve	erm	Credit our -
1	I	19.00
	II	19.00
2	I	19.00
	II	17.50
3	I	19.50
	II	21.50
4	I	21.50
	II	21.50
5	I	20.00
	II	20.00
<b>ota Credit }ours</b>		<b>189.00</b>

**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:

### NSE Department

Level	Term	Credit hours
1	I	18.75
	II	20.25
2	I	18.75
	II	20.50
3	I	20.00
	II	19.00
4	I	21.00
	II	19.50
<b>Total Credit hours</b>		<b>157.75</b>

### IPE Department

Level	Term	Credit hours
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
<b>Total Credit hours</b>		<b>160.00</b>

### PME Department

Level	Term	Credit hours
1	I	19.75
	II	18.75
2	I	19.00
	II	21.00
3	I	20.25
	II	21.50
4	I	21.75
	II	20.50

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

#### 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.

ota Credit	Hours 162.50
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## PHOTO GALLERY



**MAJOR GENERAL MD ABUL KHAIR, ndc, PEng  
COMMANDANT, MIST**



## REGULATORY BODIES MEETING



## GRADUATION CEREMONY



**INAUGURATION OF FOUNDATION PLAQUE OF MIST FACULTY TOWER BUILDING - 3 & 4**



**DEVELOPMENT OF POP UP TGT AND FIRING RESULT AUTOMATION SYSTEM (FRAS)**



**INAUGURATION CEREMONY OF MOTOMIST AUTOMOTIVE CLUB**



**SEMINAR ON "ENERGY SCENARIO AND PROSPECT OF PETROLEUM & MINING ENGINEERING IN BANGLADESH"**





**1<sup>st</sup> INTERNATIONAL CONFERENCE ON  
"MECHANICAL ENGINEERING AND  
APPLIED SCIENCE (ICMEAS-2017)"**



**BANGLADESH INTERNATIONAL CONFERENCE  
FOR BIOMEDICAL STUDENTS &  
YOUNG DOCTORS (BiCoBS)**



**WORKSHOP ON  
"ADVANCE BRIDGE DESIGN-2017"**



**WORKSHOP ON "ABET ACCREDITATION"**



**SHORT COURSE ON  
"RETROFITTING OF STRUCTURES-2017"**



**TRAINING ON "CYBER SECURITY AND  
E-FILING SYSTEM FOR BEPZA PERSONNEL"**



**"CAREER BRIEF" FOR BIOMEDICAL ENGINEERING STUDENTS**



**INTERACTIVE SESSION ON "STUDENT PROFESSIONAL AWARENESS & APPEARANCE"**



**CERTIFICATE AWARDING CEREMONY ON "ELECTRICAL SERVICES DESIGN AND MICRO-CONTROLLER AND ROBOTICS SHORT COURSES"**



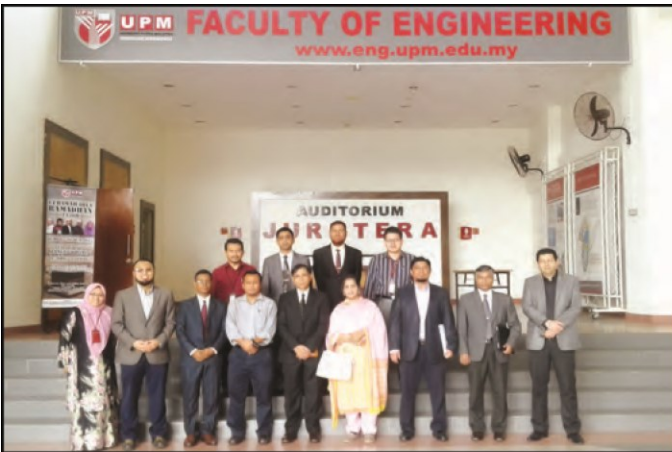
**CERTIFICATE AWARDING CEREMONY SHORT COURSE ON "OCCUPATIONAL SAFETY HEALTH AND INDUSTRIAL MANAGEMENT"**



**AERO DAY 2017**



**MECHANICAL DAY 2017**



VISIT OF MIST FACULTY TEAM TO MALAYSIA & THAILAND



VISIT OF INDIAN TEAM



VISIT OF BAETE TEAM FOR RENEWAL OF ACCREDITATION OF EECE PROGRAM



VISIT OF BAETE TEAM FOR RENEWAL OF ACCREDITATION OF CSE PROGRAM



DELEGATION VISIT OF FLYING INSTRUCTORS SCHOOL (FIS)



ORIENTATION TRAINING VISIT OF BCS & BJS-69



**TRAINING VISIT AT CMH DHAKA**



**TRAINING VISIT TO M & U CYCLE LTD**



**TRAINING VISIT TO TITAS GAS FIELD AND OFFICE OF BANGLADESH GAS FIELD COMPANY LIMITED (BGFL)**



**TRAINING VISIT TO BANGLADESH MACHINE TOOLS FACTORY (BMTF)**



**TRAINING VISIT T BANGLADESH INDUSTRIAL AND TECHNICAL ASSISTANCE CENTER (BITAC)**



**TRAINING VISIT AT NANNU SPINING MILLS LTD (NARSINGDI)**



**LABORATORY VISIT AT BAPEX**



**INTERNATIONAL YOUTH EXCHANGE PROGRAMS -2017**



**NATIONAL WOMEN'S HACKATHON-2017**



**DAFFODIL INTERNATIONAL UNIVERSITY APP CONTESTS-2017**



**CAMPUS CAREER FESTIVAL**



**PROJECT FAIR-2017**



**LAUNCHING CEREMONY OF ACADEMIC SESSION 2016-17**



**INTER-DEPARTMENT CULTURAL COMPETITION & NOBIN BORON-2017**



**A**



**BOSHONTO UTSHOB-2017**



**BANGL NEW YEAR-1424**

2

T



**INTER DEPARTMENT CRICKET COMPETITION**



**INTER DEPARTMENT FOOTBALL COMPETITION**



**INTER DEPARTMENT DEBATE COMPETITION**



**A**



## INTER DEPARTMENT VOLLEYBALL COMPETITION

3

T

5



**COMMANDANT ADDRESSING IN COMMANDANT'S PARADE**

**AT**



**CLASS IN PROGRESS**



**SESSIONAL IN PROGRESS**



**INTER FACING LAB**



**HE ENGINE LAB**



**READING ROOM**



**CYBER CAFE**



**MEDICAL CENTRE**



**CENTRAL LIBRARY**



**FITNESS CENTRE**



**MIS CAFETERIA**

## TEACHERS' ACCOMMODATION



T

## STUDENTS' ACCOMMODATION (OSMANY HALL)



6

# FACULTY OF CIVIL ENGINEERING

## DEPT OF CIVIL ENGINEERING

Total Credit Hours: 162

### Level-1, Term-I

Course Code	Course Name	Contact Hour	Credit Hour
Phy 101	Physical Optics, Waves and Oscillation, Heat and Thermodynamics	3	3
Math 137	Differential and Integral Calculus, Matrices	3	3
Hum 185	English	2	2
Hum 155/Hum 165/Hum 175	Sociology/Government/Moral Philosophy	2	2
CE 101	Analytical Mechanics	4	4
Hum 186	Developing English Language Skills	3	1.5
Shop 132	Workshop Sessional	3	1.5
CE 100	Civil Engineering Drawing	3	1.5
<b>Total:</b>		<b>23</b>	<b>18.5</b>

### Level-2, Term-II

Course Code	Course Name	Contact Hour	Credit Hour
Hum 253	Accounting	2	2
C 201	Engineering Materials	4	4
CE 205	Numerical Methods for Engineering	3	3
CE 207	Applied Mathematics for Engineers	3	3
C 213	Mechanics of Solids II	3	3
CE 206	Engineering Computations Sessional	3	1.5
C 208	Quantity Surveying	3	1.5
CE 212	Structural Mechanics & Materials Sessional	3	1.5
CE 214	Architectural, Engineering and Planning Appreciation	2	1.5
<b>ota</b>		<b>26</b>	<b>21</b>

### Level-1, Term-II

Course Code	Course Name	Contact Hour	Credit Hour
Phy 105 / Chem 105	Structure of Matter, Electricity and Magnetism and Modern Physics / Chemistry II	3	3
Chem 103	Chemistry I	3	3
Math 139	Differential Equations and Statistics	3	3
EECE 165	Basic Electrical Technology	3	3
CE 103	Surveying and spatial information Engineering	4	4
Phy 102	Physics Laboratory	3	1.5
Chem 114	Inorganic Quantitative Analysis	3	1.5
CE 102	Computer Aided Drawing	3	1.5
CE 104	Practical Surveying	3 weeks	1.5
<b>Total:</b>		<b>25</b>	<b>22</b>

### Level-3, Term-I

Course Code	Course Name	Contact Hour	Credit Hour
CE 311	Structural Analysis & Design I	4	4
CE 315	Design of Concrete Structures I	3	3
CE 331	Environmental Engineering I	3	3
CE 341	Principle of Soil Mechanics	4	4
CE 301	Professional Practices & Communication	2	2
CE 302	Professional Practices & Communication Sessional	3	1.5
CE 332	Environmental Engineering Laboratory	3	1.5
CE 342	Soil Mechanics Laboratory	3	1.5
<b>Total:</b>		<b>25</b>	<b>20.5</b>

**Level-2, Term-I**

Course Code	Course Name	Contact Hour	Credit Hour
Hum 217	Engineering Economics	2	2
Math 237	Laplace Transform and Vector Analysis	3	3
CE 203	Engineering Geology & Geomorphology	3	3
CE 211	Mechanics of Solids I	3	3
CE 261	Fluid Mechanics	3	3
CE 200	Details of Construction	3	1.5
CE 204	Computer Programming Sessional	3	1.5
CE 210	GIS and Remote sensing	3	1.5
CE 262	Fluid Mechanics Sessional	3	1.5
<b>Total:</b>		<b>26</b>	<b>20</b>

**Level-3, Term-II**

Course Code	Course Name	Contact Hour	Credit Hour
CE 317	Design of Concrete Structures II	4	4
CE 319	Design of Steel Structures	3	3
CE 333	Environmental Engineering II	4	4
CE 351	Transportation Engineering and Planning	3	3
CE 361	Open Channel Hydraulics	3	3
CE 316	Concrete Structures Design Sessional I	3	1.5
CE 320	Steel Structures Design Sessional	3	1.5
CE 362	Open Channel Hydraulics Sessional	3	1.5
CE 300	Civil Engineering Students' Internship Programme (CESIP)	4 Weeks	1
<b>Total:</b>		<b>26</b>	<b>22.5</b>

**Level-4, Term-I**

Course Code	Course Name	Contact Hour	Credit Hour
CE 401	Project Planning & Construction Management	3	3
CE 411	Structural Analysis & Design II	3	3
CE 441	Foundation Engineering	3	3
CE 451	Pavement Design and Traffic Management	4	4
CE 463	Hydrology and Irrigation Engineering	4	4
CE 452	Highway Materials and Transport Design Sessional	3	1.5
CE 410	Concrete Structures Design Sessional II	3	1.5
CE 400	Project & Thesis	3	1.5
<b>Total:</b>		<b>26</b>	<b>21.5</b>

**Level-4, Term-II**

<u>Compulsory Courses</u>				
Course Code	Course Name	Contact Hour	Credit Hour	Remarks
CE 400	Project & Thesis	6	3	
CE 403/ CE 405	Socio-economic Aspects of Development Project/Business and Career Development	2	2	
<u>Structural Engineering</u>				
Course Code	Course Name	Contact Hour	Credit Hour	Remarks
CE 413	Design of Steel-Concrete Composite Structure	2	2	
CE 415	Prestressed Concrete	2	2	
CE 417	Design of Concrete Structures III	2	2	
CE 419	Introduction to Finite Element Method	2	2	
CE 421	Dynamics of Structures	2	2	
CE 423	Structural Safety	2	2	
CE 425	Seismic Design of Structures	2	2	
CE 412	Computer Aided Analysis and Design of Structures Sessional	3	1.5	
<u>Environmental Engineering</u>				
Course Code	Course Name	Contact Hour	Credit Hour	Remarks
CE 433	Solid and Hazardous Waste Management	2	2	
CE 435	Environmental Pollution and Management	2	2	
CE 431	Natural Resources and Renewable Energy	2	2	
CE 437	Climate Change and Disaster Management	2	2	
CE 439	Environmental Impact Assessment	2	2	
CE 432	Design of Water Supply, Sanitation and Sewerage Systems	3	1.5	

<u>Geotechnical Engineering</u>				
Course Code	Course Name	Contact Hour	Credit Hour	Remarks
CE 443	Earth Retaining Structures	2	2	Select Any Two
CE 445	Elementary Soil Dynamics	2	2	
CE 447	Soil-Water Interaction	2	2	
CE 442	Geotechnical Engineering Design Sessional	3	1.5	Geotech Sessional
<u>Transportation Engineering</u>				
Course Code	Course Name	Contact Hour	Credit Hour	Remarks
CE 453	Traffic Engineering Design and Management	2	2	
CE 455	Pavement Management, Drainage and Airport Engineering	2	2	
CE 457	Urban Transportation Planning & Management	2	2	
CE 459	Intelligent Transportation System	2	2	
CE 461	Railway Engineering	2	2	
CE 454	Traffic Studies and Pavement Design Sessional	3	1.5	
<u>Water Resources Engineering</u>				
Course Code	Course Name	Contact Hour	Credit Hour	Remarks
CE 465	Groundwater Engineering	2	2	
CE 467	Flood Mitigation and Management	2	2	
CE 469	River Engineering	2	2	
CE 471	Hydraulic Structures	2	2	
CE 473	Coastal Engineering	2	2	
CE 472	Design of Hydraulic Structures	3	1.5	
<b>*Select Any Two Engineering Combination</b>				
Total		22	16	(5+5.5+5.5)
<b>G. Total</b>		<b>199</b>	<b>162</b>	

\* If required courses can be interchanged between terms of a level without changing syllabus

\*\* If required courses other than major and minor groups can be offered in the final term

**DEPT OF ARCHITECTURE**  
**Total Offered Credit Hours: 221.0**  
**Total Required Credit Hours: 189.0**

		<b>L-1, T-1</b>	<b>Cr.</b>	<b>Hr.</b>
<b>Core Sessional</b>	Design Studios	ARCH 1102: Design Studio I	6	9
	Design Communication Studios	ARCH 1104: Architectural graphics I	3	6
	<b>Total Cr. &amp; Cr. Hr. Sessional</b>		<b>9.0</b>	<b>15</b>
<b>Core Theory</b>	General Education	HUM 1111: English	2	2
		MATH 1111: Mathematics	2	2
	Design Related Theories	ARCH 1103: Design Theory I	2	2
	Technical System	ARCH 1105: Building and Finish Material	2	2
	History, Human Behavior & Environment	ARCH 1101: Art and Architecture I	2	2
	Practice			
	<b>Total Cr.&amp; Cr. Hr. Core Theory</b>		<b>10</b>	<b>10</b>
<b>Elective Theory</b>	General Education			
	Technical System			
	Design Related Theories			
	History, Human Behavior & Environment			
	<b>Total Cr. &amp; Cr. Hr. Elec. Theory</b>		<b>0</b>	<b>0</b>
	<b>Total Cr. &amp; Cr. Hr. each level</b>		<b>19.0</b>	<b>25</b>

		<b>L-1, T-2</b>	<b>Cr.</b>	<b>Hr.</b>
<b>Core Sessional</b>	Design Studios	ARCH 1202: Design Studio II pre req. ARCH 1102: Design Studio I	6	9
	Design Communication Studios	ARCH 1204: Architectural graphics II pre req. ARCH 1104: Architectural Graphics I	3	6
		ARCH 1230: Computer Application I	1.5	3
	<b>Total Cr. Hr. Sessional</b>		<b>10.5</b>	<b>18</b>
<b>Core Theory</b>	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 II	2	2
Practice				
	<b>Total Cr.&amp; Cr. Hr. Core Theory</b>		<b>10</b>	<b>10</b>
<b>Elective Theory</b>	General Education			
	Technical System			
	Design Related Theories			
	History, Human Behavior & Environment			
	<b>Total Cr.&amp;Cr. Hr. Elec. Theory</b>		<b>0</b>	<b>0</b>
	<b>Total Cr. &amp;Cr.Hr. each level</b>		<b>20.5</b>	<b>28</b>

		<b>L-2, T-1</b>	<b>Cr.</b>	<b>Hr.</b>
<b>Core Sessional</b>	Design Studios	ARCH 2102: Design Studio III pre req. ARCH 1202: Design Studio II	8	12
	Design Communication Studios	ARCH 2104: Graphic Art & Sculpture	1.5	3
		ARCH 2130: Computer Application II pre req. ARCH 1230: Computer I	1.5	3
	<b>Total Cr.&amp;Cr.Hr. Sessional</b>		<b>11.0</b>	<b>18</b>
<b>Core Theory</b>	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 III	2	2
	Practice			
	<b>Total Cr.&amp;Cr.Hr. Core Theory</b>		<b>8</b>	<b>8</b>
<b>Elective Theory</b>	General Education	HUM 2111: Logic and Philosophy	2	2
		HUM 2113: Psychology and Behavior		
	Technical System			

	Design Related Theories			
	History, Human Behavior & Environment			
	Total Cr.&Cr.Hr. Elec. Theory		<b>2</b>	<b>2</b>
	Total Cr.&Cr. Hr. each level		<b>21</b>	<b>28</b>

		<b>L-2, T-2</b>	<b>Cr.</b>	<b>Hr.</b>
<b>Core Sessional</b>	Design Studios	ARCH 2202: Design Studio IV pre req. ARCH 2102: Design Studio III	8	12
	Design Communication Studios	ARCH 2204: Photography and Film	1.5	3
		ARCH 2230: Computer Application II	1.5	3
	Total Cr.&Cr. Hr. Sessional		<b>11.0</b>	<b>18</b>
<b>Core Theory</b>	General Education			
	Design Related Theories	ARCH 2203: Landscape Design	2	2
	Technical System	CE 2221: Structure II	2	2
		EWCE 2231: Building Services I: Plumbing	2	2

	History, Human Behavior & Environment	ARCH 2201: Art and Architecture IV	2	2
	Practice			
	Total Cr.&Cr. Hr. Core Theory		<b>8</b>	<b>8</b>
<b>Elective Theory</b>	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 Cr.&Cr. Hr. Elec. Theory		<b>2</b>	<b>2</b>	
Total Cr.&Cr. Hr. each level		<b>21</b>	<b>28</b>	

		L-3, T-1	Cr.	Hr.
Core Sessional	Design Studios	ARCH 3102: Design Studio V pre req. ARCH 2202: Design Studio IV	8	12
	Design Communication Studios	ARCH 3104: Landscape Design Studio	1.5	3
	Total Cr. &Cr.Hr. Sessional		<b>9.5</b>	<b>15</b>
Core Theory	General Education			
	Design Related Theories			
	Technical System	CE 3121: Structure III	2	2
		ME 3141: Building Services II: Mechanical Equipment	2	2
		ARCH 3161: Construction Method & Details	2	2
	History, Human Behavior & Environment Practice	ARCH 3101: Architecture of Bengal	2	2
Total Cr.&Cr. Hr. Core Theory		<b>8</b>	<b>8</b>	
Elective Theory	General Education			
	Technical System			
	Design Related Theories	ARCH 3103: Bio-Design and Architecture		
		ARCH 3105: Advanced Construction & Building Technology		
		ARCH 3107: Modular Architecture, Production line & Customization	2	2
History, Human Behavior & Environment				
Total Cr. &Cr.Hr. Elec. Theory		<b>2</b>	<b>2</b>	
Total Cr. &Cr.Hr. each level		<b>19.5</b>	<b>25</b>	
<b>L-3, T-2</b>				
		L-3, T-2	Cr.	Hr.
Core Sessional	Design Studios	ARCH 3202: Design StudioVI pre req. ARCH 3102: Design Studio V	8	12
	Design Communication Studios	ARCH 3204: Working Drawing I: Construction Drawing	1.5	3
	Total Cr. &Cr.Hr. Sessional		<b>9.5</b>	<b>15</b>
Core Theory	General Education			
	Design Related Theories	ARCH 3203: Urban Design	2	2
	Technical System	CE 3221: Structure IV	2	2
		EECE 3251: Building Services III: Electrical Equipment	2	2
	History, Human Behavior & Environment Practice	ARCH 3201: Art and Architecture V	2	2
	Total Cr.&Cr. Hr. Core Theory		<b>8</b>	<b>8</b>
Elective Theory	General Education			
	Technical System			
	Design Related Theories	ARCH 3205: Advanced Planning		
		ARCH 3207: Rural Planning	2	2
		ARCH 3209: Transportation and Mobility Design		
History, Human Behavior & Environment				
Total Cr. &Cr.Hr. Elec. Theory		<b>2</b>	<b>2</b>	
Total Cr. &Cr.Hr. each level		<b>19.5</b>	<b>25</b>	

		<b>L-4, T-1</b>	<b>Cr.</b>	<b>Hr.</b>
<b>Core Sessional</b>	Design Studios	ARCH 4102: Design Studio VII	8	12
		pre req. ARCH 3202: Design Studio VI		
	Design Communication Studios	ARCH 4104: Working Drawing II: Production Drawing	1.5	3
		ARCH 3204: pre req. Working Drawing I		
	Total Cr. & Cr.Hr. Sessional		<b>9.5</b>	<b>15</b>
<b>Core Theory</b>	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 Cr. & Cr.Hr. Core Theory		<b>6</b>	<b>6</b>
<b>Elective Theory</b>	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 Cr. & Cr.Hr. Elec. Theory		<b>2</b>	<b>2</b>
	Total Cr. & Cr.Hr. each level		<b>17.5</b>	<b>23</b>

		<b>L-4, T-2</b>	<b>Cr.</b>	<b>Hr.</b>
<b>Core Sessional</b>	Design Studios	ARCH 4202: Design Studio VIII	8	12
		pre req. ARCH 4102: Design Studio VII		
	Design Communication Studios	ARCH 4204: Interior Design Studio	1.5	3
		ARCH 4206: Professional Training	1.5	3
	Total Cr.&Cr. Hr. Sessional		<b>11.0</b>	<b>18</b>
<b>Core Theory</b>	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 Cr. & Cr. Hr. Core Theory		<b>6</b>	<b>6</b>
<b>Elective Theory</b>	General Education			
	Technical System	ARCH 4203: Ancient 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 Cr. & Cr. Hr. Elec. Theory		<b>2</b>	<b>2</b>
	Total Cr. & Cr. Hr. each level		<b>19</b>	<b>26</b>

		L-5, T-1	Cr.	Hr.
Core Sessional	Design Studios	ARCH 5102: Design Studio IX pre req. ARCH 4202: Design Studio VII	10	15
	Design Communication Studios	ARCH 5104: Seminar	1.5	3
	Total Cr.&Cr. Hr. Sessional		<b>11.5</b>	<b>18</b>
Core Theory	General Education	ARCH 5101: Architecture & Society	2	2
	Design Related Theories	Hum 5111: Accounting	2	2
	Technical System			
	History, Human Behavior & Environment			
	Practice			
	Total Cr.&Cr. Hr. Core Theory		<b>4</b>	<b>4</b>
Elective Theory	General Education			
	Technical System			
	Design Related Theories	ARCH 5103: Health Facilities Planning & Design ARCH 5105: Industrial & Commercial Building Design ARCH 5107: Educational, Religious & Recreational Facilities Design	2	2
	History, Human Behavior & Environment			
	Total Cr.&Cr. Hr. Elec. Theory		<b>2</b>	<b>2</b>
	Total Cr. &Cr.Hr. each level		<b>17.5</b>	<b>24</b>

		L-5, T-2	Cr.	Hr.
Core Sessional	Design Studios	ARCH 5202: Design Studio X / ARCH 5208: Design Studio XI	12	18
	Design Communication Studios	pre req. ARCH 5102: Design Studio IX		
	Total Cr. Hr. Sessional		12.0	18
Core Theory	General Education			
	Design Related Theories			
	Technical System			
	History, Human Behavior & Environment			
	Practice	ARCH 5273: Professional Practice	2	2
	Total Cr. Hr. Core Theory		2	2
Elective Theory	General Education			
	Technical System	ARCH 5203: Building Safety Design	2	2
	Design Related Theories	ARCH 5205: Disaster & Post Disaster Responsive Architecture		
	Design Related Theories	ARCH 5207: Architecture for Children and Differently Able People		
	History, Human Behavior & Environment	ARCH 5209: Architectural Conservation		
	Total Cr. Hr. Elec. Theory		2	2
	Total Cr. Hr. each level		16	22

**DEPT OF ENVIRONMENTAL, WATER RESOURCES AND  
COASTAL ENGINEERING**  
Total Credit Hours: 162.5

**Level – 1, Term – I**

Course Code	Course Name	Contact Hour	Credit Hour
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
<b>Total:</b>		<b>24</b>	<b>19.5</b>

**Level – 1, Term – II**

Course Code	Course Name	Contact Hour	Credit Hour
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
<b>Total:</b>		<b>25</b>	<b>20.5</b>

**Level – 2, Term – II**

Course Code	Course Name	Contact Hour	Credit Hour
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
<b>Total:</b>		<b>24</b>	<b>19.5</b>

**Level – 3, Term – I**

Course Code	Course Name	Contact Hour	Credit Hour
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
<b>Total:</b>		<b>26</b>	<b>21.5</b>

**Level – 3, Term – II**

**Level – 2, Term – I**

Course Code	Course Name	Contact Hour	Credit Hour
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
<b>Total:</b>		<b>25</b>	<b>20.5</b>

Course Code	Course Name	Contact Hour	Credit Hour
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 Found 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
<b>ota</b>		<b>24</b>	<b>22</b>

Level – 4, Term – I			
Course Code	Course Name	Contact Hour	Credit Hour
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
<b>Total:</b>		<b>23</b>	<b>20</b>

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

Course Code	Course Name	Contact Hour	Credit Hour	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	
<b>Total:</b>		<b>19</b>	<b>19</b>	

Level – 4, Term – II (Major: Water Resources Engg)*				
Course Code	Course Name	Contact Hour	Credit Hour	Rmks
EWC 463	Irrigation and Drainage Engineering	3.0	3.0	Major Courses
EWC 465	Design of Hydraulic Structures	3.0	3.0	
EWC 469	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	
<b>Total:</b>		<b>19</b>	<b>19</b>	

## DEPT OF PETROLEUM AND MINING ENGINEERING

Total Credit Hours: 162.50

### LEVEL – 1, TERM – I

Course Code	Course Name	Contact hour/week	Credit Hour
<b>THEORY</b>			
Chem 171	Basic Chemistry	3	3
Hum 171	Fundamental English	2	2
Math 171	Differential and Integral Calculus	3	3
PME 151	Geology for Mining and Petroleum Engineers	3	3
PME 153	Introduction to Petroleum and Mining Engineering	4	4
<b>SESSIONAL/LABORATORY</b>			
ME 178	Engineering Drawing	3	1.5
ME 176	Workshop Practice	3	1.5
PME 152	Geology Laboratory	1.5	0.75
Hum 172	Developing English Language Skills	2	1
<b>Total:</b>		<b>24.5</b>	<b>19.75</b>

Contact Hours: 15 (Theo) + 9.5 (Lab) = 24.5 hours/week  
 No of Theory Courses = 5  
 Total Credits = 19.75  
 No of Laboratory Courses = 4

### LEVEL – 2, TERM – I

Course Code	Course Name	Contact hour/week	Credit Hour
<b>THEORY</b>			
EEE 273	Fundamentals of Electrical Engineering	3	3
Math 271	Operational Calculus and Numerical Analysis	4	4
PME 271	Engineering Mechanics	3	3
ME 273	Engineering Thermodynamics	3	3
PME 261	Rock Mechanics	3	3
<b>SESSIONAL/LABORATORY</b>			
EEE 274	Electrical Engineering Laboratory	3	1.5
ME 274	Engineering Thermodynamics Laboratory	1.5	0.75
PME 262	Rock Mechanics Laboratory	1.5	0.75
<b>Total:</b>		<b>25</b>	<b>19.0</b>

Contact Hours: 16 (Theo) + 6 (Lab) = 22 hours/week  
 No of Theory Courses = 5  
 Total Credits = 19  
 No of Laboratory Courses = 3

**LEVEL – 1, TERM – II**

Course Code	Course Name	Contact hour/week	Credit Hour
<b>THEORY</b>			
Chem 173	Petroleum Chemistry	3	3
Hum 173	Economics	2	2
Math 173	Differential Equation and Vector Analysis	4	4
Phy 171	Physics	3	3
PME 111	Reservoir Rock and Fluid Properties	3	3
<b>SESSIONAL/LABORATORY</b>			
Chem 172	Chemistry Laboratory	3	1.5
Phy 172	Physics Laboratory	3	1.5
PME 112	Reservoir Rock and Fluid Properties Laboratory	1.5	0.75
<b>Total:</b>		<b>22.5</b>	<b>18.75</b>

Contact Hours: 15 (Theo) + 7.5 (Lab) = 22.5 hours/week

No of Theory Courses = 5

Total Credits = 18.75

No of Laboratory Courses = 3

**LEVEL – 2, TERM – II**

Course Code	Course Name	Contact hour/week	Credit Hour
<b>THEORY</b>			
CSE 271	Introduction to Computer Programming	2	2
Math 273	Engineering Statistics	2	2
ME 275	Fluid Mechanics	3	3
PME 277	Strength of Materials	3	3
PME 263	Mine Surveying	3	3
Hum 271	Sociology	2	2
<b>SESSIONAL/LABORATORY</b>			
CSE 272	Computer Programming Sessional	3	1.5
ME 276	Fluid Mechanics Laboratory	1.5	0.75
PME278	Structural Mechanics and Materials Laboratory	3	1.5
PME 264	Mine Surveying Laboratory	3	1.5
<b>Total:</b>		<b>27</b>	<b>21</b>

Contact Hours: 15 (Theo) + 12 (Lab) = 27 hours/week

No of Theory Courses = 6

Total Credits = 21

No of Laboratory Courses = 4

**LEVEL – 3, TERM – I**

Course Code	Course Name	Contact hour/week	Credit Hour
<b>THEORY</b>			
EEE 373	Electrical Machine and Electronic Engineering	3	3
PME 311	Reservoir Engineering	3	3
PME 313	Well Logging and Formation Evaluation	3	3
PME 315	Drilling Engineering	3	3
PME 361	Minerals Processing	3	3
<b>SESSIONAL/ LABORATORY</b>			
EECE 374	Electrical and Electronic Engineering Laboratory	3	1.5
PME 314	Well Logging Laboratory	1.5	0.75
PME 334	Drilling Fluids Laboratory	3	1.5
PME 362	Minerals Processing Laboratory	3	1.5
<b>Total:</b>		<b>25.5</b>	<b>20.25</b>

Contact Hours: 15 (Theo) + 10.5 (Lab) = 25.5 hours/week

No of Theory Courses = 5

Total Credits = 20.25

No of Laboratory Courses = 4

**LEVEL – 3 (TERM – II)**

Course Code	Course Name	Contact hour/week	Credit Hour
<b>THEORY</b>			
ME 317	Heat and Mass Transfer	3	3
PME 321	Petroleum Production Engineering	3	3
PME 323	Natural Gas Engineering	3	3
PME 325	Petroleum Refining Technology	2	2
PME 363	Mining Systems	3	3
PME 365	Shaft Sinking and Tunneling	3	3
<b>SESSIONAL/LABORATORY</b>			
ME 318	Heat Transfer Laboratory	1.5	0.75
PME 324	Natural Gas Engineering Laboratory	3	1.50
PME 364	Mining Systems Laboratory	1.5	0.75
PME 352	Computational Laboratory	1.5	0.75
PME 354	Industrial Training	3 weeks	0.75
<b>Total:</b>		<b>24.5</b>	<b>21.5</b>

Contact Hours: 17 (Theo) + 7.5 (Lab) = 24.5 hours/week

No of Theory Courses = 6

Total Credits = 21.5 (excluding Industrial Training)

No of Laboratory Courses = 4

**LEVEL – 4, TERM – I**

Course Code	Course Name	Contact hour/week	Credit Hour
<b>THEORY</b>			
PME 411	Well Test Analysis	3	3
PME 413	Reservoir Modeling and Simulation	3	3
PME 461	Mine Ventilation and Environmental Engineering	3	3
PME 463	Mine Planning and Design	3	3
PME 465	Rock Blasting and Explosive Technology	3	3
PME 455	Professional Practices and Communication	2	2
<b>SESSIONAL/ LABORATORY</b>			
PME 400	Project / Thesis- Part: I	2	1
PME 416	Reservoir Modeling and Simulation Sessional	1.5	0.75
PME 462	Mine Ventilation and Environmental Engineering Laboratory	3	1.5
PME 456	Professional Practices and Communication Sessional	3	1.5
<b>Total:</b>		<b>26.5</b>	<b>21.75</b>

Contact Hours: 17 (Theory) + 9.5 (Lab) = 26.5 hours/week

No of Theory Courses = 6

Total Credits = 22.25

No of Laboratory Courses = 4

**LEVEL – 4 (TERM – II)**

Course Code	Course Name	Contact hour/week	Credit Hour
<b>THEORY</b>			
PME 453	Evaluation and Management of Petroleum and Mining Projects	4	4
PME 421	Transmission and Distribution of Natural Gas	3	3
PME 423	Enhanced Oil Recovery Techniques	2	2
PME 467	Ground Water Managements in Mining	2	2
PME 469	Mine Haulage and Transportation	3	3
PME 451	Health, Safety and Environment in Petroleum and Mining Industries	2	2
<b>SESSIONAL/LABORATORY</b>			
PME 400	Project / Thesis- Part: II	6	3
PME 422	Transmission and Distribution of Natural Gas Laboratory	1.5	0.75
PME 472	Mine Instrumentation and Machineries Laboratory	1.5	0.75
<b>Total:</b>		<b>25</b>	<b>20.5</b>

Contact Hours: 16 (Theo) + 9 (Lab) = 25 hours/week

No of Theory Courses = 6

Total Credits = 20.5

No of Laboratory Courses = 3



# FACULTY OF ELECTRICAL AND COMPUTER ENGINEERING

## DEPT OF COMPUTER SCIENCE AND ENGINEERING

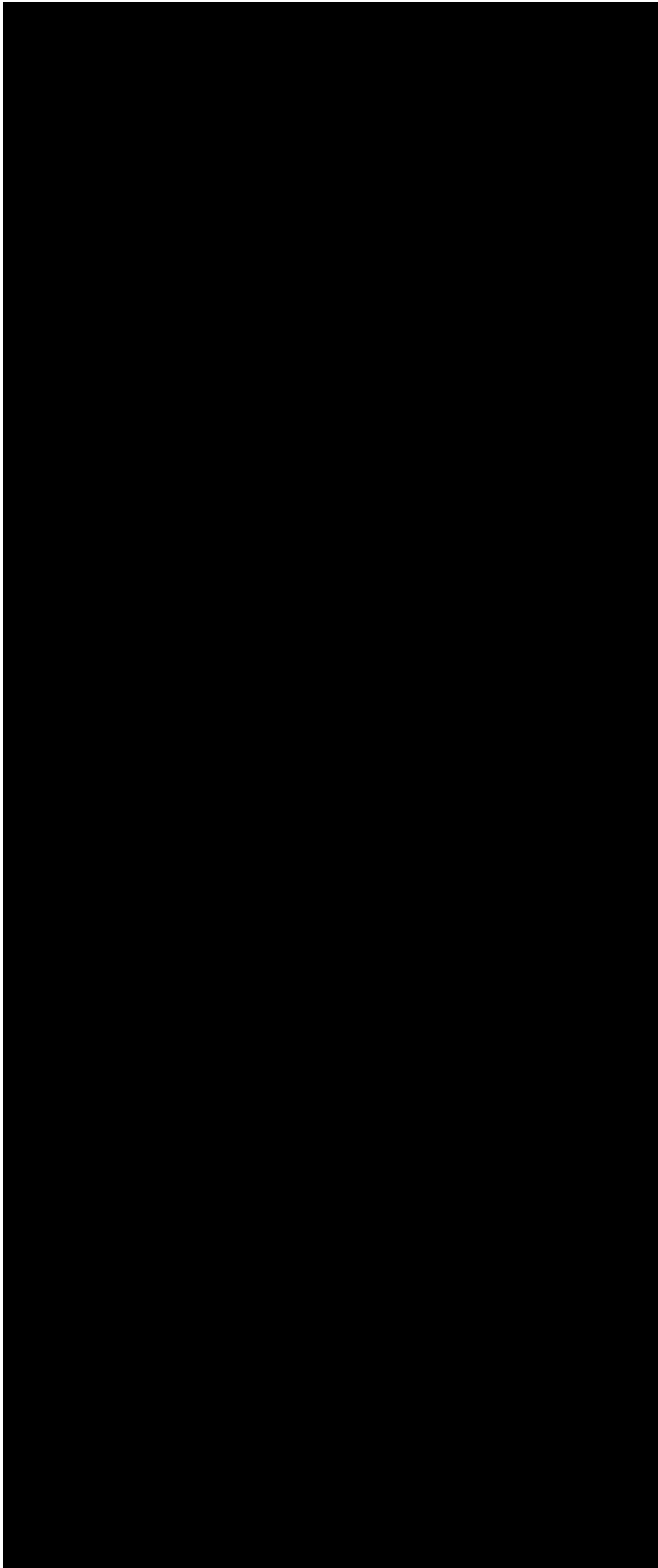
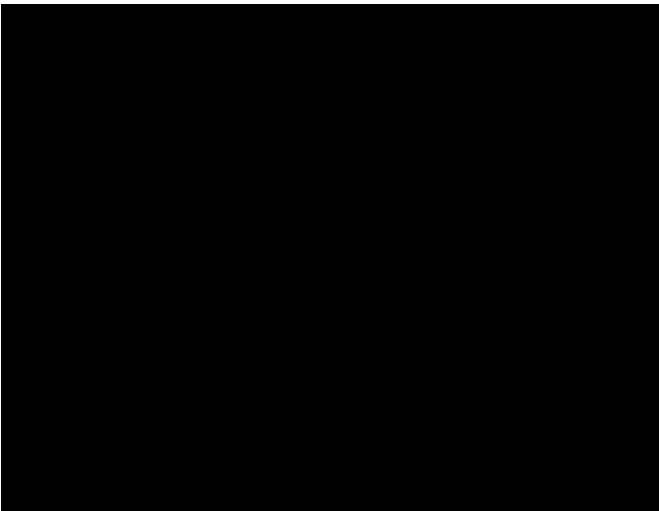
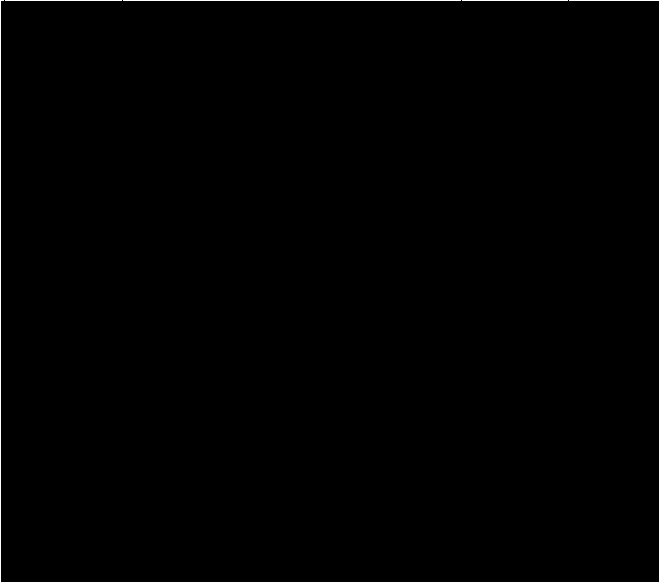
Total Credit Hours: 160

### Level-2, Term-I

Course Code	Course Name	Contact Hour	Credit Hour
CSE-201	Digital Logic Design	3.00	3.00
CSE-202	Digital Logic Design Sessional	3.00	1.50
CSE-203	Data Structures and Algorithms-1	3.00	3.00
CSE-204	Data Structures and Algorithms-1 Sessional	3.00	1.50
CSE-205	Object Oriented Programming Language	3.00	3.00
CSE-206	Object Oriented Programming Language Sessional-1	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-3 INDUSTRIAL TRAINING**

Course Code	Course Name	Contact Hour	Credit Hour
CS 350	Industrial raining	4 Weeks	1.00



# DEPT OF ELECTRICAL, ELECTRONIC AND COMMUNICATION ENGINEERING

Total Credit Hours: 161

## Level-1, Term-I

Course Code	Course Name	Contact Hour	Credit Hour
EECE 101	Electrical Circuits I	3.00	3.00
EECE 102	Electrical Circuits and Simulation Lab-I	3.00	1.50
PHY 111	Phy I (Waves and Oscillation, Optics and Thermal Physics)	3.00	3.00
MATH 111	Differential and Integral Calculus	4.00	4.00
CHEM 101	Chem-I	3.00	3.00
CHEM 114	Inorganic & Quantitative Analysis Lab	3.00	1.50
HUM-127	Sociology and Engineering Ethics/ Moral Philosophy	2.00	2.00
CE-152	Engineering Drawing	3.00	1.50
<b>Total:</b>		<b>24</b>	<b>19.5</b>

## Level-2, Term-II

Course Code	Course Name	Contact Hour	Credit Hour
EECE 205	Electrical Machines II	3.00	3.00
EECE 206	Electrical Machines Laboratory	3.00	1.50
EECE 207	Electronics II	3.00	3.00
EECE 208	Electronics Circuit and Simulation Laboratory II	3.00	1.50
EECE 212	Numerical Technique Laboratory	3.00	1.50
EECE 217	Engineering Electromagnetic	3.00	3.00
MATH 213	Complex Variables and Statistics	4.00	4.00
HUM 279	Financial and Managerial Accounting	3.00	3.00
<b>Total:</b>		<b>25</b>	<b>20.50</b>

## Level-1, Term-II

Course Code	Course Name	Contact Hour	Credit Hour
EECE 105	Electrical Circuits II	3.00	3.00
EECE 106	Electrical Circuit and Simulation Lab -II	3.00	1.50
PHY 113	Phy II (Electricity and Magnetism, Modern Physics and Mechanics)	3.00	3.00
PHY 114	Phy II Laboratory	3.00	1.50
MATH 115	Vector analysis, Matrices and Geometry	4.00	4.00
CSE 109	Computer Programming	3.00	3.00
CSE 110	Computer Programming Laboratory	3.00	1.50
HUM 177	Fundamental of Economics	3.00	3.00
<b>Total:</b>		<b>25</b>	<b>20.50</b>

## Level-3, Term-I

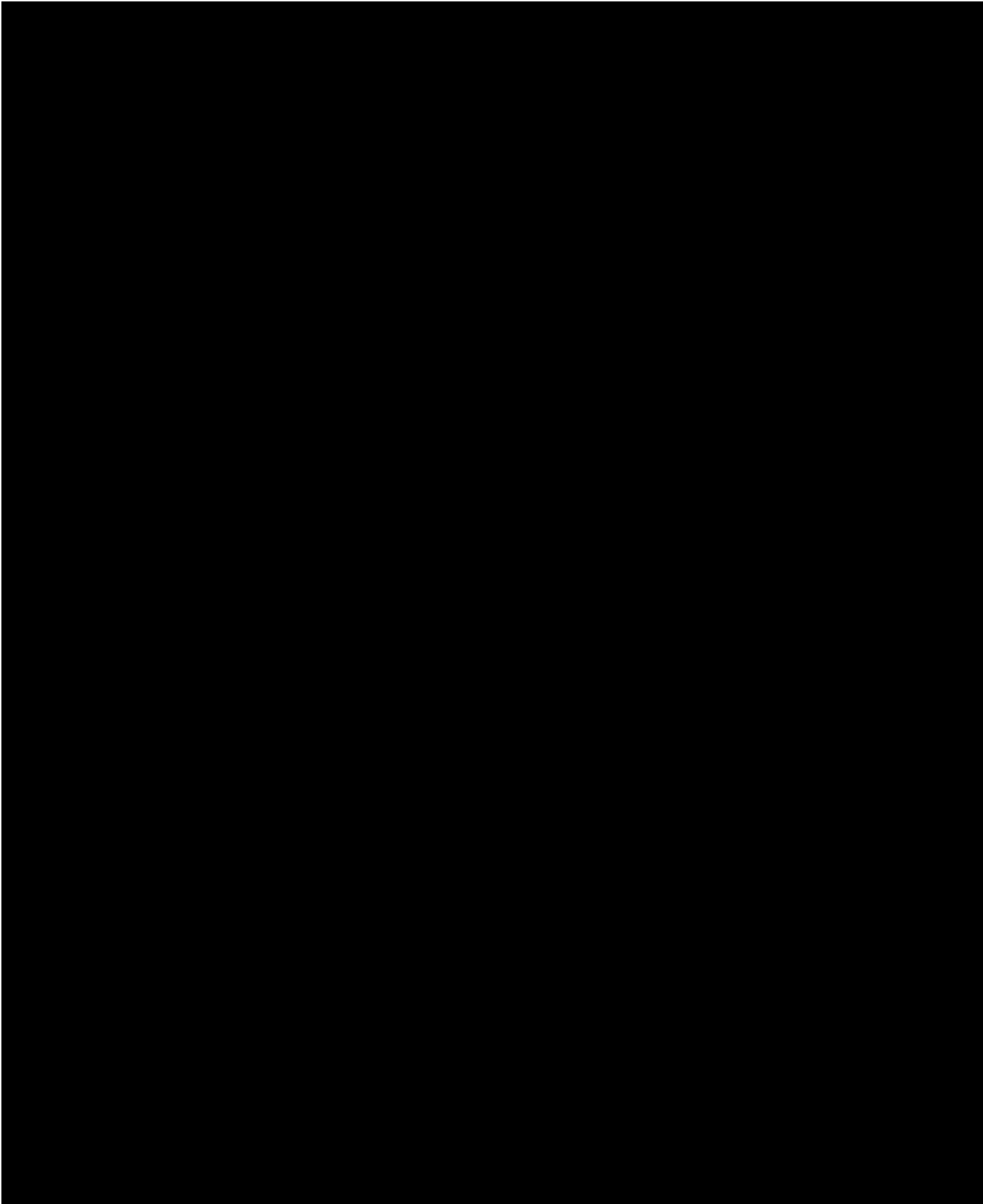
Course Code	Course Name	Contact Hour	Credit Hour
EECE 301	Continuous Signals and Linear Systems	3.00	3.00
EECE 303	Digital Electronics	3.00	3.00
EECE 304	Digital Electronics Laboratory	3.00	1.50
EECE 305	Power System I	3.00	3.00
EECE 306	Power System I Laboratory	3.00	1.50
EECE 313	Electrical Measurement, Instrumentation and Sensors	3.00	3.00
EECE 314	Electrical Measurement, Instrumentation and Sensors Lab	3.00	1.50
EECE 322	Electrical Service Design Laboratory	3.00	1.50
ME 393	Industrial Management	3.00	3.00
<b>Total:</b>		<b>27</b>	<b>21.00</b>

## Level-2, Term-I

Course Code	Course Name	Contact Hour	Credit Hour
EECE 201	Electronics-I	3.00	3.00
EECE 202	Electronics Circuit and Simulation Lab -I	3.00	1.50
EECE 203	Electrical Machines-I	3.00	3.00
ME 263	Fundamental of Mechanical Engineering	3.00	3.00
ME 264	Fundamental of Mechanical Engineering Lab	3.00	1.50
MATH 211	Ordinary & Partial Differential Equation	3.00	3.00
HUM-235	English	2.00	2.00
HUM-272	Developing English Skills Laboratory	3.00	1.50
<b>Total:</b>		<b>23</b>	<b>18.50</b>

## Level-3, Term-II

Course Code	Course Name	Contact Hour	Credit Hour
EECE 307	Microprocessors and Interfacing	3.00	3.00
EECE 308	Microprocessor and Interfacing Laboratory	3.00	1.50
EECE 309	Communication Theory	3.00	3.00
EECE 310	Communication Laboratory	3.00	1.50
EECE 311	Digital signal Processing-I	3.00	3.00
EECE 312	Digital signal Processing-I Lab	3.00	1.50
EECE 315	Electrical Properties of Material	3.00	3.00
EECE 317	VLSI I	3.00	3.00
EECE 318	VLSI I Lab	3.00	1.50
EECE 330	Industrial Training	-	1.00
<b>Total:</b>		<b>27</b>	<b>22</b>



# FACULTY OF MECHANICAL ENGINEERING

## DEPT OF MECHANICAL ENGINEERING

Total Credit Hours: 161

### LEVEL-1, TERM-I

Course Code	Course Name	Contact Hour	Credit Hour
ME161	Introduction to Mechanical Engineering	3	3
EECE159	Fundamentals of Electrical Engineering	3	3
Phy 105	Structure of Matter, Electricity and Magnetism and Modern Physics	3	3
Chem 101	Chemistry-1	3	3
Math 159	Differential and Integral Calculus	3	3
		15	15.00
Shop 162	Foundry, Welding and Machine Shop Sessional	3	1.50
EECE160	Fundamental of Electrical Engineering Sessional	3/2	0.75
Chem 114	Inorganic Quantitative Analysis Sessional	3	1.50
		7.5	3.75
<b>Total:</b>		<b>22.5</b>	<b>18.75</b>

### LEVEL-2, TERM-II

Course Code	Course Name	Contact Hour	Credit Hour
ME 243	Mechanics of Solids	3	3.00
ME 261	Numerical Analysis	3	3.00
ME 291	Metallic Materials	3	3.00
Math 263	Fourier Analysis, Harmonic functions, Laplace Transform and Complex variable	4	4.00
Hum 233	Principal of Accounting	2	2.00
Hum 231	Engineering Economics	2	2.00
		17	17.00
ME 244	Mechanics of solids Sessional	3/2	0.75
ME 260	Mechanical Engineering Drawing – II	3	1.5
ME 262	Numerical Analysis Sessional	3/2	0.75
ME 292	Metallic Materials Sessional	3/2	0.75
		7.50	3.75
<b>Total:</b>		<b>24.5</b>	<b>20.75</b>

### LEVEL-1, TERM-II

Course Code	Course Name	Contact Hour	Credit Hour
ME 171	Computer Programming Language	3	3
Phy 107	Waves and Oscillation, Geometrical Optics and Wave Mechanics	3	3
Chem 141	Chemistry of Engineering Materials	3	3
Math 163	Vector analysis, Matrices and Coordinate Geometry	4	4
Hum 101	English	2	2
		15	15.00
ME 160	Mechanical Engineering Drawing-I	3	1.50
ME 172	Computer Programming Language Sessional	3/2	0.75
Hum 102	Technical Report Writing and Presentation	3	1.50
Phy 102	Physics Sessional	3	1.50
		10.5	5.25
<b>Total:</b>		<b>25.5</b>	<b>20.25</b>

### LEVEL-3, TERM-I

Course Code	Course Name	Contact Hour	Credit Hour
ME 301	Conduction and Radiation Heat Transfer	3	3
ME 321	Fluid Mechanics – 1	3	3
ME 341	Machine Design –1	3	3
ME 345	Mechanics of Machinery	4	4
ME 361	Instrumentation and Measurement	3	3
		16	16.00
ME 302	Heat Transfer Sessional	3/2	0.75
ME 322	Fluid Mechanics Sessional-1	3/2	0.75
ME 342	Machine Design Sessional-1	3/2	0.75
ME 346	Mechanics of Machinery Sessional	3	1.5
ME 362	Instrumentation and Measurement Sessional	3/2	0.75
		9	4.5
<b>Total:</b>		<b>25.50</b>	<b>20.50</b>

### LEVEL –2, TERM – I

Course Code	Course Name	Contact Hour	Credit Hour
ME 201	Basic Thermodynamics	4	4
ME 241	Engineering Mechanics	3	3
EECE 259	Electrical and Electronics Technology	4	4
Math 261	Ordinary and partial Differential Equation	4	4
Hum	Select from the prescribed courses	2	2
		17	17.00
EECE 260	Electrical and Electronics Technology Sessional	3	1.5
ME 202	Basic Thermodynamics Sessional	1.5	0.75
ME 242	Engineering Mechanics Sessional	1.5	0.75
		6	3.00
<b>Total:</b>		<b>23.00</b>	<b>20.00</b>

### LEVEL –3, TERM – II

Course Code	Course Name	Contact Hour	Credit Hour
ME 303	Convection, Boiling, Condensation and Mass Transfer	3	3
ME 323	Fluid Mechanics – II	3	3
ME 331	Production Processes	4	4
ME 343	Machine Design – II	3	3
ME 381	Measurement and Quality Control	3	3
		16	16
ME 304	Heat and Mass Transfer Sessional	3/2	0.75
ME 324	Fluid Mechanics Sessional-II	3/2	0.75
ME 332	Production Process Sessional	3/2	0.75
ME 344	Machine Design Sessional-II	3/2	0.75
ME 382	Measurement and Quality Control Sessional	3/2	0.75
ME 372 *	Industrial Training	4 weeks	1.00
		7.5+4 weeks	4.75
<b>Total:</b>		<b>23.5 + 04 Weeks</b>	<b>20.75</b>

\*It 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	Contact Hour	Credit Hour
ME 401	Internal Combustion Engines	3	3
ME 421	Fluid Machinery	3	3
ME 431	Machine Tools	3	3
Optional I <sup>a</sup>	Selected from prescribed optional subjects	3	3
Optional II <sup>a</sup>	Selected from prescribed optional subjects	3	3
ME 402	Heat Engines Sessional	3/2	0.75
ME 422	Fluid Machinery Sessional	3/2	0.75
ME 432	Machine Tools Sessional	3/2	0.75
ME 400	Project and Thesis – I	6	3
<b>Total:</b>		<b>25.5</b>	<b>20.25</b>

**LEVEL- 4, TERM – II**

Course Code	Course Name	Contact Hour	Credit Hour
ME 403	Power Plant Engineering	3	3
ME 481	Industrial Management	4	4
Optional III <sup>a</sup>	Selected from prescribed optional subjects	3	3
Optional IV <sup>a</sup>	Selected from prescribed optional subjects	3	3
Optional V <sup>a</sup>	Selected from prescribed optional subjects	3	3
ME 404	Steam Laboratories Sessional	3/2	0.75
ME 400	Project and thesis – II	6	3
<b>Total:</b>		<b>23.5</b>	<b>19.75</b>

**Notes:**

- Students can choose from a number of humanities courses as follows, offered by Humanities Department:  
 Hum 201: Sociology  
 Hum 203: Government  
 Hum 213: Principles of Accounting.  
 Hum 223: Economics  
 Hum 227: Industrial Sociology
- Students can choose from optional courses offered by the Department of Mechanical Engineering.

# AERONAUTICAL ENGINEERING

Total Credit Hours: Aerospace 162.00 & Avionics 161.50

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

Course Code	Course Name	Contact Hour	Credit Hour
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 123	Math II (Complex Variables and Vector Analysis)	3	3
AEAS 101	Introduction to Aeronautical Engineering	3	3
Phy 116	Physics Sessional	3	1.5
AEAV 102	Electrical Circuit Analysis-I Sessional	3	1.5
AEAS 110	Aeronautical Engineering Drawing-1	3	1.5
SHOP 108	Workshop Technology Sessional - I	1.5	0.75
<b>Total:</b>		<b>25.5</b>	<b>20.25</b>

## LEVEL-2, TERM-I (Avionics)

Course Code	Course Name	Contact Hour	Credit Hour
AEAV 201	Electrical Circuit Analysis-II	3	3
AEAS 201	Engineering Mechanics (Statics and Dynamics)	4	4
AEAV 203	Electronics – I	3	3
AEAV 205	Numerical Analysis and Applications	3	3
Math 221	Math IV (Matrices, Coordinate Geometry and Harmonic Functions )	3	3
HumXXX	Select form the prescribed courses (XXX)	3	3
AEAV 202	Electrical Circuit Analysis-II Sessional	1.5	0.75
AEAV 206	Numerical Analysis and Applications Sessional	3.0	1.5
<b>Total:</b>		<b>23.5</b>	<b>21.25</b>

## LEVEL 1, TERM-II (Aerospace and Avionics)

Course Code	Course Name	Contact Hour	Credit Hour
Phy 117	Phy II (Electricity and Magnetism, Modern Physics and Mechanics)	3	3
Chem 105	Chemistry (Atomic Structure, Thermo-chemistry and Chemistry of Engineering Materials)	4	4
Math 125	Math III (Ordinary and Partial Differential Equations and Laplace Transforms)	3	3
AEAV 103	Computer Programming and Applications	3	3
Hum 111	English	3	3
Hum 112	Technical Report Writing and Presentation	3	1.5
Chem 106	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
<b>Total:</b>		<b>26.5</b>	<b>21.25</b>

## LEVEL-2, TERM-II (Aerospace)

Course Code	Course Name	Contact Hour	Credit Hour
AEAS-203	Fundamentals of Fluid Mechanics	3	3
AEAS-205	Mechanics of Solids	3	3
AEAS-207	Thermodynamics	3	3
Math-225	Math V (Fourier Analysis and Statistics)	3	3
AEAS 215	Aircraft Systems	3	3
HUM YYY	Select from prescribed courses	3	3
AEAS-206	Mechanics of Solids Sessional	3	1.5
AEAS-208	Thermodynamics Sessional	1.5	0.75
AEAS-210	Aeronautical Engineering Drawing-II	3	1.5
<b>Total:</b>		<b>25.5</b>	<b>21.75</b>

## LEVEL-2, TERM-I (Aerospace)

Course Code	Course Name	Contact Hour	Credit Hour
AEAS-201	Engineering Mechanics (Statics and Dynamics)	4	4
AEAV-205	Numerical Analysis and Application	3	3
AEAV 203	Electronics-I	3	3
Math-221	Math IV (Matrices, Coordinate Geometry and Harmonic Analysis)	3	3
HUM XXX	Select from prescribed courses	3	3
AEAV-206	Numerical Analysis and Application Sessional	3	1.5
AEAV-204	Electronics-I Sessional	1.50	0.75
<b>Total:</b>		<b>20.5</b>	<b>18.25</b>

## LEVEL-2, TERM-II (Avionics)

Course Code	Course Name	Contact Hour	Credit Hour
AEAS 203	Fundamentals of Fluid Mechanics	3	3
AEAV 215	Electronics-II	3	3
AEAV 217	Aircraft Electrical Systems	3	3
AEAS 207	Thermodynamics	3	3
Math 225	Math V (Fourier Analysis and Statistics)	3	3
AEAV 216	Electronics-II Sessional	3	1.5
AEAS 208	Thermodynamics Sessional	1.5	0.75
AEAV 218	Aircraft Electrical Systems Sessionals	1.5	0.75
AEAS 210	Aeronautical Engineering Drawing-II	3	1.5
<b>Total:</b>		<b>24</b>	<b>19.5</b>

### LEVEL-3, TERM-I (Aerospace)

Course Code	Course Name	Contact Hour	Credit Hour
AEAS-301	Heat Transfer	3	3
AEAS-303	Applied Aerodynamics and Computational Fluid Dynamics (CFD)	4	4
AEAS-305	Aerospace Propulsion	4	4
AEAS-307	Aircraft Loading & Structure Analysis	3	3
AEAS 331	Material Science and Aerospace Materials	3	3
AEAS-322	Heat Transfer Sessional	3	1.5
AEAS-324	Applied Aerodynamics and CFD Sessional	3	1.5
AEAS-306	Aerospace Propulsion Sessional	1.5	0.75
AEAS 332	Material Science and Aerospace Materials Sessionals	1.5	0.75
<b>Total:</b>		<b>26</b>	<b>21.50</b>

### LEVEL- 3, TERM – I (Avionics)

Course Code	Course Name	Contact Hour	Credit Hour
AEAV 301	Digital Systems	3	3
AEAV 303	Signals and Systems	3	3
AEAV 317	Aircraft Electronics Systems	3	3
AEAS 303	Applied Aerodynamics and Computational Fluid Dynamics (CFD)	4	4
HumYYY	Select from the prescribed courses (YYY)	3	3
AEAV 302	Digital Systems Sessional	3	1.5
AEAS 324	Applied Aerodynamics and CFD Sessional	3	1.5
AEAV 318	Aircraft Electronics Systems Sessionals	1.5	0.75
<b>Total:</b>		<b>25.0</b>	<b>20.5</b>

### LEVEL-3, TERM-II (Aerospace)

Course Code	Course Name	Contact Hour	Credit Hour
AEAV 329	Measurement and Aircraft Instruments	3	3
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
AE-300	Industrial Training	4 Weeks	1
AEAV 330	Measurement and Aircraft Instruments vSessional	3	1.5
AEAS-320	Machine Design Sessional	3	1.5
<b>Total:</b>		<b>22.0</b>	<b>20.0</b>

### LEVEL-3, TERM – II (Avionics)

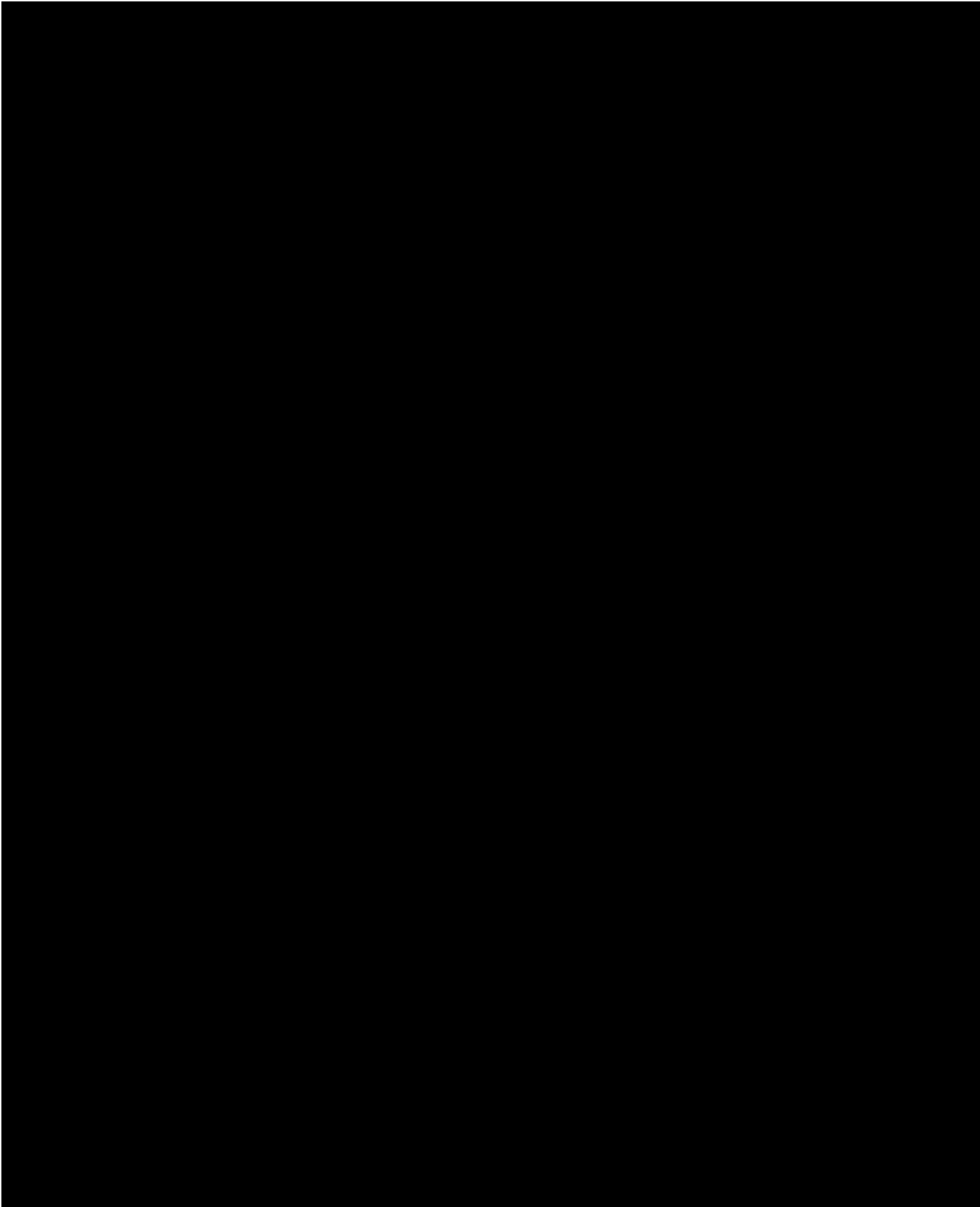
Course Code	Course Name	Contact Hour	Credit Hour
AEAV-307	Electro-Magnetic Field Theory	3	3
AEAV 327	Aircraft Navigation System-I	3	3
AEAV 329	Measurement and Aircraft Instruments	3	3
AEAV-313	Digital Signal Processing	3	3
AEAV 305	Communication Engineering	3	3
AE-300	Industrial Training	4 weeks	1
AEAV 306	Communication Engineering Sessional	1.5	0.75
AEAV 330	Measurement and Aircraft Instruments Sessional	3	1.5
AEAV-324	Digital Signal Processing Sessional	1.5	0.75
<b>Total:</b>		<b>21.0</b>	<b>19.00</b>

### LEVEL-4, TERM-I (Aerospace)

Course Code	Course Name	Contact Hour	Credit Hour
AEAS 437	Aerospace Vehicle Design	3	3
AEAS 439	Rotor Dynamics and Aircraft Performance	3	3
AEAS 447	Space Engineering	3	3
AEAV 461	Control Engineering	3	3
AEAS-XXX	Select from prescribed optional courses	3	3
AEAS-400	Project and Thesis	6	3
AEAS 438	Aerospace Vehicle Design Sessional	3	1.5
AEAS-416	Wind Tunnel Testing Sessional	1.5	0.75
<b>Total:</b>		<b>25.5</b>	<b>20.25</b>

### LEVEL-4, TERM – I (Avionics)

Course Code	Course Name	Contact Hour	Credit Hour
AEAV-401	Microwave Engineering	3	3
AEAV 411	Control Systems Engineering	3	3
AEAS 447	Space Engineering	3	3
AEAS-433	Aerospace Technology	3	3
AEAV-XXX	Selected from prescribed optional courses	3	3
AEAV-400	Project and Thesis	6	3
AEAV 412	Control Systems Engineering Sessional	1.5	0.75
AEAS 434	Aerospace Technology Sessional	1.5	0.75
AEAV 442	Microwave Engineering Sessional	1.5	0.75
<b>Total:</b>		<b>25.50</b>	<b>20.25</b>



# DEPT OF NAVAL ARCHITECTURE AND MARINE ENGINEERING

Total Credit Hours: 161.25

## Level-1, Term-I

Course Code	Course Name	Contact Hour	Credit Hour
<b>Theoretical Courses</b>			
Chem 121	Chemistry-1	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	Basic Naval Architecture	2	2
NAME 109	Basic Marine Engineering	2	2
<b>Sessional Courses</b>			
ME 150	Mechanical Engineering Drawing-1	3	1.5
Chem 122	Chemistry Sessional-1	3	1.5
Shop 180	Foundry and Welding Shop Sessional	1.5	0.75
Shop 190	Machine Shop Sessional	1.5	0.75
<b>Total (5T+4S)</b>		<b>24.0</b>	<b>19.50</b>

## LEVEL-1, TERM-II

Course Code	Course Name	Contact Hour	Credit Hour
<b>Theoretical Courses</b>			
Phy 123	Waves and Oscillations, Geometrical Optics and Wave Mechanics	3	3
Math 153	Ordinary Differential Equation and Partial Differential Equation	3	3
NAME 157	Hydrostatics and Stability	3	3
ME 177	Basic Thermal Engineering	3	3
EECE 181	Electrical Engineering Principles	3	3
<b>Sessional Courses</b>			
NAME 158	Ship Design Studio 1	3	1.5
ME 178	Basic Thermal Engineering Sessional	3	1.5
Phy 124	Physics Sessional	3	1.5
Hum 132	English Sessional	1.5	0.75
<b>Total (5T+3S)</b>		<b>25.5</b>	<b>20.25</b>

## LEVEL-2, TERM-I

Course Code	Course Name	Contact Hour	Credit Hour
<b>Theoretical Courses</b>			
Math 251	Vector Analysis and Coordinate Geometry	3	3
NAME 205	Shipbuilding Materials	3	3
NAME 213	Fluid Mechanics	3	3
NAME 219	Engineering Mechanics	3	3
NAME 229	Marine Engines and Fuels	3	3
<b>Sessional Courses</b>			
NAME 206	Shipbuilding Materials Sessional	1.5	0.75
NAME 208	Ship Design Studio - II	3	1.5
NAME 214	Fluid Mechanics Sessional	3	1.5
NAME 226	Computer Aided Design (CAD)-1	3	1.5
<b>Total (5T+4S)</b>		<b>25.5</b>	<b>20.25</b>

## LEVEL-2, TERM- II

Course Code	Course Name	Contact Hour	Credit Hour
<b>Theoretical Courses</b>			
Hum 223	Economics	3	3
Math 253	Statistics, Laplace Transform and Matrices	3	3
NAME 227	Mechanics of Structure	3	3
NAME 253	Marine Hydrodynamics	3	3
EECE 281	Electrical and Electronic Technology for Marine Application	3	3
<b>Sessional Courses</b>			
NAME 228	Mechanics of Structure Sessional	1.5	0.75
NAME 254	Marine Hydrodynamics Sessional	3	1.5
NAME 258	Ship Design Laboratory-III	3	1.5
EECE 282	Electrical and Electronic Technology for Marine Engineering Sessional	3	1.5
<b>Total (5T+4S)</b>		<b>25.5</b>	<b>20.25</b>

**LEVEL- 3, TERM- I**

Course Code	Course Name	Contact hours	Credit hours
<b>Theoretical Courses</b>			
Hum 313	Principles of Accounting	3	3
NAME 301	Ship Structure	3	3
NAME 307	Design of Marine Vehicles	3	3
NAME 353	Resistance and Propulsion of Ships	3	3
<b>Optional Courses (any one **)</b>			
NAME 315	Port and Harbor Engineering	3	3
NAME 321	Finite Element Method for Ship Structure	3	3
NAME 389	Marine Production and Planning	3	3
<b>Sessional Courses</b>			
NAME 300	Ship Design Project and Presentation	3	1.5
NAME 302	Ship Structure Sessional	1.5	0.75
NAME 308	Ship Design Studio IV	3	1.5
NAME 354	Resistance and Propulsion of Ships Sessional	3	1.5
<b>Total (5T+4S)</b>		<b>25.5</b>	<b>20.25</b>

**LEVEL- 3, TERM- II**

Course Code	Course Name	Contact hours	Credit hours
<b>Theoretical Courses</b>			
Math 351	Fourier Analysis, Harmonic Function and Complex Variable	3	3
NAME 305	Shipbuilding Technology	3	3
NAME 359	Marine Engineering 1	3	3
NAME 369	Heat Transfer	3	3
<b>Optional courses (any one**)</b>			
NAME 357	Design of Special Ships	3	3
NAME 367	Economic and Social Aspects of Marine Transportation System	3	3
NAME 373	Computational Fluid Dynamics (CFD)	3	3
<b>Sessional Courses</b>			
NAME 300	Ship Design Project and Presentation	3	1.5
NAME 360	Marine Engineering Sessional-1	3	1.5
NAME 374	Numerical Analysis Sessional	1.5	0.75
<b>Training course / Internship*</b>			
NAME 350	Shipyards Practice/ Industrial Training (4 Weeks)	4 weeks	1.5
<b>Total (5T+3S + Training course)</b>		<b>22.5 + 4 weeks</b>	<b>20.25</b>

\* 04 Weeks Industrial / Shipyards Training course

**LEVEL- 4, TERM- I**

Course Code	Course Name	Contact hours	Credit hours
<b>Theoretical Courses</b>			
NAME 403	Dynamics of Marine Vehicles	3	3
NAME 409	Marine Engineering II	3	3
NAME 479	Engineering Management	3	3
<b>Optional courses (any two**)</b>			
NAME 425	Shipbuilding Practice in Bangladesh	3	3
NAME 431	Ship Hull Vibration	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 481	Optimization Method in Ship Design	3	3
<b>Sessional Courses</b>			
NAME 400	Project and Thesis	6	3
NAME 426	Computer Aided Design (CAD)-II	3	1.5
NAME 430	Computer Programming in Ship Design	3	1.5
<b>Total (5T+3S)</b>		<b>27</b>	<b>18 + 3 = 21</b>

**LEVEL- 4, TERM- II**

Course Code	Course Name	Contact hours	Credit hours
<b>Theoretical Courses</b>			
NAME 457	Ship Economics and Management	3	3
NAME 459	Ship Hull Maintenance and Repair	3	3
NAME 465	Navigation and Maritime Regulations	3	3
<b>Optional courses (any two**)</b>			
NAME 447	Marine Pollution and Prevention	3	3
NAME 453	Power and Propulsion System	3	3
NAME 463	Ship Performance		
NAME 477	Control Engineering	3	3
NAME 489	Introduction to Offshore Structure	3	3
NAME 499	Shipyards Management	3	3
<b>Sessional Courses</b>			
NAME 400	Project and Thesis	6	3
NAME 460	Marine Engineering Sessional	3	1.5
<b>Total (5T+2S)</b>		<b>24.0</b>	<b>19.5</b>

# DEPT OF INDUSTRIAL AND PRODUCTION ENGINEERING

Total Credit Hours: 160

## Level 1, Term I

Course Code	Course Name	Contact Hours	Credit Hours
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
<b>Total Theoretical</b>		<b>15.00</b>	<b>15.00</b>
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
<b>Total Sessional:</b>		<b>12.00</b>	<b>6.00</b>
<b>Grand Term Total:</b>		<b>27.00</b>	<b>21.00</b>

## Level 1, Term II

Course Code	Course Name	Contact Hours	Credit Hours
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
<b>Total Theoretical</b>		<b>16.00</b>	<b>16.00</b>
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
<b>Total Sessional:</b>		<b>9.00</b>	<b>4.50</b>
<b>Grand Term Total:</b>		<b>25.00</b>	<b>20.50</b>

## Level 2, Term I

Course Code	Course Name	Contact Hours	Credit Hours
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
<b>Total Theoretical</b>		<b>15.00</b>	<b>15.00</b>
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
<b>Total Sessional:</b>		<b>10.50</b>	<b>5.25</b>
<b>Grand Term Total:</b>		<b>25.50</b>	<b>20.25</b>

## Level 2, Term II

Course Code	Course Name	Contact Hours	Credit Hours
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
<b>Total Theoretical</b>		<b>16.00</b>	<b>16.00</b>
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
<b>Total Sessional:</b>		<b>4.50</b>	<b>2.25</b>
<b>Grand Term Total:</b>		<b>20.50</b>	<b>18.25</b>

## Level 3, Term I

Course Code	Course Title	Contract Hour	Credit Hour
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
<b>Total Theoretical:</b>		<b>16.00</b>	<b>16.00</b>
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
<b>Total Sessional:</b>		<b>9.00</b>	<b>4.50</b>
<b>Grand Term Total:</b>		<b>25.00</b>	<b>20.50</b>

## Level 3, Term II

Course Code	Course Title	Contract Hour	Credit Hour
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
<b>Total Theoretical:</b>		<b>15.00</b>	<b>15.00</b>
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
<b>Total Sessional:</b>		<b>7.50</b>	<b>5.75</b>
<b>Grand Term Total:</b>		<b>22.50</b>	<b>20.75</b>

**Level**

<b>Level 4, Term I</b>			
<b>Course Code</b>	<b>Course Title</b>	<b>Contract Hour</b>	<b>Credit Hour</b>
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
<b>Total Theoretical :</b>		<b>15.00</b>	<b>15.00</b>
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
<b>Total Sessional :</b>		<b>9.00</b>	<b>4.50</b>
<b>Grand Term Total:</b>		<b>24.00</b>	<b>19.50</b>

**Level**

<b>Level 4, Term II</b>			
<b>Course No</b>	<b>Course Title</b>	<b>Contract Hour</b>	<b>Credit Hour</b>
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
<b>Total Theoretical :</b>		<b>13.00</b>	<b>13.00</b>
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
<b>Total Sessional :</b>		<b>13.50</b>	<b>6.25</b>
<b>Grand Term Total:</b>		<b>26.50</b>	<b>19.25</b>

**FACULTY OF SCIENCE AND ENGINEERING**

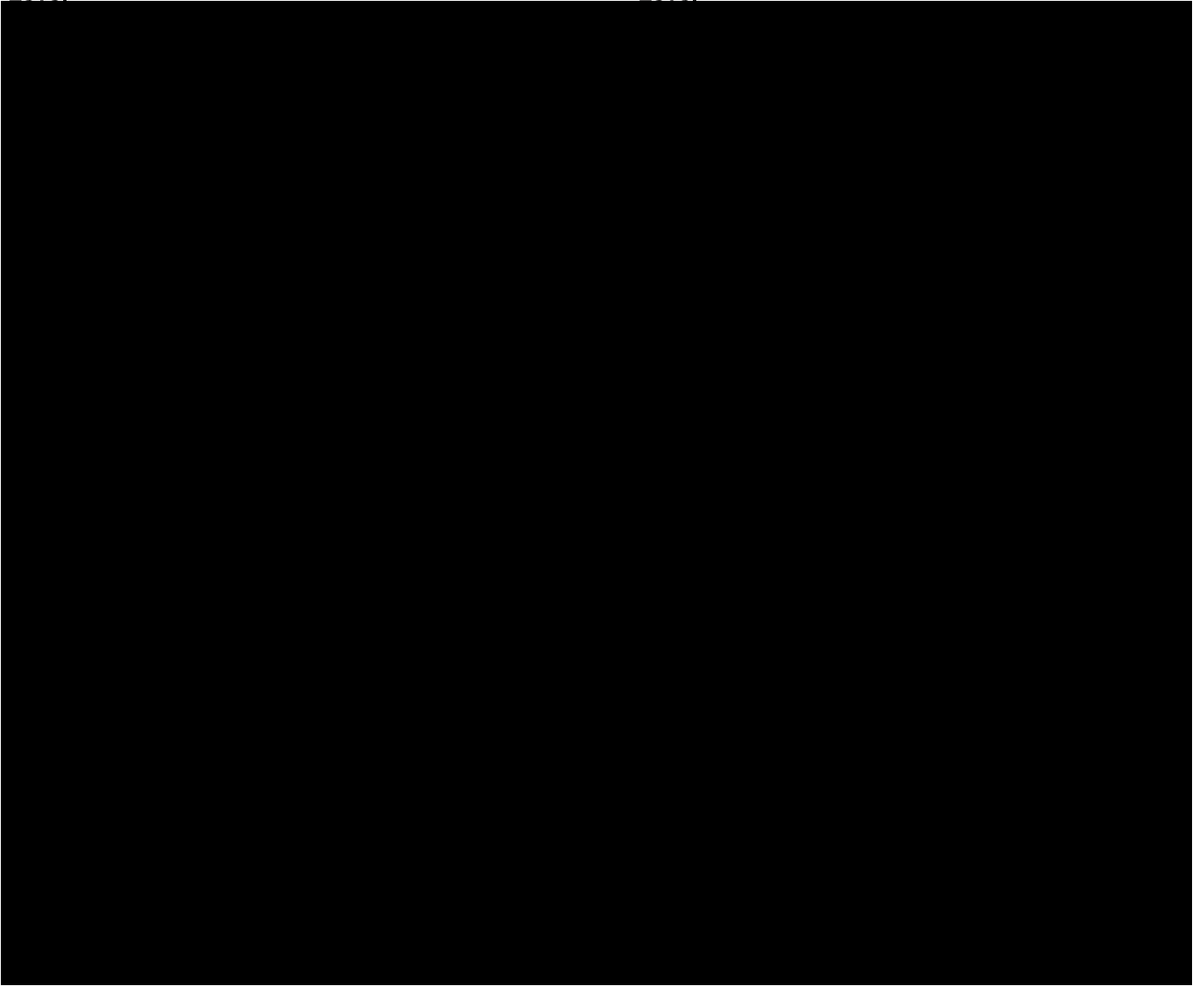
**DEPT OF BIOMEDICAL ENGINEERING**

Total Credit Hours: 160

19.5

Level

Level



**DEPT OF NUCLEAR SCIENCE AND ENGINEERING (NSE)**

Total Credit Hours: 157.75

**Level**

Course Code	Course Name	Contact Hour	Credit Hour
NSE 325	Fluid Mechanics and Machinery	3	3.0
NSE 329	Reactor Operation and Safety	3	3.0
NSE 331	Nuclear Chemical Engineering and Corrosion	3	3.0
NSE 357	Nuclear Security and Safeguard Engineering	3	3.0
NSE 373	Measurement and Quality Control	3	3.0
NSE 326	Fluid Mechanics and Machinery Sessional	3/2	0.75
NSE 332	Nuclear Chemical Engineering and Corrosion Sessional	3/2	0.75
NSE 374	Project Design	3	1.5
NSE 310	Nuclear Related Training	4 Weeks	1.0
<b>Total:</b>		<b>21.0+4 Weeks</b>	<b>19</b>

**- 3, Term - II**

**Level**

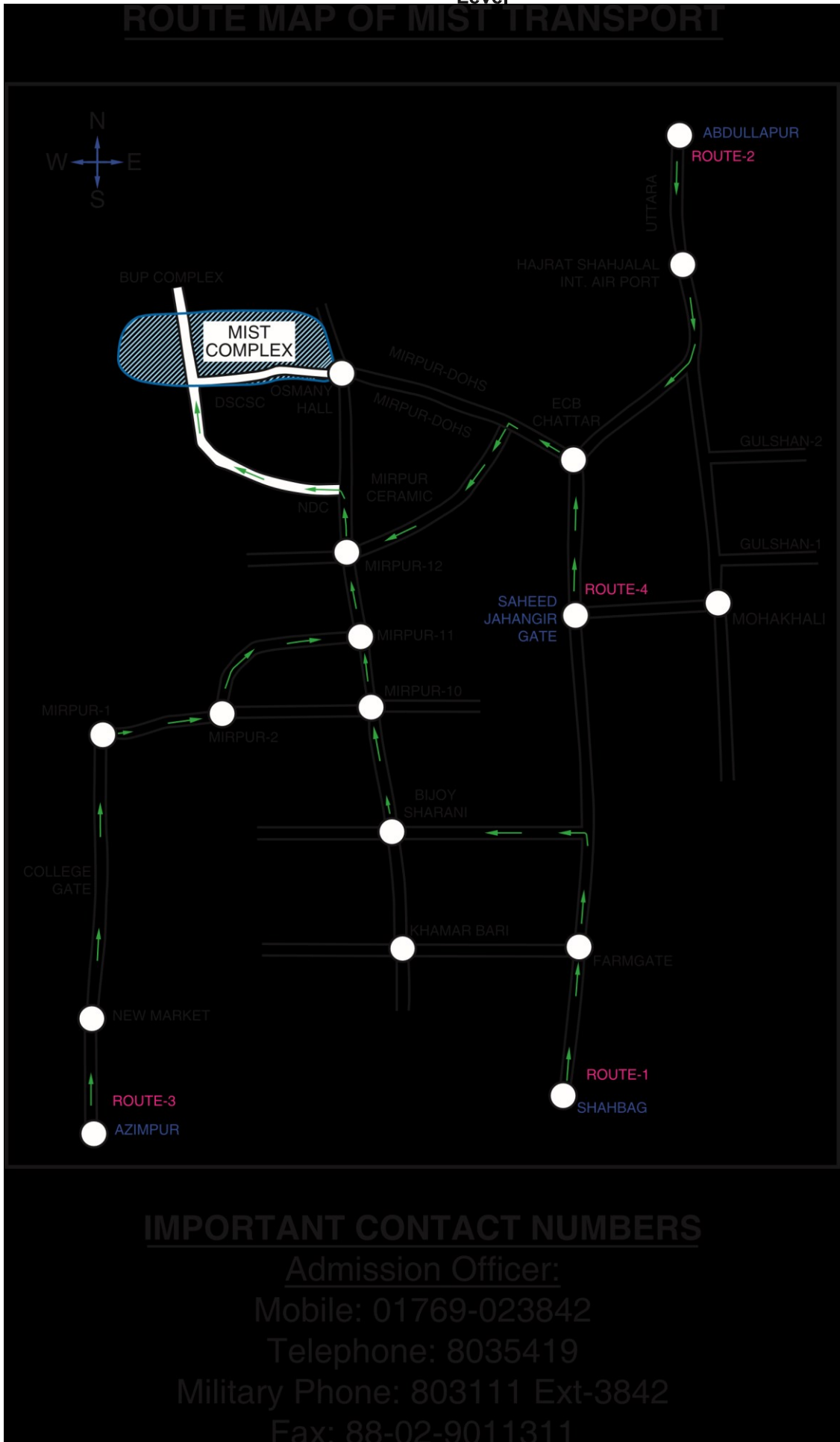


## CONCLUSION

Military Institute of Science and Technology (MIST) is dedicated with a progressive and innovative outlook to pursue excelling technical education of the modern age. In the meantime It has been established as prestigious academic institute for studies in different fields of engineering and technology for military personnel and civil officials/ students from home and abroad at undergraduate and post graduate level including M.Phil and Ph.D. MIST has provisions for advisory, research and consultancy service including supervisions, material testing and to enter into suitable agreement with any persons/ 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, while quality education is 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 its goal to grow into a 'Centre of Excellence' and assume a prestigious position in the educational arena of our country.

Level

Level



# FUTURE PLAN OF MIST



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