GOVERNMENT COLLEGE OF TECHNOLOGY HYDERABAD

PROSPECTUS

BACHELOR OF SCIENCE (BSc) ENGINEERING TECHNOLOGY
REGULAR MORNING PROGRAMS

“SESSION 2022-23”

22 - BATCH

AFFILIATED WITH

MEHRAN UNIVERSITY OF ENGINEERING & TECHNOLOGY, JAMSHORO-76062, SINDH, PAKISTAN

DISCLAIMER

The information in this prospectus is correct at the time of publishing. The College reserves the right to add or remove courses and to make changes in Syllabi, Courses options, and Modules, Fees structure,e etc. at any stage without notice.

VISION

Technical Education for employability and sustainable socio-economic development.

MISSION

To functionalize the institute with STEVTA regulations of institute management, trained faculty and industrial collaboration that ensures to produce entrepreneurial oriented human resources which serve national and international socio-economic environment with high skills and ethical standards.

OBJECTIVES

- To provide demand-driven industry-specific technical education.
- To assess the training needs in the context of the domestic and glomarkets.
- To develop linkages with the industry through IMC, training, and assessment for the quality of education.
- To organize opportunities for the continuous training of the faculty and staff of the institutes.
- To organize and conduct seminars and workshops in order to provide the updated knowledge to the trainees in their respective fields.
- To focus on the character building of students as to play vital role in the development of society.
- To motivate the students with desires to learn and give professional guidance based on their potential.

PROGRAM LEARNING OUTCOMES (PLOs)
FOR BSc ENGINEERING TECHNOLOGY PROGRAMS

Introduction

The twelve graduate attributes provided by the NTC as per Program Accreditation Policy and Procedures Manual (May 2017) have been adopted as the PLOs for its Bachelor of Science (BSc) in Engineering Technology Programs in GCT Hyderabad. It is ensured that these PLOs are achieved by respective CLOs of Engineering Technology curriculum as assessed through both direct and indirect methods.

List of PLOs

The twelve PLOs for Undergraduate (BSc) Engineering Technology Program are:

1. **Engineering Technology Knowledge (SA1):** An ability to apply knowledge of mathematics, natural science, Engineering Technology fundamentals and Engineering Technology specialization to defined and applied Engineering Technology procedures, processes, systems or methodologies.
2. **Problem Analysis (SA2):** An ability to Identify, formulate, research literature and analyze broadly-defined Engineering Technology problems reaching substantiated conclusions using analytical tools appropriate to the discipline or area of specialization.
3. **Design/Development of Solutions (SA3):** An ability to design solutions for broadly- defined Engineering Technology problems and contribute to the design of systems, components or processes to meet specified needs with appropriate consideration for public health and safety, cultural, societal, and environmental considerations.
4. **Investigation (SA4):** An ability to conduct investigations of broadly-defined problems; locate, search and select relevant data from codes, data bases and literature, design and conduct experiments to provide valid conclusions.
5. **Modern Tool Usage (SA5):** An ability to Select and apply appropriate techniques, resources, and modern technology and IT tools, including prediction and modelling, to broadly-defined Engineering Technology problems, with an understanding of the limitations.
6. **The Engineering Technologist and Society (SA6):** An ability to demonstrate understanding of the societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to Engineering Technology practice and solutions to broadly defined Engineering Technology problems.
7. **Environment and Sustainability (SA7):** An ability to understand and evaluate the sustainability and impact of Engineering Technology work in the solution of broadly defined Engineering Technology problems in societal and environmental contexts.
8. **Ethics (SA8):** Understand and commit to professional ethics and responsibilities and norms of Engineering Technology practice
9. **Individual and Team Work (SA9):** An ability to Function effectively as an individual, and as a member or leader in diverse teams.
10. **Communication (SA10):** An ability to communicate effectively on broadly defined Engineering Technology activities with the Engineering Technologist community and with society at large, by being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.
11. **Project Management (SA11):** An ability to demonstrate knowledge and understanding of Engineering Technology management principles and apply these to one's own work, as a member or leader in a team and to manage projects in multidisciplinary environments.
12. **Lifelong Learning (SA12):** An ability to recognize the need for, and have the ability to engage in independent and life-long learning in specialist Engineering Technologies.

ACADEMIC CALENDAR

FOR BSc ENGINEERING TECHNOLOGY DEGREE PROGRAM SESSION 2022-23 (BATCH-22)

<table>
<tr><th colspan="5">Academic and Examination Schedule</th></tr>
<tr><th colspan="5">Duration of Academic Session (Year)</th></tr>
<tr><td>Teaching</td><td>16 weeks</td><td>Total Duration of Academic session</td><td>21 × 2 = 42 weeks</td><td rowspan="2">* Minimum attendance requirement to be eligible to appear in semester examination is 75%.</td></tr>
<tr><td>Mid Term Exam</td><td>01 week</td><td>Summer Vacation</td><td>08 weeks</td><td rowspan="2">* Minimum No. of lectures during the semester in a subject of 3CHs shall be 48.</td></tr>
<tr><td>Exam. Preparation</td><td>01 week</td><td>Winter Vacation</td><td>02 weeks</td><td rowspan="4">* Each credit hour (Theory) is of one contact hour.

* Each credit hour (Practical) is of 03 contact hours.</td></tr>
<tr><td>Examinations</td><td>02 weeks</td><td colspan="2">----------</td></tr>
<tr><td>Semester Break</td><td>01 week</td><td colspan="2">----------</td></tr>
<tr><td>Total</td><td>21 weeks</td><td>Total</td><td>52 weeks</td></tr>
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TENTATIVE CALENDAR OF THE SESSION: 2022-23 (BATCH-22)

Sr. No.	Activities	Proposed Date
01	Commencement of Classes (1st Semester)	03.04.2023
02	Mid Term Exam.	29.05.2023 to 03.06.2023
03	Summer Vacation	04.06.2023 to 31.07.2023
04	Suspension of Classes	16.09.2023
05	Examination Preparation	17.09.2023 to 30.09.2023
06	Conduct of Final Examination	02.10.2023 to 14.10.2023
07	Commencement of Classes (2nd Semester)	16.10.2023
08	Winter Vacation	22.12.2023 to 31.12.2023

1. INTRODUCTION

1.1 Technical Education in Pakistan

The significance of Technicians and Technical Education for economy of a country is prominent due to the Industrial and Computer Revolution of the Century, the revolutions which have changed the world face. The growth, production and proper function of an Industry largely depends on the pyramid of productive work force i.e., Engineer, Associate Engineer (Technician) and skilled worker. An Associate Engineer occupies the most important and middle position in the pyramid of productive work force. Through the skilled worker an Associate Engineer shapes up the ideas of Engineer into reality. The main sources of production of Associate Engineers are College of Technologies, Polytechnics and other Technical Institutes.

Soon after the independence of Pakistan in 1947, it was discovered that there was an acute shortage of Technical Institutes in the country. In view of this the Government constituted "Council of Technical Education for Pakistan" in June 1948. The Council recommended a scheme of Polytechnics, Mono-technics and Technical Institutes with a post-matric three – year Diploma of Associate Engineer (DAE) course in September, 1950.

To accelerate the Development of Technical Education, the first Directorate of Technical Education was set up at Lahore in 1958. The Commission on National education (December, 1950) recognized the importance of Technical Education for economic progress and defined its place in the system of Education. By the end of 1962 it became clear that only one Directorate of Technical Education for the whole country of Pakistan is inadequate. Therefore, another Directorate of Technical Education was established at Karachi in Feb, 1964.

In the Education Policy (1972 – 80) Government of Pakistan decided to introduce Bachelor of Technology B-Tech (Pass) and B-Tech (Hons) degree course with the help and collaboration of Engineering Universities at the Technical Colleges after high demand of Associate Engineers to provide facilities of higher education in order to improve their skill and prospects for promotion. Keeping the international standards of undergraduate courses and to capture international job market Higher Education Commission Pakistan recommended to switch from split B.Tech (Pass) and B.Tech (Hons) program to a B.Tech Four year program in the year 2005 and formulated a committee for development of such curriculum. The curriculum was revised in year 2010 and made mandatory for implementation w-e-f year 2015.

After the constitution of National Technology Council Pakistan under the auspices of Higher Education Commission (HEC) Pakistan, the 4-Year B.Tech program was discontinued from Fall of 2018 and new BSc Engineering Technology program was introduced by NTC having the mandate to accredit the programs in the country.

1.2 BSc Engineering Technology Program

The BSc Engineering technology programs have been designed to meet certain defined standards according to international trends. The technology education curriculum is aligned with guidelines of HEC and ensures Continual Quality Improvement culture, in the spirit of Outcome Based Education (OBE) system in conformity with the Sydney Accord.

1.3 Government College of Technology, Hyderabad

The present Government College of Technology at Hyderabad was first established as a Technical Institute offering only one – year/two-year courses in different technical disciplines. The Technical Institute was shifted to its new and present building at National Highway near Wahdat Colony in 1959. As a result of Education Reforms in 1962, the Technical Institute was converted into a polytechnic Institute launching a three – Year post-matric Diploma Course of Associate Engineer. In the education Policy of 1972. The Government of Pakistan decided to introduce Bachelor Degree

courses in Civil, Electrical & Mechanical Technologies. Therefore, in March, 1974 Government sanctioned Bachelor of Technology (Pass) and Bachelor of Technology (Hons) Programs at degree level for this Institute and the institute was upgraded from a polytechnic Institute to a College of Technology. In line with the policy of HEC the college is introducing B.Tech Four year program in Civil, Electrical and Mechanical Technologies from academic year 2014-15, 2015-Batch.

1.4 College Building and Facilities

The College building is located on the National Highway spreading over 22 acres of land. It is the second biggest technical institute of Sindh province. The college building is divided into two portions, the college and the staff residence colony. The college building consists of three main blocks and sports complex.

a) The main block (Administration block, Library, Civil Drawing Hall and Prayer Place)
b) The academic block (Auditorium, Classrooms, Drawing halls and Laboratories of Auto & Diesel, Civil, Computer Information Technology centre, Electrical, Electronics, Chemical and Mechanical Department), and
c) The Degree Program block (B-Tech block).
d) The multipurpose Sports Complex with the facility of state-of-the-art Gymnasium and indoor games.

1.4.1 Workshops & Laboratories

The College has sufficient number of spacious workshops and laboratories adequately equipped with necessary machinery and instruments to provide an excellent opportunity for training of students according to the detailed curriculum in each engineering technology.

1.4.2 Library

The College Library has more than 15,000 books on all technical subjects, it also subscribes technical journals, magazines and daily newspapers. The collection of books is updated from time to time to cater to the needs of students. The library is frequently used by the students and teachers and remains open from 8.00 a.m. to 8.00 p.m. round the year.

1.4.3 Transport

A bus and coaster are available for providing transport facility to the students.

1.4.4 Audio Video Hall

Air-Conditioned halls furnished with state-of-the-art Audio Video systems have been established to facilitate students.

1.4.5 Standby Generator

For providing power backup during load shedding, a standby generator has been provided by the college.

1.4.6 Information Technology Centre

An Information Technology Centre has been established. The modern air-conditioned laboratories of computer cell are fully equipped in order to facilitate the students of Diploma of Associate Engineer (DAE) and Bachelor of Technology (B-Tech) as well.

1.4.7 Prayer Hall

A prayer hall has been established with necessary accessories for the facility of staff and students to offer prayers during college hours.

1.4.8 Drinking Water

Every department is provided with electric water dispensers, and there is a heavy-duty electric water cooler in administration block which provides safe drinking water.

2. COLLEGE ADMINISTRATIVE STAFF

1.	Prof. Abdul Salam Mahesar M.Com	Principal
2.	Engr. Muhammad Akram Samo B.E (Electrical), M.E (IT), M.Sc. (Maths)	Vice Principal (Morning Shift)
3.	Engr. Hazoor Bux Bhatti B.E (Electrical)	Vice Principal (DSP)
4.	Engr. Muhammad Memon B.E (Mech.), PGD (Environmental Engineering), PGD (Computer Science)	In Charge Degree Program
5.	Engr. Muhammad Naeem Daudpoto B.E (Electrical), MBA	Industrial Coordinator
6.	Mr. Muhammad Iqbal Memon BSc (Biology)	Registrar

2.1 Faculty of Related Studies Department

1.	Mr. Muhammad Bux Chandio M.A (Islamic Culture)	Associate Professor
2.	Mr. Ghulam Qadir Bhand M.A (Economics)	Assistant Professor
3.	Engr. Muhammad Sajid Shaikh B.E (Chemical)	Lecturer
4.	Engr. Syed Hamid Raza Shah B.E (P & G)	Lecturer
5.	Engr. Shahzad Daheri B.E (P & G), PGD (Petroleum)	Lecturer

3. DEPARTMENT OF CIVIL ENGINEERING TECHNOLOGY

Civil Technology deals with the process of directing and controlling natural resources for the use & benefit of mankind through construction of various structures of buildings. It applies practices to the Construction, Operation & Maintenance of Structures, such as buildings, Roads, Bridges, Railways, Factories, Airports, Irrigation schemes, docks & harbours, Water supply and Sewerage disposal etc.

The department of Civil Technology offers many courses relevant to the vast field of Civil Technology including Surveying, soil mechanics, concrete technology, hydraulics, irrigation system, public health engineering and other related subjects.

3. 1 Vision of the Department

To impart knowledge and skills in civil engineering technology to produce graduates of high caliber, professional competence, technical skills and ethical values to serve the society and nation.

3.2 Mission of the Program

BSc Civil Engineering Technology program aims at providing state of the art education to produce highly skilled professionals for significant contribution in the socio-economic development locally and globally

3.3 Program Educational Objectives (PEOs)

The Program Educational Objectives of BSc Civil Engineering Technology Program ensure that after '4 – Years' of graduation the professionals should have:

PEO – 1: A thorough grip on use of best practices related to Civil Engineering Technology in construction, operation and management of various organizations.

PEO – 2: Expertise to play significant role in sustainable development of society at national and global levels.

PEO – 3: Passion for professional advancement and innovation through lifelong learning,

3.4 Faculty of Civil Engineering Technology Department

1.	Engr. Rashid Hussain Memon B.E (Civil)	Chairman / Associate Professor
2.	Engr. Muhammad Zahid Memon B.E (Civil), PGD (Civil), M.E (I.T)	Associate Professor
3.	Engr. Abdul Waheed Shaikh B.E (Civil), M.E (Civil)	Assistant Professor
4.	Engr. Qamar ul Islam B.E (Civil)	Assistant Professor

3.5 SCHEME OF STUDIES BSc ENGINEERING TECHNOLOGY (CIVIL)

1st Year (1st Semester)		
Course Code	**Course Title**	**Credit Hours**
CH-112	Islamic Studies / Ethics	2+0
CS-113	Linear Algebra and Calculus	3+0
CS-123	Introduction to Computer Fundamentals	1+2
CT-113	Civil Engineering Drawing	1+2
CT-124	Surveying & Levelling	2+2
CT-133	Applied Mechanics	2+1
	Total (18)	**11+7**

1st Year (2nd Semester)		
Course Code	**Course Title**	**Credit Hours**
CH-123	Communication Skills	3+0
CH-132	Pakistan Studies	2+0
CS-133	Differential Equations	3+0
CT-144	Materials and Methods of Building Construction	2+2
CT-154	Concrete Technology	2+2
	Total (16)	**12+4**

2nd Year (3rd Semester)		
Course Code	**Course Title**	**Credit Hours**
CM-212	Occupational Health & safety Management	2+0
CT-212	Introduction to Architecture and Town Planning	2+0
CT-223	Quantity Surveying and Contract Documents	1+2
CT-233	Soil Mechanics	2+1
CT-243	Fluid Mechanics	2+1
CT-254	Mechanics of Solids	2+2
	Total (17)	**11+6**

2nd Year (4th Semester)		
Course Code	**Course Title**	**Credit Hours**
CH-213	Technical Report Writing	3+0
CS-213	Probability and Statistics	3+0
CT-263	Transportation Engineering	2+1
CT-273	Water Supply & Waste Water Management	2+1
CT-283	Hydrology	2+1
CT-292	Theory of Structures	2+0
	Total (17)	**14+3**

3rd Year (5th Semester)		
Course Code	**Course Title**	**Credit Hours**
CM-313	Environmental Engineering & Management	2+1
CM-323	Project Management	3+0
CT-313	Reinforced Concrete Structures	2+1
CT-323	Construction and Hydraulic Machinery	2+1
CT-333	Computer Aided Building Modelling and Design	1+2
CT-343	Foundation Engineering	2+1
	Total (18)	**12+6**

3rd Year (6th Semester)		
Course Code	**Course Title**	**Credit Hours**
CT-353	Pre-stressed & Precast Concrete	2+1
CT-363	Highway Engineering	2+1
CT-373	Geology & Earthquake Engineering	2+1
CT-383	Irrigation and Hydraulic Structures	2+1
CT-393	Steel Structures	2+1
CT-3103	Project	0+3
	Total (18)	**10+8**

3rd Year (6th Semester) -Summer Project Work		
Course Code	**Course Title**	**Credit Hours**
CT-3113	Project (Continue)	0+3
	Total (3)	**0+3**

4th Year (7th Semester)		
Course Code	**Course Title**	**Credit Hours**
CT4116	16 Weeks Supervised Industrial / Field Training (8x5 = 40 hrs / Week)	0+16
	Total (16)	**0+16**

4th Year (8th Semester)		
Course Code	**Course Title**	**Credit Hours**
CT4216	16 Weeks Supervised Industrial / Field Training (8x5=40 hrs / Week)	0+16
	Total (16)	**0+16**

4. DEPARTMENT OF ELECTRICAL ENGINEERING TECHNOLOGY

Electricity plays vital role in the country in improving the living conditions of the people and powering many different Industries. The field of Electrical Technology is concerned with Generation, Transmission, Distribution, Control and Utilization of electrical energy. There are lot of job opportunities for degree holders who are considerable in both, public as well as private sector organizations and industries.

The teaching faculty is highly educated. The subjects are taught related to the electrical technology including electrical measurements, electrical circuits, electrical machines, advance electronics and other subjects.

4.1 Vision of the Department

To provide quality technical education to prepare globally competent and ethically strong Electrical Engineering Technologists with power of innovation to contribute the knowledge for the betterment of the society.

4.2 Mission of the Program

The mission of Department of Electrical Engineering Technology is to provide quality education emphasizing on industrial application of engineering knowledge with technical skills to produce graduates who will become responsible and contributing leaders in industry.

4.3 Program Educational Objectives (PEOs)

The Program Educational Objectives of BSc Electrical Engineering Technology Program ensure that after '4 – Years' of graduation the professionals should be able to:

PEO – 1: Formulate and resolve the engineering technology problems innovatively.
PEO – 2: Perform effectively as an individual and as a team member in professional environment.
PEO – 3: Pursue professional growth through moral and continue learning attitude.

4.4 Faculty of Electrical Department

1.	**Engr. Lutuf Ali Khaskheli** B.E (Electrical), M.E (Electrical Power System)	Chairman/Associate Professor
2.	**Engr. Muhammad Akram Samo** B.E (Electrical), M.E (IT), M.Sc. (Maths)	Associate Professor
3.	**Engr. Hazoor Bux Bhatti** B.E (Electrical)	Associate Professor
4.	**Engr. Muhammad Naeem Daudpota** B.E (Electrical), MBA	Associate Professor
5.	**Mr. Mahainder Lal Nagdev** M.Sc. (Electronics), MBA	Associate Professor
6.	**Engr. Syed Suhail Ahmed Shah** B.E (Electrical)	Associate Professor
7.	**Engr. Inayatullah Memon** B.E (Electrical)	Assistant Professor
8.	**Engr. Khalid Nadeem Soomro** B.E (Electrical)	Assistant Professor
9.	**Engr. Altaf Ahmed Khan** B.E (Electronics), M.E (Telecom)	Assistant Professor
9.	**Engr. Tanveer Hassan Memon** B.E (Electrical)	Assistant Professor

4.5 SCHEME OF STUDIES BSc ENGINEERING TECHNOLOGY (ELECTRICAL)

1st Year (1st Semester)		
Course Code	**Course Title**	**Credit Hours**
EH-112	Islamic Studies / Ethics	2+0
ES-113	Linear Algebra and Calculus	3+0
ES-123	Applied Physics	2+1
ES-133	Introduction to Computer Fundamentals	1+2
ET-113	Basic Mechanical Technology	2+1
ET-123	Engineering Drawing	1+2
	Total (17)	**11+6**

1st Year (2nd Semester)		
Course Code	**Course Title**	**Credit Hours**
EH-122	Pakistan Studies	2+0
EH-133	Communication Skills	3+0
ES-143	Differential Equations	3+0
ET-134	Electronic Devices & Circuits	2+2
ET-143	Linear Circuits Analysis	2+1
ET-152	Electro-Magnetic Fields	2+0
	Total (17)	**14+3**

2nd Year (3rd Semester)		
Course Code	**Course Title**	**Credit Hours**
ET-214	Digital Electronics	2+2
ET-222	Power Generation Systems	2+0
ET-234	Electrical Instruments and Measurements	2+2
ET-243	Electrical Network Analysis	2+1
ET-254	Electrical Machines - I	2+2
	Total (17)	**10+7**

2nd Year (4th Semester)		
Course Code	**Course Title**	**Credit Hours**
ES-213	Probability and Statistics	3+0
ET-263	Micro-Processor Theory and Interfacing	2+1
ET-273	Electrical Machines - II	2+1
ET-284	Communication Technology	2+2
ET-292	Electrical Power Transmission	2+0
ET-2103	Electrical Power Distribution and Utilization	2+1
	Total (18)	**13+5**

3rd Year (5th Semester)		
Course Code	**Course Title**	**Credit Hours**
EH-313	Technical Report Writing	3+0
EM-312	Total Quality Management	2+0
ET-314	Data and Computer Communication	2+2
ET-324	Power Electronics	2+2
ET-333	Control Technology	2+1
ET-342	Power System Analysis	2+0
	Total (18)	**13+5**
3rd Year (6th Semester)		

Course Code	Course Title	Credit Hours
EM-323	Project Management	3+0
ET-354	Industrial Drives and PLC	2+2
ET-363	Switchgear and Protective Devices	2+1
ET-373	High Voltage Technology	2+1
ET-383	Project	0+3
	Total (16)	**9+7**

3rd Year (6th Semester) Summer Project Work		
Course Code	**Course Title**	**Credit Hours**
ET-393	Project (Continue)	0+3
	Total (3)	**0+3**

4th Year (7th Semester)		
Course Code	**Course Title**	**Credit Hours**
ET-4116	16 Weeks Supervised Industrial / Field Training (8x5=40Hrs / Week)	0+16
	Total (16)	**0+16**

4th Year (8th Semester)		
Course Code	**Course Title**	**Credit Hours**
ET-4216	16 Weeks Supervised Industrial / Field Training (8x5=40Hrs / Week)	0+16
	Total (16)	**0+16**

5. DEPARTMENT OF MECHANICAL ENGINEERING TECHNOLOGY

Mechanical technology is a professional technical discipline that involves the application of principles of maintenance of mechanical systems. It requires a solid understanding of key concepts including mechanics, kinematics, thermodynamics, and energy. Practitioners of mechanical technology use these principles and others in the design and analysis of automobiles, aircraft, heating and cooling systems, buildings, bridges, industrial equipment, machinery and more.
It offers several major subjects of study. This is to ensure a minimum level of competence among graduates and to inspire confidence in the technical profession as a whole.

5.1 Vision of the Department

To produce highly qualified professionals who can understand complicated designs and to implement them to physical positions on the ground.

5.2 Mission of the Program

1. To produce experienced and knowledgeable technologists which can understand the information given to them in the design and layout of any project or industry and construct it as per design and to achieve the sustainable socio-economic development through enterprises.

2. To prepare skilled professionals for a productive career in a competitive and technologically based society and advance the mechanical technology principles and applications to serve better.

5.3 Program Educational Objectives (PEOs)

The Program Educational Objectives of BSc Mechanical Engineering Technology Program ensure that after '4 – Years' of graduation the professionals should be able to:

PEO – 1: Apply the concepts of basic technical knowledge and skills to solve industrial and technical problems in mechanical related technology.
PEO – 2: To meet the requirements of rapid changing/growing technologies in the world.
PEO – 3: To provide experienced and technical hands.

5.4 Faculty of Mechanical Department

1.	Engr. Abdullah Laghari B.E (Mech.), M.E (Environmental Engineering)	Chairman /Associate Professor
2.	Engr. Muhammad Memon B.E (Mech.), PGD (Environmental Engineering), PGD (Computer Science)	Associate Professor / In Charge Degree Program
3.	Engr. Mirza Irshad Ali Baig B.E (Mech.)	Associate Professor
4.	Engr. Roshan Ali Gadahi B.E. (Mech.), PGD (Environmental Engineering)	Assistant Professor
5.	Engr. Hajjan Gaho B.E. (Mech.)	Assistant Professor
7.	Engr. Kishor Kumar B.E (Mech.)	Assistant Professor
8.	Engr. Syed Muhammad Aftab Ali B.E. (Mech.), PGD (Manufacturing)	Lecturer

5.5 SCHEME OF STUDIES BSc ENGINEERING TECHNOLOGY (MECHANICAL)

1st Year (1st Semester)		
Course Code	**Course Title**	**Credit Hours**
MH-112	Islamic Studies/ Ethics	2 + 0
MS-113	Applied Physics	2 + 1
MS-123	Linear Algebra and Calculus	3 + 0
MS-133	Applied Chemistry	2 + 1
MS-143	Introduction to Computer Fundamentals	1 + 2
MT-113	Workshop Technology	1 + 2
	Total (17)	**11 + 6**

1st Year (2nd Semester)		
Course Code	**Course Title**	**Credit Hours**
MH-122	Pakistan Studies	2 + 0
MS-153	Differential Equations	3 + 0
MT-124	Technical Drawing and CAD-1	2 + 2
MT-134	Applied Thermodynamics - 1	2 + 2
MT-144	Basic Electrical & Electronics	2 + 2
	Total (17)	**11 + 6**

2nd Year (3rd Semester)		
Course Code	**Course Title**	**Credit Hours**
MH-213	Communication Skills	3 + 0
MT-213	CAD - II	0 + 3
MT-223	Engineering Statics	2 + 1
MT-233	Mechanics of Materials	2 + 1
MT-243	Applied Thermodynamics - II	2 + 1
	Total (15)	**9 + 6**

2nd Year (4th Semester)		
Course Code	**Course Title**	**Credit Hours**
MH-223	Technical Report Writing	3 + 0
MS-213	Probability and Statistics	3 + 0
MM-212	Total Quality Management	2 + 0
MT-253	Engineering Dynamics	2 + 1
MT-264	Fluid Mechanics	2 + 2
MT-273	Industrial Materials	2 + 1
	Total (18)	**14 + 4**

3rd Year (5th Semester)		
Course Code	**Course Title**	**Credit Hours**
MH-312	Engineering Economics	2 + 0
MT-313	Heat Transfer	2 + 1
MT-324	I C Engines	2 + 2
MT-333	Machine Design	2 + 1
MT-343	Manufacturing Processes	2 + 1
MT-353	Instrumentation and Control	2 + 1
	Total (18)	**12 + 6**

3rd Year (6th Semester)		
Course Code	**Course Title**	**Credit Hours**
MM-313	Project Management	3 + 0
MT-363	Mechanical Vibrations	2 + 1
MT-373	Refrigeration & Air Conditioning	2 + 1
MT-384	Material Handling and Safety	3 + 1
MT-393	Project	0 + 3
	Total (16)	**10 + 6**

3rd Year (6th Semester) Summer Project Work		
Course Code	**Course Title**	**Credit Hours**
MT-3103	Project (Continue)	0+3
	Total (3)	**0+3**

4th Year - 7th Semester		
Course Code	**Course Title**	**Credit Hours**
MT- 4116	16 Weeks Supervised Industrial / Field Training (8x5=40 hrs / Week)	0 + 16
	Total (16)	**0 + 16**

4th Year (8th Semester)		
Course Code	**Course Title**	**Credit Hours**
MT- 4216	16 Weeks Supervised Industrial / Field Training (8x5=40 hrs / Week)	0 + 16
	Total (16)	**0 + 16**

6. DISTRIBUTION OF SEATS

6.1 Category-wise Distribution of All Engineering Technology Seats

Sr. No.	Category	Percentage % of Total Seats	Total No. of Seats
01	**Open Merit** (Hyderabad and Mirpurkhas Divisions)	60% of 40 Seats	24 Seats
02	**All Sindh Basis** (Other Districts of Sindh except Hyderabad & Mirpurkhas Divisions)	20% of 40 Seats	08 Seats
03	**Reserved Seats**		
3.1	Real Sons/Daughters/Brothers/ Sisters of STEVTA Employees. (Civil/Public Servants/Retired/Deceased)	5% of 40 Seats	02 Seats
3.2	In-service Staff Members of Technical Education	5% of 40 Seats	02 Seats
3.3	Reciprocal Basis	2.5% of 40 Seats	01 Seat
3.4	Sons/Daughters of the Defence/ Armed forces Personnel	2.5% of 40 Seats	01 Seat
3.5	Extracurricular Activities	2.5% of 40 Seats	01 Seat
3.6	Transgender (She-male)/ Disable Persons	2.5% of 40 Seats	01 Seat
	Regular Seats 40		**40 Seats**
	Self-finance Seats 05		**45 Seats**

6.2 Self-finance Scheme

Five (5) seats of each Engineering Technology Program have been reserved for the candidates domiciled in Sindh Province under Self-finance Scheme.

6.3 Policy for Award of Seats

i. The left-over seats reserved for the category of the Open Merit would be awarded to the candidates of the All Sindh category and vice versa.

ii. The left-over seats reserved for the categories of Self Finance and Reserved Seats would be awarded to the candidates of Open Merit category in the first priority, and to the candidates of All Sindh category in the second priority.

7. ADMISSION ON RESERVED SEATS

7.1 Real Sons/Daughters/Brothers/Sisters of STEVTA Employees

Candidates applying on the reserved seats for Sons/Daughters/Brothers/Sisters of Employees are required to produce evidence certificate of their parents holding a minimum three-year service in STEVTA. The application must be forwarded to the Directorate (Academic & Training) STEVTA, Head Quarter (HQ) through respective Regional Directors, STEVTA. The Managing Director/Director (A&T) STEVTA, HQ is the final authority to allow admission on the reserved seats of employees. **First preference will be given to real sons/daughters.**

7.2 In-service staff members of Technical Education

In-service staff members of Technical Education will be allowed admission in first year BSc Engineering Technology Program on the following conditions:

a. Candidate will be required to submit study leave.
b. Candidate will be required to submit Departmental Permission (NOC) at the time of admission.

7.3 Seats on Reciprocal basis

The candidates from other provinces, seeking admission on reciprocal basis should send their applications through TEVTA of their respective province to STEVTA, HQ. Applications sent directly to the college shall not be entertained in any case.

7.4 Sons/Daughters of Defence Personnel

Candidates seeking admission on seats reserved for Armed Forces should apply through their respective Head Quarters to STEVTA, HQ. Applications sent directly to the college shall not be entertained in any case.

7.5 Seats for Extra Curricular Activities/Disable quota

Candidates seeking admission on the basis of Extra Curricular Activities, are required to submit documentary evidence of their skills and also specify field of extra curricular activities clearly in application form, they may be asked to appear for a test to justify their skills.

Seats for disables. Certificate of disability issued by the competent authority should be attached.

8. RULES AND PROCEDURES FOR ADMISSION

(i) Admissions to the First Year for BSc Engineering Technology in Civil, Electrical and Mechanical Programs are made according to the policies and rules, framed by the authorities of Mehran University of Engineering and Technology, Jamshoro from time to time. The rules mentioned in this prospectus are subject to revision by the competent authority of the University as and when deemed necessary and without any notice. The admission will be processed by Mehran University of Engineering and Technology, Jamshoro.

(ii) The candidates who apply for admission on the basis of fake certificates/documents (detected before or after their admission) shall be prosecuted under criminal law and their admission shall be canceled. Additionally, they may also be debarred for a period of three years for future admission and all payments made to the MUET, Jamshoro/GCT, Hyderabad shall be forfeited in favour of the GCT, Hyderabad.

8.1 Eligibility for Admission

(i) The candidates who have passed their Higher Secondary School Certificate (HSC Part-II)/Diploma of Associate Engineer (DAE)/equivalent in any of the disciplines mentioned against each program in annual examination 2022 or prior up to annual examination of 2019 with at least 60% aggregate marks **(Grace marks shall not be considered)** from any recognized Board of Intermediate and Secondary Education/Board of Technical Education in Pakistan or from foreign countries are eligible to apply for admission subject to provision of equivalence certificate.

(ii) The candidates who have passed the above examinations or equivalent before Annual Examination 2019 shall not be eligible for admission.

(iii) Those students, who were admitted to any other universities/institutes before applying for admission and were rusticated, debarred or their admissions were cancelled, shall not be considered for admission. Additionally, if the students withhold information regarding such a disciplinary action and they were granted admission; their admission will be cancelled immediately after ascertaining such facts. Those candidates who have been convicted involving moral turpitude shall also be refused admission. Since the admission form is a legal document, any wrong information provided therein or tampering it in any other way is illegal and may result in rejection of the form out rightly.

9. NAMES OF PROGRAM AND DISCIPLINE

1. **Bachelor of Science in Civil Engineering Technology**
   i. **DAE** in Civil, Construction Technology, Civil with any Specialization, Architecture, Environmental, Mining, and Land & Mine Surveying.
   ii. **HSC (Pre-Engineering)**

2. **Bachelor of Science in Electrical Engineering Technology**
   i. **DAE** in Electrical, Electronics, Automation, Avionics, Computer / Computer and Information Technology, Software, Instrumentations, Instrumentation & Process Control, Mechatronics, Precision Mechanical & Instrument, RADAR, RADIO, Telecommunication and Bio-Medical.
   ii. **HSC** (Pre-Engineering)

3. **Bachelor of Science in Mechanical Engineering Technology**
   i. **DAE** in Mechanical, Dies & Mould, Mechanical (Automobile & Diesel), Mechanical (Construction Machinery), Mechanical (Foundry & Pattern Making), Mechanical (Metallurgy & Welding), Mechanical with any Specialization, Mechatronics, Precision Mechanical & Instruments, Refrigeration & Air Conditioning, Vacuum, Aerospace, Auto & Diesel, Petroleum, Power, Textile, Garments, Chemical/Glass & Ceramic, Automation, and Bio-Medical.
   ii. **HSC** (Pre-Engineering)

9.1 Admission Form

Call for admissions is advertised on the University website **www.muet.edu.pk**. The candidates who intend to apply for admission must follow the guidelines mentioned on the Directorate of Admissions website **admissions.muet.edu.pk**.

The candidates are required to deposit the admission processing fee online or otherwise in any branch of Habib Bank Ltd, under **HBL CMD-A/C. No. 00427991903403**. The candidates have to submit one set of photocopies of all the required documents and paid copy of bank challan with Mehran University of Engineering and Technology, Jamshoro. The University authorities after receipt of application and admission processing fee will send admit slips to the candidates eligible for computer-based pre-admission test in their respective accounts on Online Admission Portal. The candidates have to print their admit cards and bring the same on the day of pre-admission test center along with original CNIC/B-Form. The appearance/passing in the pre-admission test does not mean the candidate is eligible for admission. The eligibility of candidates for admission is decided by the Admissions Office of the University after scrutinizing the documents provided by them. The eligibility criteria for admission are given here above in relevant clause. Since the admission form is a legal document, any wrong information provided therein or tampering it in any other way is illegal and may result in rejection of the form out rightly

9.2 Pre-Admission Test

In accordance with the policies adopted by the Federal as well as Provincial Governments, all the eligible candidates (including under reserved quota category) applying for admission are required to appear in the Pre-admission Test conducted by the University. Candidates having secured less than 40% score in the Pre-admission Test shall not be eligible for the admission.

The final merit list of the candidates is prepared by calculating their overall merit, based on the marks obtained in each of the following examinations, multiplying them with the respective weightage and adding the result to calculate the "Composite Percentage Number" (CPN*) as described below:

Sr. No.	Percentage of Marks in	Multiplying Weightage
A.	Secondary School Certificate - Matriculation:	**0.10**
B.	DAE/HSC: (with adjusted marks**)	**0.30**
C.	Pre-admission Test Score:	**0.60**

***** **For example:** If a candidate has secured 70% marks in SSC, 60% marks in DAE/HSC and 50% marks in Pre-admission Test; his/her CPN would be: **(70×0.1) + (60×0.3) + (50×0.6) = 7 + 18 + 30 = 55.0000**

** Adjusted marks means marks secured in DAE/HSC examination plus additional marks if any, as defined in the relevant Clause, minus marks to be deducted as defined in the relevant Clause.

The CPN of the candidates on the merit list may be calculated with four digits after decimal point. The following steps may be taken, in case of tie of CPN even after exercising the above action:

i. The candidate having higher pre-admission test marks will be higher in merit.
ii. The candidate having higher DAE/HSC marks will be higher in merit.
iii. The candidate having higher SSC marks will be higher in merit.
iv. The candidate having higher HSC Math-II marks will be higher in merit.
v. The candidate having higher HSC Math-I marks will be higher in merit.

9.3 Interviews

After the receipt of the result of Pre-admission Test, a comprehensive merit list is prepared and a number of candidates roughly equivalent to the reserved seats are called for interview before the Admission Committee of the University.

The candidate may be accompanied by his/her guardian declared in his/her admission form during interview. The interviews are held at Mehran University, Jamshoro on the dates as announced on MUET and GCTH websites: **www.muet.edu.pk** / **www.admissions.muet.edu.pk** and **www.gcthyd.edu.pk**.

The candidates will also be required to bring their original documents as mentioned below for verification:

(i) Marks Certificate of SSC – (Matriculation).
(ii) Marks Certificate of DAE/HSC Part-II (Pre-Engineering and General Science Groups).
(iii) Domicile Certificate of candidate.
(iv) PRC 'Form C' of candidate.
(v) National Identity Card/B-form (as applicable).
(vi) Undertaking on Judicial stamp paper as per specimen (Page # 34).
(vii) Medical Certificate on proforma*.

* Pro forma can be downloaded from **www.admissions.muet.edu.pk**.

It is mandatory for the candidates to appear before the Admission Committee for interview. If any candidate fails to produce all or any of the above-mentioned documents, he/she shall not be allowed to appear in the interview and will be disqualified from the process of admission.

The admission shall be allowed on the day of interview; and if admitted, all the above original documents would be retained by the university for at least **one entire year**. The candidates are advised to keep at least one to two sets of photocopies of all the documents with them. The candidate has to deposit the fees as mentioned in relevant fees clause at the time of interview.

9.4 Rectification of Mistakes
The Admission Merit Lists/Call Lists announced by the Admission Office of the University are provisional and if any mistake is detected, it is rectified accordingly.

9.5 Admission of Candidates Who Fail to Deposit the Admission Fees on the Interview Day
If any of the candidates fails to deposit admission fees on the day of interview in the University bank account, his/her seat will be allotted to the following candidate on the merit list.

9.6 Additional Marks
The candidates, who have produced certificates of Hafiz-e-Quran on printed form from registered Madrasahs and clear the test of Hifz taken by the University, are also considered to have additional 20 marks to be added to the marks of HSC Part-II/DAE.

9.7 Deduction of Marks Due to Gap in Education
In case of a gap or repetition of DAE/HSC Exams, the merit is determined as described below:

One percent of the aggregate marks is deducted for each gap of one academic year after Matriculation examination from the total marks of DAE/HSC examination or equivalent for the purpose of determination of merit. This deduction is applicable whether the DAE/HSC Examination had been repeated or the gap had occurred owing to any other reason.

9.8 Closing of Admissions Process
The admissions process for the session is made up to the end of **FOURTH week** from the date of start of the classes. After this period, no new admissions are made.

9.9 NOC and Study Leave Order for Candidates already in Service
The candidates who are already in service at the time of submission of admission form should attach **NO OBJECTION CERTIFICATE** from their employers for their admission. After selection to the First Year Class, they are required to submit study leave order and relieving order from their employers for study purpose at the University because the BSc in Civil, Electrical and Mechanical Engineering Technology Degree Programs are regular full time and morning programs and no student admitted in the College is allowed to engage himself/herself in any employment during his/her studies.

9.10 Admission in any Other Institute
Being a full-time program of studies, no student of the College is allowed to enrol in any other full time or part time courses of studies in any other educational institution without prior permission of the authorities of the University. Violation of the above may lead to the cancellation of his/her admission.

9.11 Re-Admission Policy
Those students who are eligible for any semester of any year and remained absent from their classes and examinations for any reason, are considered for re-admission in the appropriate semester where they left their studies with the appropriate batch subject to application of other relevant rules by the Re-admission Committee, provided that their absence is not more than **two calendar years**. However, their attendance to determine their eligibility to appear in the semester examination is considered from the date of issuance of re-admission order. Such admissions may be made **within four weeks** from the date of start of classes of particular session.

9.12 Enrolment Card
Each student is required to enrol himself/herself in the University/Institute after the finalization of the discipline in the First Semester of First Year and obtain enrolment card accordingly. In case of failure, he/she is not allowed to appear in the examination of the First Semester of the First Year.

9.13 Admission and Tuition Fees

The admission fee is non-adjustable and non-transferable. The fees details are given below:

(1) Fees payable at the time of admission

(a). Fees payable to MUET, Jamshoro*		
Admission Fees (Per Year)	Rs.	10,000-00
Enrollment Card Fees (once)	Rs.	1,200-00
Marks Certificate Verification Fees (Once)	Rs.	2,500-00
Total Fees payable to MUET, Jamshoro (a)	**Rs.**	**13,700-00**
(b). Fees payable to GCT, Hyderabad		
College Fees (Inclusive of Security Deposit)**	Rs.	20,000-00
Total Fees payable at the time of admission (b)	**Rs.**	**20,000-00**
Total of (a) + (b)	**Rs.**	**33,700-00**

(2) Annual Admission Fees payable to MUET, Jamshoro

Annual Admission Fees payable to **MUET,** Jamshoro **(**for the 2nd, 3rd and 4th years of studies)	Rs.	10,000-00

(3) Fees payable at the Start of each Year of Study

Annual Fees payable to **GCT**, Hyderabad **(**for the 2nd, 3rd and 4th years of studies)	Rs.	18,000-00

***** The candidates/students are required to pay admission fee at the time of admission and at the start of every odd semester in the **HBL Bank Account No. 00427991903403 in any branch of Habib Bank Limited**, through challan available on the MUET admissions website.

****** The Security Deposit is charged once at the time of admission and the same is refunded upon written request of the students after successful completion of their studies. Whereas, the Security Deposit forfeited if any of the students cancels his/her admission.

9.14 Admission Fee Refund Policy

Where the University strictly follows the National Level Fee Refund Policy at Higher Education Institutions at Pakistan which is as under:

% of Admission Fee	Timeline for Semester
Full 100% fee refund	Up to the 7th day (including holidays) of convene of classes
Half 50% fee refund	Up to the 15th day (including holidays) of convene of classes
No Refund 0%	From 16th day of convene of classes.

10. REGULATIONS FOR SEMESTER SYSTEM FOR AFFILIATED COLLEGES

Regulations regarding **the General Scheme of Studies for the Bachelor's Degree Programs (including BSc and BBA) of the Colleges/Institute affiliated with the Mehran University of Engineering and Technology**, under Section 47(1) (n) of the Act 1977.

1. Short Title: These Regulations may be called the Mehran University of Engineering and Technology Bachelor of Degree Courses Regulations 2021 for the affiliated College/Institute, repealing such regulations framed by the University authorities (if any).

2. These Regulations shall be subject to the Mehran University of Engineering and Technology General scheme of Studies for the Bachelor's degree courses Statutes 2012.

3. Commencement: These Regulations shall be deemed to have come into force with effect from 21 Batch offered at affiliated College/Institute.

4. Definitions: In these Regulations unless otherwise expressly stated:

   i. "University" means the Mehran University of Engineering and Technology, Jamshoro.

   ii. "Academic Year" means the Academic Year of the University.

   iii. "Spring/Fall Semester" means a Period of 21 weeks out of an academic year for teaching and evaluation and/or guidance of the students of the University.

   iv. "Vice-Chancellor", "Pro Vice Chancellor", "Dean", "Director", "Chairman/Chairperson", "Teacher" and "Controller of Examinations" means respectively the Vice-Chancellor, the Pro Vice Chancellor, the Dean of Faculty, the Director of Institute, the Chairman/Chairperson of Teaching Department, the Teacher and the Controller of Examinations of the University.

   v. "Affiliated College". Each College/ Institute affiliated with Mehran University of Engineering & Technology, Jamshoro.

   vi. "Departmental Committee". Each College/Institute will have a Departmental Committee consisting of three senior most teachers of the Department of the College/Institute including Principal/Director as Convener.

   vii. "Credit Hours (CH)" have been defined in section 6.

   viii. "Quality Point (QP), Grade Point Average (GPA), and "Cumulative Grade Point Average (CGPA) has been defined in section 17.

   ix. "Internal Examiner" means the subject teacher who taught the subject.

   x. "External Examiner" means the subject expert from the MUET or any other University or expert from the Industry having 15 years' experience in the relevant area; who have not taught the subject to the concerned class.

   xi. "Supervisor" is the teacher who guided the student(s) in the project.

5. Undergraduate Structure of Bachelors of Science / Study / Business Administration Degree Course is given in the table below

Table 5.1

Degree Programs	
4 Years Duration	
Total No. of Credit Hours (Minimum)	130 Credit Hours
Total No. of Credit Hours (Maximum)	140 Credit Hours
Semester Duration	16 weeks of teaching excluding examinations
Course Duration	Minimum of 8 semesters Maximum time limit of 6 years, further extendable for one year with the approval of Statutory Bodies
Course Load per Semester for Regular Full-Time Students	15-18 Credit Hours (In special cases 15 –19 Credit Hours)

6. Credit hours for undergraduate degrees

6.1 A credit hour means teaching/learning a theory course for one hour each week throughout the semester.

6.2 One credit hour in the laboratory or practical work/project would require lab contact of three hours per week throughout the semester.

6.3 The credit hours are denoted by two digits within brackets with a plus in between. The first digit represents the theory part while the second (right side) digit represents the practical. Below Table 6.1 gives the possible distribution of Theory and Practical Credit hours.

Table 6.1 Distribution of Theory and Practical Credit Hours

Credit Hours	Distribution in Theory and Practical Hours
01	(0+1)
02	(2+0) / (0 + 2)
03	(3+0) / (2 + 1) / (0 + 3)
04	(3+1)

7. Course layout for undergraduate students

7.1 4-year BSc degree program is composed of 130-140 Credit Hours in which 130 represents the minimum and 140 represents the maximum credit hours required to be completed.

7.2 For BSc Engineering Technology programs: The courses for the BSc Engineering Technology program will consist of minimum 130 credit hours, out of which a minimum of 100 credit hours of core Engineering Technology courses and minimum of 30 credit hours of general and university courses, subject to meeting the requirement of the respective Accreditation Councils.

7.3 Internship: Students should undergo supervised industrial training/internship in industry/research/business organization.

8. Academic Year

There will be two regular semesters in an academic year. Following is the breakup:

Sr. No.	Description	Duration
1.	Teaching duration of 1st semester (Including Mid Semester Exam).	16 Weeks
2.	Preparation and conduct of final 1st Semester Exam	05 Weeks
3.	Teaching duration of 2nd Semester (Including Mid Semester Exam).	16 Weeks
4.	Preparation & Conduct of Final 2nd Semester Exam	05 Weeks
5.	Summer Break	08 Weeks
6.	Winter Break	02 Weeks
	Total Duration of Semesters	**52 Weeks**

Minimum Number of Contact Hours for a Theory and Practical Subject

Sr. No.	Theory / Practical	Credit Hours	Contact Hours
1	Theory	1	14
2	Theory	2	28
3	Theory	3	42
4	Practical	1	42
5	Practical	2	84
6	Practical	3	126

9. The minimum requirement for each semester course

(a) Attendance
(b) Assignments
(c) Tests (minimum two)
(d) Mid Semester Examination
(e) Final Semester Examination

The Schedule of Tests, Mid Semester & Final Semester Examination shall be as under:

Sr. No.	Activity	Period
1.	Mid Semester Examination	After 8-weeks
2.	Final Semester Examination	After 16-weeks

10. Distribution of Marks

The distribution of marks for each theory and practical course in a Semester will be as follows:

THEORY			
Description		**Maximum**	**Minimum**
		100 Marks	**50 Marks**
i.	**Attendance**	10	05
ii.	**Test(s)**	05	03
iii.	**Assignments**	05	02
iv.	**Mid Semester Exam**	20	10
v.	**Final Semester Exam**	60	30
	Total	**100 Marks**	**50 Marks**
PRACTICAL			

Description		Maximum	Minimum
		100 Marks	50 Marks
i.	**Attendance**	10	05
ii.	**Lab Evaluation Work**	30	15
(a)	**Objective Type Test**	30	15
(b)	**Conduct of Practical / Viva Voce**	30	15
Totals		**100 Marks**	**50 Marks**

Note: For the courses carrying other than 100 & 50 marks the distribution of marks will be accordingly.

11. Grade Equivalent

Grade	Grade Point	MARKS			
		THEORY		PRACTICAL	
		Max. Marks 100	Min. Marks 50	Max. Marks 100	Min. Marks 50
A+	4.0	85 & above	42 & above	85 & above	42 & above
A	3.75	75 to 84	37 to 41	75 to 84	37 to 41
B+	3.5	66 to 74	33 to 36	66 to 74	33 to 36
B	3.0	60 to 65	30 to 32	60 to 65	30 to 32
C+	2.5	55 to 59	27 to 29	55 to 59	27 to 29
C	2.0	50 to 54	25 to 26	50 to 54	25 to 26
F	0.0	0 to 49 (fail)	0 to 24 (fail)	0 to 49 (fail)	0 to 24 (fail)

- Fraction is to be considered as a whole number.
- Subjects carrying more than 100 marks in Theory/Practical will be awarded grades accordingly.
- The results will be prepared on the basis of Grade Point Average (GPA).

Computation of semester grade point average (GPA) and cumulative grade point average (CGPA)

GPA

This is a figure ranging preferably from 0.00 to 4.00 be used to indicate the performance of a student in the semester concerned. A standard scale of 0.00 to 4.00 is adopted.

$$\textbf{GPA} = \frac{\text{Sum of all courses in a semester (Course Credit Hours x Grade Point Earned)}}{\text{Total Credit Hours taken in the semester}}$$

Semester Grade Point Average (GPA) and Cumulative Grade Point Averages (CGPAs) will be calculated suing the following relationship:

$$\textbf{CGPA} = \frac{\text{Sum of all courses taken in all semesters (Course Credit Hours x Grade Point Earned)}}{\text{Total Credit Hours taken in all Semesters}}$$

12. Attendance Requirement

(i) A student should have at least 75% attendance to appear in Final Semester Examination.
(ii) In genuine cases, maximum 10% condonation in attendance shall be the discretionary powers of the Dean, FoST&H on the basis of an application to be scrutinized by Principal/Director of the College/Institute concerned and routed through Inspector Colleges of the University.
(iii) The eligibility attendance of Theory/Practical for late admitted students to First Semester of First Year only shall be calculated from the date of admission.

13. Distribution of Attendance Marks

Distributions of attendance marks will be as given in the following tables:

A. For Theory Head of 3 Credit Hours, i.e., 100 Marks		
Sr. No.	**Lecture Hours attended**	**Marks to be awarded**
1	41 to 42	10
2	37 to 40	09
3	33 to 36	08
4	31 to 32	07
5	Below 31	00

B. For Theory Head of 1/2 Credit Hours, i.e., 50 Marks		
Sr. No.	**Lecture Hours attended**	**Marks to be awarded**
1	27 to 28	05
2	24 to 26	04
3	21 to 23	03
4	Below 21	00

C. For Practical Head of 2/3 Credit Hours, i.e., 100 Marks		
Sr. No.	**Lecture Hours attended**	**Marks to be awarded**
1	95% to 100%	10
2	86% to 94%	09
3	81% to 85%	08
4	75% to 80%	07
5	Below 75%	00

D. For Practical Head of 1 Credit Hour, i.e., 50 Marks		
Sr. No.	**Lecture Hours attended**	**Marks to be awarded**
1	90% to 100%	05
2	80% to 89%	04
3	75% to 79%	03
4	Below 75%	00

The labs carrying marks other than 50/100 the distribution of attendance marks will be accordingly.

14. Conduct of Sessional Work/Mid-Semester and Final Semester Examinations

i. 10/5 marks of assignment for subjects carrying 100/50 marks shall be awarded by the teacher concerned after conducting 3/2 class tests (MCQs type) and 2/1 best of 3/2 class tests shall be counted toward award of 10/5 marks. The entire record of evaluated class tests shall be submitted by the concerned subject teacher to Examinations Department at the time of submission of final results.

ii. At the end of each semester, the marks of attendance, sessional work, and lab work secured by the student in Theory and Practical of the concerned subject shall be announced by the concerned subject teacher by displaying on the Notice Board.

iii. Mid Semester Examination will be conducted by the Examination Department in collaboration with the concerned Department of the College.

iv. The mid-semester examination will be conducted only for theoretical subjects.

v. The time duration for mid semester examination will be 1 hour for 3 CHs course and each question paper will contain 3 questions with a choice to attempt any two, whereas the time duration for 1/2 CHs course examination will be 45 minutes and the question paper will contain 3 questions with a choice to attempt any two.

vi. The marks of the mid semester examination question paper of 3 CHs will be 20, and for the 1/2 CHs course will be 10.

vii. No MCQ's, fill-in the blanks or objective type questions will be given in mid semester examination. The questions shall be descriptive.

viii. The scripts of all assignments will be returned and those of the tests and mid- semester examination will be shown to the students after evaluation. Each blank page / gaps in the scripts will be stamped/ lines drawn, by the teacher concerned.

ix. The marks of each test and mid-semester examination will be displayed and solutions will be discussed in the class room immediately after evaluation. If any student is not satisfied with the evaluation, he/she may convey this to the Principal/Director of the concerned College / Institute within 7 days of the result thus displayed and the matter will then be looked into by the Departmental Committee, whose decision will be final. Any such objections after the expiry of 7 days will not be accepted. A copy of the Marks of the tests and mid-semester will be deposited by the teacher in the department office immediately after the announcement of the results.

x. The teachers will prepare 3 copies of the result of each course separately at the end of each semester (attendance, test, mid semester examination. Assignments and final semester examination) on the prescribed form and shall forward two copies to the Controller of Examinations of the University.

xi. The cumulative result (including all the marks of attendance, assignments, tests, mid-semester examination and final semester examination) of each semester of a year will be announced by the Controller of Examinations of the University.

15. Appearance in the Semester Examination

The semester examination will be open to the students who fulfils the following conditions:

i. During the semester immediately preceding the examination, he/she has been on the roll list of the concerned Department.

ii. He/she has submitted his/her Examination Form duly filled-in completely along with the prescribed fee to the Controller of Examinations of the University within the due date announced by the University.

16. Setting of Question Paper/Assessment of Scripts and conduct of Practical Examination

The mode of setting of question papers (Theory / Practical) and assessment of scripts for Theory Examination of the University as well as conduct of Practical Examination shall be as under:

(a) Setting of Question Paper

Theory

i. The Internal Examiner of both theory and practical in Regular/Supplementary Examinations shall be recommended by the Principal/Director to the Controller of Examinations of the University. The internal Examiner shall preferably be the subject teacher otherwise a proper justification may be communicated to the Controller of Examination for further consideration.

ii. The External Examiners of both Theory and Practical in Regular / Supplementary Examinations shall be appointed by the Vice-Chancellor from the Panel of Examiners recommended by the Controller of Examinations of the University in coordination with the Chairman/Director of the Department/Institute of the University through Dean, FoST&H.

iii. The Internal Examiner for the Theory paper will set the Question Paper in duplicate which shall be sent to the External, along with a copy of syllabus in sealed envelope by the Controller of Examinations of the University who shall set the final question paper with 30% moderation / change of the total number of questions. The Internal Examiner shall submit question paper two weeks before the commencement of the Examination and same shall be sent to External Examiner by Controller of Examinations of the University one week before commencement of Final Examination.

iv. In specific cases if the question paper is not submitted by the External Examiner two days before the date of commencement of the Examination, the question paper set by the Internal Examiner shall be deemed final.

v. The choice of attempting the questions shall be limited to a maximum of 60%, i.e., Five (05) out of Eight (08) questions to be solved by the students. The question paper shall comprise various sections in exceptional cases determinable as per nature of the course.

Practical

i. The Objective Type Question Paper of Practical Examination shall be set in duplicate first by internal Examiner and thereafter the same shall be got moderated by External Examiner concerned as per procedure already applicable for Theory Examination.

ii. The Following Guideline Parameters shall be included by the Examiners for setting of objective type Question Papers.

iii. Fill in the Blanks, True of False, Multiple-Choice Questions (MCQS), Definition of Technical Terms, Drawing Skill Oriented Questions and Interpretation of Diagrams.

iv. The duration for conduct of Objective Type Test shall be Minimum of 30 Minutes and Maximum of One hour for Question Papers carrying 15 & 30 Marks, respectively.

v. The Practical and Viva-Voce Examination shall be conducted jointly by the Internal & External Examiners approved by the Vice-Chancellor. The signature sheets of examinees for conduct of Objective Type Test and Viva-Voce/Jury shall be maintained separately and the same shall be submitted to the Examinations Department for office record by the Examiners. The award lists signed by the both examiners shall be submitted in triplicate under sealed cover to the Controller of Examinations of the University.

vi. The Internal Examiner as well as External Examiner shall both submit separate report under sealed confidential cover to the Controller of Examinations of the University regarding the standard of the examination taken by them.

(b) Assessment of Scripts

i. The scripts of Theory Examination shall be sent to the concerned External Examiner first and thereafter the scripts shall be assessed by the respective Internal Examiner. Both the examiners will send the award lists (in triplicate) to the Controller of Examinations of the University separately.

ii. The average of the marks of the Internal & External Examiners shall be awarded to the candidates. In case the variation in the award of marks of Internal & External Examiners exceeds 20% of the marks assigned to the Final Examination, the matter shall be referred to the Dean, FoST&H for final decision.

17. Promotion Rules

i. A student will be promoted to the 2nd Semester of the first year provided he/she has completed minimum attendance and filled up examination form and appeared in at least one of the Heads of the Final Semester examinations (1st Semester).

Note. Theory or Practical would be treated as separate Heads.

ii. A student will be promoted to the 1st Semester of the 2nd year (3rd Semester) provided he / she has obtained C-Grade or higher in at least 50% Heads (including minimum of 02 theory papers) of 1st Semester of First year in Regular Examination and has completed minimum attendance requirement (75%) of the 2nd Semester of the 1st year and has filled up the Regular examination form and appeared in at least one of the Heads of the Examinations (2nd Semester).

iii. A student will be promoted to the 2nd Semester of the 2nd year (4th Semester) provided he/she has completed minimum attendance requirement (75%) of the 3rd Semester, filled up the examination form and appeared in at least one head of the final Semester examinations (3rd Semester).

iv. A student will be promoted to the 1st Semester of the 3rd Year (5th Semester) provided he / she has obtained C-Grade or higher in at least 50% Heads (including minimum of 05 Theory papers) of 1st year prior to start of classes of 5th Semester and has completed minimum attendance requirement (75%) of the 4th Semester, and has filled up the examination form and appeared in at least one of the Heads of the Examinations (4th Semester).

Note: Benefit of fraction in marks will be given to the students.

v. A student will be promoted to 2nd Semester of 3rd year (6th Semester) provided he/she has completed minimum attendance requirement (75%), filled up the examination form and appeared in at least one of the Heads of the final Semester examination (5th Semester).

vi. A student will be promoted to the 1st semester of the 4th year (7th Semester) provided he/she has cleared all Heads of First Year secured minimum CGPA of 2.00 obtained C-Grade or higher in at least 50% Heads of Second Year (including 5 Theory papers) prior to start of classes of 7th Semester, and has completed minimum attendance requirement (75%) of the 6th Semester and has filled up the Regular examination form and appeared in at least one of the Heads of the Examinations (6th Semester).first

vii. A student will be promoted to 2nd Semester of 4th Year (8th Semester) provided he/she has completed minimum attendance requirement i.e. 75%, filled up the examination form and appeared in at least one Head of the 1st semester of 4th year (7th Semester) examination.

Note: Benefit of fraction in marks will be given to the students.

18. Academic Calendar

The calendar will include the following information: to be adopted from next academic year.

a. Date of start of classes
b. Conduct of mid-semester
c. Date of suspension of classes
d. Schedule of examinations
e. Display of sessional marks
f. Examinations preparation up to
g. Conduct of final semester examinations
h. Announcement of results

19. Medium of Instructions

Instructions in all courses and laboratories are carried out in the English Language.

20. Violation of discipline in examinations (Unfair means Cases Committee)

20.1 The Unfair Means Committee for the affiliated Colleges shall be comprised of the following:

- The Dean Faculty of Science, Technology & Humanities, MUET (Chair)
- The Controller of Examinations, MUET (Member)
- The Inspector of the Colleges, MUET (Member)
- The Principal/Director of the College/Institute (Member)
- The In-charge, Affiliated Colleges Section, Examinations Dept., MUET (Secretary)

20.2 Any candidate found guilty of the following matters, his/her case will be submitted to Unfair Means Cases Committee constituted by the University.

i. Removes a leaf from his/her answer book, the answer book shall be cancelled.
ii. Submits forged or fake documents in connection with the examination.
iii. Commits impersonation in the examination.
iv. Cheatings from any paper book or notes.
v. Mutilates the Answer Book.
vi. Possesses any kind of material, which may be helpful to him/her in the examination.
vii. Does anything that is immoral or illegal in connection with the examination and which may be helpful to him/her in the examination.
viii. Refuses to obey the invigilation staff or refuses to follow the instructions issued by the University in connection with the examination.
ix. Misbehaves/creates any kind of disturbance in/around the examination centre.
x. Uses abusive or obscene language on the answer script.
xi. Possesses any kind of weapon in or around the examination centre.
xii. Possesses any kind of electronic device which may be helpful in the examination.

His/her case shall result in penalties keeping in view the nature and intensity of offence.

(i) Cancellation of paper*.
(ii) Suspension from program for one semester.
(iii) Heavy and light Fine.
(iv) Expulsion forever from the University.
(v) Any others.

*Unfair Means Cases Committee will decide that the student will have to appear in summer semester / with regular semester for the cancelled paper.

20.3 Appeal against the decision of Unfair Means Cases Committee

If a student is not satisfied with the decision of the Unfair Means Cases Committee, he/she can submit his/her appeal within a week after the decision of the Committee to the Vice Chancellor. No appeal shall lie against the decision of the Syndicate.

21. CGPA required for the Completion of a Degree

21.1 For completion of the degree, the minimum qualifying GPA for Bachelor's Degree Program is 2.00.

22. Departmental Committee

Each Department/Institute will have a Departmental Committee consisting of three senior most teachers of the Department/Institute including Chairman/Director to assess the progress of the students during the semester.

23. Awards and Distinctions

a. Medals/Positions will be awarded to the students passing their courses/papers in Semester System in the first attempt only.
b. In the Semester System, Letter Grades will be awarded on the basis of GPA/CGPA and Positions would be given on the basis of CGPA. In case two or more students are acquiring same CGPA only then the Positions will be shared among those students.
c. No medal and position will be granted to candidates who passed the examination in 2nd attempt.
d. No Medal / Roll of Honor will be awarded in the case of improving CGPA.
e. The disciplines where number of students is less than 5, no position will be awarded in semester system.

24. Re-admitted Students

These rules & regulations are also applicable to those student(s) who have got re-admission at affiliated colleges / institutes with 21 and onward batches.

Note: University reserves the right to modify rules and regulation with approval of the competent authority during the course of study.

11. AFFIDAVIT (To be submitted at the time of admission)

The following affidavit is to be furnished by the candidates for admission on judicial stamp paper of Rs. 20/- at the time of admission:

I, _____S/o_____

R/o, _____ do hereby

state on solemn affirmation that I shall:

a) Abide by all the rules/regulations regarding admission, conduct of Academic Program, Discipline, behaviour etc. in force in college at present or to be approved and implemented in future.
b) Confine my activities to the academic pursuits during my studies in the college and would not indulge in any political, un-social activities directly or indirectly and shall be liable to be expelled from the college, in case I am found involved in any such activities.
c) Never use violence or threat or pressure or any dispute with others.
d) Not hold a gathering or meeting or take out processions in any part of the college campus other than the areas specified for the purpose.
e) Not indulge in any kind of unfair or unlawful means / malpractice in examination and coercion by any means.
f) Not bring into campus, consume or encourage, consumption of alcoholic products, drugs and narcotics not indulge in acts of moral turpitude.
g) Not bring or keep any type of weapons within the college premises.
h) Not damage any college property, including building, equipment, vehicles etc. in any manner.
i) In case of violation of any of the undertaking as herein above given by me I shall not only be liable for disciplinary action as per college rules but shall also be liable for criminal prosecution under law of land.

Place: _____

Date: _____

Signature of the Applicant / Candidate

CNIC NO.

					-								-	

(Please attach photocopy)

GENERAL INSTRUCTIONS

In order to conduct the test efficiently and transparently, the candidate must follow the following instructions and the instructions given by the Invigilators:

1. The Test consists of 100 questions and is divided into four parts as follows:

   Total time to attempt all questions is 60 minutes (01 hour).
   Pre-Engineering group: Physics, Chemistry, Mathematics and English (25 questions each)
   Pre-Medical group: Physics, Chemistry, Biology and English (25 questions each)
   General Science group: Physics, Computer Science, Mathematics and English (25 questions each)
   Commerce / Humanities / Other groups: General Science (25 questions), General Mathematics (30 questions), Intelligent Quotient (20 questions) and English (25 questions)
2. The request of group change (Pre-Engineering, Pre-Medical, General Science or Others) will not be allowed on the Test Day.
3. There will be no negative marking on wrong answer. Each correct answer carries one mark.
4. The Computer Based Test (CBT) credentials shall be provided to the candidate.
5. The candidate shall follow the instructions by Invigilators for login and commencement of the test.
6. All rough work must be done only on the provided rough-work sheet. The rough work sheet is the property of the University, and each candidate will have to return the rough work sheet at the end of the Test. **If any candidate takes away the rough work sheet for any reason, he/she will be treated according to the law and his/her name will be removed from the list of the candidates for admission.**
7. The selected answer can be changed any time before termination of the Test.
8. Opening of any other website or software is strictly prohibited.
9. **During the Test, if any candidate terminates the test intentionally or unintentionally, he/she will not be allowed to continue the Test.**
10. **During the Test, do not talk, whisper, or turn eyes away from your dedicated screen. Candidate(s) found doing so will be removed from the list of the candidates for admission.**
11. **Any evidence of impersonation, cheating or non-compliance with instructions will disqualify the candidate(s) and will be removed from the list of the candidates for admission.**
12. Don't leave your seats unless and until allowed.

PRE-ADMISSION TEST
SAMPLE TEST PAPER

General Instructions

The test is divided into following four parts and sub-parts:

Part I: **English** **25 Questions**

- Vocabulary
- Grammar
- From Text
- Sentence correction

Part II: **Physics** **25 Questions**

- All chapters (XI and XII)

Part III: **Mathematics/Biology** **25 Questions**

- All chapters (XI and XII)

Part IV: **Chemistry/Computer Science** **25 Questions**

- All chapters (XI and XII)

Part I
ENGLISH

Vocabulary

1. A week before the MUET exam, Ahmad started to _____ vocabulary, which he had not studied yet.

a) Underscore
b) Betroth
c) Inundate
d) Martinet

Grammar

2. I _____ tennis every Sunday morning.

a) playing
b) play
c) am playing
d) am play

From Text

3. How were Quaid's feelings even though he drove through the unceasing shouts of People?

a) Gay and Gaiety
b) Calm and serene
c) Quite happy
d) Quite gloomy

4. Who wrote the novel "The Prisoner of Zenda"?

a) Shakespeare
b) Words Worth
c) Anthony Hope
d) John Milton

Sentence Correction

5. Jeans *was* not permitted in out college.

a) were
b) had
c) will
d) have

Part II
PHYSICS

1. The product of mass and velocity is called:

a) Acceleration
b) Moment Arm
c) Negative Accelerations
d) Momentum

2. The production of X-Rays can be regarded as an inverse of:

a) Electromagnetic effect
b) Photoelectric effect
c) Compton's effect
d) Photon effect

Part III
MATHEMATICS

1. If $\sqrt{\sqrt{cos}\emptyset\ \sqrt{cos}\emptyset\ \sqrt{cos}\emptyset\ \ldots\ldots} = 1, then\ \ \emptyset =$

a) $n\pi/2$
b) $2n\pi$
c) $n\pi$
d) $2n\pi/3$

2. If y =f (x), then $\frac{dy}{dx}$ *is defined as*_____

a) $\frac{dy}{dx} = \lim_{\delta x \to 0} \frac{f(x+\delta x) - f(x)}{\delta x}$

b) $\frac{dy}{dx} = \lim_{\delta x \to 0} \frac{f(x-\delta x) - f(x)}{\delta x}$

c) $\frac{dy}{dx} = \lim_{\delta x \to 0} \frac{f(x-\delta x) + f(x)}{\delta x}$

d) $\frac{dy}{dx} = \lim_{\delta x \to 0} \frac{f(x+\delta x) + f(x)}{\delta x}$

BIOLOGY

1. Presence of one of the followings made evolution of respiration possible.

a) Carbon dioxide
b) Oxygen
c) Nitrogen
d) Inert gasses

2. If non-protein part is covalently bonded, it is known as:

a) Co-enzyme
b) Activation
c) Prosthetic group
d) Product

Part IV

CHEMISTRY

a. The Chemistry of Carbon is Called:

i. Organic Chemistry
ii. Inorganic Chemistry
iii. Physical Chemistry
iv. Pharmaceutical Chemistry

b. How many moles of Sulphur are there in 64 grams of the element?

i. 1
ii. 2
iii. 3
iv. 4

COMPUTER SCIENCE

1. Keyboard is a:

a) Input device
b) Output device
c) Important device
d) Plastic device

2. Personal Computer consist of:

a) Central Processing Unit
b) Input
c) Output
d) All of the above

----------GOOD LUCK----------