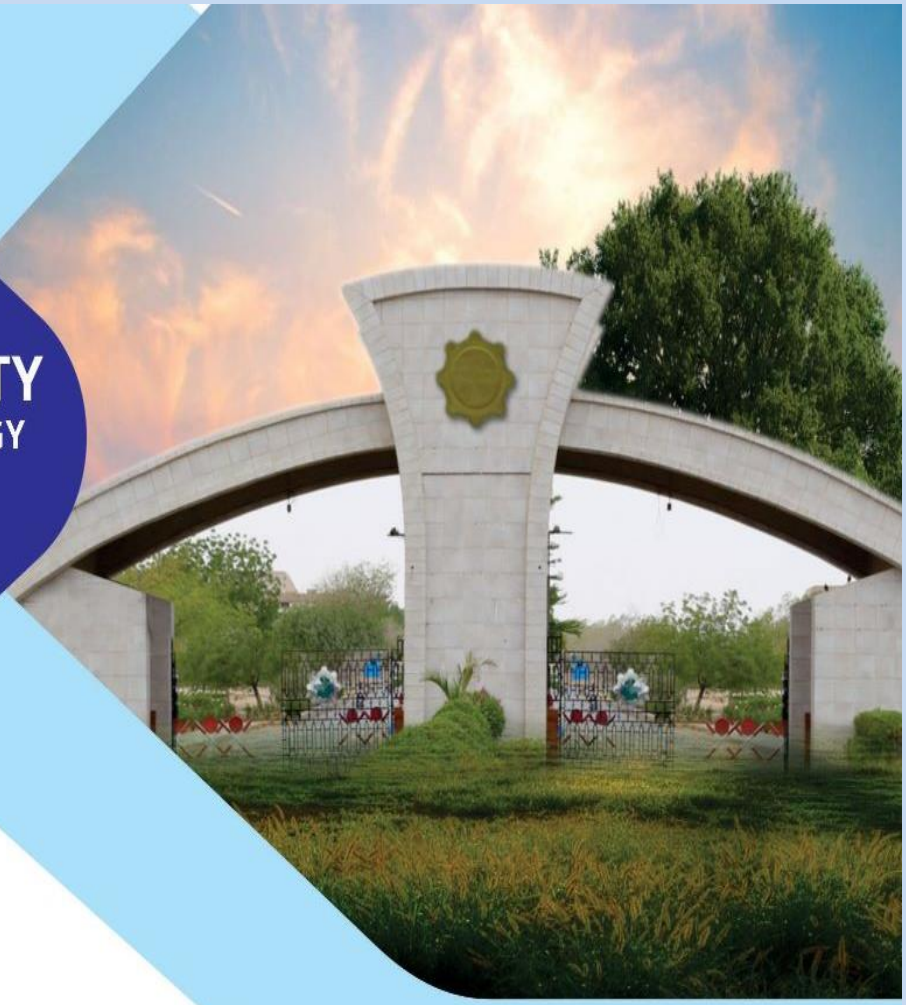
Mehran University
of Engineering
and Technology

MEHRAN UNIVERSITY
OF ENGINEERING & TECHNOLOGY
JAMSHORO, SINDH - PAKISTAN
(Since 1963)



PROSPECTUS
2023-24

Bachelor's Degree Programs

Directorate of Admissions
Mehran University of Engineering & Technology
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Tel: 022-2771704 Fax: 022-2109030
admissions.muet.edu.pk
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ACKNOWLEDGMENT

We are thankful to stakeholders for their involvement in preparation of this Prospectus.

Disclaimer

The information in this prospectus is correct at the time of publishing. The University reserves the right to add or remove courses and to make changes in Syllabi, Courses Options and Modules, Fees etc. at any stage. Although every effort is made to ensure accuracy at the time of publication, University reserves the right to make any corrections in the contents and provisions without notice. For further information please contact admissions@admin.muet.edu.pk

Vision:
To become world class educational and research institute and contribute effectively towards building up indigenous & technological capabilities for sustainable socio-economic development.

Mission:
To equip our undergraduate, postgraduate and doctoral students with advance knowledge through collaborative opportunities emerged from linkages with academia, industry and government.

Quality Policy:
In line with its vision and mission, the management and faculty have developed broad based Quality Management System in the University with a strong commitment to the following:

1. **Quality Brand**
   University aims to be recognized for its leadership position in higher education through designing interactive courses and carrying out multidisciplinary research programs and projects that are distinctive and relevant to social needs, and are of national and international quality standards.

2. **Compliance with Statutory Requirements**
   University ensures that every individual working for and / or studying in the University shall comply with the University Act, Statutes, Regulations and Rules.

3. **Stakeholders Focus**
   University considers every stakeholder very important and therefore endeavors to provide encouraging, flexible, empowered, cohesive and congenial working environment to assimilate, synthesize and analyze knowledge for the ultimate benefit of academia, industry, government and society.

4. **Student Focus**
   University considers students as its direct customers and is committed to produce highly qualified manpower related to multidisciplinary engineering and technology, policy and management and business fields. University ensures meeting students' professional needs and expectations and appreciates their participatory role in maintaining progressive learning environment.

5. **Knowledge Creation and Dissemination**
   University is focused on conducting multidisciplinary research in order to create knowledge to resolve political, technological, social and environmental issues and to disseminate this knowledge through trainings, workshops, conferences and research journals to various national and international institutions.

6. **Business Startup**
   University is focused on facilitating startups and creating businesses based on multidisciplinary fields.

7. **Linkages and Networking**
   University establishes strong ties with various national and international universities, industries and government.

8. **Optimization of Resources**
   University is focused that the human capital, infrastructure and financial resources must be utilized optimally for accruing and sustaining benefits.

9. **Environment Friendly**
   University is committed to make our University environment safest, greenest and cleanest in the region.

10. **Continual Improvement**
    University is committed to provide a rewarding and challenging environment for faculty, staff and students to kindle and sustain a passion for excellence.

PROGRAM LEARNING OUTCOMES (PLOS) FOR B.E. PROGRAMS

Introduction

The twelve graduate attributes provided by the PEC as per Manual of Accreditation 2019 (3rd Edition) have been adopted as the PLOs for its Bachelor of Engineering Programs in MUET, Jamshoro and its campus. It is ensured that these PLOs are achieved by respective CLOs of Engineering curriculum as assessed through both direct and indirect methods.

List of PLOs

The twelve PLOs for the Undergraduate (B.E) Engineering Program are:

1. **GA1 Engineering Knowledge:** An ability to apply knowledge of mathematics, science, engineering fundamentals and an engineering specialization to the solution of complex engineering problems.

2. **GA2 Problem Analysis:** An ability to identify, formulate, research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences and engineering sciences.

3. **GA3 Design/Development of Solutions:** An ability to design solutions for complex engineering problems and design systems, components or processes that meet specified needs with appropriate consideration for public health and safety, cultural, societal, and environmental considerations.

4. **GA4 Investigation:** An ability to investigate complex engineering problems in a methodical way including literature survey, design and conduct of experiments, analysis and interpretation of experimental data, and synthesis of information to derive valid conclusions.

5. **GA5 Modern Tool Usage:** An ability to create, select and apply appropriate techniques, resources, and modern engineering and IT tools, including prediction and modeling, to complex engineering activities, with an understanding of the limitations.

6. **GA6 The Engineer and Society:** An ability to apply reasoning informed by contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to professional engineering practice and solution to complex engineering problems.

7. **GA7 Environment and Sustainability:** An ability to understand the impact of professional engineering solutions in societal and environmental contexts and demonstrate knowledge of, and need for, sustainable development.

8. **GA8 Ethics:** Apply ethical principles and commit to professional ethics and responsibilities and norms of engineering practice.

9. **GA9 Individual and Team Work:** An ability to work effectively, as an individual or in a team, on multifaceted and /or multidisciplinary settings.

10. **GA10 Communication:** An ability to communicate effectively, orally as well as in writing, on complex engineering activities with the engineering community and with society at large, such as being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.

11. **GA11 Project Management:** An ability to demonstrate management skills and apply engineering principles to one's own work, as a member and/or leader in a team, to manage projects in a multidisciplinary environment.

12. **GA12 Lifelong Learning:** An ability to recognize the need for, and have the preparation and ability to engage in, independent and life-long learning in the broadest context of technological change.

OUR MAJOR ACHIEVEMENTS

UNIVERSITY OF TODAY – WORKING FOR TOMORROW

- Ranked 351st in QS World University Rankings
- Ranked 2nd in UI Green Metric World University Rankings
- Ranked 2nd in Public Sector Engineering University in Pakistan and 1st in Sindh Province in HEC Rankings.
- 14 Patents registered
- Lifelong Learning Resource Centre Established
- FM Radio Frequency 96.2 Allotted
- Five start-up Companies Registered
- 200+ PHD faculty members
- Internationally published books by faculty
- First ever UNESCO/ICTP Regional Workshop on "FGPA Design for scientific instrumentation" held at MUET (indico.ictp.it/event/a14228/)
- Innovation & Entrepreneurship Centre (IEC) Established (iec.muet.edu.pk)
- US-Pak center for advanced studies in Water (USPCAS-W) Established (Water.muet.edu.pk)
- Baby Day Care Centre Established
- Establishment of Society of Women Engineers (SWE)
- Establishment of Student international societies and Chapters
- International Science-Policy Conference on Climate Change in Pakistan, held at Islamabad (sp3c.com.pk)
- 18 international conferences in last 4 years
- Organized conferences in Spain, Malaysia, Nepal and Ireland
- Collaborative linkages with International/National Universities and Industries
- Leading partner university in Erasmus Mundus, European Mobility Program
- First time in MUET history, more than 80 companies participated in Job Fair
- Students Financial Aid Office providing scholarships to more than 40% students
- Social events (Alumni reunion, Model United Nations, Big Event, MUET Gala)
- Serving communities through Corporate Social Responsibility (CSR) program
- DICE Energy & Water (DEW'1 First ever in history of MUET (dew.muet.edu.pk)
- Gender policy introduced by MUET, Jamshoro at: (www.muet.edu.pk/sites/default/files/MUET-Gender-Policy-Statement.pdf)
- Providing continuously National Freelance Training Program to students in different trades
- Establishment of Business Incubation Center of HEC proudly led by Mehran University in Consortium
- Mehran University publishes its own research Journal since 1982, which has now been recognized by leading indexes.
- Recently launched first research journal in social sciences named 'Repertus' which specifically focuses on language research
- Mehran UET has been selected amongst 8 Pakistani Universities for Kamyab Jawan Program
- Mehran UET students and teachers have won numerous awards in the field of research, education and knowledge in Qatar, China, USA and many other countries.

ACADEMIC CALENDAR FOR BACHELOR'S DEGREE PROGRAMS FOR THE ACADEMIC YEAR 2023-24

Duration of a Semester:	
Teaching	16 Weeks
Mid Semester Exam	01 Week
Final Semester Examination Preparation and Conduct	03 Weeks
Semester Break	01 Week
Total:	**21 Weeks**

Duration of a Year:	
Duration of Two Semesters	21x2 = 42 Weeks
Duration of Summer Vacation / Summer Semester	08 Weeks
Duration of Winter Break	02 Weeks
Total:	**52 Weeks**

Minimum attendance requirement to be eligible to appear in the Semester Examination is 75%.
Number of Lectures during the Semester in a subject of 3 CH & 2 CH shall be 48 & 32 respectively.
Number of contact hours for a practical of 1 CH per Semester is 48.

SEMESTER: SPRING 2023

Batch & Semester	23-Batch 1st (Semester)	22-Batch 2nd (Semester)	21-Batch 4th (Semester)	20-Batch 6th (Semester)	19AR-Batch 8th (Semester)	18AR-Batch 10th (Semester)
Date of Start of Classes	15-08-2023	03-07-2023				17-04-2023
Conduct of Mid Semester Exam	09-10-2023	28-08-2023				15-08-2023
Date of Suspension of Classes	24-11-2023	20-10-2023				13-10-2023
Examination Preparation	25-11-2023 to 27-11-2023	21-10-2023 to 24-10-2023				14-10-2023 to 16-10-2023
Conduct of Final Semester Exam	28-11-2023 to 13-12-2023	25-10-2023 to 11-11-2023				17-10-2023 to 29-10-2023
Semester Break	14-12-2023 to 17-12-2023	12-11-2023 to 19-11-2023				-
Announcement of Result	19-12-2023	17-11-2023				06-11-2023

WINTER VACATION: 25-12-2023 TO 07-01-2024

SEMESTER: FALL 2023

Batch & Semester	23-Batch 2nd (Semester)	22-Batch 3rd (Semester)	21-Batch 5th (Semester)	20-Batch 7th (Semester)	19AR-Batch 9th (Semester)
Date of Start of Classes	18-12-2023	20-11-2023			
Conduct of Mid Semester Exam	26-02-2024	29-01-2024			
Date of Suspension of Classes	18-04-2024	29-03-2024			
Examination Preparation (Including Eid Holidays)	19-04-2024 to 21-04-2024	30-03-2024 to 14-04-2024			
Conduct of Final Semester Exam	22-04-2024 to 07-05-2024	15-04-2024 to 03-05-2024			
Announcement of Result	13-05-2024	07-05-2024			

SUMMER VACATION / SUMMER SEMESTER: 11-05-2024 to 07-07-2024

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1. Introduction

1.1 The University

Mehran University of Engineering and Technology is one of the leading engineering universities of Pakistan, located in Jamshoro.

The university started its journey back in 1963 as Sindh University Engineering College with only two departments, and since then, it has grown and continues to grow. Today, with more than 35,000 alumni and 6,000 students, it has become a leading engineering university in the country.

Mehran UET has the honor of being the first Public Sector Engineering University of the country to have successfully obtained the ISO 9000 Certification. Mehran UET is also a member of the Association of Commonwealth Universities of the United Kingdom. In March 2021, HEC Quality Assurance Agency (QAA) confers the Excellent Performance Award upon MUET for the year (2018-2019) at the Annual Progress Review meeting.

QS World University Rankings ranked MUET among the top 351-400 universities of Asian in its ranking for 2020 and UI Green Metric World University Rankings ranked MUET 298th globally and 8th nationally in its ranking for 2021. The HEC ranked MUET 1stin Sindh and 6thin Pakistan, in Engineering Category. Mehran UET has continuously been awarded “Excellent Performance Certificate” for last three years by HEC, Islamabad.

In 2009, a constituent college named as 'Mehran University College of Engineering & Technology' was established at Khairpur Mirs’ to cater the increasing demand of qualified engineers. Later on, in 2013, it was upgraded as MUET, SZAB Campus, Khairpur Mirs’.

The University has a mission to produce high-quality engineering, sciences and social sciences graduates with extraordinary skills to fulfill the rising demand of the industries and establish stronger linkages with the industries in order to better understand their present and future requirements.

The university provides an excellent educational environment with cutting-edge academic and research facilities to the students, enabling them to become professionals who can satisfy contemporary industrial and societal issues with novel solutions. Mehran University offers admissions in more than 24 academic programs at the undergraduate level, and postgraduate students and researchers work under the supervision of well-qualified faculty to find innovative solutions to contemporary industry challenges at state-of-the-art and fully-equipped laboratories of the university. Key areas of research focus are computing, condition monitoring, water, environment, energy, and sustainable development.

The university is committed to producing high-quality engineering graduates with extraordinary skills to fulfill the rising demand of the industry. It is focusing on establishing stronger linkages with the industry to better understand their present and future engineering requirements. As per HEC rankings, MUET ranks as the second-best public sector engineering university of Pakistan, and the top-ranked engineering university of Sindh Province.

Mehran University offers a rare combination of elite academic performance and an enviable lifestyle through its facilities. The Student Teacher Centre has been constructed over an area of 20,000 sqft to provide befitting indoor sports and communal facilities to students and staff. The state-of-the-art Library and Online Information Center in the heart of Mehran University contains more than 180,000 books related to different fields of life. MUET hostels are affordable, homely, and safe accommodations for almost 2100 male and female students. Almost all ten, including three female students’ hostels, are spacious and airy two-storied buildings, with well-furnished rooms to accommodate two to three students with internet and other facilities.

The university's Main Auditorium with a capacity for more than 700 people is the most stunning meeting room with high-tech modern audio-visual equipment. There are several cafeterias and

canteens across the campus, which provide fresh quality edibles ensuring hygienic protocols at affordable prices. The university has a neoteric Sports Complex with modern Gymnasium and fitness center facilities equipped with the latest fitness machines to provide students and staff with the best possible sporting and healthy activities environment.

MUET FM 92.6 - the voice of my university is licensed by PEMRA, under the category of non-commercial FM radio stations, and aims to provide hands-on training through short-term internships and media courses. The university also organizes extracurricular activities for the development and well-being of students. The signature events of MUET include MUET Model United Nations, The Big Event, TEDxMUET, Sports Gala, and MUET Gala.

Students Financial Aid Office has been established at the university to support the students who are unable to pursue their education due to financial barriers. This office aims to provide students access to quality education through merit and need-based scholarships and interest-free educational loans, so no one should be deprived of education due to the financial crisis.

In conclusion, Mehran University of Engineering and Technology is a top-ranked engineering institution in Pakistan, providing high-quality education and research opportunities to its students. With its modern facilities and holistic student experience, the university prepares students to become professionals who can contribute to society and the industry with innovative solutions to contemporary issues.

1.2 Officers of the University

The principal Officers of the University, responsible for the overall administration, academic activities, and development work in the University.

Sr. No.	Post	Name	Phone
1.	Vice-Chancellor	Prof. Dr. Tauha Hussain Ali	022-2771197
2.	Pro-Vice-Chancellor Main Campus, Jamshoro	Prof. Dr. Aneel Kumar	022-2771360
3.	Pro-Vice-Chancellor MUET, SZAB Campus, Khairpur Mir's	Prof. Dr. Dur Muhammad Pathan	0243-9280312
4.	Dean, Faculty of Electrical, Electronic and Computer Engineering	Prof. Dr. Mukhtiar Ali Unar	022-2771558
5.	Dean, Faculty of Mechanical Process and Earth Engineering	Prof. Dr. Khanji Harijan	022-2771312
6.	Dean, Faculty of Science, Technology and Humanities	Prof. Dr. Abdul Sattar Larik	022-2771352
7.	Dean, Faculty of Architecture and Civil Engineering	Prof. Dr. Rizwan Ali Memon	022-2771638
8.	Registrar	Mr. Lachman Das Sootahar	022-2771371
9.	Director Finance	Mr. Zeeshan Ahmed Memon	022-2771442
10.	Director Admissions	Mr. Saleem Siddiqui	022-2771704
11.	Director Services	Mr. Qazi Riaz Hassan Qureshi	022-2109073
12.	Director, Works & Strategic Planning	Mr. Saghir Ahmed Memon	022-2771311
13.	Director, ICPC	Engr. Saleem Ahmed Memon	022-2772250
14.	Controller of Examinations	Sayed Muhammad Raza Shah	022-2771631
15.	Director, MIS	Syed Muhammad Raza Shah	022-2771275
16.	Librarian	Mr. Zahid Hussain Sahito	022-2771169
17.	Director, Sports	Mr. Abdul Ghaffar Chandio	022-2109103
18.	Resident Auditor	Mr. Sagheer Ahmed Chandio	022-2772285
19.	Advisor Students' Affairs	Prof. Dr. Tanweer Hussain	022-2772251
20.	Provost (Hostels)	Mr. Ghulam Abbas Mahar	022-2772299

2. FACULTY OF ARCHITECTURE AND CIVIL ENGINEERING

2.1 Department of Architecture

2.1.1 The Department

The complexity of modern buildings calls for the effective combination of skill and talent in the best interest of Architecture & Environment. The Department of Architecture offers a comprehensive curriculum in a modern field that encompasses City Planning, including environmental considerations for both urban and suburban settings. Studies in Architecture are related to the design and construction of houses and other building types, keeping in view the appearance, comfort, usability, optimization between expenditure, facilities, and environmental friendliness.

The Department of Architecture offers a full-time, five-year course leading to the degree of "Bachelor of Architecture (B.Arch.)". The syllabus of the subjects is designed in such a way as to acquaint the students with basic planning, aesthetics, design, and drawing of plans and specifications for various buildings. At the same time, some subjects concerning basic Architectural design, including Computer-Aided Design (CAD) and socio-economic design, are also included in the curriculum. Teachings through lectures in the classrooms are adequately supported by studios and laboratory work.

The Department of Architecture has a well-organized student-based society named Mehran Architecture Student's Society (MASS). The society is actively engaged in conducting several curriculum and extracurricular activities such as seminars, workshops, training, debates, and competitions.

2.1.2 The Faculty

Chairman of the Department:
Mr. Moazam Ali Pathan
Phone: 022-2772293 /**Ext.:** 3100

Assistant Professors:	**Lecturers:**	**Contractual Lecturers:**
Mr. Moazam Ali Pathan M.Arch., Pakistan.	**Ms. Fareeda Mughari** B.Arch., Pakistan.	**Mr. Sajidullah Ghirano** M. Arch., Pakistan
Mr. Irfan Ahmed Memon M.Arch., Pakistan.	**Mr. Abdul Waheed Memon** M.Arch., Pakistan.	**Ms. Rida Hussain** M.Arch., Pakistan
Dr. Sabeen Qureshi PhD, Malaysia.	**Ms. Naheed Rohail** M.E, Pakistan.	**Ms. Irum Arisar** M. Arch., Pakistan
Dr. Saima Kalwar PhD, Malaya	**Mr. Abdul Salam Talpur** B.Arch., Pakistan.	**Ms. Mahjabeen Memon** M.Arch., Pakistan
Ms. Raheela Laghari M.E, Pakistan.	**Ms. Firdous Parveen** B.Arch., Pakistan.	**Studio Architects:** **Mr. Jam Zeeshan Ali Korejo** M.Arch., Pakistan.
Ms. Shahnila Ansari M.E, Pakistan.		

2.1.3 Laboratory Facilities

The numbers of laboratories have been established in the department, which includes:

1. Model Making Lab
2. Computer Lab
3. Ceramics Lab
4. Surveying Lab
5. Environmental Lab

The Seminar Hall and Seminar Library have also been established to conduct seminars and provide reference facilities in the department. In addition, frequent field visits are organized for the students to keep them abreast of the latest design and architectural practices in the country.

During the 5th/Final Year, the students are also given a project/dissertation, mostly for a building, in which they are expected to prepare designs, drawings, and a project report. The degree of B. Arch. is awarded to the students after they have fulfilled all the requirements for the degree, including passing all examinations and tests for practical work.

2.1.4 The Courses

	Course Code	Subject Name	Credit Hours	
			Theory	Practical
1st Semester	AR111	Foundation Studio-I	02	04
	AR112	Visual Communication	02	04
	AR113	Sociology	02	00
	SS111	Islamic Studies/Ethics	02	00
	PS106	Pakistan Studies	02	00
		Total	**10**	**08**

	Course Code	Subject Name	Credit Hours	
			Theory	Practical
2nd Semester	AR121	Foundation Studio-II	02	04
	AR122	Building Materials-I	02	00
	AR123	Model Making	00	03
	CE135	Surveying	02	01
	EN101	Functional English	03	00
		Total	**09**	**08**

	Course Code	Subject Name	Credit Hours	
			Theory	Practical
3rd Semester	AR211	Architectural Design-I	02	04
	AR212	Building Materials-II	02	00
	AR213	Physical Environmental Studies	02	00
	AR214	History of Art & Architecture-I	03	00
	AR215	Computer Aided Design-I	00	02
	CE250	Statics	02	00
		Total	**11**	**06**

	Course Code	Subject Name	Credit Hours	
			Theory	Practical
4th Semester	AR221	Architectural Design-II	02	04
	AR222	Building Construction-I	02	00
	AR223	Building Services-I	03	00
	AR224	History of Art & Architecture-II	03	00
	AR225	Computer Aided Design-II	00	02
	AR226	Structure in Architecture-I	02	00
		Total	**12**	**06**

	Course Code	Subject Name	Credit Hours	
			Theory	Practical
5th Semester	AR311	Architectural Design-III	02	04
	AR312	Building Construction-II	02	00
	AR313	Building Services-II	02	00
	AR314	History of Art & Architecture-III	03	00
	AR315	Computer Aided Design-III	00	02
	AR316	Structure in Architecture-II	02	00
		Total	**11**	**06**

	Course Code	Subject Name	Credit Hours	
			Theory	Practical
6th Semester	AR321	Architectural Design-IV	02	04
	AR322	Working Drawings & Details-I	00	03
	AR323	Landscape Design	02	01
	AR324	Muslim Architecture	02	00
	AR325	Theories & Criticism in Architecture	02	00
	AR326	Structure in Architecture-III	02	00
		Total	**10**	**08**

	Course Code	Subject Name	Credit Hours	
			Theory	Practical
7th Semester	AR411	Architectural Design-V	02	04
	AR412	Working Drawings & Details-II	00	03
	AR413	Interior Design	02	01
	AR414	Architecture in Pakistan	02	00
	AR415	Building Economics	02	00
	AR416	Structure in Architecture-IV	02	00
		Total	**10**	**08**

	Course Code	Subject Name	Credit Hours	
			Theory	Practical
8th Semester	AR421	Architectural Design-VI	02	04
	AR422	Urban Planning & Design	03	00
	AR423	Energy Efficient Architecture	03	00
	AR424	Architectural Conservation	02	01
	AR425	Architectural Research Methods	03	00
		Total	**13**	**05**

	Course Code	Subject Name	Credit Hours	
			Theory	Practical
9th Semester	AR511	Architectural Design-VII	02	04
	AR512	Research & Development project –I (Thesis Report)	00	05
	AR513	Sustainable Architecture	03	00
	CE510	Quantity Surveying & Accounting	03	00
		Total	**08**	**09**

	Course Code	Subject Name	Credit Hours	
			Theory	Practical
10th Semester	AR521	Research & Development Project-II (Thesis Project)	00	10
	AR522	Disaster Management	02	00
	AR523	Professional Practice & Management	02	00
		Total	**04**	**10**

2.1.5 Career Opportunities

Plenty of jobs available in government organization and private organizations / firms and a lot of opportunities to start once self-business firm.

2.2 Department of Civil Engineering

2.2.1 The Department

Civil Engineering is the process of directing and controlling natural resources for the use and benefit of humankind through the construction of various structures. It applies engineering practices to the planning and designing, construction, operation, and maintenance of structures such as buildings, roads, bridges, railways, industries, airports, irrigation schemes, docks, harbors, dams, flood control systems, water supply, sewerage disposal schemes, etc. Thus, civil engineering is the largest and broadest discipline of engineering.

The Department of Civil Engineering is the biggest department of the University in terms of infrastructure, student enrollment, and faculty. It provides essential and advanced engineering education according to the requirements of the field. All the classrooms of the department are equipped with audio-visual facilities, and the laboratories have the latest equipment and tools. Highly experienced faculty and technical staff are available to supervise the laboratories.

The Department of Civil Engineering has successfully adopted an Outcome Based Education (OBE) system to meet the criteria of the Pakistan Engineering Council (PEC) as per the Washington Accord. All the class tests, class and field assignments, and semester exams are assessed based on specific course learning objectives associated with each course.

The designed curriculum covers a wide range of various sub-disciplines of the department, including Structural Engineering, Concrete Technology, Geotechnical Engineering, Foundation Engineering and Design, Irrigation and Drainage Engineering, Transportation Engineering, Environmental Engineering, Construction Engineering, Construction Project Management, etc. The courses fulfill the present demand of the construction industry as they are designed by involving industrial experts. Various subjects require tutorials and laboratory work, for which adequate facilities and equipment are available.

The student-centric approach of the department focuses on outcomes from individual students by the end of the course. Final year students also explore various specialization fields through the Final Year Project assigned to them. The Final Year Projects may be specific to a particular branch of Civil Engineering, such as Structural Engineering, Geotechnical Engineering, Irrigation Engineering, Highway Engineering, Construction Management, and Environmental Engineering, etc.

Additionally, students go on field visits to Civil Engineering projects, such as water distribution structures, bridge and building structures, geotechnical works, etc. During the summer vacations, students are involved in various Civil Engineering projects in the form of internships in organizations such as WAPDA, NESPAK, NHA, Works and Services Department, Irrigation Department, etc. These internships help them gain practical engineering knowledge. The Survey Camp is conducted, which consists of surveying activities such as leveling, traversing, and detailing, and also introduces the usage of the latest technologies of surveying tools in civil engineering projects.

The Department of Civil Engineering has a well-organized student-based society named Mehran University Civil Engineers' Society (MUCES). The society is actively engaged in conducting several curriculum and extracurricular activities, such as seminars, workshops, training, short courses, sports events, debates, competitions, etc.

The Department of Civil Engineering also offers various postgraduate degrees such as Master of Engineering (M.E.) and Doctor of Philosophy (PhD) in the following fields:

1. Civil Engineering
2. Structural Engineering
3. Geotechnical and Highways Engineering
4. Construction Management

Vision of the Department:
The vision of the Department of Civil Engineering is to become an institution that provides state-of-the-art education to aspiring civil engineering graduates and to evolve as a research-based solution provider to the civil engineering industry.

Mission of the Program:
The undergraduate program of the Department of Civil Engineering aims to develop highly competent professionals, preparing them for entry-level positions in civil engineering, further study in graduate school, lifelong learning, and societal leadership. This is achieved by providing a dynamic learning environment that emphasizes problem-solving skills, teamwork, communication, and leadership skills.

Program Educational Objectives (PEOs):
i. Solve civil engineering problems faced by the industry by utilizing their theoretical, technical, and professional knowledge.
ii. Function in team-oriented activities considering the societal, environmental, and economic impacts.
iii. Continue professional growth through ethical, moral, and learning attitude.

2.2.2 The Faculty

Chairman of the Department:
Prof. Dr. Khalifa Qasim Laghari
Phone: 022-2772254-72 /**Ext.:**7100

PROFESSORS:	**ASSISTANT PROFESSORS:**	
Dr. Tauha Hussain Ali PhD, Australia.	**Mr. Arshad Ali Memon** M.E, Pakistan.	**Mr. Anees Raja** (On Study Leave Abroad)
Dr. Aneel Kumar PhD, Japan.	**Mr. Samar Hussain Rizvi** M.E, Pakistan.	**Dr. M. Rehan Hakro** PhD, Pakistan.
Dr. Rizwan Ali Memon PhD, Pakistan.	**Mr. Azizullah Jamali** M.E, Pakistan.	**Mr. Lal Chand** M.E, Pakistan.
Dr. Khalifa Qasim Laghari PhD, Pakistan.	**Mr. Amjad Ali Pathan** M.E, Pakistan.	**Mr. Shankar Lal Meghwar** (On Study Leave Abroad)
Dr. Nafees Ahmed Memon PhD, Romania.	**Mr. Masroor Ali Jatoi** M.E, Pakistan.	**Mr. Muhammad Ali** (On Study Leave Abroad)
Dr. Ashfaque Ahmed Memon PhD, Pakistan.	**Mr. Abdul Raqeeb Memon** M.E, Pakistan.	**Mr. Anees Ahmed Vighio** (On Study Leave Abroad)
Dr. Agha Faisal Habib PhD, United Kingdom.	**LECTURERS:** **Mr. Farhan Qureshi** M.E, Pakistan.	**Mr. Manoj Kumar** M.E, Pakistan.
Dr. Zaheer Ahmed Almani PhD, United Kingdom.	**Mr. Ali Murtaza Phull** (On Study Leave Abroad)	**Mr. Rabinder Kumar** M.E, Malaysia.
Dr. Fareed Ahmed Memon PhD, Malaysia.	**Dr. Ali Raza Khoso** PhD, Malaysia.	**Mr. Hafiz Usama Imad** M.E, Pakistan.
Dr. Naeem Aziz Memon PhD, United Kingdom.	**Mr. Fahad Ali Shaikh** M.E, Pakistan.	**Mr. Abdul Qudoos Malano** M.E, Pakistan.
Dr. Ashfaque Ahmed Pathan PhD, Pakistan.	**Mr. Fida Hussain Siddiqui** (On Study Leave Abroad)	**Mr. Izat Ali Sahito** M.E, Pakistan.

2.2.3 Laboratory Facilities

The Department of Civil Engineering has following laboratories. All the laboratories are well equipped with advanced and conventional testing equipment.

1. Soil Mechanics Laboratory
2. Highway Engineering Laboratory
3. Engineering Geology Laboratory
4. Concrete Laboratory
5. Material Testing Laboratory
6. Engineering Mechanics Laboratory
7. Environmental Engineering Laboratory
8. Hydraulics Laboratory
9. Software laboratory
10. Surveying Laboratory

2.2.4 Library Facilities:

The Department of Civil Engineering has a well-furnished Seminar library. The seminar library has a wide collection of about 1100 books encompassing all the areas related to the field of Civil Engineering Technology.

2.2.5 The Courses

	Course Code	Subject	Credit Hours	
			Theory	Practical
1st Semester	CE102	Geometrical Drawing	02	01
	CE106	Civil Engineering Materials	03	01
	CE118	Applied Physics	03	01
	ENG101	Functional English	03	00
	CS146	Introduction to Computing &Programming	02	01
		Total	**13**	**04**

	Course Code	Subject	Credit Hours	
			Theory	Practical
2nd Semester	CE113	Engineering Surveying	03	01
	MTH108	Applied Calculus	03	00
	IS111/SS104	Islamic Studies / Ethics	02	00
	PS106	Pakistan Studies	02	00
	CE122	Civil Engineering Drawing	02	01
	CE126	Engineering Geology	02	01
		Total	**14**	**03**

	Course Code	Subject	Credit Hours	
			Theory	Practical
3rd Semester	CE207	Railways and Waterways Engineering	03	00
	CE212	Mechanics of Solids-I	02	01
	MTH204	Differential Equations, Fourier Series and Laplace	03	00
	CE227	Fluids Mechanics and Hydraulics	03	01
	ENG201	Communication Skills	02	00
	CE222	Theory of Structures	02	00
		Total	**15**	**02**

	Course Code	Subject	Credit Hours	
			Theory	Practical
4th Semester	CE241	Applied Hydraulics	03	01
	CE231	Construction Engineering	03	00
	CE251	Mechanics of Solids-II	03	00
	MTH206	Complex Analysis, Statistical Methods and Probability	03	00
	CE203	Geo Informatics	01	01
	CE246	Architectural and Town Planning	02	00
		Total	**16**	**02**

	Course Code	Subject	Credit Hours	
			Theory	Practical
5th Semester	MTH303	Linear Algebra and Numerical Methods	03	01
	CE306	Structural Analysis	03	00
	CE346	Concrete Technology	02	01
	CE363	Hydrology	02	00
	CE355	Project Management	02	00
	CE351	Environmental Engineering-I	02	01
		Total	**14**	**03**

	Course Code	Subject	Credit Hours	
			Theory	Practical
6th Semester	CE366	Geometric Design of Highways and Airports	02	00
	CE326	Soil Mechanics	03	01
	CE338	Reinforced Concrete Design-I	03	00
	CE316	Steel Structures	03	00
	ENG301	Technical & Scientific Writing	02	00
	CE341	Quantity Surveying and Estimation	03	00
		Total	**16**	**01**

	Course Code	Subject	Credit Hours	
			Theory	Practical
7th Semester	CE407	Reinforced Concrete Design-II	03	01
	CE411	Geotechnical Engineering	03	01
	CE451	Traffic Engineering and Pavement Design	02	01
	CE422	Professional Ethics	02	00
	CE423	Engineering Economics	02	00
	CE498	Final Year Project-I	00	03
		Total	**12**	**06**

	Course Code	Subject	Credit Hours	
			Theory	Practical
8th Semester	CE426	Foundation Engineering	03	00
	CE443	Irrigation and Drainage Engineering	03	01
	CE438	Construction Planning & Management	03	00
	CE431	Environmental Engineering-II	03	00
	CE450	Community Services	00	00
	CE499	Final Year Project-II	00	03
		Total	**12**	**04**

2.2.6 Career Opportunities

The bachelor's in civil engineering program at MUET, Jamshoro provides a clear route to a professional career in the field of Civil Engineering. Our graduates can pursue careers in many different fields and organizations related to Civil Engineering Projects and can also establish their own businesses. Typical employment sectors for civil engineers include consulting firms, contractors, local authorities, public sector departments (Buildings, Highways, Railways, Airports, Irrigation, Water and Power, Ports, etc.), non-profit and research organizations.

Graduates find diverse work as civil engineering technologists. Potential positions include Civil Engineering Design Technologist, Traffic Technologist, Building Inspector, Material Testing Technologist, Estimator, and Construction Project Coordinator.

Typical employment sectors for civil engineering technologists include consulting firms, contractors, local authorities, public sector departments (Buildings, Highways, Railways, Airports, Irrigation, Water and Power, Ports, etc.), non-profit and research organizations.

2.3 Department of City & Regional Planning

2.3.1 The Department

To meet the ever-increasing demand for qualified Urban and Regional planners, to provide a better and pollution-free living environment for the people, to ensure planned growth, and to control and guide future planning activities in urban and rural areas of the country, a full-time four-year course is offered in the field of City and Regional Planning. The program aims to produce Urban and Regional Planners with interdisciplinary skills to meet the demands of rapidly increasing cities and achieve sustainable development and planning millennium goals.

The Department of City & Regional Planning has played a pivotal role not only in Town Planning Education but also in the development of Urban Research in the country. Upon successful completion of all requirements for the degree, students will be awarded the degree of Bachelor of City and Regional Planning (B.CRP). Four batches were admitted in the years 2019, 2020, 2021, and 2022, respectively. The Department also offers the degrees of Masters (M.CRP) and Doctor of Philosophy (Ph.D.) in the field of City and Regional Planning

Vision of the Department

The Department's vision is to produce quality urban and regional planners and bring planned development within urban and rural areas of the country, specifically Sindh Province, to develop quality research activities that can foster the growth of the faculty, professionals, and students.

Mission of the Program

This is the only Department in Sindh Province that disseminated the knowledge of City and Regional Planning. Therefore, Department's mission is to fulfill the demand of urban and regional planners for public and private sector organizations that could play their role in the planned development of the country.

Program Educational Objectives (PEOs)

The following are the PEOs of the program:

i. To produce quality urban planners.
ii. To flourish the urban and regional planning research activities.
iii. To bring planned development within urban settlements and periphery.
iv. To provide world-class advanced education knowledge and skills in the field of City and Regional Planning.
v. To conduct outstanding technical basis and applied research in the field of City and Regional Planning profession.
vi. To provide professionals in various streams of specializations in City and Regional Planning.

2.3.2 The Faculty

Chairman of the Department:
Prof. Dr. Mir Aftab Hussain Talpur
Phone: +92-22-2772250-72 / **Ext.:**7200

PROFESSORS: **Dr. Mir Aftab Hussain Talpur** PhD, Malaysia. **Dr. Imtiaz Ahmed Chandio** PhD, Malaysia. **ASSOCIATE PROFESSORS:** **Dr. Saima Kalwar** PhD, Malaysia.	**Dr. Irfan Ahmed Memon** PhD, Malaysia. **ASSISTANT PROFESSORS:** **Mr. Fahad Ahmed Shaikh** M.CRP, Pakistan. **Dr. Noman Sahito** PhD, China. **(on study leave)** **Dr. Muhammad Yousif Mangi** PhD, China	**LECTURERS:** **Mr. Taufiq Ahmed Qureshi** B.CRP, Pakistan **Mr. Ubedullah Soomro** M.CRP., Pakistan. **Mr. Shahbaz Khan** M.CRP., Pakistan.

2.3.3 Laboratory Facilities

The following laboratory facilities are available in the Department:

1. Computer Lab.
2. Graphic & Model Making Lab.
3. Photographic Developing & Printing Lab.
4. Surveying Lab.
5. Drawing Studio

2.3.4 The Courses

	Course Code	Subject Name	Credit Hours	
			Theory	Practical
1st Semester	CRP112	Introduction to Town Planning	03	01
	CRP113	Technical Drawing	02	01
	MATH110	Calculus & Statistical Methods	03	00
	IS111/SS104	Islamic Studies / Ethics	02	00
	PS106	Pakistan Studies	02	00
	ENG101	Functional English	03	00
		Total	**15**	**02**

	Course Code	Subject Name	Credit Hours	
			Theory	Practical
2nd Semester	CRP124	History of Cities and Urban Planning	03	00
	CRP125	Planning Theory	02	00
	CRP126	Architectural Design for Planners	02	01
	CRP127	Model Making	00	02
	CE110	Surveying-I	03	01
	MTH114	Planning Data Analysis	03	00
		Total	**13**	**04**

	Course Code	Subject Name	Credit Hours	
			Theory	Practical
3rd Semester	CRP214	Building Construction	2	1
	CRP215	Transportation Engineering	3	1
	CRP216	Computer Aided Design and Modeling	2	1
	CRP217	Social Town Planning	2	0
	CE201	Surveying-II	3	1
	ENG201	Communication Skills	2	0
		Total	**14**	**04**

	Course Code	Subject Name	Credit Hours	
			Theory	Practical
4th Semester	CRP225	Housing	2	0
	CRP226	Transportation Planning	3	1
	CRP227	Urban Design and Landscape Planning	3	1
	CRP228	Site Planning	2	1
	CRP229	Planning Surveys and Data Analysis	2	1
	CRP230	Rural Planning	2	0
		Total	**14**	**04**

	Course Code	Subject Name	Credit Hours	
			Theory	Practical
5th Semester	CRP316	Planning of New Towns	2	1
	CRP317	Regional Planning	3	1

	CRP318	Public Participation & Community Development	2	0
	EE314	Environmental Engineering	3	1
	ENG301	Technical and Scientific Writing	2	0
	CS331	Information and Database Management	2	1
		Total	**14**	**04**

	Course Code	Subject Name	Credit Hours	
			Theory	Practical
6th Semester	CRP325	Research Methods	3	0
	CRP326	Urban Geography	3	0
	CRP327	Introduction to GIS	2	1
	CRP328	Infrastructure Planning and Management	2	0
	CRP329	Land Use and Building Control	2	0
	EE315	Environmental Planning and Management	3	1
		Total	**15**	**02**

	Course Code	Subject Name	Credit Hours	
			Theory	Practical
7th Semester	CRP417	Master Planning-I	3	1
	CRP418	GIS Applications in Planning	2	1
	CRP419	Project Planning and Management	2	1
	CRP420	Professional Planning Practice	2	0
	CRP421	Planning Legislation	2	0
	CRP498	Final Year Project- I	0	03
		Total	**11**	**06**

	Course Code	Subject Name	Credit Hours	
			Theory	Practical
8th Semester	CRP427	Master Planning-II	03	02
	CRP428	Urban Economics	03	00
	CRP429	Estate Management	03	00
	CRP430	Hazards and Disaster Risk Management	02	00
	CRP499	Final Year Project-II	00	03
		Total	**11**	**05**

2.3.5 Career Opportunities

Public & Semi-public Sector Jobs

After qualifying, our graduates can serve the nation as Professional Planners in public or semi-public sector organizations. Currently, our graduates are working in prestigious organizations such as the Capital Development Authority (CDA) in Islamabad, Malir Development Authority (MDA) in Karachi, Ministry of Planning and Development (Housing and Physical Planning), Ministry of Local Government including Sindh Building Control Authority (SBCA), Ministry of Communication, Planning Commission of Pakistan, Ministry of Environment, Military Engineering Services (MES) of Pakistan, NESPAK, Urban Unit, Sindh Master Planning Authority, and other nonprofit research organizations.

Private Sector Jobs

A significant number of our CRP graduates are also employed in various private sector organizations, including Bahria Town Karachi, Defense Housing Authority (DHA) in Karachi, OPP-Karachi, Osmani & Co., Engineering Associates, CG Consultants, and Prop Shore (graana.com), among others.

2.4 Institute of Environmental Engineering and Management

2.4.1 The Institute

With increased awareness of environmental issues at the global and national levels, environmental engineering has emerged as a rapidly growing discipline with vast opportunities for future advancement. The Institute of Environmental Engineering & Management (IEEM) has been established to generate new ideas and discover innovative solutions to address local, regional, and global environmental challenges. In Pakistan, the implementation of environmental standards is a priority, with Environmental Protection Agencies (EPAs) in the five provinces and the federal government being responsible for enforcing these standards. This opens up numerous opportunities for qualified experts in Environmental Engineering. The scope of an Environmental Engineer extends beyond the community and regional levels to a global scale.

The Bachelor of Engineering (B.E.) program offered by the Institute is based on a comprehensive theoretical foundation and rigorous practical training, supplemented by field visits and industrial internships. The curriculum of the B.E. degree program covers a wide range of subjects relevant to the field of environmental engineering. The faculty members of the Institute of Environmental Engineering & Management (IEEM) are highly qualified, holding PhD and M.E. degrees in their respective areas of expertise.

Mission of the Program

Environmental Engineering program imparts high-quality education with the vision of producing engineers to provide innovative solutions to the environmental challenges and nurture personal growth skills as creative and entrepreneurial minds along with professional ethics to have successful career.

Program Educational Objectives (PEOs)

Program educational objectives are based on the needs of the program's constituencies and are linked to student learning outcomes and assessment process. The program needs to demonstrate a well-defined and published program mission which are based on stakeholder's needs. After graduation, our students will be able to:

i. Apply engineering knowledge to design, build and improve environmental engineering-based systems to address the technical and socio-economic problems.
ii. Perform their professional and societal obligation by promoting public health, safety, and welfare and address the environmental issues through their services and practices.
iii. Work effectively as a member or lead multidisciplinary teams to serve the community for professional development and continual improvement.

2.4.2 The Faculty

Director of the Institute:
Prof. Dr. Abdul Razzaque Sahito
Phone: 022-2772250-73/ **Ext.:**7301

Professors: **Dr. Abdul Razzaque Sahito** PhD, Pakistan. **Dr. Sheeraz Ahmed Memon** PhD, Korea **Associate Professors:** **Dr. Muhammad Safar Korai** PhD, Pakistan	**Assistant professors:** **Engr. Azizullah Channa** M.E, Pakistan (On Study Leave) **Engr. Maryam Arain** M.E, Pakistan (On Study Leave) **Lecturers:** **Engr. Sajid Hussain Mangi** M.E, Pakistan (On Study Leave)	**Engr. Barkatullah Kandhro** M.E, Pakistan (On Contract) **Engr. Abdul Aziz Chan** M.E, Pakistan (On Contract) **Engr. Eram Abdullah** M.E, Pakistan (On Contract) **Engr. Waheed Ali Khokhar** M.S., Pakistan (On Contract)

2.4.3 Laboratory Facilities

The department is also equipped with the laboratories are listed below, having advanced and latest instruments.

1. Hi-Tech Laboratory
2. Water & Soil Pollution Control Laboratory
3. Solid Waste Management Laboratory
4. Air & Noise Pollution Control Laboratory
5. GIS & Computer Laboratory
6. Thermo Laboratory
7. Microbiology Laboratory

2.4.4 The Courses

	Course Code	Subject Name	Credit Hours	
			Theory	Practical
1st Semester	EE101	Introduction to Environmental Engineering	3	0
	IS111/SS104	Islamic Studies/Ethics	2	0
	PS106	Pakistan Studies	2	0
	CE137	Surveying	3	1
	ENG101	Functional English	3	0
	EE111	Environmental Physics	3	0
		Total	**16**	**01**

	Course Code	Subject Name	Credit Hours	
			Theory	Practical
2nd Semester	CS146	Introduction to Computing and Programming	2	1
	MTH108	Applied Calculus	3	0
	EE122	Environmental Chemistry	3	1
	CE154	Fluid Mechanics for Environmental Engineers	3	1
	EE132	Environmental Microbiology	2	1
		Total	**13**	**04**

	Course Code	Subject Name	Credit Hours	
			Theory	Practical
3rd Semester	EE204	Ecological Management	2	0
	CE277	Engineering Drawing Practices	2	1
	MTH236	Linear Algebra & Analytical Geometry	3	0
	EL	Electrical Technology for Environmental	2	1
	MT250	Engineering Materials and Environment	2	0
	EE205	Water Supply Engineering & Treatment	3	1
		Total	**14**	**03**

	Course Code	Subject Name	Credit Hours	
			Theory	Practical
4th Semester	EE242	Environmental Economics	2	0
	EE272	GIS & Remote Sensing	2	1
	MTH212	Differential Equations & Fourier Series	3	0
	EE292	Computer Aided Design for Environmental Engineers	0	1
	CE462	Soil Mechanics for Environmental Engineers	2	1
	EE234	Wastewater Engineering & Treatment	3	1
		Total	**12**	**04**

	Course Code	Subject Name	Credit Hours	
			Theory	Practical
5th Semester	ENG-301	Technical & Scientific Writing	2	0
	MTH319	Numerical Analysis	3	1
	EE331	Environmental Biotechnology	2	1
	ME391	Applied Thermodynamics	3	1
	ENT	Entrepreneurship	2	0
	EE371	Climate Change and Disaster Management	2	0
		Total	**14**	**03**

	Course Code	Subject Name	Credit Hours	
			Theory	Practical
6th Semester	ME390	Renewable and Emerging Energy Technologies	3	1
	EE313	Solid Waste Engineering & Management	3	1
	EE381	Professional Ethics	2	0
	MTH317	Statistics and Probability	3	0
	EE326	Air and Noise Pollution Control Engineering	3	1
		Total	**14**	**03**

	Course Code	Subject Name	Credit Hours	
			Theory	Practical
7th Semester	EE494	Natural Resources Management	3	0
	EE414	Modelling of Environmental Systems	3	1
	CE471	Project Planning & Management	3	0
	EE485	Cleaner Production Techniques	2	0
	EE466	Hazardous Waste Risk Assessment & Management	3	0
	EE498	Final Year Project-I	0	3
		Total	**14**	**04**

	Course Code	Subject Name	Credit Hours	
			Theory	Practical
8th Semester	EE454	Environmental Impact Assessment	3	0
	EE426	Occupational Health, Safety & Environment	3	0
	EE435	Environmental Management System & Standards	2	0
	CE472	Water Resource Engineering and Management	3	1
	EE405	Community Services	0	0
	EE499	Final Year Project–II	0	3
		Total	**11**	**04**

2.4.5 Career Opportunities

Environmental Engineering undergraduate and postgraduate programs offer you opportunities to work in any aspect of environmental protection. The major areas include air pollution control; hazardous waste management; toxic materials control; water supply and wastewater treatment; solid waste management and disposal; industrial hygiene; radiation protection; health; safety and environment (HSE), Environmental Consultant, environmental impact assessment (EIA); cleaner production; natural resource management; public health and land pollution control. Environmental engineers are also leaders of the development, planning, and implementation of environmental sustainability principles, including waste reduction, alternative energy, and life-cycle analysis. Within each of these major categories, there are also many subcategories. Environmental Engineering provides opportunities as to the type of work, for whom you work, and where you work. A career in Environmental Engineering offers a comfortable salary, job security, and considerable personal satisfaction.

3. FACULTY OF ELECTRICAL, ELECTRONICS & COMPUTER SYSTEMS ENGINEERING

3.1 Department of Biomedical Engineering

3.1.1 The Department

Mehran University of Engineering and Technology has the distinction of being the first public sector university in Pakistan to establish the Biomedical Engineering Department. The program was initiated in 2003 and, since 2011, the Department of Biomedical Engineering has been housed in a separate, spacious building under the guidance of young, dynamic, and visionary leadership. As a progressive educational unit of Mehran UET, the department plays a vital role in producing engineers who have a broad range of study options in various fields, including Medical Imaging, Biomedical Instrumentation, Diagnostics, Biotechnology, Nanotechnology, Computer Science, Electronics, Telemedicine, and other related areas.

Vision of the Department

The Department of Biomedical Engineering at MUET aims to provide the highest quality learning and research opportunities in the field of Biomedical Engineering. The department's objective is to achieve excellence and explore engineering principles that can be applied to solve problems in the medical and biological sciences.

Mission of the Program

To produce quality Biomedical engineers with high intellect and broad vision, capable of meeting the current and future needs of the human race in medical diagnosis, treatment, prosthesis, and rehabilitation through research and professional practice

Program Educational Objectives (PEOs) of the Bachelor of Biomedical Engineering Program revolve around producing engineers with the capabilities to:

i. Work in a multidisciplinary field at the interface of engineering, medicine, and biology to design sustainable healthcare solutions.

ii. Lead as an entrepreneur / a manager to contribute towards knowledge-based economy in the field of healthcare.

iii. Independently master new knowledge and technologies, as well as successfully engage in post-graduate studies and research in biomedical engineering and allied fields.

3.1.2 The Faculty

Chairman of the Department:
Dr. Abdul Qadir Ansari
Phone: 022-2772279

PROFESSOR:	ASSISTANT PROFESSORS:	LECTURERS:
Dr. Ahsan Ahmad Ursani PhD, France.	**Engr. N.P. Chowdhry** M.S, United Kingdom.	**Engr. Syed Faisal Ali** B.E, Pakistan.
ASSOCIATE PROFESSORS: **Dr. Syed Amjad Ali Shah** PhD, China.	**Dr. Muhammad Arif** PhD, United Kingdom (On leave abroad)	**Engr. Salman Afridi** M.E, Pakistan.
Dr. Abdul Qadir Ansari PhD, Pakistan	**Engr. Rabia Chandio** M.E, Pakistan	**Engr. Kandeel Fatima** M.E, Pakistan.
Dr. M. Aamir Panhwar PhD, China.	**Dr. Maheen Mahwish Surahio** PhD, China.	

3.1.3 Laboratory Facilities

Biomedical Engineering department has the following five well-equipped laboratories:

1. Biomedical Instrumentation lab
2. Biomedical Sciences Laboratory
3. Biomedical Computing Laboratory
4. Biomedical Engineering Laboratory
5. Telemedicine and Research Laboratory
6. Nano-medicine Research Laboratory

1.1.4 The Courses

	Course Code	Name of Course	Credit Hours	
			Theory	Practical
1st Semester	EL101	Basic Electrical Engineering	2	1
	BM102/ MTH107	Basic Biology/ Basic Mathematics	3	0
	CS145	Introduction to Computing	3	1
	BM111	Applied Physics	3	1
	BM121	Applied Chemistry	2	1
		Total	**13**	**4**

	Course Code	Name of Course	Credit Hours	
			Theory	Practical
2nd Semester	ES133	Basic Electronics	3	1
	EL201	Electrical Circuits and Systems	3	1
	BM131	Biophysics	3	0
	MTH102	Applied Calculus	3	0
	PS106	Pakistan Studies	2	0
	IS111/ SS104	Islamic Studies / Ethics	2	0
		Total	**16**	**2**

	Course Code	Name of Course	Credit Hours	
			Theory	Practical
3rd Semester	BM222	Physiology I	3	1
	ES262	Electronic Circuit Design	3	1
	BM211	Biochemistry	2	1
	BM232	Human Anatomy	3	1
	MTH236	Linear Algebra and Analytical Geometry	3	0
		Total	**14**	**4**

	Course Code	Name of Course	Credit Hours	
			Theory	Practical
4th Semester	MTH224	Differential Equations	3	0
	BM280	Computer Aided Drawing	0	1
	BM241	Physiology II	2	0
	ES285	Electronic Instrumentation	3	1
	ES273	Digital Electronics	3	1
	BM290	Radiation and Environment	2	0
	ENG206	Communication Skills	2	0
		Total	**15**	**3**

	Course Code	Name of Course	Credit Hours	
			Theory	Practical
5th Semester	MT310	Biomaterials	3	1
	BM311	Biomedical Instrumentation I	3	1
	ES352	Microprocessor and Microcontroller	3	1
	MTH315	Statistics and Probability	3	0
	MTH306	Complex Variable and Transforms	3	0
		Total	**15**	**3**

	Course Code	Name of Course	Credit Hours	
			Theory	Practical
6th Semester	TL372	Signals and Systems	3	1
	BM331	Biomedical Instrumentation II	3	0
	MTH336	Numerical Analysis and Computer Applications	3	1
	ENG302	Technical Report Writing and Presentation Skills	2	0
	BM320	Healthcare Information Systems and Hospital Management	2	0
		Total	**13**	**2**

	Course Code	Name of Course	Credit Hours	
			Theory	Practical
7th Semester	BM402	Digital Signal and Image Processing	3	1
	BM411	Biomechanics	3	1
	ES412	Control Systems	3	1
	BM421	Modeling and Simulation	2	1
	BM498	Final Year Project-I	0	3
		Total	**11**	**7**

	Course Code	Name of Course	Credit Hours	
			Theory	Practical
8th Semester		Economics for Technopreneurs	2	0
	BM442	Medical Imaging	3	0
	BM470	Ethics for Biomedical Engineers	2	0
	BM462	Emerging Trends in Biomedical Engineering	3	0
	BM480	Principles of Food Processing and Preservation	2	0
	BM499	Final Year Project-II	0	3
		Total	**12**	**3**

3.1.5 Career Opportunities

Biomedical engineering involves the application of engineering techniques and principles to solve problems in medicine, healthcare, and biology. It is a broad and multidisciplinary field that encompasses various industries, including pharmaceutics, genetics, diagnostics, surgery, and rehabilitation. We aim to

produce engineers who can serve as computational medicine designers, prosthetic device designers, biomedical equipment designers, maintenance engineers, sales managers, after-sale service managers, telemedicine solution designers, and researchers.

Our graduates find fulfilling roles in state-of-the-art diagnostic centers, hospitals, telemedicine centers, biomedical equipment manufacturers and distributors, drug manufacturers, software development houses, the automobile industry, research laboratories, and research institutions. Additionally, biomedical engineers play vital roles in regulatory authorities such as the Drug Regulatory Authority of Pakistan and the Pakistan Quality Standards Organization.

The demand for biomedical engineers is growing, both in Pakistan and abroad. Modern hospitals, pharmaceutical companies, biomedical device manufacturers and vendors, diagnostic research laboratories, government agencies, automobile industry, and software development companies hire biomedical engineers. They are sought after to manage hospitals, contribute to the development and utilization of innovative instruments for disease diagnosis and treatment, and restore independence and functionality to patients.

Our graduates have secured positions at esteemed national and international organizations, including the Pakistan Atomic Energy Commission, National Specialty Alloys Inc. (USA), Siemens, Institute of Chemistry (Academia Sinica, Taiwan), Almosawiq Al-Arabia SA, Al-Sharq Hospital, Fujairah Hospital Dubai, Al-Noor Hospital Bahrain, Austin Health Group (Australia), and many others.

3.2 Department of Computer Systems Engineering

3.2.1 The Department

Computer Systems Engineering is a discipline that integrates the fields of Electrical Engineering and Computer Science to develop computer systems. Computer Engineers receive training in Electronic Engineering, Software Design, and Hardware-Software integration, rather than solely focusing on Software Engineering or Electronic Engineering. They are involved in both hardware and software aspects of computing, ranging from circuit design for microprocessors, personal computers, and supercomputers to the development of communication systems and networks. This field of engineering not only focuses on understanding how computer systems work, but also on their integration into larger contexts.

Typical tasks performed by Computer Engineers include writing software and firmware for embedded microcontrollers, designing analog sensors, creating mixed signal circuit boards, and developing operating systems. They are well-suited for robotics research, which heavily relies on using digital systems to control and monitor electrical components such as motors, communication systems, and wireless sensors. With the increasing demand for engineers who can design hardware, software, firmware, and manage various computer, information, and management systems used in industries, the department offers carefully designed multidisciplinary courses and degree programs.

The Department of Computer Systems Engineering is dedicated to fully embracing and implementing the outcome-based education (OBE) system in its educational practices. It leaves no stone unturned in its efforts to ensure the practical application of this education system.

Vision of the Department

To lead in computing education for a smart, secure, and sustainable future.

Mission of the Program

The mission of the department of Computer Systems Engineering is to impart world class education to computer engineers, enabling them to become successful in their professional career and lifelong learning by exhibiting moral and ethical values, thereby becoming a useful part of the society and contributing positively to the socio-economic growth of the country.

Program Educational Objectives (PEOs)

The program educational objectives (PEOs) are prepared by the OBE implementation committee for outcome-based education implementation and are approved through the Board of Studies, Board of Faculty and Academic Council. The PEOs are prepared on the basis of stakeholders' needs and linked with twelve program learning outcomes. Three PEOs have been finalized after thorough deliberation and comprehensive meetings.

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i. To produce graduates who performs professional based on the acquired computer engineering knowledge and analytical skills with continual improvement.
ii. To produce graduates who ensures rationalism and ethics in a multicultural, diversified environment.
iii. To prepare graduates who is a team player and capable to demonstrate communication and management skills with an approach towards problem solving.

3.2.2 The Faculty

Chairman of the Department.
Dr. Shahnawaz Talpur
Associate Professor
Phone: 92- 22-2772276-22-2772250-73 / **Ext.:** 4202

MERITORIOUS PROFESSOR: **Dr. Mukhtiar Ali Unar** PhD, United Kingdom. **PROFESSOR EMERITUS:** **Dr. A. Q. K. Rajput** PhD, United States of America. **PROFESSOR:** **Dr. T.J. Saifullah Khanzada** PhD, Germany. (On Lien: Ex-Pakistan) **ASSOCIATE PROFESSORS:** **Dr. Sheeraz Memon** PhD, Australia. (On Lien: Ex-Pakistan) **Dr. Shahnawaz Talpur** PhD, China. **Dr. M. Moazzam Jawaid** PhD, United Kingdom. **Dr. Sanam Narejo** PhD, Italy.	**Dr. Sammer Zai** PhD, South Korea. **Dr. M. Ahsan Ansari** PhD, South Korea. **Dr. Bushra Naz** PhD, China. **ASSISTANT PROFESSORS:** **Mr. Arbab Ali Samejo** M.E, Pakistan. **Dr. Adnan Ashraf** PhD, Pakistan **Ms. Zartasha Baloch** PhD, Pakistan. **Mr. Rizwan Badar Baloch** M.E, Pakistan. **Dr. Irfan Ali Bhacho** PhD, South Korea.	**Ali Asghar Manjotho,** M.E, Pakistan. **LECTURERS:** **Mr. Salahuddin Jokhio** M.E, Pakistan. (On Study Leave) **Mr. Fawad Ali Mangi** M.E, Pakistan. (On Study Leave) **Ms. Anum Memon** M.E, Pakistan. **Ms. Haleema Memon** M.E, Pakistan. **Ms. Madeha Memon** M.E, Pakistan. **Ms. Rahima Dosani** M.E, Pakistan.

3.2.3 Laboratory Facilities

Following state-of-the-art laboratories are available for the students where hands-on experiences provided. These laboratories provide high speed internet services in centralized environment.

1. Computing Lab-I
2. Computing Lab-II
3. Microprocessor Lab
4. Communication Lab
5. Advance Software Engineering & Research Lab
6. Multimedia and Visual Design Studio Lab
7. Data Management and Internet Lab
8. Software Development Lab

3.2.4 The Courses

	Course Code	Subject Name	Credit Hours	
			Theory	Practical
1st Semester	MTH108	Applied Calculus	3	0
	CS111	Information and Communication Technologies	2	1
	CS151	Computer Programming	3	1
	ENG101	Functional English	3	0
	EL101	Basic Electrical Engineering	3	1
		Total	**14**	**03**

	Course Code	Subject Name	Credit Hours	
			Theory	Practical
2nd Semester	MTH112	Linear Algebra and Analytical Geometry	3	0
	ES123	Electronic Circuits and Devices	3	1
	CS153	Object Oriented Programming	3	1
	IS-111/SS104	Islamic Studies/ Ethics	2	0
	PS106	Pakistan Studies	2	0
		Total	**13**	**02**

	Course Code	Subject Name	Credit Hours	
			Theory	Practical
3rd Semester	CS211	Digital Logic and Design	3	1
	ENG201	Communication Skills	2	0
	CS251	Data Structures and Algorithm	3	1
	CS221	Discrete Structures	2	0
	MTH224	Differential Equations	3	0
	IND202	Engineering Economics and Project Management	3	0
		Total	**16**	**02**

	Course Code	Subject Name	Credit Hours	
			Theory	Practical
4th Semester	TL231	Signals And Systems	3	1
	MTH226	Fourier Series and Transforms	2	0
	CS253	Database Management System	3	1
	CS201	Computer Architecture and Assembly Programming	3	1
	CS261	Operating Systems	3	1
		Total	**14**	**04**

	Course Code	Subject Name	Credit Hours	
			Theory	Practical
5th Semester	CS311	Microprocessors and Interfacing	3	1
	CS321	Computer Networks	3	1
	CS331	Software Engineering	3	0
	MTH317	Statistics and Probability	3	0
	CS373	Web Engineering	3	1
		Total	**15**	**03**

	Course Code	Subject Name	Credit Hours	
			Theory	Practical
6th Semester	ENG-301	Technical and Scientific Writing	2	0
	TL376	System and Network Security	2	0
	CS380	Artificial Intelligence	3	1
	ES370	Embedded Systems	2	1
	CS363	Digital Image Processing	3	1
	N/A	Community Service	-	-
		Total	**12**	**03**

	Course Code	Subject Name	Credit Hours	
			Theory	Practical
7th Semester		CEDE-I	3	0
	CS493	Mobile Application and Game Development	3	1
	CS461	Data Science and Analytics	3	1
	ENT421	Entrepreneurship	2	0
	CS498	Final Year Project-I	0	3
		Total	**11**	**05**

8th Semester	Course Code	Subject Name	Credit Hours	
			Theory	Practical
	CS485	Cloud and Distributed Computing	3	1
		MDEE-I	2	1
	CS471	Human Computer Interaction	3	0
	MGT426	Organizational Behavior	2	0
	CS499	Final Year Project-II	0	3
		Total	**10**	**05**

Computer Engineering Depth Electives (CEDE)

1 **(CS481)** Internet of Things
2 **(CS482)** Systems Programming
3 **(CS486)** Algorithm Design and Analysis

Multi-Disciplinary Engineering Electives (MDEE)

1 **(CS491)** Block chain Technologies and Applications
2 **(CS492)** Neural Networks and Fuzzy logic
3 **(CS494)** Data Warehousing and Big Data

3.2.5 Career Opportunities

The computerization of most facets of modern business and industry, together with the great demand for technical manpower creates a multitude of possibilities. As a career option that can allow an individual to be involved in the creation and implementation of a Computer System, Computer Systems Engineers are professionals who are actively engaged in the process of matching current technology with the needs of a company. As part of this task, the Computer Systems Engineer engages in the evaluation and installation of software, hardware, and other types of support equipment into a workable network that supports a variety of functions within a corporation. The Computer Systems Engineer may function as an employee of the company, a representative of a computer components and hardware, or as an independent consultant. Moreover, the computer system engineer has a wide range of job opportunities available, including electronic, telecommunication and software engineering fields.

The Computer Systems Engineer finds employment in a wide variety of computerized environments such as hardware, software, networking, research and development, process or information control systems or a combination of the above mentioned. The engineer might specialize further in any one of these chosen fields. Responsibilities may include maintenance or optimization of such environments. Additional functions could include the design, development, and implementation of additional or new systems, liaison with other departments such as management, production and instrumentation as well as with clients is an important aspect of his job. The dedicated Computer Systems Engineer may seek a senior post such as filling the post of System Administrator, Lead System or Project Manager.

3.3 Department of Electrical Engineering

3.3.1 The Department

Electrical Engineering is a branch of engineering concerned with the study and application of electricity, electronics, and electromagnetism. It also deals with large-scale electrical systems such as power generation, transmission, distribution, and utilization of electrical energy.

The Department of Electrical Engineering is one of the oldest and prestigious departments of the University, supported and equipped with highly qualified faculty and technical staff. The department consists of 27 full-time faculty members, several of whom have received prestigious awards for their teaching and research work.

Our department labs serve not only undergraduate and postgraduate students but also provide services to the public and private sectors. These services include training, equipment testing, calibration, and consultancy for academia and industry. In addition to academic activities, the department's faculty and students are actively involved in research and development collaborations with industries.

The undergraduate students receive a degree upon successful completion of the four-year degree program. Postgraduate students receive an M.E. degree after successfully completing an 18-month course and research work. Currently, there are 490 undergraduates, 59 postgraduates, and 20 PhD students enrolled in the department.

The undergraduate and postgraduate students come from various regions across the country and abroad. The undergraduate program emphasizes teaching Electrical Engineering fundamentals and applications, as well as advanced engineering studies, enabling young graduates to work in industry or pursue higher education with confidence.

Vision of the Department

To provide the world class education and research opportunities in the field of Electrical Engineering at par with national and international levels.

Mission of the Department

The department of electrical engineering aims to provide high quality of education to produce skilled, dynamic, creative and ethical professionals to take active part in the development of the society.

Program Educational Objectives (PEOs):

i. Perform their professional role in the fields of Electrical Engineering.
ii. Effectively utilize their technical and managerial skills for the solution of engineering problems.
iii. Demonstrate professional standards of moral and ethical values as a team leader or as an individual.

3.3.2 The Faculty

Chairman of the Department:
Prof. Dr. Ashfaque Ahmed Hashmani
Phone:022-2771351

PROFESSORS:		
Dr. Muhammad Aslam Uqaili PhD, United Kingdom.	**Dr. Faheemullah Shaikh** PhD, China.	**Mr. Abdul Jabbar Memon** M.E, Pakistan.
Dr. Ashfaque A. Hashmani	**Dr. Mahesh Kumar Rathi** PhD, Malaysia.	**Dr. Shoaib Ahmed Khatri** PhD, Pakistan.

PhD, Germany. **Dr. Abdul Sattar Larik** PhD, Pakistan. **Dr. Zubair Ahmed Memon** PhD, Pakistan. **Dr. Syed Asif Ali Shah** PhD, Austria. **Dr. Mukhtiar Ahmed Mahar** PhD, Pakistan. **Dr. Ali Asghar Memon** PhD, United Kingdom **ASSOCIATE PROFESSORS:** **Dr. Amir Mahmood Soomro** PhD, China. **Dr. Anwar Ali Sahito** PhD, Pakistan.	**Dr. Anwar Ahmed Memon** PhD, Pakistan. **Dr. Abdul Hakeem Memon** PhD, China. **Dr. Pervez Hameed Shaikh** PhD, Malaysia. **ASSISTANT PROFESSORS:** **Mr. Noor Nabi Shaikh** B.E, Pakistan. **Mr. Muhammad Rashid Memon** M.E, Pakistan. **Ms. Mokhi Maan Siddiqui** M.E, Pakistan. **Mr. Mansoor Ahmed Soomro** M.E, Pakistan (On Study Leave) **Mr. Shah Murad Tunio** M.E, Pakistan. (On Lien)	**Mr. Shafi Muhammad Jiskani** M.E, Pakistan. **Dr. Zohaib Ahmed Leghari** PhD, Malaysia. **LECTURERS:** **Mr. Abdul Latif Samoon** M.E, Pakistan. **Mr. Faheem Shafique Channar** M.E, Pakistan. (On study leave) **Mr. Shoaib Shaikh** M.E, Pakistan. (On study leave) **Mr. Mustafa Memon** M.E, Pakistan. (On study leave) **Ms. Rabail Memon** M.E, Pakistan.

3.3.3 Laboratory Facilities

It possesses state of the art laboratories and equipped with latest equipment up to mark for the electrical engineering program such as:

1. Power System Lab
2. Power Electronics Lab
3. Electrical Machines Lab
4. High Voltage Engineering Lab
5. Clean Energy Lab
6. Control and Automation Lab
7. Electrical Circuit &Measurement Lab
8. Equipment and Training Lab
9. Applied Electricity Lab
10. Communication Lab
11. Computer Lab
12. Advance Computer Lab
13. Electrical Workshop Lab
14. Electrical Power Transmission & Distribution Lab

3.3.4 The Courses

	Course Code	Subject Name	Credit Hours	
			Theory	Practical
1st Semester	EL-111	Electrical Workshop Practice	0	1
	EL-112	Applied Physics	3	1
	EL-113	Linear Circuit Analysis	3	1
	CS-104	Introduction to Computing and Programming	2	1
	ENG-101	Functional English	3	0
	MTH-102	Applied Calculus	3	0
		Total	**14**	**4**

	Course Code	Subject Name	Credit Hours	
			Theory	Practical
2nd	EL122	Electrical Network Analysis	3	1
	CE141	Applied Mechanics	3	1

	MTH112	Linear Algebra and Analytical Geometry	3	0
	PS106	Pakistan Studies	2	0
	IS111/SS104	Islamic Studies / Ethics	2	0
	ENG102	Communication Skills	2	0
	EL127	Engineering Drawing	0	1
		Total	**15**	**3**

3rd Semester	Course Code	Subject Name	Credit Hours	
			Theory	Practical
	EL211	Electronic Devices & Circuits	3	1
	EL214	Electrical Machines	3	1
	EL215	Theory of EMF	3	0
	MTH212	Differential Equations and Fourier series	3	0
	ME271	Applied Thermodynamics	3	0
		Total	**15**	**2**

4th Semester	Course Code	Subject Name	Credit Hours	
			Theory	Practical
	EL223	Applied Electronics	2	1
	EL224	Digital Logic Design	3	1
	ES264	Introduction to Embedded Systems	3	1
		Technical and Scientific Writing	2	0
	MTH213	Complex Variables & Transforms	3	0
		Total	**13**	**3**

5th Semester	Course Code	Subject Name	Credit Hours	
			Theory	Practical
	EL313	Instrumentation & Measurement	3	1
	EL314	Power Generation Systems	3	0
	TL311	Communication Systems	3	1
	MTH336	Numerical Analysis & Computer Applications	3	1
		Signals & Systems	3	1
		Total	**15**	**4**

6th Semester	Course Code	Subject Name	Credit Hours	
			Theory	Practical
	EL322	Advanced Electrical Machines	3	1
	EL323	Electrical Power Transmission	3	1
	EL325	Power Economics & Management	3	0
	ES325	Linear Control Systems	3	1
	MTH311	Statistics and Probability	3	0
		Total	**15**	**3**

7th Semester	Course Code	Subject Name	Credit Hours	
			Theory	Practical
	EL416	Power System Analysis	3	1
	EL415	Power Electronics	3	1
	SS416	Professional Ethics	3	0
	EL498	Final Year Project-I	0	3
		Total	**9**	**5**

8th Semester	Course Code	Subject Name	Credit Hours	
			Theory	Practical
	EL423	Power System Protection	3	1
	EL424	High Voltage Engineering	3	1
	SS425	Power Distribution & Utilization	3	1
	EL499	Final Year Project-II	0	3
		Total	**9**	**6**

3.3.5 Career Opportunities

Electrical engineering is a field of engineering that generally deals with the study and application of electricity, electronics and electromagnetism. Electrical engineering is an amalgamation of what is now called electrical, electronics, communication, instrumentation and computer engineering. The well recognized branches of electrical engineering are power & energy, communications, robotics, electronics and control systems. In broader sense, this field covers a wide range of sub-disciplines including those that deal with power& energy, digital electronics, analogue electronics, artificial intelligence, control systems, electronics, signal processing and telecommunications. Overlapping of this field with computer has opened up the door to a career distribution in almost every industry. Following are the few companies and institutions in which the electrical graduates can find job.

1. WAPDA
2. Fertilizer Industries
3. Chemical Industries
4. Textile Industries
5. Pharmaceutical Companies
6. Mechanical & Automobile
7. K-Electric
8. Pakistan Atomic Energy Commission (PAEC)
9. Oil & Gas Companies
10. Research Institutes
11. Lucky Cement Factory
12. Al Rahim Textile Industries
13. KAD Consultants Electrical & Solar System Engineers
14. Dawlance United Refrigeration Industries Ltd.
15. Civil Aviation Authority
16. Johnson & Philips Pakistan Ltd
17. Tuwairqi Steel Mills Ltd.
18. National Transmission and Dispatch Company (NTDC) Ltd.
19. Philip Morris Pakistan Ltd.
20. Technology Links Pvt. Ltd
21. National Electric Power Regulatory Authority **(**NEPRA)
22. Distribution companies (HESCO, IESCO, PESCO, QUESCO etc.)
23. Sugar Industries
24. Karachi Port Trust (KPT)
25. Environmental Network International (ENI)

3.4 Department of Electronics Engineering

3.4.1 The Department

Electronic engineering is an increasingly important engineering discipline that significantly impacts other engineering fields. It is in high demand both in developed and developing nations. Advances in materials, processes, devices, and circuits within electronic engineering have led to rapid progress in existing applications and the emergence of new ones. To fully utilize the potential of electronic engineering and further advance electronic technology, it is crucial to have robust education and training programs in this key engineering discipline.

Electronic engineering artifacts play a major role in the evolution of mankind and culture. The profession and education of electronic engineers face challenges due to the ever-changing nature of engineering systems that define "modern technology." The advent of microprocessor technology has made electronic engineering a prominent technology of this century, with new species and higher levels of integration. The applications and uses of electronics are vast, and it is difficult to find any industrial or commercial area that will not be affected by this technology.

The Department of Electronic Engineering offers undergraduate and postgraduate degrees. The programs offered include:

1. B.E. (Electronic Engineering)
2. M.E. (Electronic System Engineering) under the umbrella of Institute of Information& Communication Technologies (IICT)
3. M.E. (Industrial Automation and Control) under the umbrella of Institute of Information& Communication Technologies (IICT).
4. PhD (Electronic Engineering) under the umbrella of Institute of Information& Communication Technologies (IICT).

The field of electronic engineering encompasses the knowledge of electronic circuits, devices, and their applications. Students learn various subjects from diverse fields, including Integrated Electronics, Measurements and Instrumentation, Digital Electronics, Power Electronics, Control Systems, Embedded Systems Design, Optoelectronics, Digital Signal Processing, FPGA-Based Digital Design, Electromagnetic Fields, Computer Communication & Networking, Mechatronic Systems and Applications, and Artificial Intelligence.

Mission of the Department

To produce Quality Electronic engineers with high intellect and broad vision who can meet current needs and foresee future needs of the nation in the field of Electronic by serving research and professional practice.

Program Educational Objectives (PEOs)

The program educational objectives (PEOs) were prepared by the OBE implementation committee for outcome-based education implementation and approved through the Departmental Board of Studies (BoS), Board of Faculty (BoF) and Academic Council (AC). The PEOs were prepared on the basis of stakeholders needs and linked with twelve PLOs. The PEOs of B.E. Electronic Engineering degree program are:

i. Apply in-depth electronic engineering knowledge and analytical skills to initiate innovative solutions for the society
ii. Quest for learning, establishing collaborations and engaging in continuous professional development in the field of Electronics by carrying research and adopting professional practices.
iii. Adaptive in multidiscipline and multicultural environment and work effectively as a team lead or team member possessing strong soft skills and high moral ethics.

3.4.2 The Faculty

Chairperson of the Department:
Prof. Dr. Wajeeha Shah
Phone: +92-22-2771334, +92-22-2772250-70 (Ext. 4100)

EMERITUS PROFESSOR: **Dr. B.S Chowdhry** PhD, (UK) **Dr. Arbab Nighat Kalhoro** PhD, (China) **Chairperson** **PROFESSORS:** **Dr. Wajiha Shah** PhD, (Austria) **Dr. Farida Memon** PhD, (Pakistan) **Dr. AttiyaBaqai** PhD, (Pakistan) **ASSOCIATE PROFESSORS:** **Dr. Tayab Din Memon** PhD, (Australia) (On lien) **Dr. Irfan Ahmed Halepoto** PhD, (Pakistan) **ASSISTANT PROFESSORS:** **Engr. Tufail Ahmed Waseer** M.E, (Pakistan)	**Dr. Khalil-ur-RehmanDayo** PhD, (Pakistan) **Engr. MehboobKhuwaja** M.E, (Pakistan) - (On lien) **Dr. KehkashanFahim** PhD, (Pakistan) **Engr. Kamran Kazi** M.E, (Pakistan) **Engr. Saba Baloch** M.E, (Pakistan) On Study Leave **Engr. Yasmeen NazPanhwar** M.E, (Pakistan) **Engr. KhuhedMemon** M.Sc. (Singapore) On Study Leave **Dr. M. ZaighamAbass Shah** PhD, (USA) **Engr. Aamir Ali Patoli** M.E, (Pakistan)	**Engr. Sara Qadeer Rajput** M.E, (Pakistan) **Engr. Mansoor Ali Teevno** M.E, (Pakistan) On Study Leave **Dr. ShoaibRehmanSoomro** PhD, (Istanbul) Postdoc (Spain) **LECTURERS:** **Engr. Qurban Ali Memon** M.E, (Pakistan) **Engr. QudsiaMemon** M.E, (Pakistan) **Engr. KomalKhuwaja** M.E, (Pakistan) On Study Leave **Engr. Bharat Lal** M.E, (Pakistan) On Study Leave

3.4.3 LABORATORY FACILITIES:

The courses taught are regularly updated to keep abreast of new knowledge and development. The students also undertake a project during their final year, which helps them to enhance their capabilities as young design engineers. The department is also equipped with state-of-the-art laboratories such as:

1. Analog Electronics Laboratory
2. Digital System Design Laboratory
3. Communication Systems Laboratory
4. Computing Laboratory
5. Modeling & Simulation Laboratory
6. Power Electronics & Drives Laboratory
7. Research Laboratory
8. Instrumentation &Control Laboratory
9. Electronic Design Automation Laboratory (IICT Building)
10. Project Laboratory-I
11. Project Laboratory-II (IICT Building)

These laboratories are well equipped with latest equipment ranging from basic electronic devices, simulators and trainers to more advanced embedded system trainers. Excellent course work and practical experience, provide ample job opportunities to our graduates in both public and private sector organizations, national & multinational companies.

3.4.4 The Courses

	Course Code	Name of Subject	Credit Hour	
			Theory	Practical
1st Semester	ENG101	Functional English	3	0
	MTH108	Applied Calculus	3	0
	EL116	Applied Physics	3	1
	EL120	Electrical Circuits	3	1
	ES102	Electronics Workshop	0	1
	CS150	Introduction to Computing	2	1
		Total	**14**	**4**

	Course Code	Name of Subject	Credit Hour	
			Theory	Practical
2nd Semester	MTH112	Linear Algebra & Analytical Geometry	3	0
	CS113	Computer Programming	2	1
	ES112	Basic Electronics	3	1
	SS125	Professional Ethics	2	0
	PS106	Pakistan Studies	2	0
	IS111/SS104	Islamic Studies/Ethics	2	0
		Total	**14**	**2**

	Course Code	Name of Subject	Credit Hour	
			Theory	Practical
3rd Semester	MTH212	Differential Equations & Fourier Series	3	0
	ES203	Electronic Circuit Design	3	1
	ES226	Digital Electronics	3	1
	ES227	Measurements & Instrumentation	3	1
	ENG201	Communication Skills	2	0
	CS215	Computer Aided Engineering Design	0	1
		Total	**14**	**4**

	Course Code	Name of Subject	Credit Hour	
			Theory	Practical
4th Semester	MTH213	Complex Variables & Transforms	3	0
	EL202	Electrical Machines	2	1
	ES232	Probability and Random Signals	2	0
	ES244	Electromagnetic Field Theory	2	0
	ES257	Integrated Electronics	3	1
	ES250	Introduction to Embedded Systems	3	1
		Total	**15**	**3**

	Course Code	Name of Subject	Credit Hour	
			Theory	Practical
5th Semester	ENG301	Technical & Scientific Writing	2	0
	ES385	Communication Systems	3	1
	ES398	Signals & Systems	2	1
	ES319	Power Electronics	3	1
	MTH310	Numerical Methods	3	1
		Total	**13**	**4**

6th Semester	Course Code	Name of Subject	Credit Hour	
			Theory	Practical
		Computer Communication and Networking	3	1
	ES353	Control Systems	3	1
		Entrepreneurship	3	0
	ES373	FPGA Based Digital Design	3	1
		Total	**12**	**3**

7th Semester	Course Code	Name of Subject	Credit Hour	
			Theory	Practical
	ES414	Digital Control System	3	1
		Engineering Management	2	0
	ES441	Optoelectronics	2	1
	ES451	Industrial Electronics	3	1
	ES498	Final Year Project-1	0	3
		Total	**10**	**6**

8th Semester	Course Code	Name of Subject	Credit Hour	
			Theory	Practical
		Sociology for Engineers	2	0
	ES422	Robotics and Mechatronic Systems design	3	1
	CS490	Artificial Intelligence	3	1
	ES434	Digital Signal Processing	3	1
	ES499	Final Year Project-II	0	3
		Total	**11**	**6**

3.4.5 Career Opportunities

Electronic Engineering Department works in strong collaboration with the Directorate of Student Affairs, as well as student societies with a similar scope, for career counseling of graduating students. The emphasis is on effectively placing students and graduates in the industry, along with providing career advice through counseling sessions. The Department regularly organizes seminars, such as "Industrial Advisory Board (IAB) experts-student interactive sessions," for students.

Electronics Engineering is a rapidly expanding field with numerous job opportunities. It is a branch of engineering that focuses on electronic circuits, devices, and the equipment and systems that utilize them. The field of Electronic Engineering is extensive and includes specific areas such as Digital Electronics, Control Systems, Analog Electronics, Embedded Systems, and Power Electronics.

For those interested in pursuing a career in Electronics Engineering, there are numerous opportunities available. After completing their degree, candidates can easily find employment as an Electronic Engineer in top industries/sectors, including:

1. Engineering Firms.
2. Consulting Firms.
3. Teaching.
4. Research and Development
5. Automotive Industry.
6. Data communication.
7. Oil and Gas industry.
8. Technical publishing.
9. Logistics.
10. IT.
11. Power Generation Industry etc.

3.5 Department of Software Engineering

3.5.1 The Department

The Department of Software Engineering is home to research and academic units that address issues and recent advances in software engineering. The department provides research areas and cutting-edge facilities in Bachelor of Engineering in Software Engineering and Bachelor of Science in Artificial Intelligence. The goal has been, and continues to be, to provide a high-degree program in Software Engineering and Artificial Intelligence that prepares students for lifelong learning as they take on professional careers in the software industry. The degree programs enable students to gain a thorough understanding of the role of software development and artificial intelligence in enterprise organizations and to transform conventional systems into digitization that improves business and organizational processes.

The department offers a range of courses in both degree programs in accordance with the Pakistan Engineering Council (PEC) and the National Computing Evaluation & Accreditation Council (NCEAC). These courses comprise fundamentals of programming to advanced topics in computing, such as software testing and software architecture and design, among others. The Department of Software Engineering has completed its transformation to a newly advised education system based on outcome-based education (OBE). The mission of the department is defined in line with the university's vision and mission. The program educational objectives (PEOs) have been finalized after thorough deliberation and comprehensive meetings. The B.E (Software) program has adopted twelve program learning outcomes (PLOs) in accordance with PEC guidelines, and the BS(AI) program has adopted ten PLOs in accordance with NCEAC. The courses of the programs have been updated, and course learning outcomes (CLOs) for each course are designed, along with their difficulty level, as per Bloom's taxonomy, i.e., cognitive, affective, and psychomotor.

Vision of the Department
To become the center of excellence and the aspiration in the discipline of software engineering by producing the highly skilled professionals, who with their analytical capabilities and proficiencies apply the technical knowledge for the socio-economic development.

Mission of the Department
To provide technically sound ambiance of learning and realizing the frequently changing traits of software industry to pursue sustainable socio-economic growth with the sense of ethics, professionalism and leadership to serve community and humanity at large.

Program Educational Objectives (PEOs)

i. Performs his/her professional roles in Software industry and related fields.
ii. Adheres to professional responsibilities in multi-cultural environment with continual improvement.
iii. Works effectively as a team lead or a team member in challenging ventures.
iv. Communicates technical and managerial information efficiently in oral and written forms.

3.5.2 The Faculty

Chairman of the Department:
Dr. Naeem Ahmed Mahoto
Ph: 022-2772255 Ext:6900

PROFESSORS: **Dr. Sania Bhatti** PhD, United Kingdom **Dr. Qasim Ali Arain** PhD, China **ASSOCIATE PROFESSORS:** **Dr. Naeem Ahmed Mahoto** PhD, Italy **Dr. Mohsin Ali Memon** PhD, Japan **Dr. Isma Farah Siddiqui** PhD, South Korea **ASSISTANT PROFESSORS:** **Mr. Din Muhammad Sangrasi** (On study leave) M.E, Pakistan **Mr. Salahuddin Sadar** M.E, Pakistan **Ms. Amirita** (On study leave) M.E, Pakistan	**Dr. Areej Fatemah** PhD, Pakistan **Dr. S. M. Shehram Shah** PhD, Austrailia **Mr. Zahid Hussain Khaskheli** (On study leave) M.E, Pakistan **Ms. Hira Nouman** (On study leave) M.E, Pakistan **Ms. Shafia Qadeer Memon** M.E, Pakistan **Ms. Memoona Sami** M.E, Pakistan **Mr. Junaid Ahmed Baloch** M.E, Pakistan **LECTURERS:** **Dr. Anoud Shaikh** PhD, Pakistan **Mr. Zubair Sangi** M.E, Pakistan	**Mr. Vijdan Khalique** (On study leave) M.E, Pakistan **Dr. Rabeea Jafferi** PhD, Malaysia **Ms. Mariam Jawaid** M.E, Pakistan **Ms. Rabia Iftikhar** M.E, Pakistan **Ms. Rafia Shaikh** (Contract) M.E, Pakistan **Mr. Naveen Kumar** (Contract) M.E, Pakistan **Mr. Mansoor Samo** (Contract) M.E, Pakistan **Ms. Faryal Baloch** (Contract) M.E, Pakistan **Ms. Mehwish Shaikh** (Contract) M.E, Pakistan

3.5.3 Laboratory Facilities

To meet the latest treads in software and hardware technology the department has 6 well –resources IT laboratories where students are skilled to meet the future needs of the technology.

1. Software Quality Assurance & Testing Laboratory.
2. Visual Informatics and Image Processing Laboratory.
3. Data Warehousing and Management Laboratory.
4. 3-D Modeling and Visualization Laboratory.
5. Software Research and Development Laboratory.
6. Parallel Processing and Cluster Computing Laboratory.

The maximum class for laboratory practical is also constituted in accordance with the optimum standards set by PEC and HEC. The Department of Software Engineering has a total of 6 labs, all of which are equipped with 100 thick and thin clients altogether. All such systems are equipped with the latest engineering software such as MATLAB, ORACLE, NETBEANS and DREAMWEAVER etc. The laboratory rooms are spacious, equipped with air conditioners and safety/health standards to accommodate 50 students at a time with 1:1 student and PC ratio.

3.5.4 The Courses

	Course Code	Subject Name	Credit Hours	
			Theory	Practical
1st Semester	MTH108	Applied Calculus	3	0
	SW112	Programming Fundamentals	3	1
	SW113	Introduction to Info. & Comm. Technologies	2	1
	ENG111	Functional English	3	0
	EL119	Applied Physics	3	0
		Total	**14**	**2**

	Course Code	Subject Name	Credit Hours	
			Theory	Practical
2nd Semester	SW121	Object Oriented Programming	3	1
	SW123	Professional Practices	3	0
	MTH112	Linear Algebra & Analytical Geometry	3	0
	SW124	Introduction to Software Engineering	3	0
	PS106	Pakistan studies	2	0
	IS111/ SS104	Islamic Studies / Ethics	2	0
		Total	**16**	**1**

	Course Code	Subject Name	Credit Hours	
			Theory	Practical
3rd Semester	SW212	Data Structures & Algorithms	3	1
	SW215	Database Systems	3	1
	SW216	Software Requirements engineering	3	0
	SW211	Software Economics & Management	3	0
	SW217	Operations Research	3	0
		Total	**15**	**2**

	Course Code	Subject Name	Credit Hours	
			Theory	Practical
4th Semester	SW225	Operating Systems	3	1
	SW226	Computer Networks	3	1
	SW227	Software design & architecture	2	1
	SW228	Data Warehousing	3	0
	ENG201	Communicaiton Skills	2	0
		Total	**13**	**3**

	Course Code	Subject Name	Credit Hours	
			Theory	Practical
5th Semester	SW315	Software Construction and Development	2	1
	MTH317	Statistics & Probability	3	0
	SW316	Information Security	3	0
	SW317	Human computer Interaction	3	0
	SW318	Agent based Intelligent Systems	3	0
	ENT321	Introduction to Entrepreneurship and creativity	3	0
		Total	**17**	**1**

6th Semester	Course Code	Subject Name	Credit Hours	
			Theory	Practical
	SW322	Software Project Management	3	0
	SW325	Discrete Structures	3	0
	ENG301	Technical &Scientific Writing	2	0
	SW326	Data Science and Analytics	3	1
	SW327	Mobile Application Development	3	1
		Total	**14**	**2**

7th Semester	Course Code	Subject Name	Credit Hours	
			Theory	Practical
	SW415	Software re-engineering	3	0
	SW416	Multimedia Communication	3	1
	SW417	Web Engineering	3	1
	SW418	Formal Methods in Software Engineering	3	0
	SW498	Final Year Project– I	0	3
		Total	**12**	**5**

8th Semester	Course Code	Subject Name	Credit Hours	
			Theory	Practical
	SW424	Simulation & Modeling	3	0
	SW425	Cloud Computing	3	1
	SW426	Software Quality Engineering	3	1
	SW499	Final Year Project-II	0	3
		Total	**9**	**5**

3.5.7 Career Opportunities

Software engineering is at the core of Information Technology and the increasing need for computers in the daily life of people has made it imperative that new designs and new computer software systems be developed so that advancing technology can be applied in a growing range of applications. The work assigned to people who are called software engineers evolves very fast, which reflects the changes in technology as well as the increase of new specializations which keep cropping up in this field along with the preferences and practices of employers. The principles and knowledge of computer science, engineering, and mathematical analysis are employed by software engineers for designing, developing, testing, and evaluating the software and the systems that computers use to carry out various applications.

Our department works in strong collaboration with Directorate of Student Affairs along with the student societies of similar scope for career counselling of graduating students. The emphasis is on the effective placement of students and graduates in the industry along with counselling sessions which provide career advice to the students. Our graduates have very successful careers in industry and research. Our graduates work for software consultancy companies, specialized software development companies and the IT departments of large institutions (financial, telecommunications and public sector). Recent employers include Software Houses, Banks, NADRA, PIA, PTCL, OGDCL, SSGC, WAPDA, and SPARCO.

3.6 Department of Telecommunication Engineering

3.6.1 The Department

Keeping in view the demand of Telecommunication sector, MUET got the privilege to establish the Telecommunication Engineering Department for the first time in the history of all Public and Private sector universities of Pakistan in the year of 2001. The main objective of department is to augment its existing programs to produce high quality Telecom personnel in various specialized areas such as Wired Networks, Mobile/Wireless Communication, Multimedia and Broadband Communication etc. The department is under the establishment of Institute of Communication Technologies (ICT). In last 20 years, graduates of this Institute have established their footprint in leading telecom industries of Pakistan, and they are playing vital role in ICT development. The opportunities for Telecom engineers have been further extended with the emerging growth of 4G/5G mobile networks and Internet of Things.

The Department of Telecommunication offers congenial environment for events, seminars, workshops and technical sessions in accordance with international standards. We have well-equipped laboratories and state-of-the-art equipment for experimental and research work.

Mission of the Program
To produce quality Telecommunication engineers with in-depth knowledge and skills who can meet current and future needs of society by serving in professional domains and carrying out quality research through collaborative environment.

Program Educational Objectives (PEOs)

i. To produce telecommunication graduates who can work as academicians, researchers, system designers, analysts and managers to meet market requirements.
ii. To inculcate self-learning and problem-solving skills in telecommunication students through modern scientific methods and tools.
iii. To nurture telecommunication students who can effectively work both individually and in a team to meet sustainable environmental and societal needs while maintaining professional ethics.

3.6.2 The Faculty

Chairman of the Department:
Prof. Dr. Aftab Ahmed Memon
Phone: +92-22-2772277 /Ext.: 6000

MERITORIOUS PROFESSOR: **Dr. Aftab Ahmed Memon** PhD, Japan. **PROFESSORS:** **Dr. Abdul Waheed Umrani** PhD, Singapore. **Dr. Faisal Karim Shaikh** PhD, Germany. **ASSOCIATE PROFESSORS:** **Dr. Fahim Aziz Umrani** PhD, United Kingdom. **Dr. Abdul Latif Memon** PhD, China.	**Dr. Nasrullah Pirzada** PhD, Malaysia. **Dr. M. Zafi Sherhan Shah** PhD, United Kingdom. **ASSISTANT PROFESSORS:** **Engr. Nafeesa Bohra** M.E., Pakistan. **Engr. Zulfiqar Ali Arain** M.E., Pakistan. **Engr. Syed Mohsin Ali Shah** M.E., Pakistan. **Engr. Shanzah Mohsin** M.E., Pakistan.	**Engr. Syed Rizwan Ali Shah** M.E., Pakistan. **Dr. Faisal Ahmed Memon** PhD, Italy. **Dr. Abi Waqas Memon** PhD, Italy. **Dr. Umair Ahmed Korai** PhD, United Kingdom. **Engr. Mehran M. Memon** M.E., Malaysia. (On Study Leave) **Engr. Saadullah Kalwar** M.E., Pakistan. (On Study Leave)

Dr. Sajjad Ali Memon PhD, China. **Dr. Faheem Yar Khuhawar** PhD, Italy. **Dr. Imran Ali Qureshi** PhD, China. **Dr. Badar Munir** PhD, China.	**Engr. Saima Hafeez Qureshi** M.E., Pakistan. **Engr. Naeem Aijaz Yousfani** M.E., Pakistan. **Engr. Riaz Ahmed Soomro** M.E., Pakistan. **Engr. Hyder Bux Mangrio** M.E., Pakistan. **Engr. Shakeel A. Laghari** M.E., Pakistan.	**LECTURERS:** **Engr. Umair M. Qureshi** M.E., Pakistan. (On Study Leave) **Engr. Zuneera A. Memon** M.E., Pakistan (On Study Leave) **Engr. Anum Talpur** M.E., Pakistan. (On Study Leave)

3.6.3 Laboratory Facilities

Keeping in view the industry demands, the department of Telecommunication Engineering has established state of the art laboratories. These laboratories enable students with the latest technological advancements and make them able to meet with the market requirements. Following laboratories are available at the Department of Telecommunication, **MUET, Jamshoro**:

1. Analog and Digital Communication Laboratory
2. Project Laboratory
3. Transmission and Switching Laboratory
4. Networking and Protocol Design Laboratory
5. Optical Communication and Photonics Laboratory
6. PC Laboratory I & II
7. Cellular Communications Laboratory
8. Advanced Computing Laboratory
9. Digital Signal Processing Laboratory
10. Radio Communication Laboratory
11. Internet of Things (IoT) Laboratory
12. Cyber Security Laboratory

3.6.4 The Courses

	Course Code	Subject Name	Credit Hours	
			Theory	Practical
1st Semester	MTH108	Applied Calculus	03	00
	TL122	Applied Physics	02	01
	CS110	Introduction to Computing & Programming	02	01
	ENG101	Functional English	03	00
	IS111/SS104	Islamic Studies / Ethics	02	00
	PS106	Pakistan Studies	02	00
		Total	**14**	**02**

	Course Code	Subject Name	Credit Hours	
			Theory	Practical
2nd Semester	ES112	Basic Electronics	03	01
	CS123	Object Oriented Programming	03	01
	TL113	Introduction to Simulation Tools	00	01
	EL102	Circuit Analysis	03	01
	MTH112	Linear Algebra and Analytical Geometry	03	00
		Total	**12**	**04**

	Course Code	Subject Name	Credit Hours	
			Theory	Practical
3rd Semester	ES205	Amplifiers and Oscillators	03	01
	ES215	Digital Logic Design	03	01
	MTH212	Differential Equations and Fourier Series	03	00
	IN202	Engineering Management	03	00
	ENG201	Communication Skills	02	00
		Total	**14**	**02**

	Course Code	Subject Name	Credit Hours	
			Theory	Practical
4th Semester	ES256	Microprocessors and Microcontrollers	03	01
	ENG215	Technical Report Writing Skills	02	00
	STD2XX	Entrepreneurship	02	00
	MTH213	Complex Variables and Transforms	03	00
	MTH246	Numerical Analysis and Computer Applications	03	01
	SS221	Professional Ethics	02	00
		Total	**15**	**02**

	Course Code	Subject Name	Credit Hours	
			Theory	Practical
5th Semester	TL324	Communication Systems	03	01
	TL316	Electromagnetics	03	00
	TL355	Probability and Stochastic Processes	03	00
	TL395	Signals and Systems	03	01
	TL366	Telecom Policies and Standards	02	00
		Total	**14**	**02**

	Course Code	Subject Name	Credit Hours	
			Theory	Practical
6th Semester	TL371	Digital Communication	02	01
	TL334	Computer Communication and Networking	03	01
	TL391	Optoelectronics	02	01
	TL304	Antennas and Wave Propagation	03	01
	TL346	Digital Signal Processing	03	01
		Total	**13**	**05**

	Course Code	Subject Name	Credit Hours	
			Theory	Practical
7th Semester	TL401	Microwave Engineering	03	01
	TL474	Fiber Optic Communication Systems	03	01
	TL431	Queueing Theory	02	01
	TL425	Wireless Communications	03	00
	TL498	Final Year Project-I	00	03
	TL465	MBC Elective I : Telecom Studio	00	01
		Total	**11**	**07**

8th Semester	Course Code	Subject Name	Credit Hours	
			Theory	Practical
	TL414	Satellite and Radar Communications	03	00
	TL484	Emerging Wireless Technologies and RF	02	00
	TL456	Network Protocols and Architecture	02	01
	TL446	Transmission and Switching Systems	03	01
	TL499	Final Year Project-II	00	03
		Total	**10**	**05**

3.6.5 Career Opportunities

Telecommunication engineers work within several industries based on Internet and computing technologies, telephone networks, radio wave transmission and reception, satellite communication, radar and navigation, etc. Some engineers concentrate on applying technical knowledge, whilst others focus on managerial activities. Many posts include elements of both managerial and technical responsibilities. The technical aspect of the role includes using specialist knowledge to design and deliver solutions, as well as providing technical guidance to others within the organization.

1. Pakistan Telecommunication Company Limited (PTCL)
2. Jazz (Mobilink-Warid)
3. Telenor Pakistan
4. Zong (China Mobile Pakistan)
5. Ufone (PTML)
6. SCO (Special Communications Organization)
7. Wi-Tribe Pakistan
8. Nayatel
9. WorldCall Telecom Limited
10. PTCL Smart TV
11. Storm Fiber
12. Nokia
13. Ericsson
14. ZTE Corporation
15. Cisco Systems, Inc.
16. Juniper Networks, Inc.
17. Motorola Solutions, Inc.
18. Samsung Electronics Co., Ltd.
19. IBM Pakistan
20. Siemens Pakistan
21. Alcatel-Lucent (now part of Nokia)
22. NEC Corporation
23. Amdocs
24. Oracle Communications
25. Comviva Technologies Limited
26. Multinet Pakistan
27. National Telecommunication Corporation (NTC)
28. Supernet Limited
29. Wateen Telecom
30. Fiberlink (Cyber Internet Services)
31. Dancom Pakistan (Instaphone)
32. LinkdotNet Telecom Limited
33. TeleCard Limited
34. WorldTel Pakistan
35. Burraq Telecom
36. NetSol Connect
37. AirLink Communications
38. Redtone Telecommunications Pakistan
39. Nexlinx
40. Transworld Associates (TWA)
41. Connect Communications
42. Cybernet Pakistan
43. Hitech Networks
44. Micronet Broadband
45. Go4B (Connect Broadband)
46. WOL Network (Wi-tribe Pakistan)
47. Huawei Technologies Co., Ltd.

4. FACULTY OF MECHANICAL PROCESS AND EARTH ENGINEERING

4.1 Department of Chemical Engineering

4.1.1 The Department

Chemical Engineering is a discipline that focuses on the application of engineering principles to plan, design, construct, operate, and control chemical processing plants. These plants deal with various processes, including petrochemicals, fertilizers, cement, sugar, polymers, pharmaceuticals, petroleum & gas, bio products, food products, materials, and more. Due to its versatility, Chemical Engineering is known as one of the prominent engineering disciplines with a significant market both nationally and internationally. The Department of Chemical Engineering at Mehran UET was established in 1970 to meet the increasing demand for Chemical Engineers and produce industry-oriented professionals with innovative approaches, problem-solving skills, and managerial abilities.

The Department of Chemical Engineering at MUET Jamshoro has active collaborations with national and international institutions, including Western Sydney University Australia, Exeter University UK, Arizona University USA, Winston University UK, Brunel University UK, Xi'an Jiaotong University, and Xi'an, China. Additionally, the department has an Academia-Industry Linkage Committee (AILC) that connects with organizations such as SUPARCO Karachi, PCSIR Karachi, Sui Southern Gas Company Ltd (SSGC) Karachi, United Energy Pakistan Ltd., and Archroma Pakistan Ltd. These collaborations provide international exposure to students and faculty in academic and research activities. Recently, we have offered seven groups of final-year thesis research projects on industrial topics provided by United Energy Pakistan Ltd. and Matiari Sugar Mills Ltd., allowing students to tackle industry-oriented problems and develop effective solutions. Furthermore, during the last summer and winter breaks, over 80% of students from the Department of Chemical Engineering were offered internships in over 30 industries, demonstrating the effectiveness of AILC's approach.

The Department of Chemical Engineering strongly believes in engaging students in curricular and co-curricular activities for their academic and professional development. The department has two registered student chapters, including the American Chemical Society (ACS MUET Students' Chapter) and the American Institute of Chemical Engineers (AIChE MUET Students' Chapter). Each year, new student bodies are elected and given the responsibility of organizing different events such as Poster Presentation Competitions, Project Exhibitions, Departmental Sports Fest, Interactive Sessions, Workshops, and Trainings.

Vision of the Department

To provide excellent education in the field of Chemical Engineering as per International Standards, and develop Research Based Solutions to Process Industry, for National Development.

Mission of the Program

To produce Quality Professional Engineers with Problem Solving Expertise, Integrity and Strive to enhance their Skills and Ideas related to Chemical industry.

Program Education Objectives (PEOs)

i. Demonstrate proficiency in applying the acquired knowledge & skills to solve engineering problem related to the chemical industry.
ii. Contribute to the development of the society by partaking in chemical engineering projects utilizing their high-level of competence.
iii. Exhibit effective skill-set comprising of skills such as communication, interpersonal, leadership and being a team player.
iv. Excel and grow professionally with value-added skills of integrity and creativity.

4.1.2 The Faculty

Chairperson of the Department
Prof. Dr. Khadija Qureshi
Phone: 022-2771262, 022-772255-3 /**Ext.:** 4400

PROFESSORS: **Dr. Khadija Qureshi** PhD, Pakistan. Post Doctorate USA **Dr. Suhail Ahmed Soomro** PhD, Pakistan. **Dr. Shaheen Aziz** PhD, Pakistan. **Dr. Inamullah Bhatti** PhD, Malaysia. Post Doctorate USA **Dr. Abdul Rehman Memon** PhD, United Kingdom.	**Dr. Zeenat Muhammad Ali** PhD, Pakistan. **Dr. Aziza Aftab** PhD, Pakistan. **ASSOCIATE PROFESSORS:** **Dr. M. Shuaib Shaikh** PhD, Malaysia. **Dr. Imran Nazir Unar** PhD, Pakistan. **Dr. Masroor Ahmed Abro** PhD, China.	**Dr. Zulfiqar Ali Bhatti** PhD, Pakistan. **ASSISTANT PROFESSORS:** **Dr. Khan M. Qureshi** PhD, Malaysia. **Dr. Sikandar Mustafa Almani** PhD, France **Engr. Aisha Kousar Effendi** M.E, Pakistan. **LECTURERS:** **Dr. Zulfiqar Ali Solangi** PhD, Pakistan

4.1.3 Laboratory Facilities

1. Water Quality Research Laboratory
2. Analytical Research Laboratory
3. Computer Laboratory
4. Chemistry Laboratory
5. Polymer Research Laboratory
6. Fluid Mechanics Laboratory
7. Biochemical and Food Processing Laboratory
8. Heat Transfer Laboratory
9. Particulate Technology Laboratory
10. Fuel and Energy Laboratory
11. Mass Transfer Laboratory
12. Coal Research Laboratory
13. Chemical Reaction Laboratory
14. Instrumentation and Process Control Lab.

4.1.4 The Courses

	Course code	Name of Subject	Credit Hours	
			Theory	Practical
1st Semester	CH101	Inorganic and Organic Chemistry	2	1
	CH102	Chemical Process Calculations-I	2	0
	PS106	Pakistan Studies	2	0
	IS111/SS104	Islamic Studies/Ethics	2	0
	CH103	Computer Aided Drawing for Chemical Engineers	2	2
	ME142	Workshop Practice	0	2
	MTH108	Applied calculus	3	0
		Total	**13**	**5**

	Course code	Name of Subject	Credit Hours	
			Theory	Practical
2nd Semester	CH112	Chemical Process Technology	3	0
	CH113	Chemical Process Calculations-II	3	0
	MTH204	Differential Equations, Fourier Series & Laplace	3	0

	ENG101	Functional English	3	0
	CE115	Engineering Mechanics	2	0
	EL102	Basic Electrical Technology	2	1
		Total	**16**	**1**

3rd Semester	Course code	Name of Subject	Credit Hours	
			Theory	Practical
	CH201	Physical and Analytical Chemistry	2	1
	CH203	Heat Transfer Operations	3	1
	CH204	Engineering Thermodynamics	3	1
	MTH206	Complex Analysis, Statistical Methods &	3	0
	ENG301	Technical and Scientific Writing	2	0
		Total	**13**	**3**

4th Semester	Course code	Name of Subject	Credit Hours	
			Theory	Practical
	CH214	Engineering Materials	2	0
	CH215	Chemical Engineering Thermodynamics	3	0
	CH212	Chemical Engineering Fluid Mechanics-I	3	1
	CH213	Particulate Technology	3	1
	CS228	Introduction to Computer and Programming	3	1
		Total	**15**	**3**

5th Semester	Course code	Name of Subject	Credit Hours	
			Theory	Practical
	CH302	Mass Transfer	3	1
	CH305	Biochemical Engineering	2	1
	CH307	Chemical Engineering Fluid Mechanics-II	2	1
	CH308	Chemical Plant Design	2	0
	MTH303	Linear Algebra & Numerical Methods	3	1
		Total	**12**	**4**

6th Semester	Course code	Name of Subject	Credit Hours	
			Theory	Practical
	CH311	Fuels and Energy	3	1
	CH313	Simultaneous Heat and Mass Transfer	3	1
	CH314	Chemical Reaction Engineering	3	1
	CH315	Chemical Process Design and Simulation	3	1
	CH316	Entrepreneurship	2	0
		Total	**14**	**4**

7th Semester	Course code	Name of Subject	Credit Hours	
			Theory	Practical
	CH401	Transport Phenomena	3	0
	CH408	Gas Processing	2	0
	CH405	Pollution Control Engineering	3	1
	CH407	Food Technology	2	1
	CH409	Engineering Economics	2	0
	CH498	Final Year Design Project-I	0	3
		Total	**12**	**6**

	Course code	Name of Subject	Credit Hours	
			Theory	Practical
8th Semester	CH411	Industrial Management	2	0
	CH430	Instrumentation & Process Control	3	1
	CH414	Petroleum Refinery Engineering	3	0
	CH415	**Process Safety and Maintenance**	2	0
	CH499	Final Year Design Project-II	0	3
		Total	**10**	**4**

4.1.4 Career Opportunities

Chemical engineering is a field that offers a diverse range of career opportunities such as:

- Process Engineer: Process engineers are responsible for designing and implementing manufacturing processes. They work to optimize existing processes, develop new processes, and ensure that the manufacturing process is efficient, safe, and cost-effective.
- Research and Development Engineer: R&D engineers are involved in creating and developing new products or improving existing products. They work to identify new technologies and techniques that can be used to improve manufacturing processes.
- Quality Control Engineer: Quality control engineers ensure that products are manufactured to meet certain standards and specifications. They use various tools and techniques to identify and analyze any quality issues and work to develop solutions to improve the overall quality of products.
- Environmental Engineer: Environmental engineers work to develop and implement strategies to protect the environment. They may work to minimize the environmental impact of manufacturing processes, or to develop new technologies that are environmentally friendly.
- Project Manager: Project managers oversee projects from start to finish, ensuring that they are completed on time, within budget, and to the required quality standards. Chemical engineers with good project management skills can work in a variety of industries, including manufacturing, construction, and consulting.
- Energy Engineer: Energy engineers are involved in developing and implementing energy-saving strategies. They may work to reduce energy consumption in manufacturing processes, or to develop new technologies that generate renewable energy.
- Sales Engineer: Sales engineers use their technical expertise to sell products and services to customers. They work closely with customers to understand their needs and develop solutions that meet their requirements.

A greater number of our graduates are found serving in leading public as well as private sector organizations within Pakistan such, Engro Chemicals, Engro Polymers, FFBL, FFC, SUPARCO, Pakistan Atomic Energy Commission, NRL, PRL, BYCO Refinery, PCSIR, OGDCL, SSGC, SNGPL, BHP Oil and gas, OMV Oil and gas, PPL, Novatex, Novartis, Archroma, LCI Chemicals, Lotte Chemicals, *etc*., and abroad too.

4.2 Department of Industrial Engineering& Management

4.2.1 The Department

The Department of Industrial Engineering and Management was established in 1987. Industrial Engineering is a rapidly developing and broad professional discipline that deals with the design, installation, operations, and management of integrated systems of men, materials, and machines. It draws upon specialized knowledge of physical and social sciences and technology. The field primarily focuses on managerial problems that require a combination of fundamental science and engineering practice for their solutions. While the manufacturing industry offers a wide scope for Industrial Engineering, an increasing number of professionals are finding satisfying employment in other sectors such as business, hospitals, hotels, banks, and airlines, which are also availing the services of Industrial Engineers. The department offers Bachelor of Engineering (B.E) undergraduate and postgraduate (M.E / PhD) programs exclusively in Industrial Engineering and Management.

Vision of the Department

This program intends to be globally recognized as a leader in Industrial Engineering and Management.

Mission of the Program

The program mission is to produce quality engineers, professionals, and leaders having sound managerial and technical skills in the core areas of Industrial Engineering and Management and can play their leading role in academia and industry for socio-economic development of society.

Program Education Objectives (PEOs)

The Graduates of B.E Industrial Engineering and Management will have:

i. The ability to competently make a use of managerial and technical knowledge in decision making pertaining to the designing and complexity of systems, both in the manufacturing and service industry.
ii. The ability to conduct research and apply their analytical and IT related skills for continuous learning and developing innovative ideas for professional and career growth.
iii. The capability to act as ethical and responsible professionals in fostering innovative activities considering economic, environmental and societal aspects.
iv. Ability to effectively lead, work and communicate in cross functional teams or be able to develop the entrepreneurial skill to operate their own business.

4.2.2 The Faculty

Chairman of the Department:
Prof. Dr. Abdul Salam Soomro
Phone: +92 22 2771247

PROFESSORS: **Dr. Abdul Salam Soomro** PhD, Pakistan / Malaysia. **Dr. Ghulam Yasin Shaikh** PhD, Pakistan. **Dr. Muhammad Saleh Jumani** PhD, United Kingdom. **ASSOCIATE PROFESSORS:** **Dr. Shakeel Ahmed Shaikh** PhD, United Kingdom.	**Dr. Sonia Irshad Mari** PhD, South Korea. **Dr. Muhammad Saad Memon** PhD, South Korea. **ASSISTANT PROFESSORS:** **Mr. Abdul Qayoom Lakhair** PGD, Pakistan. **Mr. Hafiz Karim Bux Indhar** M.E, Pakistan.	**Mr. Ali Arsalan Siddiqui** M.E, Pakistan. **Mr. Muhammad Ali Khan** M.E, Pakistan. **LECTURERS:** **Mr. Miskeen Ali Gopang** M.E, Pakistan.

4.2.3 Laboratory Facilities

1. Workshop
2. Operations Research Lab
3. Computer-Aided Design and Simulation Modeling Lab
4. Vicon Motion Capture System Lab
5. Additive Manufacturing Lab
6. Condition Monitoring Lab
7. Human Factors and Time & Motion Study Lab
8. Computer Integrated Manufacturing Lab

4.2.4 The Courses

	Course Code	Subject Name	Credit Hours	
			Theory	Practical
1st Semester	MTH108	Applied Calculus	03	00
	SS111	Islamic Studies	02	00
	SS104	Ethics (Elective)	02	00
	PS106	Pakistan Studies	02	00
	INM101	Industrial Economics and Management	03	00
	INM111	Engineering Drawing & CAD	03	01
	EL102	Electrical Technology	03	01
		Total	**16**	**02**

	Course Code	Subject Name	Credit Hours	
			Theory	Practical
2nd Semester	MTH103	Linear Algebra Differential Equations & Analytical Geometry	03	00
	INM121	Basic Business Management	02	00
	ENG101	Functional English	03	00
	CE145	Mechanics of Materials	03	01
	INM131	Manufacturing Processes	02	02
		Total	**13**	**03**

	Course Code	Subject Name	Credit Hours	
			Theory	Practical
3rdSemester	MT220	Materials & Processes	03	01
	INM201	Management Information Systems	02	00
	ME281	Mechanics of Machines	02	01
	INM221	Applied Thermodynamics	02	01
	CS218	Introduction to Computer& C++ Programming	03	01
		Total	**12**	**04**

	Course Code	Subject Name	Credit Hours	
			Theory	Practical
4th Semester	INM231	Production Planning and Control	03	00
	INM241	Industrial Probability and Estimations	03	01
	INM251	Managerial Accounting	03	00
	INM261	Machine Design	03	00
	CE261	Fluid Mechanics	03	01
		Total	**15**	**03**

	Course Code	Subject Name	Credit Hours	
			Theory	Practical
5th Semester	INM301	Quality Control and Reliability	03	00
	MTH336	Numerical Analysis & Com. Application (N.A.C.A)	03	01
	INM311	Operations Research I	03	01
	INM321	Production Management	02	00
	ES361	Instrumentation & Control	03	01
		Total	**14**	**03**

	Course Code	Subject Name	Credit Hours	
			Theory	Practical
6th Semester	INM331	Organizational Behavior	02	00
	INM341	Work Study & Methods Engineering	03	01
	INM351	Marketing Principles and Practices	03	00
	INM361	Project Management	03	01
	INM371	Environmental Management	02	00
	INM381	Principles of Decision Making	03	00
		Total	**16**	**02**

	Course Code	Subject Name	Credit Hours	
			Theory	Practical
7th Semester	INM401	Human Resources Management	03	00
	INM411	Human Factors Engineering	03	01
	INM421	Operations Research II	03	01
	INM431	Industrial Maintenance and Safety	03	00
	INM498	Final Year Project I	00	03
		Total	**12**	**05**

	Course Code	Subject Name	Credit Hours	
			Theory	Practical
8th Semester	INM451	Entrepreneurship	03	00
	INM461	Production Systems Design	03	00
	INM471	Supply Chain and Logistics	03	00
	INM481	Advanced Manufacturing Technologies	03	01
	INM499	Final Year Project II	00	03
		Total	**12**	**04**

4.2.5 Career Opportunities

Graduates in the industrial engineering program take courses in various areas, such as production planning, engineering economics, computer-integrated manufacturing, human factors and ergonomics, operations research, statistics, principles of decision making, supply chain management, and quality management.

Employment prospects for industrial engineers are projected to grow by 10 percent from 2016 to 2026, which is faster than the average for all occupations. This field offers versatility both in terms of the nature of the work and the industries where their expertise can be applied. Industrial engineers can find employment in a wide range of industries, including major manufacturing sectors, consulting and engineering services, research and development firms, and wholesale trade. The value of their work stems from their focus on reducing internal costs, making them valuable in many industries. For instance, their expertise is crucial for manufacturing industries considering relocation from overseas to domestic sites. Additionally, the growth of the healthcare industry and changes in its delivery methods will create demand for industrial engineers in professional, scientific, and consulting services.

4.3 Department of Mechanical Engineering

4.3.1 The Department

Department of Mechanical Engineering was established in 1963. It is one of the main departments of the University with student's strength of about 550. The Department of Mechanical Engineering offers a full-time four years B.E degree program, with dedicated & well qualified faculty and staff who are strive to produce the engineers having the capabilities to contribute in exploration of affordable and sustainable development of the country.

Mechanical engineering department endeavors to produce engineers and researchers with sound knowledge of traditional and emerging areas of engineering together with innovative design abilities to achieve sustainable national development. Moreover, it attempts to develop the skill of the students to make them globally competitive engineers and researchers by providing quality education and research facilities. The Department of Mechanical Engineering is also actively engaged in the various curriculum & extra curriculum activities at the department level as well as University level such as seminars, workshops, training, industrial visits, short courses, sports events, debates, competitions etc.

Vision of the Department

Mechanical Engineering Department intends to become a hub of high-quality engineering education and research so as to produce skilled, innovative, entrepreneurial mechanical engineers who meet the ever-changing engineering demands.

Mission of the Program

Mechanical Engineering program strives to produce engineers and researchers with sound knowledge of traditional and emerging areas of engineering together with the ability of having critical and innovative thinking and make them globally competitive.

Program Education Objectives (PEOs):

i. To produce engineers with clear concepts about fundamentals of Mechanical Engineering discipline and allied subjects.
ii. To produce engineers with analytical and problem-solving abilities.
iii. To produce engineers with high level of professionalism and integrity.
iv. To produce engineers with sound communication and leadership abilities along with the desire of continuously improving their knowledge and skills.

4.3.2 The Faculty:

Chairman of the Department:
Prof. Dr. Abdul Fatah Abbasi
Phone: +92-022- 2771275, 022-22772250-70 / **Ext.:** 2300

PROFESSORS: **Dr. Abdul Fatah Abbasi** PhD, Pakistan. **Dr. Khanji Harijan** PhD, Pakistan. **Dr. Rizwan Ahmed Memon** PhD, Hong Kong. **Dr. Dur Muhammad Pathan** PhD, Pakistan. **Dr. Tanweer Hussain Phulpoto** PhD, United Kingdom.	**Engr. Muhammad Jurial Sangi** M.E, Pakistan. **Engr. Muhammad Sharif Jamali** M.E, Pakistan. **Engr. M. Atif Qaimkhani** M.E, Pakistan. **Engr. Imtiaz Ali Memon** M.E, Pakistan. **Dr. Laveet Kumar** PhD, Malaysia.	**Engr. Abdul Hafeez Khoharo** M.E, Pakistan. (On Study Leave) **Engr. Samiullah Qureshi** M.E, Pakistan. (On Study Leave) **Engr. Farhan Haider Joyo** M.E, Pakistan. **Engr. M. Waqas Chandio** M.E, Pakistan.

Dr. Abdul Ghafoor Memon PhD, Pakistan. **ASSISTANT PROFESSORS:** **Engr. Shoukat Ali Memon** B.E, Pakistan.	**LECTURERS:** **Engr. Javed Rehman Larik** M.E, Pakistan. **Engr. Zain-ul-Abdin Qureshi** B.E, Pakistan **Engr. Roshan Kumar** M.E, Pakistan. (On Study Leave)	**Engr. Intizar Ali Tunio** M.E, Pakistan. **Engr. Ans Memon** M.E, Pakistan. **LAB ENGINEER** **Engr. Ali Muhammad** B.E, Pakistan

4.3.3 Laboratory& Library Facilities

The Department of Mechanical Engineering has following laboratories. All the laboratories are well equipped with latest and conventional Equipment.

1. Energy Technology Laboratory
2. Heat Transfer Laboratory
3. Refrigeration & Air Conditioning (HVAC)
4. Aerodynamics Laboratory
5. Engineering Mechanics Laboratory
6. Mechanics of Machines Laboratory
7. Thermal Power Plant Laboratory
8. Fluid Mechanics Laboratory
9. Instrumentation Laboratory
10. Control Engineering Laboratory
11. Thermodynamics Laboratory
12. Mechanical Vibrations Laboratory
13. Material Testing Laboratory
14. Automobile Laboratory
15. Mechanical Engineering Workshop
16. Computer & Modelling Simulation Laboratory
17. Drawing Hall
18. Seminar Library

4.3.4 The Courses:

	Course Code	Subject Name	Credit Hours	
			Theory	Practical
1st Semester	SS 111/SS 104	Islamic Studies / Ethics	2	0
	PS106	Pakistan Studies	2	0
	MTH108	Applied Calculus	3	0
	ME103	Engineering Drawing &Computer Graphics	0	2
	ME152	Applied Physics	2	0
	CH108	Applied Chemistry	2	0
	ME143	Workshop Practice	0	2
		Total	**11+04=15**	

	Course Code	Subject Name	Credit Hours	
			Theory	Practical
2nd Semester	ENG101	Functional English	2	0
	MTH103	Linear Algebra, Differential Equations & Analytical Geometry	3	0
	ME113	Engineering Statics	2	1
	ME123	Engineering Materials	3	0
	EL102	Electrical Technology	2	1
	ES181	Basic Electronics	2	1
		Total	**14+03+17**	

3rd Semester	Course Code	Subject Name	Credit Hours	
			Theory	Practical
	MTH213	Complex Variables & Transforms	3	0
	ME203	Mechanics of Materials-I	2	0
	ME286	Engineering Dynamics	2	0
	ME222	Thermodynamics-I	3	0
	ME252	Fluid Mechanics-I	3	1
	CS210	Introduction to Computing and programming	2	1
		Total	**15+02=17**	

4th Semester	Course Code	Subject Name	Credit Hours	
			Theory	Practical
	ENG201	Communication Skills	2	0
	ME233	Mechanics of Materials-II	3	1
	ME242	Thermodynamics-II	3	1
	ME226	Fluid Mechanics-II	3	1
	ME212	Mechanics of Machines-I	2	0
		Total	**13+03=16**	

5th Semester	Course Code	Subject Name	Credit Hours	
			Theory	Practical
	ME302	Heat & Mass Transfer	3	1
	MTH336	Numerical Analysis & Computer Applications (NACA)	3	1
	ME332	Machine Design -I	3	0
	ME366	Mechanics of Machine-II	2	1
	ENG301	Technical and Scientific Writing	2	0
	ME313	Manufacturing Processes-I	2	0
		Total	**15+03=18**	

6th Semester	Course Code	Subject Name	Credit Hours	
			Theory	Practical
	ME343	Instrumentation & Control	3	1
	MTH317	Statistics & Probability	3	0
	ME352	Machine Design-II	3	0
	ME372	Refrigeration & Air Conditioning	3	1
	ME383	Manufacturing Processes-II	2	1
	ME356	Computer Aided Machine Design (CAMD)	0	1
		Total	**14+04=18**	

7th Semester	Course Code	Subject Name	Credit Hours	
			Theory	Practical
	ME403	Engineering Management and Entrepreneurship	3	0
	ME431	Applied Aerodynamics	2	1
	EE425	Safety, Health & Environment	2	0
	ME443	Thermal Power Plants	2	1
	ME498	Final Year Project–I	0	3
	-	Elective-I	2	0
	-	Elective-II	2	0
		Total	**13+05=18**	

	Course Code	Subject Name	Credit Hours	
			Theory	Practical
8th Semester	ME463	Mechanical Vibrations	2	1
	ME413	Automobile Engineering	3	1
	ME499	Final Year Project–II	0	3
	-	Elective-I	3	1
	-	Elective-II	3	0
		Total	**11+06=17**	

ELECTIVE-I Engineering Stream

	Course Code	Subject Name	Credit Hours	
			Theory	Practical
Elective-I	ME408	Finite Element Analysis	2	0
	ME418	Tribology	2	0
	ME428	Computational Fluid Dynamics	2	0
	ME438	Automation and Robotics	3	1
	ME448	Solar Energy Systems	3	1
	ME453	Renewable and Emerging Energy Technology (REET)	3	1
	(ME484)	Maintenance Engineering	2	0

Elective-II Management Stream

	Course Code	Subject Name	Credit Hours	
			Theory	Practical
Elective-II	ME458	Supply Chain Management	2	0
	ME468	Operation Managment	2	0
	ME483	Engineering Economics and Project Management	3	0
	ME488	Total Quality Management	3	0
	ME495	Engineering Law	3	0
	ME426	Professional Ethics & Practices	2	0

4.3.5 Career Opportunities

After completion of four-year degree program in B.E mechanical engineering and BS in mechanical engineering technology, the graduates will find diverse jobs in the field of mechanical engineering as an engineer and technologist in the private and public sector institutions.

4.4 Department of Mechatronic Engineering

4.4.1 The Department

Mechatronic Engineering is the newest department (established in the year 2021) by the University. Initially, the Master in Mechatronic Engineering degree program was offered from the year 2014. Subsequently, PhD in Mechatronic Engineering was also offered. Both of these postgraduate programs are Higher Education Commission (HEC) approved. The four-year undergraduate degree program in Mechatronic Engineering was launched in the year 2016 under the administration of the Mechanical Engineering Department. After the establishment of the separate Department of Mechatronic Engineering, this program is being managed by the same. Mehran UET is the first and the only public sector university in the province of Sindh offering the four-year B.E. in Mechatronic Engineering program.

A mechatronic engineer pursues an inter-disciplinary approach, which enables him/her to design and develop devices and systems that encompass multiple conventional engineering disciplines. With the advent of the Fourth industrial revolution (Industry 4.0), modern smart technology is taking automation to the next higher level thus bringing fundamental changes to our lives. The undergraduate program in mechatronic engineering provides a right mix of subjects from mechanical, electronic and computer engineering domains that is aimed to design and develop innovative technological interventions into the modern-day challenges of industrial, medical and agricultural sectors. In addition to faculty of the Mechatronic Engineering Department, the subjects are also taught by faculty members from Mechanical Electronic and Computer System Engineering departments. In addition to the Department's dedicated laboratories, practical work is also carried out in the labs of other departments of the University.

Vision of the Department

The Department's vision is to be a leader in mechatronic engineering education and research by building capabilities for technological solutions to achieve sustainable development.

Mission of the Program

The mission of B.E. Mechatronic Engineering program is to produce engineers and researchers with sound knowledge of traditional and emerging areas of engineering together with the ability of having critical and innovative thinking and make them globally competitive engineers and researchers.

Program Education Objectives (PEOs):

i. To produce Mechatronic Engineers with core knowledge of related multiple disciplines.
ii. To inculcate analytical and problem-solving abilities in graduating students.
iii. To produce professionals with integrity and demonstrable communication and leadership skills.

4.4.2 The Faculty

Chairman of the Department:
Prof. Dr. Jawaid Daudpoto
Phone: +92-22772250-70 / **Ext.:** 2331

PROFESSOR: **Dr. Jawaid Daudpoto** PhD, United Kingdom. **ASSISTANT PROFESSORS:** **Dr. Saifullah Samo** PhD, China. **Dr. Shadi Khan Baloch** PhD, Turkey.	**Engr. Raheel Ahmed Nizamani** M.E, Pakistan. **LECTURER:** **Engr. Aeeman Soomro** M.E, Pakistan. **Engr. Memona Memon** M.E, Pakistan.	**Engr. Aamir Shaikh** M.E, Pakistan. **Engr. Arsalan Jalees Abro** M.E, Pakistan. **Engr. Fida Hussain** M.E, Pakistan.

4.4.3 Laboratory Facilities

Following lab facilities are available to students of Mechatronic Engineering:

1. Instrumentation Lab.
2. Robotics & Control Lab.
3. Computer Lab.
4. Modeling & Simulation Lab.
5. Mechatronic System Design Lab.
6. Circuit Design & Project Lab.
7. Engineering Drawing Lab.
8. Engineering Mechanics Lab.
9. Fluid Mechanics Lab.
10. Workshop
11. Material Testing Lab
12. Thermodynamics Lab.
13. Mechanics of Machines Lab.
14. Mechanical Vibration Lab.
15. Equipment and Training Lab.
16. Electrical Circuit and Measurement Lab.
17. Power Electronics and Control Lab.

4.4.4 The Courses

	Course Code	Subject Name	Credit Hours	
			Theory	Practical
1st Semester	MTH108	Applied Calculus	3	0
	EN101	Functional English	3	0
	EL117	Applied Physics	2	1
	ME107	Engineering Statics	2	1
	ME117	Engineering Materials	2	0
	ME127	Engineering Drawing	0	2
		Total	**12**	**04**

	Course Code	Subject Name	Credit Hours	
			Theory	Practical
2nd Semester	ME147	Workshop Practice	0	2
	IS111/SS104	Islamic Studies / Ethics	2	0
	PS106	Pakistan Studies	2	0
	MTH112	Linear Algebra and Analytical Geometry	3	0
	EL125	Linear Circuit Analysis	2	1
	CS110	Introduction to Computing and Programing	2	1
		Total	**11**	**04**

	Course Code	Subject Name	Credit Hours	
			Theory	Practical
3rd Semester	ME207	Mechanics of Materials	2	1
	ME216	Engineering Dynamics	3	0
	CS291	Data Structures and Object-Oriented Programming	2	1
	ES247	Electronic Devices and Circuits	3	1
	MTH227	Ordinary and Partial Differential Equations	3	0
	ENG201	Communication Skills	2	0
		Total	**15**	**03**

	Course Code	Subject Name	Credit Hours	
			Theory	Practical
4th Semester	MTH217	Laplace Transforms and Discrete Mathematics	3	0
	MTE236	Fluid Mechanics	2	1
	ES217	Digital Logic Design	2	1
	ME237	Mechanics of Machines	2	1
	MTE212	Instrumentation and Measurements	3	1
		Total	**12**	**04**

	Course Code	Subject Name	Credit Hours	
			Theory	Practical
5th Semester	MTH336	Numerical Analysis and Computer Applications	3	1
	ES317	Microcontroller and Embedded Systems	3	1
	MTE311	Signals and Systems	2	0
	MTE321	Actuating Systems	3	1
	ME327	Fundamentals of Thermal Sciences	2	1
		Total	**13**	**04**

	Course Code	Subject Name	Credit Hours	
			Theory	Practical
6th Semester	MTE331/MTE341	ELECTIVE –I	3	1
	MTH317	Statistics and Probability	3	0
	MTE351	Modeling and Simulation	2	1
	ME327	Design of Machine Elements	2	1
	ENG301	Technical & Scientific Writing	2	0
	MTE361	Mechatronic System Design	2	1
		Total	**14**	**04**

	Course Code	Subject Name	Credit Hours	
			Theory	Practical
7th Semester	MTE431/MTE441	EECTIVE-I I	3	1
	ME406	Engineering Economics and Project Management	3	0
	MTE402	Robotics	3	1
	MTE471	Control Systems	3	1
	MTE498	FYP – I	0	3
		Total	**12**	**06**

	Course Code	Subject Name	Credit Hours	
			Theory	Practical
8th Semester	MTE451/MTE461	ELECTIVE-III	3	1
	MTE421	Industrial Automation	2	1
	STD451	Entrepreneurship	2	0
	ME417	Manufacturing Processes	2	1
	EE425	Safety, Health and Environment	3	0
	MTE499	FYP – II	0	3
		Total	**12**	**06**

ELECTIVE-I

S.#.	Course Codes	Name of Subject	Credit Hours		Marks	
			Th.	Pr.	Th.	Pr.
1	MTE331	Digital Signal Processing	3	1	100	50
2	MTE341	Power Electronics	3	1	100	50

ELECTIVE-II

S.#.	Course Codes	Name of Subject	Credit Hours		Marks	
			Th.	Pr.	Th.	Pr.
1	MTE431	Applied Artificial Intelligence	3	1	100	50
2	MTE441	Intelligent Systems	3	1	100	50

ELECTIVE-III

S.#.	Course Codes	Name of Subject	Credit Hours		Marks	
			Th.	Pr.	Th.	Pr.
1	MTE451	Image Processing & Computer Vision	3	1	100	50
2	MTE461	Advanced Control Systems	3	1	100	50

4.4.4 Career Opportunities

Mechatronic Engineers have opportunities to work in emerging fields in public and private sectors. A Mechatronic system is composed of integration of mechanical and electronic components, sensors, actuators, and controllers. Modern industry has transformed from electromechanical type to fully automated type; thus, Mechatronic engineering skills are in demand by both national and international companies. They require personnel with multi-disciplinary expertise having knowledge of all the related systems to run industries and improve automated systems. Plenty of opportunities exist for postgraduate studies/scholarships nationally and internationally. Mechatronic Engineers are in demand in the following sectors:

1. Automation and Control
2. Robotics
3. Automobile
4. Renewable energy
5. Power Plants
6. Oil refineries
7. Manufacturing process plants
8. Marine engineering
9. Biomedical
10. Food processing
11. Petrochemical
12. Research and Development, etc.

4.5 Department of Metallurgy and Materials Engineering

4.5.1 The Department

The Department of Metallurgy & Materials Engineering is one of the leading departments in the engineering disciplines at Mehran UET. Metallurgy & Materials Engineering is an inter-disciplinary field, that spanning the physics and chemistry of matters, industrial manufacturing processes and engineering applications. The scope of Metallurgy and Materials Engineering is to produce the metallic and nonmetallic materials of desired shapes and properties. The advancement in technology is escalating with time therefore department aims to incorporate and accommodate the new trends in materials.

Metallurgy and Materials Engineering is the only discipline in Mehran UET which is equipped with advanced research equipment and highly qualified academics staff, including research fellows. Henceforth, research activity traverse around all the important area of Metallurgy & Materials Engineering, which includes energy, bio-medical and synthesis of advanced materials. The department has promoted the research environment due to which the students feel comfortable to work in research projects without the time restrictions. Moreover, department is playing dominate role in promoting the adequate research environment through facilitating research activities to students of rest academic disciplines of MUET and other institutions of Pakistan.

The Bachelor of Engineering program covers the subject from its foundations in physics and chemistry to the design, manufacture and applications of metals and their alloys, composites, nanomaterials and advanced materials. In order impart practical knowledge among' individual labs have been introduced. The Department also offers Master of Engineering (M.E.) and Doctor of Philosophy (Ph.D.) in Metallurgy and Materials Engineering, which at present is a part time evening program. The Department is continuing to grow and will be a nationally recognized leader in the education of students in the field of metallurgy and materials engineering.

The scope of Metallurgy &Materials Engineering is truly vast. It is an inter-disciplinary field, which is covering almost all areas of engineering. If you are enthusiastic and do not yet wish to be limited to a single engineering discipline and are looking for a fascinating degree subject and career, then our Bachelor of Metallurgy & Materials Engineering program could be for you.

Vision of the Department

The department intends to provide quality education in order to produce global leaders in the field of Metallurgy and Materials Engineering.

Mission of the Program

The program mission is to produce engineering graduates of metallurgy and materials, who become pillars and market leaders of the related industries through their expert knowledge and problem-solving attributes with sustainability approach and professional attitude.

Program Educational Objectives (PEOs):

Graduates in Metallurgy & Materials Engineering will have following key attributes:

i. Graduates will excel in the field of metallurgy and materials engineering with excellent knowledge and problem-solving skills. Graduates pursue for post-graduation and professional career in the metallurgy and materials related industries.
ii. Graduates will contribute to solve complex engineering problems with professional attributes and excellent communication skills related to Metallurgy &Materials Engineering.
iii. Graduates will participate effectively in research and development for designing of new material and processes for particular applications.

4.5.3 The Faculty:

Chairman of the Department:
Prof. Dr. Muhammad Ishaque Abro
Phone: 022-272250-73/ **Ext.:** 4500 - 4501

PROFESSORS:	**LECTURERS:**
Dr. Muhammad Ishaque Abro PhD, Pakistan	**Mr. Muddassir Ali Memon** M.E, Pakistan (on study leave)
ASSISTANT PROFESSORS: **Mr. Ashfaque Ahmed Issani** M.E, Pakistan	**Mr. Ayatullah Qureshi** M.E, Pakistan
Dr. Muhammad Wasim Akhtar PhD, Korea	**Mr. Mukesh Kumar** M.Phil, Pakistan (on study leave)
Dr. Umair Aftab PhD, Pakistan	**Mr. Suhail Mashooque Odhano** M.E, Pakistan (On Contract)
Mr. Shafique Ahmed M.E, Pakistan (on study leave)	**Mr. Muhammad Yameen Solangi** M.E, Pakistan (On Contract)
Dr. Imtiaz Ali Soomro PhD, Malaysia	

4.5.4 LABORATORY FACILITIES

The department is also equipped with following laboratories, having latest equipment:

1. Material Testing Lab-1
2. Material Testing Lab-2
3. Non-Destructive Testing Lab
4. Sand Testing Lab
5. Heat Treatment Lab
6. Fabrication Lab
7. Advanced Characterization Lab
8. Materials Synthesis Lab
9. Metallography Lab
10. Electrochemical and Corrosion Lab
11. Computer and Simulation Lab

4.5.5 The Courses

	Course Code	Subject Name	Credit Hour	
			Theory	Practical
1st Semester	MT131	Introduction to Engineering Materials	3	0
	MT132	Applied Chemistry	2	1
	MT133	Applied Physics	2	1
	MTH108	Applied Calculus	3	0
	IS111	Islamic studies	2	0
	SS104	Ethics (For Non-Muslims)		
	PS106	Pakistan studies	2	0
		Total	**14**	**2**

	Course Code	Subject Name	Credit Hour	
			Theory	Practical
2nd Semester	MT135	Mineral Processing	2	1
	MT136	Engineering Drawing and CAD	2	1
	MTH125	Linear Algebra and Differential Equation	3	0
	ENG101	Functional English	3	0
	CS110	Introduction to Computing and Programming	2	1
	ME176	Workshop Practice	0	2
		Total	**12**	**5**

	Course Code	Subject Name	Credit Hour	
			Theory	Practical
3rd Semester	MT232	Physical Metallurgy-I	3	0
	MT238	Materials Thermodynamics	3	0
	EE214	Industrial Safety & Environmental Engineering	3	0
	ENG201	Communication Skills	3	0
	ES292	Instrumentation & Control	2	1
		Total	**14**	**1**

	Course Code	Subject Name	Credit Hour	
			Theory	Practical
4th Semester	MT234	Iron and Steel Making Technology	3	0
	MT235	Non-Ferrous Metallurgy	3	0
	MT236	Mechanical Behavior of Materials	3	1
	MT237	Engineering Ceramics & Glasses	3	0
	MTH215	Numerical Methods & Computation	3	1
		Total	**15**	**2**

	Course Code	Subject Name	Credit Hour	
			Theory	Practical
5th Semester	MT331	Inspection and Testing of Materials	3	1
	MT333	Physical Metallurgy-II	3	1
	MT342	Polymeric Materials	3	0
	MT343	Advanced Steels	2	0
	ENG301	Technical and Scientific Writing	2	0
	MTH317	Statistics & Probability	3	0
		Total	**16**	**2**

	Course Code	Subject Name	Credit Hour	
			Theory	Practical
6th Semester	MT336	Foundry Engineering	3	1
	MT337	Powder Metallurgy	2	0
	MT338	Manufacturing Processes	3	1
	MT339	Welding & other Joining Processes	3	1
	MT340	Corrosion & Protection	3	1
	MT341	Composite Materials	2	0
		Total	**16**	**4**

	Course Code	Subject Name	Credit Hour	
			Theory	Practical
7th Semester	MT431	Heat Treatment Processes	3	1
	MT432	Advanced Materials & Nanotechnology	3	0
	MT433	Nuclear Metallurgy & Materials	2	0
	MT434	Research Methodology	2	0
	MT435	Metallurgical Plants and Quality Control	2	0
	MT498	Final Year Project-I	0	3
		Total	**12**	**4**

	Course Code	Subject Name	Credit Hour	
			Theory	Practical
8th Semester	MT438	Design of Materials	2	0
	MT439	Computational Materials Science	2	1
	MT440	Tribology and Surface Engineering	2	0
	MT441	Fracture Mechanics and Forensic Analysis	3	1
	INM491	Entrepreneurship and Marketing	3	0
	MT499	Final Year Project-II	0	3
		Total	**12**	**5**

4.5.2 Career Opportunities

The graduates of this program earn the title of "Metallurgy and Materials Engineer", and can hunt their jobs in any public and private metal/materials working industries in inland and abroad. In Pakistan graduate can seek job opportunities in Peoples Steel Mill, Bolan Casting limited, Agha Steel Mill, Pakistan Machine tool factory, Heavy Mechanical Complex, Pakistan Ordinance Factory, Sui Southern Gas Company Pak Suzuki etc. Other interesting areas may be automotive industry, high tech ceramic industry. Graduates can work in many different areas and industries such as facilities that produce iron, steel, and non-ferrous metals (aluminum, copper, etc.), the metal casting industry, the automotive industry, traditional and high-tech ceramic manufacturing facilities, heat treatment companies, materials research and development centers, the defense industry, quality control firms, surveillance companies, oil and gas sector and biomedical applications.

4.6 Department of Mining Engineering

4.6.1 The Department

Pakistan is blessed with a variety of mineral resources, including iron, copper, gold, bauxite, granite, marble, limestone, dolomite, china clay (kaolin), bentonite, chalk, coal, gravel, calcite, gypsum, laterite, silica sand, sandstone, phosphate rock, and rare earth minerals.

These mineral resources play a crucial role in the modern industrial era, as they are used in the production of various products such as iron, steel, copper, gold, nickel, aluminum, coal, coke, cement, ceramics, glass, salt, chalk, precious stones, marble, and granite. The mineral sector significantly contributes to the economic growth of both developing and developed countries. Clean coal technology utilizes coal for electricity production, and the brick kiln industry relies on lignite coal. Iron ore is a vital ingredient in the iron and steel industries, while limestone is essential in the cement industry. Copper is used for the production of electric wires, electronics, and refrigeration pipes. Gold and precious stones find their application in jewelry, and rare earth minerals are utilized as catalysts and alloys. Phosphate rock is a key component in the production of fertilizers, while kaolin is extensively used in the ceramic industry. Silica sand is melted to create various types of glass.

Mining Engineering focuses on the extraction of coal, metallic ores, and non-metallic minerals from the earth. Mining engineers acquire the skills to evaluate the commercial aspects of mining projects, extract minerals and ores from mining areas, implement mineral processing techniques to enhance the quality of mineral products, and sell these products to modern industries.

The Department of Mining Engineering offers Bachelor of Engineering (B.E.), Master of Engineering (M.E.), and Doctor of Philosophy (Ph.D.) degrees in Mining Engineering. The carefully designed curriculum for Mining Engineering provides comprehensive theoretical knowledge, practical experience, internships, health and safety courses, and the development of academic, technical, and professional skills to compete with graduates on a national and international level.

The Department of Mining Engineering actively engages in various projects of national and strategic importance related to coal mining, coal gasification, and mineral processing, as well as environmental aspects of mining activities. The department has established strong academic and research collaborations with prestigious institutions such as the University of Nottingham in the UK, Montan University in Leoben, Austria, Hacettepe University in Turkey, and China University of Mining and Technology in Xuzhou, China.

Vision of the Department

To provide excellent education in the field of Mining Engineering as per International Standards, and develop Research Based Solutions to Mining Industry, for National Development.

Mission of the Program

To produce Quality Professional Engineers with Problem Solving Expertise, Integrity and Strive to enhance their Skills and Ideas related to Mining industry.

Program Educational Objectives (PEOs)

To produce Mining Graduates who will be able to:

i. Demonstrate proficiency of applying the acquired knowledge & skills to solve engineering problem related to the exploitation of mineral resources.
ii. Consider economic and environmental impacts on mining engineering projects and contribute to the society through their problem-solving attitude.
iii. Exhibit effective communication, teamwork, leadership skills.
iv. Pursue professional growth through moral and continuous learning attitude.

4.6.2 The Faculty

Chairman of the Department:
Dr. Fahad Irfan Siddiqui
Phone: 022-2771391, 022-2772260-73 **Ext.** 4600

PROFESSOR: **Dr. Abdul Ghani Pathan** PhD, United Kingdom. **ASSOCIATE PROFESSORS:** **Dr. Fahad Irfan Siddiqui** PhD, Pakistan **Mr. Parvez Ahmed Shakeel** Honorary, MSc., Pakistan. **ASSISTANT PROFESSORS:** **Mr. Safiullah Memon** M.E, Pakistan.	**Dr. Munawar Ali Pinjaro** PhD, China. **Mr. Agha Shafi Muhammad Pathan** M.E, Pakistan. **Dr. Sultan Ahmed Khoso** PhD, China. **Dr. Muhammad Raheel Memon** PhD, Turkey.	**LECTURERS:** **Mr. Mairaj Hyder Soomro** M.E, Pakistan (On Study Leave) **Mr. M. Burhan Memon** M.E, Malaysia (On Study Leave) **Mr. Saleem Raza Baloch** M.E, Pakistan.

4.6.3 Laboratory Facilities

The department has the following well-equipped laboratories, which meets the academic needs of the students and faculty. These laboratories hold promise in providing superior consultancy services and supporting several research programs.

1. Rock Mechanics Laboratory
2. Mineral Processing Laboratory
3. Software Laboratory
4. Surveying and Mine Planning Laboratory
5. Mine Ventilation Laboratory
6. Advanced Research Laboratory

4.6.4 The Courses

	Course Code	Name of Subject	Credit Hours	
			Theory	Practical
1st Semester	MTH102	Applied Calculus	3	0
	PS106	Pakistan Studies	2	0
	IS111/SS104	Islamic Studies / Ethics	2	0
	MN121	Engineering Drawing	0	2
	ME181	Workshop Practice	0	2
	MN102	Mining Engineering Fundamentals	3	0
		Total	**10**	**4**

	Course Code	Name of Subject	Credit Hours	
			Theory	Practical
2nd Semester	EN101	Functional English	3	0
	MTH111	Linear Algebra and Analytical Geometry	3	0
	MN111	Applied Chemistry	3	1
	EL102	Electrical Technology	3	1
	CE115	Engineering Mechanics	3	1
		Total	**15**	**3**

	Course Code	Name of Subject	Credit Hours	
			Theory	Practical
3rd Semester	MTH201	Differential Equation & Fourier Series	3	0
	ENG201	Communication Skills	2	0
	MN201	General Geology	3	1
	ME292	Applied Thermodynamics	3	1
	CE265	Strength of Material	3	1
		Total	**14**	**3**

	Course Code	Name of Subject	Credit Hours	
			Theory	Practical
4th Semester	MN261	Mine Surveying	3	1
	CE285	Fluid Mechanics	3	1
	MN222	Mineralogy and Petrology	2	1
	MN232	Mineral Processing – I	2	1
	MN252	Coal Technology	2	1
		Total	**12**	**5**

	Course Code	Name of Subject	Credit Hours	
			Theory	Practical
5th Semester	MTH301	Numerical Analysis and Computer Programming	3	1
	MN312	Mineral Processing - II	2	1
	MN301	Structural Geology	3	0
	MN321	Rock Mechanics	3	1
	MN332	Mining Laws	2	0
	MN362	Mine Management	2	0
		Total	**15**	**3**

	Course Code	Name of Subject	Credit Hours	
			Theory	Practical
6th Semester	MTH317	Statistics and Probability	3	0
	MN381	Drilling and Blasting Engineering	3	1
	EN301	Technical and Scientific Writing	3	0
	MN351	Mine Ventilation	3	1
	MN391	Mineral and Ore Deposits	3	0
		Total	**15**	**2**

	Course Code	Name of Subject	Credit Hours	
			Theory	Practical
7th Semester	MN401	Strata Control	3	0
	MN442	Mineral Resource Estimations	2	1
	MN411	Mine Water and Dewatering Design	3	1
	MN422	Planning and Design of Underground Mines	3	0
	MN443	Mine Economics	2	0
	MN498	Final Year Project-I	0	3
		Total	**13**	**5**

8th Semester	Course Code	Name of Subject	Credit Hours	
			Theory	Practical
	MN452	Computer Application to Mining Industry	0	2
	MN471	Mine Rescue and Safety	3	1
	MN462	Surface Mine Design and Practice	3	0
	MN482	Cement Technology	2	0
	MN499	Final Year Project-II	0	3
		Total	**8**	**6**

4.6.5 Career Opportunities

A degree in Mining Engineering opens up attractive career opportunities in both the private and public sectors. Graduates from the Mining Engineering department find employment in a variety of organizations and industries, including the Directorate of Mineral Development, Government of Sindh, Sindh Coal Authority (SCA), Sindh Engro Coal Mining Company (SECMC), Sino-Sindh Resource Limited (SSRL), Sindh-Lakhra Coal Mining Company (SLCMC), Pakistan Atomic Energy Commission (PAEC), Pakistan Mineral Development Corporation (PMDC), as well as various other projects related to minerals such as coal mines, cement industries, mineral processing units, tunneling, and underground excavations.

4.7 Institute of Petroleum & Natural Gas Engineering

4.7.1 The Institute

Based on the data and statistics available on the exploration of petroleum resources, it can be concluded that the province of Sindh is Pakistan's top oil and gas producer. This holds significant importance for the economic progress and sustenance of the country's developmental framework. The exploration and production of these reserves offers a broad spectrum of challenges and opportunities for graduates and postgraduates to utilize their expertise and skills for the betterment and progress of the country.

At the very outset, the Fuel Engineering department was established in Mehran UET in the province of Sindh in 1983 to provide graduates an opportunity to serve in the oil & gas industry as Petroleum Engineers. Later, as per the recommendation of the University Grants Commission (UGC), it was renamed the Department of Petroleum & Gas Engineering.

Petroleum and Gas Engineering department has a great history of Excellence through Innovation, pioneering, and producing qualified graduates. In this regard, the tradition continued as the research and talent produced shaped the future of the Institute of Petroleum & Natural Gas (IPNGE) in 1996. The Institute offers BE, ME & PhD, in Petroleum and Natural Gas Engineering. We are a leading centre of Excellence in Petroleum & Natural Gas Engineering recognized internationally for our teaching, training, and research quality.

Higher studies in Petroleum Engineering are designed to equip students with the knowledge and skills to tackle the oil & gas industry challenges. Upon graduating, students will be able to understand, frame, and solve the most complex upstream problems in today’s industry.

Students in the Institute come from various urban and rural backgrounds in Sindh, Pakistan. Most graduates have been employed by oil and gas operating companies, services companies, refineries, and marketing companies in the country and abroad.

Technical and experimental studies carried out under the pioneer ship of the Institute include standards and basic methods of research and exploration. These also include drilling simulation, reservoir simulation, and natural gas measuring techniques which equally meet international standards.

The Institute has a seminar hall of 70 persons with the latest audio-visual facilities. The Institute of Petroleum and Natural Gas Engineering and Society of Petroleum Engineers (SPE) regularly arranges and conducts technical lectures / Short courses / initial and Final Seminars of research projects/thesis of undergraduate and postgraduate students and technical sessions in the facility. The Institute has an air-conditioned Seminar Library with the original and latest books, research Journals, annual technical reports of the Director General Petroleum and Concession Department (DGPC) and Hydrocarbon Development Institute of Pakistan (HDICP), Newsletters, thesis/projects of undergraduate and postgraduates in addition to e-resources of HEC.

Vision of the Department

The visionary approach of our Institute is concentrated on Petroleum & Natural Gas Engineering towards international standards, technical achievements through research, and producing competent Engineers to serve Petroleum Industry.

Mission of the Program

The mission of the Institute of Petroleum & Natural Gas Engineering is to provide student-focused excellent teaching and educational environment that nurtures the intellectual and professional growth of students, who will become leading human resources in the upstream petroleum industry.

Program Educational Objectives (PEOs)

The curriculum's program educational objectives (PEOs) are prepared based on stakeholders' needs and linked with different program learning outcomes. The PEOs of the Bachelor of Petroleum & Natural Gas Engineering are:

i. Our graduates will demonstrate technical skills with advanced knowledge essential for the petroleum industry, capable of solving field problems through investigation using complex problem-solving skills and modern tools.

ii. Our graduates will exhibit professional leadership skills, including involvement in society, teamwork, effective communication of ideas, showing excellent ethical values, and a strong commitment to quality, safety, health, and the environment.

iii. Our graduates will pursue life-long learning and develop innovative ideas to tackle technical challenges along with project management skills that will subsequently provide a road map to the advanced concepts and latest technologies.

4.7.2 The Faculty

Director of the Institute
Dr. Muhammad Khan Memon
Phone: 022-2771241, 2772250-73 / **Ext.:** 4300

PROFESSORS:		
Prof. Dr. Abdul Haque Tunio PhD, Pakistán.	**Engr. Naveed Ahmed Ghirano** M.E, Pakistán.	**Engr. Irshad Ali Gopang** M.E, Pakistán.
ASSOCIATE PROFESSORS:	**Engr. Muhammad Zubair** M.E, Pakistán. (On Study Leave)	**Engr. Faisal Najam Abro** M.E, Pakistán.
Dr. Muhammad Khan Memon PhD, Malaysia.		**Engr. Muhammad Ali Memon** M.E, Pakistan
Dr. Aftab Ahmed Mahesar PhD, Pakistan	**Dr. Ubedullah Ansari** PhD, China.	**Engr. Sohail Nawab** M.E, Pakistán.
Dr. Khalil Rehman Memon PhD, Pakistan	**LECTURERS:** **Engr. Abdul Qadir Shaikh** M.E, Pakistán.	**Engr. Imran Ahmed Hulio** M.E, Pakistán.
ASSISTANT PROFESSORS:		
Engr. Allah Dino Samoon B.E, Pakistan	**Engr. MukhtiarAli Talpur** M.E, Pakistán	

4.7.3 Laboratory Facilities

The following laboratories are available in the Institute with modern equipment and are named as:

1. Petroleum Refinery Engineering Lab
2. Gas Engineering laboratory
3. Drilling &Drilling Fluids laboratory
4. Production Engineering laboratory
5. Petro physics laboratory
6. Reservoir Simulation laboratory
7. General / Oil Testing laboratory
8. PVT laboratory
9. Computer laboratory

These laboratories serve not only undergraduate and postgraduate students but also provide services to researchers. Besides normal academic activities, the Institute, faculty, and students are involved in research and development activities in collaboration with industries.

4.7.4 The Courses

	Course Code	Name of subject	Credit Hours	
			Theory	Practical
1st Semester	PG101	Fundamentals of Petroleum Engineering	3	0
	HU101	Functional English	3	0
	PS106	Pakistan Studies	2	0
	IS111/SS104	Islamic Studies / Ethics	2	0
	MTH108	Applied Calculus	3	0
	EL112	Applied Physics	3	1
		Total	**16**	**1**

	Course Code	Name of subject	Credit Hours	
			Theory	Practical
2nd Semester	WS105	Workshop Practice	0	2
	ME110	Engineering Drawing & Graphics	2	1
	ENG111	Communication Skills	2	0
	PG111	Applied Chemistry	2	1
	MTH112	Linear Algebra &Analytical Geometry	3	0
	PG121	Applied Geology	2	1
	PG131	Applied Thermodynamics	2	0
		Total	**13**	**5**

	Course Code	Name of subject	Credit Hours	
			Theory	Practical
3rd Semester	ENG215	Technical Report Writing & Presentation Skills	2	0
	EL215	Introduction to Electrical Engineering	2	1
	PG221	Petroleum Geology & Geo-Physical Prospecting	3	0
	MTH223	Differential Equation & Complex Variable	3	0
	CS231	Computer Programming & Software Applications	2	1
	CE261	Fluid Mechanics	2	1
		Total	**14**	**3**

	Course Code	Name of subject	Credit Hours	
			Theory	Practical
4th Semester	PG201	Petro physics	3	1
	PG211	Drilling Engineering-I	3	1
	PG222	Organizational Behavior	3	0
	PG231	Properties of Reservoir Fluids	3	1
	CE281	Mechanics of Materials	3	0
		Total	**15**	**3**

	Course Code	Name of subject	Credit Hours	
			Theory	Practical
5th Semester	PG321	Reservoir Geo Mechanics	2	0
	PG341	Drilling Engineering-II	3	1
	PG361	Reservoir Engineering	3	1
	PG371	Petroleum Refinery Engineering	3	1
	PG381	Environment & Safety Management	3	0
		Total	**14**	**3**

	Course Code	Name of subject	Credit Hours	
			Theory	Practical
6th Semester	PG301	Instrumentation & Process Control	2	1
	PG311	Natural Gas Engineering	2	1
	MTH321	Applied Numerical Methods	2	1
	PG331	Gas Reservoir Engineering	3	1
	PG351	Well Logging	2	1
		Total	**11**	**5**
	Course Code	**Name of subject**	**Credit Hours**	
			Theory	**Practical**
7th Semester	PG401	Well Testing	3	1
	PG411	Petroleum Production Engineering-I	3	1
	PG421	Reservoir Simulation	3	1
	PG441	Project Planning & Management	2	0
	PG498	Final Year Project-I	0	3
		Total	**11**	**6**

	Course Code	Name of subject	Credit Hours	
			Theory	Practical
8th Semester	PG451	Principles of Enhanced Oil Recovery	3	1
	PG461	Petroleum Production Engineering-II	3	1
	PG471	Unconventional Reservoirs	3	0
	PG481	Petroleum Economics	2	0
	PG499	Final Year Project-II	0	3
		Total	**11**	**5**

4.7.5 Carrier Opportunities:

The Institute also arranges summer internships for third/final year students by coordinating oil and gas exploration and production companies operating in Pakistan. The internships enhance the knowledge of students and provide hands-on experience. In the final year, the students are assigned to work on a project related to field operations. The project is usually designed and completed in collaboration with the petroleum industry. After graduation, the reputed oil/gas sectors usually require the top ten students for their graduate training program.

4.8 Department of Textile Engineering

4.8.1 The Department

The Department of Textile Engineering was established in 1993 for undergraduate program (i.e., Bachelor of Engineering (B.E) in Textile Engineering) with the aim of imparting the knowledge and skills in the field of textile materials, manufacturing, and processing to the students as per international standards. Consequently, after graduation, students could contribute towards the development and modernization of Pakistan's Textile Industry and Services. This department is the first Textile Engineering Institute in Sindh province and Pakistan's first recognized institute by Pakistan Engineering Council. The department also offers masters and PhD programs in the field of Textile Engineering since 2005.

In addition of B.E, ME and PhD in Textile Engineering, the Department has started BS program in Garment Manufacturing since 2019.

Vision of the Department

Attending university is mainly considered a way to leverage promising career prospects, but university is also a unique opportunity where you can look at yourself and think about how you can benefit and grow personally from the experience. Our vision is to be an educational institution that provides an education at the international level and research-based solution providers to the industry.

Mission of the Program

B.E. Textile Engineering program aims to provide quality education to produce professionals with adequate knowledge, skills and attitude for a successful career. Most courses combine theory and practice. The theory elements draw from a range of areas including Spinning, Weaving, Wet Processing, and Textile Testing & Quality Control etc. The Practical element of the program involves looking at academic development, as well as educational strategies which involve developing communication skills, looking at future career aspirations, leadership and teamwork.

Program Educational Objectives (PEOs)

The PEOs are prepared based on stakeholders' needs and linked with twelve program-learning outcomes. The PEOs of Bachelor of Textile Engineering describe that our graduates, 5 years after graduation, should be able to:

i. Participate in professional engineering practices with appropriate consideration for health and safety, environmental, legal, social, and cultural aspects.
ii. Conduct themselves as responsible professionals to complete their tasks/projects.
iii. Pursue professional growth through moral and continuous learning attitude.

4.8.2 The Faculty

Chairman of the Department:
Prof. Dr. Zeeshan Khatri
Phone: 022-2771565

PROFESSORS: **Dr. Zeeshan Khatri** PhD, Japan. **Dr. Farooq Ahmed** PhD, Pakistan. **ASSOCIATE PROFESSORS:** **Dr. Mazhar Hussain Peerzada** PhD, England. (Lien) **Dr. Awais Khatri** PhD, Australia. **Dr. Iftikhar Ali** PhD, South Korea. **Dr. Samander Ali Malik** D.Eng., Germany. **Dr. Abdul Wahab Jatoi** PhD, Japan.	**Dr. Naveed Mengal** PhD, South Korea. **Dr. Noor Ahmed Sanbhal** PhD, China. **Dr. Raja Fahad Qureshi** PhD, Pakistan. **Dr. Alvira Ayoub Arbab** PhD, South Korea. **ASSISTANT PROFESSORS:** **Dr. Sanam Irum Memon** PhD, Pakistan. **Mr. Abdul Wahab Memon** M.E, Pakistan. **Dr. Anam Ali Memon** PhD, South Korea.	**Dr. Umaima Saleem Memon** PhD, Turkey. **Dr. Rabia Almas Arain** PhD, Pakistan. **Dr. Pardeep Kumar Gianchandani** PhD, Italy. **LECTURERS:** **Dr. Sadaf Aftab Abbasi** PhD, Australia. **Engr. Nadir Ali Rind** M.E, Pakistan. **Engr.Abdul Khalique Jhatial** M.E, Pakistan. (on study leave)

4.8.3 Laboratory Facilities

1. Yarn Manufacturing Lab
2. Weaving Lab
3. Knitting Lab
4. Textile Chemical Processing Lab
5. Color Research Lab
6. Garment Manufacturing Lab
7. Textile Testing and Quality Control Lab
8. Textile Composite lab
9. Nano-materials Research Lab
10. Functional Materials and Polymer Engineering Lab
11. Smart Organic Materials Research Lab

4.8.4 The Courses

	Course Code	Subject	Credit Hours	
			Theory	Practical
1st Semester	TE111	Introduction to Textile Engineering	03	00
	TE112	Applied Chemistry	03	01
	TE113	Engineering Drawing and CAD	02	01
	MTH108	Applied Calculus	03	00
	IS111/SS104	Islamic Studies/Ethics	02	00
	PS106	Pakistan Studies	02	00
		Total	**15**	**02**

	Course Code	Subject	Credit Hours	
			Theory	Practical
2nd Semester	TE121	Textile Raw Materials	02	00
	TE122	Applied Physics	03	01
	EL118	Basic Electrical and Electronics	03	01
	MTH115	Differential Equations and Laplace Transform	02	00

	TE123	Thermodynamics and Fluid Mechanics	03	01
	ME146	Workshop Practice	00	01
		Total	**13**	**04**

3rd Semester	**Course Code**	**Subject**	**Credit Hours**	
			Theory	**Practical**
	TE211	Fiber Science	02	01
	TE212	Pre-Spinning Processes-I	02	01
	TE213	Fabric Preparatory Processes	02	01
	TE214	Textile Industry Utilities and Services	02	00
	ENG-101	Functional English	02	00
	CS115	Introduction to Computing	02	01
		Total	**12**	**04**

4th Semester	**Course Code**	**Subject**	**Credit Hours**	
			Theory	**Practical**
	TE221	Manufactured and High-Performance Fibers	03	00
	TE222	Pre-spinning Processes-II	02	01
	TE223	Textile Pretreatment	03	01
	TE224	Entrepreneurship	02	00
	MTH220	Numerical Analysis and Computer Applications	03	01
		Total	**13**	**03**

5th Semester	**Course Code**	**Subject**	**Credit Hours**	
			Theory	**Practical**
	TE311	Yarn Production Engineering	03	01
	TE312	Weaving Machines and Mechanisms	03	01
	TE313	Textile Colorants and Coloration	03	01
	TE314	Automation and Control Engineering	02	01
	ENG302	Technical and Scientific Writing	03	00
		Total	**14**	**04**

6th Semester	**Course Code**	**Subject**	**Credit Hours**	
			Theory	**Practical**
	TE321	Advanced Spinning Techniques	02	01
	TE322	Fabric Design and Structure	02	01
	TE323	Color Physics	03	01
	TE324	Textile Testing and Quality Control	02	01
	ENG301	Communication Skills	02	00
	MTH311	Statistics and Probability	03	00
		Total	**14**	**04**

7th Semester	**Course Code**	**Subject**	**Credit Hours**	
			Theory	**Practical**
	TE411	Knitted Fabric Manufacturing	03	01
	TE412	Textile Finishing and Coating	03	01
	TE413	Garment Manufacturing	03	01
	TE414	Engineering Economics	03	00
	TE498	Final Year Project-I	0	03
		Total	**12**	**06**

	Course Code	Subject	Credit Hours	
			Theory	Practical
8th Semester	TE421	Nonwoven and Specialty Fabrics	02	00
	TE422	Denim Manufacturing and Processing	03	01
	TE423	Textile Sales and Marketing	02	00
	TE424	Environment, Health and Safety	03	00
	TE425	Engineering Project Management	02	00
	TE499	Final Year Project-II	00	03
		Total	**12**	**04**

4.8.5 Career Opportunities

After graduation, the candidate will be:

- able to secure academic position in Pakistan and abroad.
- able to join various textile industry sectors including manufacturing, processing, testing, merchandising, and auditing etc. in Pakistan and abroad.
- eligible for admission in Master's degree Program (also PhD degree in some cases) in any reputed university in the country and around the globe. The areas of further study may be expanded to other Science, Engineering, Management and Applied Sectors such as Technical and Smart Textiles, Material Science & Nanotechnology, Environment, Medical, Automobile and Aerospace, Defense, and so on.

5. FACULTY OF SCIENCE, TECHNOLOGY & HUMANITIES

5.1 Bachelor of Science in Mathematics (BSM)

5.1.1 The Department (Department of Basic Sciences & Related Studies)

The faculty of this department teaches / offers various fundamental compulsory courses including Mathematics, Statistics, Computer Science, Pakistan Studies and Islamic Studies/ Ethics. Students are also assisted to understand theoretical work of Mathematics with the help of programming languages such as C++ and MATLAB in well-equipped computer laboratory of the department. The courses of Mathematics and Computer Sciences are also being taught to the Postgraduate students of the University by the faculty of Basic Sciences and Related Studies. In this way, this department is helping students to equip with necessary mathematical expertise to deal with problems being occurred in current technological era. The department also participates in offering short courses on various aspects of computer-oriented courses. The department currently comprises of 23 teachers of Mathematics, 03 teachers of Islamic Studies/Ethics, 03 teachers of Pakistan Studies,03 Visiting Faculty, 03 Teaching Assistants and 07 non-academic staff.

The department commenced a 2-year M.Phil. and 4-year PhD program in Applied Mathematics from the year 2014. Presently, Department running two batches of M.Phil. in Applied Mathematics, which comprises of about 50 students.

This will help the students of Mathematics, Statistics, Physics and Engineering to further improve their qualifications and knowledge in Applied Mathematics and relevant fields.

Role of the Department

The department has main focus to provide overall knowledge of Mathematics and other subjects to not only students of this University but also other interested public across country and outside. Several faculty members of this department are maintaining their blogs and share academic notes and other things online for interested audience. This way the Department is providing global knowledge sharing and tries to continuously improve it. In addition, some of books in Mathematics on various courses are also written by our faculty members as author/co-author.

Vision of the Department:

The department of Basic Sciences and Related Studies aspires to the highest standards of excellence in teaching and service.

Program Educational Objectives (PEOs):

To skill students with the instinctive knowledge of Mathematics and its uses in all fields in general and engineering in particular and further to equip them for higher studies and research in different disciplines.

5.1.2 Laboratory Facilities

The department of Basic Sciences and Related Studies comprises of following two computer laboratories:

1. Computer Lab for Undergraduate Students
2. Computer Lab for Postgraduate Students

Both of the labs have latest Corei-7 PCs with high-speed internet connection. Forty PCs for undergraduate lab are used for conducting C++ programming practical of students in addition to that same are being used for conducting various short courses related to C++, MATLAB, LaTeX and many others. The lab is extensively used by undergraduate student in order to complete their assignments and projects with the help of various software such as Microsoft Office etc.

5.1.3 The faculty

Chairman of the department:
Prof. Dr. Asif Ali Shaikh
Phone: +92-22772250-70 / **Ext.:**2200

PROFESSOR: **Dr. Asif Ali Shaikh** PhD, Pakistan. **Dr. Syed Feroz Shah** PhD, China. **Dr. Muhammad Anwar Solangi** PhD, Pakistan. **ASSOCIATE PROFESSORS:** **Dr. Sania Qureshi** PhD, Pakistan. **Dr. M. Mujtaba Shaikh** PhD, Pakistan. **ASSISTANT PROFESSORS:** **Mr. Ghulam Abbas Mehar** M.A, Pakistan. **Mr. Abdul Saleem Memon** M.Phil, Pakistan. **Ms. Zaib-un-Nisa Memon** M.Phil, Pakistan. (On Study leave) **Mr. Muhammad Urs Jhatial** M.Phil, Pakistan.	**Ms. Saima Bhatti** M.Phil, Pakistan. (On Study leave) **Ms. Fozia Shaikh** M.Phil, Pakistan. (On Study leave) **Mr. Imran Qasim Memon** M.Phil, Pakistan. (On Study leave) **Dr. Kashif Ali Abro** PhD, Pakistan. **Mr. HammeerAbro** M.Phil, Pakistan. **Mr. Ayaz Ali Siyal** M.Phil, Pakistan. (On Study leave) **Mr. Ali AsgharSangah** M.Phil, Pakistan. **Ms. Sara Mahesar** M.Phil, Pakistan. (On Study leave)	**LECTURES:** **Ms. Naseem Khalid Memon** M.Sc, Pakistan. **Hafiz Abdul Aziz Memon** M.Phil, Pakistan. **Mr. Shafqat Chandio** M.Phil, Pakistan. **Hafiz Shoaib Ahmed Kalhoro** M.Phil, Pakistan. **Mr. Mansoor Ali Bhagat** M.Phil, Pakistan. **Mr. Javed Iqbal Larik** M.Phil, Pakistan. (On Study leave) **Mr. Sher Khan Awan** M.Phil, Pakistan. **Hafiz Abdul WaheedChanna** M.Phil, Pakistan. **Mr. Prem Kumar** M.Phil, Pakistan.

5.1.4 The Courses

	Course Code	Subject	Credit Hours	
			Theory	**Practical**
1st Semester	MATH105	Calculus-I	3	0
	MATH110	Set Theory	3	0
	ENG101	Functional English	3	0
	IS111/SS104	Islamic Studies/Ethics	2	0
	MEBP101	G-I* (Physics-I)	3	0
	PS106	Pakistan Studies	2	0
		Total	**16**	**0**

	Course Code	Subject	Credit Hours	
			Theory	Practical
2nd Semester	MATH150	Calculus II	3	0
	MATH155	Discrete Mathematics& Graph Theory	3	0
	MATH160	Statistics & Probability	3	0
	ENG102	Communication Skills	3	0
	CS130	Introduction to Computers	3	0
	EL127	G-II* (Physics-II)	3	0
		Total	**18**	**0**

	Course Code	Subject	Credit Hours	
			Theory	Practical
3rd Semester	MATH205	Differential Equations & Fourier Series	3	0
	MATH210	Linear Algebra	3	0
	ECO230	G-III* (Economics)	3	0
	ENG215	Technical Report Writing & Presentation Skills	3	0
	MATH250	Statics &Vector Analysis	3	0
		Total	**15**	**0**

	Course Code	Subject	Credit Hours	
			Theory	Practical
4th Semester	MATH255	Dynamics	3	0
	MATH270	Number Theory	3	0
	MATH260	Computer Programming C++, Matlab	3	0
	MATH265	Group Theory	3	0
	MATH275	Topology	3	0
		Total	**15**	**0**

	Course Code	Subject	Credit Hours	
			Theory	Practical
5th Semester	MATH305	Algebraic Topology	3	0
	MATH310	Differential Geometry & Tensor Analysis	3	0
	MATH315	Partial Differential Equations	3	0
	MATH320	Real Analysis- I	3	0
	MATH350	Rings & Fields	3	0
		Total	**15**	**0**

	Course Code	Subject	Credit Hours	
			Theory	Practical
6th Semester	MATH370	Introduction to Simulator Software	3	0
	MATH355	Transforms	3	0
	MATH360	Complex Analysis	3	0
	MATH375	Analytical Dynamics	3	0
	MATH365	Real Analysis-II	3	0
		Total	**15**	**0**

	Course Code	Subject	Credit Hours	
			Theory	Practical
7th Semester	MATH405	Numerical Analysis-I	3	0
	MATH410	Functional Analysis	3	0

	MATH415	Fluid Mechanics	3	0
	MATH420	Optimization Techniques	3	0
	MATH425	Mathematical Physics	3	0
		Total	**15**	**1**

	Course Code	**Subject**	**Credit Hours**	
			Theory	**Practical**
8th Semester	MATH 470	Inferential Statistics	3	0
	MATH480	Numerical Analysis-II	3	1
	MATH465	Integral Equations	3	0
	MATH455	Econometrics	3	0
	MATH460	Operation Research	3	0
	MATH499	Comprehensive Viva-Voce	3	0
		Total	**18**	**1**

* The courses G-I, G-II, G-III may be chosen from following titles.

G-I	**G-II**	**G-III**
Physics-I	Physics-II	Economics
Chemistry	Accounting	Sociology
Philosophy	Environmental Sciences	

5.2 Bachelor of Business Administration (BBA)

5.2.1 The Institute (Mehran University Institute of Science, Technology and Development)

Mehran University Institute of Science, Technology and Development (MUISTD) is established with the objectives to produce highly qualified and skilled manpower at MS, MBA and PhD degree levels; and to formally train the existing personnel already in-charge in the field. MUISTD helps in conduct research on different aspects of effective and viable. S&T policy frame work and their strategic management to achieve these objectives. It is established to be a center of excellence for teaching, training and research required to respond to the modern-day challenges with focus on issues relating to development, management, and resisting the exploitation of human, natural and other resources. The clients of teaching, trainings and research results of this institute are; universities, Research & Development organizations, Government, National and International Business, individuals in public and private sectors.

Mission of the Program

To produce highly skilled professionals equipped with capacity of ***Knowledge creation and transfer*** under relevant degree in the field of Science, Technology, Innovation and Entrepreneurship (STIE) for viable business management, conduct of research and building of triple helix relationship among academics, industry and government to promote fast growth of economy.

Why Bachelors of Business Administration (BBA) at MUISTD?

In the era of corporate competition, the professional managers and decision makers require capabilities to perform exceptionally well and undertake informed, knowledgeable and visionary decisions in consonance with effective policies. MUISTD produces the human resource to respond to such dynamic business environment through Business Administration programs.

BBA at MUISTD aims to produce not only managers but entrepreneurs who can launch their ventures for self-sustaining future and the educational programs offered are designed to produce such qualified manpower with experience of conceiving and designing innovative business models with expertise of managing financial and non-financial issues associated with businesses. The program builds students' potential and enables them to build a balance between targets of economic success and limitations of increasing social and environmental responsibilities.

5.2.2 The Faculty

Director of MUISTD
Prof. Dr. Asif Ali Shah
Phone: 022-2772255 / **Ext.:** 6700 - 04

PROFESSOR: **Dr. Asif Ali Shah** PhD, Pakistan **ASSOCIATE PROFESSOR:** **Dr. Qazi M. Moinuddin Abro** PhD, UK **Dr. Iffat Batool Naqvi** PhD, Austria. **Dr. Kamleshwer Lohana** MS. Australia, PhD, UoS	**Dr. Adnan Pitafi** PhD, China. **ASSISTANT PROFESSOR:** **Dr. Wahid Bux Mangrio** PhD Japan **Dr. Shah Muhammad Kamran** PhD, China. **Dr. Arifa Talpur** PhD, UoS. **Ms. Ghazala Tunio** PhD, UoS.	**LECTURER:** **Mr. Waqar Sether** PhD, UoS. **Ms. Mahvish Khaskhely** MBA, Bahria University. **Mr. Abdul Salam Mallah** MBA, IBA. **Ms. Tooba A. Hashmi** MBA, SZABIST.

5.2.3 Laboratory Facilities

The Institute owns two computer labs, Lab – I and Lab – II, which provides high-speed Internet and e-mail facilities to the research students. In addition, these labs also encourage students to use SPSS and Project management software for their research particularly in data analysis.

5.2.4 The Courses

	Course Code	Subject	Credit Hours	
			Theory	Practical
1st Semester	ENG101	Functional English	03	00
	MATH120	Business Mathematics	03	00
	SS111/SS104	Islamic Studies/Ethics	02	00
	PS106	Pakistan Studies	02	00
	MGT111	Introduction to Business	03	00
	ACT111	Principles of Accounting	03	00
		Total	**16**	**00**

	Course Code	Subject	Credit Hours	
			Theory	Practical
2nd Semester		Statistical Method and Probability	03	00
	GEN121	Social Psychology and Personal Development	03	00
	MKT121	Principles of Marketing	03	00
	ECO121	Microeconomics	03	00
	MGT122	Principles of Management	03	00
	CS110	Introduction to Computing and Programming	02	01
		Total	**17**	**01**

	Course Code	Subject	Credit Hours	
			Theory	Practical
3rd Semester	ENG-201	Communication Skills	03	00
	ENT211	Business Creativity and Design Thinking	03	00
	ECO212	Macroeconomics	03	00
	GEN212	Foreign Language – I (Chinese)	03	00
		Human Resource Management	03	00
		Introduction to Business Finance	03	00
		Total	**18**	**00**

	Course Code	Subject	Credit Hours	
			Theory	Practical
4th Semester	MATH230	Inferential Statistics	03	00
	MKT222	Marketing Management	03	00
	ACT213	Managerial Accounting	03	00
	ENT222	Business Modeling Studio	03	00
	GEN223	Foreign Language – II (Chinese)	03	00
	ACT224	Financial Institutions and Markets	03	00
		Total	**18**	**00**

	Course Code	Subject	Credit Hours	
			Theory	Practical
5th Semester	ENT313	Website Design and Application Development	02	01
	MGT223	Organizational Behavior	03	00
	GEN314	Business Law	03	00
	ENT314	Entrepreneurial Finance & Marketing	03	00

	ENG-301	Business Communication	03	00
	MGT314	Productions and Operations Management	03	00
		Total	**17**	**01**

	Course Code	Subject	Credit Hours	
			Theory	Practical
6th Semester	MKT323	Customer Relationship Management	03	00
	MGT325	Globalization and Business Development	03	00
	ECO323	Pakistan Economy	03	00
	MGT326	Business Research Methods	03	00
		Agribusiness	03	00
		Decision Models and Analytics	03	00
		Total	**18**	**00**

	Course Code	Subject	Credit Hours	
			Theory	Practical
7th Semester		Financial Management	03	00
	MGT418	Strategic Management	03	00
		Marketing Analytics	03	00
		Elective I (List attached)	03	00
		Elective II (List attached)	03	00
		Total	**15**	**00**

	Course Code	Subject	Credit Hours	
			Theory	Practical
8th Semester	GEN425	Corporate Social Responsibility	02	00
	GEN426	Social Entrepreneurship	02	00
		Elective-III (List attached)	03	00
		Elective-IV (List attached)	03	00
	MGT429	Business Plan∞	03	00
	GEN425	Corporate Social Responsibility	02	00
		Total	**15**	**00**

∞A jury comprising of HoD, Focal Person of Internship, Manager IEC, Focal person from ORIC, external industrial/field expert and two senior teachers will evaluate the student's business plan at the end of the 8th semester.

*Students can opt any four courses from their respective specialization.

*Maximum 4 and Minimum 2 weeks' internships at the end of 2nd and 3rd Year.

*1 Internship at the end of 2nd year may preferably be undertaken in a social enterprise i.e., SOS Village, Edhi Foundation, Saylani Welfare Trust, etc.

Finance Elective Courses

Course Code	Subject Name	Credit Hour	
		Theory	Practical
FIN401	Analysis of Financial Statement	03	00
FIN405	Corporate Finance	03	00
FIN410	Financial Risk Management	03	00
FIN415	Investment and Portfolio Management	03	00
FIN425	Venture Capital and Private Finance	03	00
	Total	**15**	**00**

HRM Elective Courses

Course Code	Subject Name	Credit Hour	
		Theory	Practical
HRM401	Career Management and Planning	03	00
HRM410	Compensation Structure Development	03	00
HRM415	Job Analysis and Performance Appraisal	03	00
HRM430	Organizational Development	03	00
HRM440	Personnel Management	03	00
	Total	**15**	**00**

Marketing Elective Courses

Course Code	Subject Name	Credit Hour	
		Theory	Practical
MKT401	Advertising and Promotion	03	00
MKT410	Brand Management	03	00
MKT415	New Product Development	03	00
MKT430	Personal Selling	03	00
MKT440	Marketing Issues in Pakistan	03	00
MKT450	Experiential Marketing	03	00
	Total	**15**	**00**

5.2.5 Career Opportunities

There are thousands of opportunities for candidates with BBA degree and the degree program at MUISTD prepares for careers including Accountants, Financial advisors, Marketers, Commodity traders, Loan officers, Real estate agents, Managers and Entrepreneurs etc. Depending upon aptitude of graduate, options are available to work with national and international organizations including Small and Medium Enterprises and Multinational organizations.

5.3 Bachelor of Studies in English (BSE)

5.3.1 The Directorate (Directorate of English Language Development Center)

In the year 1988, the English Language Development Centre was established in collaboration with the British Council and the University Grant's Commission (Presently the Higher Education Commission of Pakistan) at Mehran University Jamshoro. This Centre was initially run by a British Director Prof. Brian Bamber. The major aim of this centre was to help students and faculty to improve their English in order to fully understand engineering courses taught in English. Later, under expansion phase, ELDC was relocated to its new state of the art building at MUET Jamshoro. Acknowledging performance of the Centre, ELDC was included amongst 5 shortlisted institutions in public universities of Pakistan considered by English Language Teaching Reforms Project (ELTR) of HEC Pakistan for the establishment of National Centre for English Language Teaching and Research. Later, the ELTR Project of the HEC of Pakistan established the state-of-the-art Self-Access Center at the ELDC, Mehran, UET, Jamshoro which is considered as the first in province Sindh a hub of teachers' training in the province. The SAC offers training on Computer Assisted Language Learning and Internet based learning.

In 2014, CELL witnessed further expansions in the degree programs. Catering to the needs of the teacher community, ELDC started MS program in field of Linguistics which is recognized by HEC of Pakistan. In 2019, ELDC launched its first-ever undergraduate program BS English also. In March 2019, ELDC in collaboration with Higher Education Commission of Pakistan organized its first international conference on Challenges & Innovations in 21st century (ICELL'19) at Mehran University of Engineering & Technology, Jamshoro. This conference was attended by international and national scholars of eminence such as David Crystal.

Besides, CELL has launched an international research journal in Language and Linguistics to promote research culture and engage the ELT community in research dialogue. Furthermore, CELL also operates an active society of Language and Literature which works to groom the intellectual and literary sensibilities of its alumni-MS and BS. Besides offering degree awarding programs in English and English Language courses, in 2022 CELL has established a 'Creative Learning Space' within its premises. The CLS offers seminars and one-to-one session to CELL BS and MS students on career counselling, and other dimensions of intellectual and emotional growth of a student.

Mission of the Program

To prepare qualified human resource in the field of English linguistics for socio-economic development of the country and engage the learners in a constructive dialogue on linguistic and literary issues and developments nationally and internationally.

Objectives of the Program:

- To Assist BS English students, understand core concepts of **linguistics & Literature.**
- The BS English program aims to equip students with an understanding of key issues and research finding in methodology, theory and analysis, and the underlying values and principles of the field, and with the skills to make a significant professional contribution to the field
- To teach technical writing as to give them academic and professional edge in their various composition challenges of their field.
- To arrange various co-curricular activities as to provide the students with ample opportunities to grow dynamically.
- To help the students learn effective communication by helping them develop both written and oral skills of communication
- To help them learn and practice different techniques for the improvement of their listening, reading, speaking and writing skills.
- To familiarize the students with the purpose, importance and different types of IELTS &TOEFL tests.
- To familiarize the students with the concept, style and format of GMAT, GRE & GAT and to explain the basic verbal, analytical and quantitative concepts in GMAT, GRE & GAT.

5.3.2 The Faculty

DIRECTOR:
Dr. Shumaila Aijaz Memon
Phone: 022-2772255 / **Ext.:** 6600

PROFESSOR: **Dr. Habibullah Pathan,** Postdoc. MIT, USA **ASSOCIATE PROFESSOR:** **Dr. Shumaila Aijaz Memon,** Postdoc. Penn State University USA, **ASSISTANT PROFESSORS:** **Dr. Sahiba Khatoon,** PhD (Malaysia) **Ms. Quratulain Mirza,** M.Phil. (ELT) Iqra University, **Mr. Shoukat Ali Lohar,** MPhil. Pakistan **LECTURERS:** **Mr Jam Khan Mohammad,** M.A (Hons), Pakistan	**Mr. Syed Waqar Ali Shah,** MS, Pakistan (On study leave) **Ms. Sadia Aftab Memon**, MS, Pakistan **Ms. Sania Memon,** MS, Pakistan **Ms Um-e-Farwa Thalho,** M.Phil, Pakistan **Mr Ali Raza Khoso,** MS, Pakistan **Ms. Shazia Khokhar,** MS, Pakistan **Ms. Shamshad Junejo,** MS, Pakistan	**LECTURERS (Contract):** **Mr. Mansoor Ahmed Memon,** MS, Pakistan **Ms. Ume Rabab Shah,** MPhil, Pakistan **Ms. Nazia Koonj,** MS, Pakistan **Mr. Saeed Ahmed Rind,** MS, Pakistan **Mr. Fayaz Ali Chandio** MS, Pakistan **Mr. Abdul Wahid** MS, Pakistan

5.3.3 The Courses

	Course code	Course Title	Credit Hours
1st Semester	ELL101	Functional English I	3
		Pakistan Studies	2
		Introduction to Computers	3
		Islamic Studies/Ethics	2
	ELL114	Introduction to Lit. I: (Poetry & Drama)	3
	ELL117	Introduction to Linguistics	3
		Total	**16**

	Course code	Course Title	Credit Hours
2nd Semester	ELL121	Functional English II	3
		Basic Mathematics	3
		Entrepreneurship	3
		Environmental Sciences	3
	ELL133	Introduction to Lit. II: (Medieval to Romantics)	3
	ELL137	Phonetics & Phonology	3
		Total	**18**

3rd Semester	Course code	Course Title	Credit Hours
	ELL241	Academic Reading and Writing	3
	ELL245	Communication Skills I	3
		Statistics and Probability	3
		Organizational Behavior	3
	ELL255	Short Fictional Narratives	3
	ELL259	Semantics	3
		Total	**18**

4th Semester	Course code	Course Title	Credit Hours
	ELL263	Communication Skills II	3
		Human Resource Management	3
	ELL271	Introduction to Philosophy	3
	ELL275	Grammar and Syntax	3
	ELL279	Introduction to Morphology	3
	ELL281	Classical Poetry	3
		Total	**18**

5th Semester	Course code	Course Title	Credit Hours
	ELL304	Popular Fiction	3
	ELL307	Sociolinguistics	3
	ELL310	Foundations of Literary Criticism and Theory	3
	ELL313	Psycholinguistics	3
	ELL315	Language Testing & Evaluation	3
	ELL317	English for specific purpose (ESP)	3
		Total	**18**

6th Semester	Course code	Course Title	Credit Hours
	ELL320	Technology in Teaching & Learning Languages	3
	ELL322	Discourse Studies	3
	ELL325	World Englishes	3
	ELL327	Modern Poetry	3
	ELL330	Introduction to Research Methodology	3
	ELL332	Modern Novel	3
		Total	**18**

7th Semester	Course code	Course Title	Credit Hours
	ELL410	Modern Drama	3
	ELL414	Content and Language Integrated Learning	3
	ELL417	Second Language Acquisition	3
	ELL420	Literary Theory and Practice	3
	ELL422	Pakistani Literature in English	3
	ELL425	Research Project	3
		Total	**18**

8th Semester	Course code	Course Title	Credit Hours
	ELL427	Syllabus Designing	3
	ELL430	Stylistics	3
	ELL433	Postcolonial Literature	3
	ELL436	Introduction to Women's Writing	3
	ELL440	Research Project	3
		Total	**15**

5.4 Bachelor of Science in Computer Science (BSCS)

5.4.1 The Department

Computer Science is a discipline that integrates the study of Computers & Computational Systems. Principle areas of study within computer science includes artificial intelligence, computer systems & networks, security, database systems, human computer interaction, vision & graphics, numerical analysis, programing languages, software engineering and theory of computing.

The problems that computer scientists encounter range from the abstract determining what problems can be solved with computers and the complexity of the algorithms that solve them to the tangible designing applications that perform well on hand-held devices that are easy to use that uphold security measures.

Given the rapid rate of change within technology, computer system engineers need to have a thirst for learning to keep up with the latest developments. Computer science majors must also be curious about the world around them since programs and systems are applied to every possible area of real life and its betterment.

The Department of Computer Science is leaving no stone unturned to achieve its transformation to practice in true spirit the education system based on outcome-based education (OBE) system.

Vision of the Department
Build a strong research and teaching environment that responds swiftly to the challenges of the current era.

Mission of the Department
To produce computer science graduates to design and develop quality software solutions, be able to work successfully within challenging environments and will be good professionals.

Program Educational Objectives (PEOs)
The program educational objectives (PEOs) were prepared by the OBE implementation committee for outcome-based education implementation and approved through the Board of Studies, Board of Faculty and Academic Council. The PEOs were prepared on the basis of stakeholders' needs and linked with ten program learning outcomes. The PEOs has been published on official webpage of the department at Mehran University website and has been displayed at various notice boards of the department. The PEOs of Bachelor of Computer Science describe that our graduates, 3-5 years after graduation, should be able to:

1. To produce graduates who performs professional based on the acquired computer engineering knowledge and analytical skills with continual improvement.
2. To produce graduates who ensures rationalism and ethics in a multicultural, diversified environment.
3. To prepare graduates who is a team player and capable to demonstrate communication and management skills with an approach towards problem solving.

5.4.2 The Faculty

Chairman of the Department
Dr. Shahnawaz Talpur,
Phone: 92-22 2772276, 92-22 2772250-73 /**Ext.:** 4202

ASSOCIATE PROFESSORS: **Dr. Shahnawaz Talpur** PhD, China. **Mr. M. Moazzam Jawaid** PhD, United Kingdom	**Dr. Adnan Ashraf** PhD, Pakistan **Ms. Zartasha Baloch** PhD, Pakistan.	**Mr. Fawad Ali Mangi** M.E, Pakistan. (On Study Leave) **Ms. Haleema Memon** M.E, Pakistan.

Dr. Sanam Narejo PhD, Italy. **Dr. Sammer Zai** PhD, South Korea. **Dr. M. Ahsan Ansari** PhD, South Korea. **Dr. Bushra Naz** PhD, China. **ASSISTANT PROFESSORS:** **Mr. Arbab Ali Samejo** M.E, Pakistan.	**Mr. Rizwan Badar Baloch** M.E, Pakistan. **Dr. Irfan Ali Bhacho** PhD, South Korea. **Ali Asghar Manjotho,** M.E, Pakistan **LECTURERS:** **Mr. Salahuddin Jokhio** M.E, Pakistan. (On Study Leave)	**Ms. Anum Memon** M.E, Pakistan. **Ms. Madeha Memon** M.E, Pakistan. **Ms. Rahima Dosani** M.E, Pakistan.

5.4.3 Laboratory Facilities

Following state-of-the-art laboratories are available for the students where hands-on experiences provided. These laboratories provide high speed internet services in centralized environment.

1. Computing Lab-I
2. Computing Lab-II
3. Microprocessor Lab
4. Communication Lab
5. Advance Software Engineering & Research Lab
6. Multimedia and Visual Design Studio Lab
7. Data Management and Internet Lab
8. Software Development Lab

5.4.4 The Courses

	Course Code	Subject Name	Credit Hours	
			Theory	Practical
1st Semester	CSC101	Computer Fundamentals	3	1
	CSC102	Computer Programming Concepts	3	1
	IS111/SS104	Islamic Studies/Ethics	2	0
	PS106	Pakistan Studies	2	0
	MATH101	Foundation-I (Non-Credit 3+0)	Nil	Nil
	ES112	Basic Electronics	3	1
		Total	**13**	**03**

	Course Code	Subject Name	Credit Hours	
			Theory	Practical
2nd Semester	CSC161	Theory of Programming Languages	3	0
	ENG101	Functional English	2	0
	EL116	Applied Physics	3	1
	MATH102	Foundation-II (Non-Credit 3+0)	Nil	Nil
	MATH108	Applied Calculus	3	0
		Total	**11**	**01**

	Course Code	Subject Name	Credit Hours	
			Theory	Practical
3rd Semester	CSC201	Digital Logic and Design	3	1

	CSC203	Data Structures and Algorithms	3	1
	CSC204	Database Systems	3	1
	CSC211	Object Oriented Programming	3	1
	MATH112	Linear Algebra and Analytical Geometry	3	0
		Total	**15**	**04**

4th Semester	**Course Code**	**Subject Name**	**Credit Hours**	
			Theory	**Practical**
	CSC251	Computer Organization and Assembly Programming	3	1
	CSC262	Compiler Construction	3	1
		Elective-I	3	1
	ENG206	Communication Skills	2	0
	MATH214	Statistics and Probability	3	0
		Total	**14**	**03**

5th Semester	**Course Code**	**Subject Name**	**Credit Hours**	
			Theory	**Practical**
	CSC301	Operating Systems	3	1
	CSC311	Computer Networks	3	1
	CSC321	Algorithms and Complexity	3	0
		Elective-II	2	1
	MGT316	Principles of Management	2	0
	MATH319	Numerical Analysis	3	0
		Total	**16**	**03**

6th Semester	**Course Code**	**Subject Name**	**Credit Hours**	
			Theory	**Practical**
	CSC361	Theory of Automata	3	0
	CSC372	Discrete Structures	3	0
		Elective-III	3	1
	ENG319	Technical & Business Writing	3	0
	MATH324	Differential Equation	3	0
		Total	**15**	**01**

7th Semester	**Course Code**	**Subject Name**	**Credit Hours**	
			Theory	**Practical**
	CSC411	Artificial Intelligence	3	1
	CSC412	Software Engineering	3	1
		Elective-IV	3	1
	MGT426	Organizational Behavior	2	0
	CSC498	Final Year Project-I	0	3
		Total	**11**	**06**

8th Semester	**Course Code**	**Subject Name**	**Credit Hours**	
			Theory	**Practical**
	CSC452	Distributed Computing	3	0
	CSC462	Cyber Security	3	0

		Elective-V	3	0
	ENT421	Entrepreneurship	2	0
	CSC499	Final Year Project-II	0	3
		Total	**11**	**03**

CS Electives:

Elective Course	Course Code	Course Title	Credit Hours (Th + Pr)
Elective-I	CSC261	Data warehousing	3+1
	CSC271	Object Oriented Analysis and Design	3+1
Elective-II	CSC332	Web Technologies	2+1
	CSC341	Computer Graphics and Animations	2+1
Elective-III	CSC381	Computer Vision	3+1
	CSC391	Mobile Application Development	3+1
Elective-IV	CSC421	Internet of Things	3+1
	CSC432	Data Sciences and Analytics	3+1
Elective-V	CSC471	Natural Language Processing	3+0
	CSC481	Block Chain Technologies	3+0

5.4.5 Career Opportunities

Computer Science graduates are professionals who are actively engaged in the process of matching current technology with the needs of a company. As part of this task, the Computer Systems graduate engages in the evaluation and installation of software, hardware, and other types of support equipment into a workable network that supports a variety of functions within a corporation. The Computer Science graduate may function as an employee of the company, a representative of a computer components and hardware, or as an independent consultant. Moreover, the computer science graduate has a wide range of job opportunities available, including electronic, telecommunication and software engineering fields.

The Computer Science graduate finds employment in a wide variety of computerized environments such as hardware, software, networking, research and development, process or information control systems or a combination of the above mentioned. The engineer might specialize further in any one of these chosen fields. Responsibilities may include maintenance or optimization of such environments. Additional functions could include the design, development, and implementation of additional or new systems, liaison with other departments such as management, production and instrumentation as well as with clients is an important aspect of his job. The dedicated Computer Systems Engineer may seek a senior post such as filling the post of System Administrator, Lead System or Project Manager. Few more opportunities, such as, Computer Systems Analyst, Database Administrator and Manager, Information Security Analyst. The latest trendy disciplines like Machine Learning Engineer and Data scientist.

5.5 Bachelor of Science in Environmental Sciences (BSES)

5.5.1 The Center (US-Pakistan Center for Advanced Studies in Water)

U.S.-Pakistan Center for Advanced Studies in Water (USPCAS-W) has been established at Mehran UET, Jamshoro, with the financial support of the United States Agency for International Development (USAID) Pakistan under the Cooperative Agreement signed with USAID on Dec.12, 2014, for five years. The center is dedicated to training and building up the capacity of a new generation of engineers and water professionals to solve the twenty-first century's water security challenges.

5.5.2 BS in Environmental Sciences at USPCAS-W

USPCAS-W started four years BS Environmental Sciences program in 2021. The program aims to provide modern scientific knowledge and tools to students in the multidisciplinary field of Environmental Sciences. The graduates of BE in Environmental Science will provide solutions to various fundamental and contemporary environmental issues, including pollution monitoring and management, environmental microbiology, groundwater modeling& remediation, application environmental biotechnology, GIS, climate change, environmental economics, water & wastewater treatment processes, and environmental laws & governance, etc. Per the Higher Education Commission guidelines, the skill development approach adopted for the program considers enhancing secondary knowledge while providing specific information in the courses. The unique program will produce progressive leaders in the field of Environmental Sciences.

5.5.3 The Faculty

Director of the Center
Dr. Kamran Ansari
Phone: 022-2772255 / **Ext.:** 8002

Dr. Zubair Ahmed
(Head of BS Environmental Sciences)

MERITORIOUS PROFESSOR: **Dr. Rasool Bux Mahar** Post Doc, USA **EMERITUS PROFESSOR:** **Dr. Bakhshal Khan Lashari** Post Doc, USA **PROFESSORS:** **Dr. Abdul Latif Qureshi** PhD, Pakistan. **Dr. Kamran Ansari** PhD, United Kingdom **Dr. Zubair Ahmed** PhD, Korea **SENIOR RESEARCH FELLOW:** **Dr. Arjumand Zaidi** PhD, Pakistan. **ASSISTANT PROFESSORS:** **Mr. Ghulam Hussain Dars** MS, USA	**Mr. Waqas Ahmed**, M.Sc., Germany **Dr. Syeda Sara Hassan** PhD, Pakistan **Ms. Rakhshinda Bano** M.Sc., USA (On study leave). **Mr. Muhammad Ali** M.A., Japan **Dr. Uzma Imran** M.E, Pakistan **Dr. Asmat Ullah**, PhD, Thailand **Dr. Naveed Ahmed**, PhD, South Korea **Dr. Tanveer Ahmed** PhD, Italy .

5.5.4 Laboratory Facilities:

USPCAS-W has the following well-established laboratory with allied facilitates:

1. Advanced Water & Wastewater Quality Control Lab
2. Pilot Scale Water & Wastewater Treatment Field Lab
3. GIS and Remote Sensing Lab
4. Computer & Software Lab
5. Soil & Water Analysis Lab
6. Hydraulic Lab

5.5.5 The Courses

	Course Code	Subject Name	Credit Hours	
			Theory	Practical
1st Semester	ENS101	Introduction to Environmental Science	03	00
	ENS102/	Basic Biology/ Basic Mathematics	03	00
	ENS103	General Chemistry	02	01
	ENG101	Functional English	03	00
	IS111/SS104	Islamic Studies/ Ethics	02	00
	PS106	Pakistan Studies	02	00
		Total	**15**	**01**

	Course Code	Subject Name	Credit Hours	
			Theory	Practical
2nd Semester	MATH108	Applied Calculus	03	00
	CS146	Introduction to Computing & Programming	03	00
	ENS152	Sociology	03	00
	ENS153	Environmental Biology	02	01
	ENS155	Environmental Chemistry	03	00
		Total	**14**	**01**

	Course Code	Subject Name	Credit Hours	
			Theory	Practical
3rd Semester	MATH217	Statistics and Probability	03	00
	ENS202	Environmental Physics	02	00
	ENS203	Environmental Microbiology	02	01
	ENS211	Fundamental & Applied Ecology	03	00
	ENS212	Environmental Fluid Mechanics	02	01
	ENG201	Communication Skills	02	00
		Total	**14**	**02**

	Course Code	Subject Name	Credit Hours	
			Theory	Practical
4th Semester	ENS251	Environmental Pollution	03	00
	ENS252	Climatology	03	00
	ENS253	Environmental Informatics	02	01
	ENS261	Watershed Management	03	00
	ENS262	Energy and Environment	03	00
	ENS263	Environmental Biotechnology	03	00
		Total	**17**	**01**

	Course Code	Subject Name	Credit Hours	
			Theory	Practical
5th Semester	ENS301	Introductory Economics	03	00
	ENS302	Environmental Toxicology	03	00
	ENS303	Analytical Techniques in Environmental Science	02	01
	ENS311	GIS and Remote Sensing	02	01
	ENS313	Applied Hydraulics	03	00
	ENG301	Technical and Scientific Writing	02	00
		Total	**15**	**02**

	Course Code	Subject Name	Credit Hours	
			Theory	Practical
6th Semester	ENS351	Environmental Economics	03	00
	ENS352	Environmental Monitoring and Management	03	00
	MES353	Land Degradation, Restoration and Management	03	00
	ENS361	Water and Climate Change	03	00
	ENS362	Solid Waste Management	03	00
	ENS363	Research Methods in Environmental Science	03	00
		Total	**18**	**00**

	Course Code	Subject Name	Credit Hours	
			Theory	Practical
7th Semester	ENS401	Environmental Impact Assessment	03	00
	ENS402	Natural Resource Management	03	00
	ENS411	Air and Noise Pollution	02	01
	ENS412	Hydrology	03	00
	ENS413	Occupational Safety, Health and Environment	03	00
	ENS498	Final Year Project - I	00	03
		Total	**14**	**04**

	Course Code	Subject Name	Credit Hours	
			Theory	Practical
8th Semester	ENS451	Environmental Laws and Governance	03	00
	ENS452	Public Health and Environment	03	00
	ENS453	Water and Wastewater Treatment Processes	03	00
	ENS461	Soil and Water Conservation	03	00
	ENS499	Final Year Project - II	00	03
		Total	**12**	**03**

5.6 Bachelor of Science in Cyber Security (BSCYS)

5.6.1 The Department:

The Department of Telecommunication Engineering, Mehran University of Engineering and Technology (MUET), Jamshoro was established in the year 2001. In fact, it was the first ever department to offer a full-time four-year Bachelor of Engineering degree program in any public sector university of Pakistan. Since then, it enables students to develop and enhance understanding of both theoretical and applied knowledge of the fundamentals of Telecommunication Engineering and Networking. In last 20 years, graduates of this Institute have established their footprint in leading telecommunication industries of Pakistan and they are playing vital role in Information and Communications Technology (ICT) development. The opportunities for telecommunication engineers have been further extended with the emerging growth of 4G/5G mobile networks.

The Department of Telecommunication offers congenial environment for events, seminars, workshops and technical sessions in accordance with international standards. We have well-equipped laboratories and state-of-the-art equipment for experimental and research work.

5.6.2 Bachelor of Science in Cyber Security:

ICT industry has evolved and new avenues such as Cyber Security has become the mainstream concern of technology industries these days. Previously it was only required for the government agencies and defense sector but currently even industries like health, banking, finance, manufacturing and social media require the expertise in the field of Cyber Security. With high demand in market, the Bachelor of Science in Cyber Security program intends to produce skilled professionals to work as Security Analyst, Security Engineer, Security Architect, Security Administrator, Security Software Developer, Cryptographer, Cryptanalyst and Security Consultant among others.

Mission of the Program

Our mission is to teach and prepare computer scientists equipped with cyber security skills to cope with challenging issues of cyber world. The key objective of our program is to contribute to society through knowledge and skills that help in dealing with cyber threats/attacks and ensure secure cyber world from external cyber-attacks.

5.6.3 The Faculty:

Chairman of the Department:
Dr. Aftab Ahmed Memon

MERITORIOUS PROFESSOR: **Dr. Aftab Ahmed Memon** Ph.D. Japan **PROFESSOR:** **Dr. Abdul Waheed Umrani** Ph.D. Singapore **Dr. Faisal Karim Shaikh** Ph.D. Germany **ASSOCIATE PROFESSOR:** **Dr. Fahim Aziz Umrani** Ph.D. United Kingdom **Dr. Abdul Latif Memon** Ph.D. China **Dr. Imran Ali Qureshi** Ph.D. China	**Dr. Zafi Sherhan Shah** Ph.D. United Kingdom **ASSISTANT PROFESSORS:** **Dr. Faisal Ahmed Memon** Ph.D. Italy **Dr. Abi Waqas Memon** Ph.D. Italy **Dr. Umair Ahmed Korai** Ph.D. United Kingdom **Engr. Nafeesa Bohra** M.E. Pakistan **Engr. Naeem Aijaz Yousfani** M.E. Pakistan **Engr. Zulfiqar Ali Arain** M.E. Pakistan	**Engr. Shakeel A. Laghari** M.E. Pakistan **Engr. Mehran M. Memon** On Study Leave M.E. Malaysia **Engr. Saadullah Kalwar** On Study Leave M.E. Pakistan **Engr. Hyder Bux Mangrio** M.E. Pakistan **Engr. Syed Rizwan Ali Shah** M.E. Pakistan **LECTURERS:** **Engr. Umair M. Qureshi** M.E. Pakistan (on Study Leave)

Dr. Faheem Yar Khuhawar Ph.D. Italy **Dr. Sajjad Ali Memon** Ph.D. China **Dr. Nasrullah Pirzada** Ph.D. Malaysia **Dr. Badar Munir** Ph.D. China	**Engr. Syed Mohsin Ali Shah** M.E. Pakistan **Engr. Shanzah Mohsin** M.E. Pakistan **Engr. Riaz Ahmed Soomro** M.E. Pakistan **Engr. Saima Hafeez** M.E. Pakistan	**Engr. Zuneera A. Memon** On Study Leave M.E. Pakistan **Engr. Anum Talpur** On Study Leave M.E. Pakistan

5.6.4 Laboratory Facilities:

The department of Telecommunication Engineering is equipped with required facilities, tools and equipment to conduct experiments in field of Cyber Security.

Following laboratories are available at the Department of Telecommunication, MUET, Jamshoro;

1. Analog and Digital Communication Laboratory
2. Project Laboratory
3. Transmission and Switching Laboratory
4. Networking and Protocol Design Laboratory
5. Optical Communication and Photonics Laboratory
6. PC Laboratory I & II
7. Cellular Communications Laboratory
8. Advanced Computing Laboratory
9. Digital Signal Processing Laboratory
10. Radio Communication Laboratory
11. Internet of Things (IoT) Laboratory
12. Cyber Security Laboratory

5.6.5 The Courses:

	Course Code	Subject Name	Credit Hours	
			Theory	Practical
1st Semester	CSC110	Introduction to Information and Communication Technologies	02	01
	CSC120	Programming Fundamentals	03	01
	CSC130	Discrete Structures	03	00
	MATH108	Applied Calculus	03	00
	ENG101	Functional English	03	00
		Total	**14**	**02**

	Course Code	Subject Name	Credit Hours	
			Theory	Practical
2nd Semester	CSC140	Object Oriented Programming	03	01
	SWE110	Database Systems	03	01
	MATH112	Linear Algebra and Analytical Geometry	03	00
	ENG102	Communication Skills	03	00
	IS111 / SS104	Islamic Studies / Ethics	02	00
	PS106	Pakistan Studies	02	00
		Total	**16**	**02**

	Course Code	Subject Name	Credit Hours	
			Theory	Practical
3rd Semester	CSC210	Data Structures and Algorithms	03	01
	CYS210	Information Security	03	00
	ES215	Digital Logic Design	03	01
	MATH224	Differential Equations	03	00
		Total	**12**	**02**

	Course Code	Subject Name	Credit Hours	
			Theory	Practical
4th Semester	SWE210	Operating Systems	03	01
	CYS250	Computer Networks	03	01
	CSC220	Computer Organization and Assembly Language	03	01
	CYS260	Professional Practices	03	00
	MATH214	Statistics and Probability	03	00
		Total	**15**	**02**

	Course Code	Subject Name	Credit Hours	
			Theory	Practical
5th Semester	CSC320	Artificial Intelligence	03	01
	CSC330	Analysis of Algorithms	03	00
	CYS320	Introduction to Cyber Security	03	00
	CYS330	Information Assurance	03	00
	CYS340	Cyber Security Elective-I	03	00
		Total	**15**	**01**

	Course Code	Subject Name	Credit Hours	
			Theory	Practical
6th Semester	CYS350	Digital Forensics	02	01
	CYS360	Network Security	02	01
	SWE310	Software Engineering	03	00
	CYS380	University Elective-I	02	01
	CYS390	Cyber Security Elective-II	03	00
	ENG301	Technical and Business Writing	03	0
		Total	**15**	**03**

	Course Code	Subject Name	Credit Hours	
			Theory	Practical
7th Semester	CYS400	Vulnerability Assessment and Reverse Engineering	02	01
	CYS410	Blockchain Technologies	03	00
	CYS420	University Elective-II	02	01
	CYS430	University Elective-III	02	00
	CYS440	Cyber Security Elective-III	03	00
	CYS498	Final Year Project-I	00	03
		Total	**12**	**05**

	Course Code	Subject Name	Credit Hours	
			Theory	Practical
8th Semester	SWE420	Secure Software Design and Development	02	01
	CYS460	University Elective-IV	02	01
	CYS470	University Elective-V	02	00
	CYS480	Cyber Security Elective-IV	02	01
	CYS499	Final Year Project-II	00	03
		Total	**08**	**06**

5.6.6 Career Opportunities

Cyber Security work within a number of industries based on Internet and computing technologies, telephone networks, radio wave transmission and reception, satellite communication, radar and navigation, etc.

Graduates of Cyber Security Program can apply technical knowledge and expertise to work as Security Analyst, Security Administrator, Cryptanalyst as well as for managerial jobs such as Security Consultant. Many posts include elements of both managerial and technical responsibilities. The technical aspect of the role includes using specialist knowledge to design and deliver solutions, as well as providing technical guidance and security assurance to others within the organization.

1. Pakistan Telecommunication Company Limited (PTCL)	1. TeleCard Limited
2. Jazz (Mobilink-Warid)	2. WorldTel Pakistan
3. Telenor Pakistan	3. Burraq Telecom
4. Zong (China Mobile Pakistan)	4. NetSol Connect
5. Ufone (PTML)	5. AirLink Communications
6. SCO (Special Communications Organization)	6. Redtone Telecommunications Pakistan
7. Wi-Tribe Pakistan	7. Nexlinx
8. Nayatel	8. Transworld Associates (TWA) Connect Communications
9. WorldCall Telecom Limited	9. Cybernet Pakistan
10. PTCL Smart TV	10. Hitech Networks
11. StormFiber	11. Micronet Broadband
12. Multinet Pakistan	12. Go4B (Connect Broadband)
13. National Telecommunication Corporation (NTC)	13. Siemens Pakistan
14. Supernet Limited	14. Alcatel-Lucent (now part of Nokia)
15. Wateen Telecom	15. NEC Corporation
16. Fiberlink (Cyber Internet Services)	16. Amdocs
17. Dancom Pakistan (Instaphone)	17. Oracle Communications
18. LinkdotNet Telecom Limited	18. Comviva Technologies Limited
	19. Huawei Technologies Co., Ltd.

5.7 Bachelor of Science in Civil Engineering Technology (BSCET)

5.7.1 The Department

A 4-year degree program entitled BS in Civil Engineering Technology provides the bright students an opportunity to realize their dream as Technologists by advancing their higher education in technical fields. The designed curriculum of Civil Engineering Technology covers a wide range of various sub-discipline including Structure, Concrete Technology, Geotechnical, Foundation Engineering and Design, Irrigation & Drainage, Transportation Engineering, Environmental, Construction etc. The courses also provide the knowledge about operation and maintenance of Civil Engineering Technology projects. Various subjects require tutorials and laboratory work, for which adequate facilities and equipment are available.

Mission of the Program

BS 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.

Program Educational Objectives (PEOs)

i. A thorough grip on use of best practices related to Civil Engineering Technology in construction, operation and management of various organizations. Function in team-oriented activities considering the societal, environmental, and economic impacts.
ii. Expertise to play significant role in sustainable development of society at national and global levels.
iii. Passion for professional advancement and innovation through lifelong learning.

5.7.2 The Courses:

	Course Code	Subject	Credit Hours	
			Theory	Practical
1st Semester	CH112	Islamic Studies / Ethics	2	0
	CS113	Linear Algebra and Calculus	3	0
	CS123	Introduction to Computer Fundamentals	1	2
	CT113	Civil Engineering Drawing	1	2
	CT124	Surveying & Levelling	2	2
	CT133	Applied Mechanics	2	1
		Total	**11**	**7**

	Course Code	Subject	Credit Hours	
			Theory	Practical
2nd Semester	CT134	Concrete Technology	2	2
	CH123	Communication Skills	3	0
	CH133	Pakistan Studies	2	0
	CT144	Materials and Methods of Building Construction	2	2
	CS133	Differential Equations	3	0
		Total	**12**	**4**

	Course Code	Subject	Credit Hours	
			Theory	Practical
3rd Semester	CT212	Introduction to Architecture and Town Planning	2	0
	CM212	Occupational Health & safety Management	2	0
	CT223	Quantity Surveying and Contract Documents	1	2
	CT233	Soil Mechanics	2	1
	CT243	Fluid Mechanics	2	1
	CT254	Mechanics of Solids	2	2
		Total	**11**	**6**

	Course Code	Subject	Credit Hours	
			Theory	Practical
4th Semester	CT263	Transportation Engineering	2	1
	CT273	Water Supply & Waste Water Management	2	1
	CT283	Hydrology	2	1
	CT292	Theory of Structures	2	0
	CH213	Technical Report Writing	3	0
	CS213	Probability and statistics	3	0
		Total	**14**	**3**

	Course Code	Subject	Credit Hours	
			Theory	Practical
5th Semester	CM313	Environmental Engineering & Management	2	1
	CT313	Reinforced Concrete Structures	2	1
	CT323	Construction and Hydraulic Machinery	2	1
	CT333	Computer Aided Building Modeling and Design	1	2
	CT343	Foundation Engineering	2	1
	CM323	Project Management	3	0
		Total	**12**	**6**

	Course Code	Subject	Credit Hours	
			Theory	Practical
6th Semester	CT353	Pre-stressed & Precast concrete	2	1
	CT363	Highway Engineering	2	1
	CT373	Geology & Earthquake Engineering	2	1
	CT383	Irrigation and Hydraulic Structures	2	1
	CT393	Steel Structures	2	1
	CT3103	Project	0	3
		(Summer Project Work)		
	CT3113	Project	0	3
		Total	**10**	**11**

	Course Code	Course Title	Credit Hours	
			Theory	Practical
7th Semester	CT4116	16 Weeks Supervised Industrial / Field Training (8 x 5 = 40 hrs. / Week)	0	16
		Total	**0**	**16**

	Course Code	Course Title	Credit Hours	
			Theory	Practical
8th Semester	CT4216	16 Weeks Supervised Industrial / Field Training (8 x 5 = 40 hrs. / Week)	0	16
		Total	**0**	**16**

5.7.3 Career Opportunities

The bachelor's in civil engineering program at MUET, Jamshoro provides a clear route to a professional career in the field of Civil Engineering. Our graduates can follow careers in many different fields and organizations related with Civil Engineering Projects and can also set up their own businesses. Typical

employment sectors for civil engineers include, consulting firms, contractors, local authorities, public sector departments (Buildings, Highways, Railways, Airports, Irrigation, Water and Power, Ports etc.), non-profit and research organizations.

Graduates find diverse work as civil engineering technologists. Potential positions include Civil Engineering Design Technologist, Traffic Technologist, Building Inspector, Material Testing Technologist, Estimator and Construction Project Coordinator.

Typical employment sectors for civil engineering technologists include, consulting firms, contractors, local authorities, public sector departments (Buildings, Highways, Railways, Airports, Irrigation, Water and Power, Ports etc.),

5.8 Bachelor of Science in Electrical Engineering Technology (BSEET)

5.8.1 The Department

Electrical Engineering is a branch of Engineering concerned with the study and application of electricity, electronics and electromagnetism. It also deals with the large-scale electrical systems such as power generation, transmission, distribution and utilization of electrical energy.

The department of Electrical Engineering is one of the oldest and prestigious department of the university supported and equipped with highly qualified faculty and technical staff. The department has 27 full-time faculty members. Several faculty members have won prestigious awards for their teaching and research work.

Our department labs serve not only undergraduate and postgraduate students but they also provide services to the public and private sectors like training, equipment testing, calibration and consultancy to academia & industry. Besides academic activities, the department's faculty and students are involved in research and development activities in collaboration with industries.

Increasing Electricity demands, urbanization, industrial growth and oil imports makes Pakistan as electrical deficit country, The Government of Pakistan is focusing for introduction of different technological needs with young professional to provide sufficient electrical technology-based education which can adopt conventional, renewable and hybrid power generation sources, integrate new technology for energy saving and help the industry and government in ever changing demand and policy.

Therefore, the department of Electrical Engineering is launching 04-year B.S. program in Electrical Engineering Technology along with existing programs. This new program deals with the design, application, installation, manufacturing, operation, or maintenance of electrical/power systems that are helpful in the electrical equipment & system manufacturing companies, power generation and transmission sector, telecommunication, railways, IT & public sector organizations, and research & design industries.

Vision of the Department:
The vision of the Department of Electrical Engineering Technology is to become an institution that provides state-of-the-art education to aspiring electrical graduates and to evolve as a research-based solution provider to the electrical engineering industry.

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

Program Education Objectives (PEOs):

The Program Educational Objectives of B.Sc. Electrical Engineering Technology Program ensures that after '4 – Years' of graduation the professionals should be able to;

i. Formulate and resolve engineering technology problems innovatively.
ii. Perform effectively as an individual and as a team member in professionalenvironment.
iii. Pursue professional growth through moral and continue learning attitude.

5.8.2 The Faculty

Chairman of the Department:
Prof. Dr. Ashfaque Ahmed Hashmani
Phone: 022-2771351

Professors: **Dr. Muhammad Aslam Uqaili** PhD, United Kingdom. **Dr. Ashfaque Ahmed Hashmani** PhD, Germany. **Dr. Abdul Sattar Larik** PhD, Pakistan. **Dr. Zubair Ahmed Memon** PhD, Pakistan. **Dr. Syed Asif Ali Shah** PhD, Austria. **Dr. Mukhtiar Ahmed Mahar** PhD, Pakistan. **Dr. Ali Asghar Memon** PhD, United Kingdom **Associate Professors:** **Dr. Amir Mahmood Soomro** PhD, China. **Dr. Anwar Ali Sahito** PhD, Pakistan.	**Dr. Nayyar Hussain Mirjat** PhD, Pakistan. **Dr. Faheemullah Shaikh** PhD, China. **Dr. Mahesh Kumar Rathi** PhD, Malaysia. **Dr. Anwar Ahmed Memon** PhD, Pakistan. **Dr. Abdul Hakeem Memon** PhD, China. **Dr. Pervez Hameed Shaikh** PhD, Malaysia. **Assistant Professors:** **Mr. Noor Nabi Shaikh** B.E, Pakistan. **Mr. Muhammad Rashid Memon** M.E, Pakistan. **Ms. Mokhi Maan Siddiqui** M.E, Pakistan. **Mr. Mansoor Ahmed Soomro** M.E, Pakistan. **Dr. Zohaib Ahmed Leghari** PhD, Malaysia.	**Mr. Shah Murad Tunio** M.E, Pakistan. (On Lien) **Mr. Abdul Jabbar Memon** M.E, Pakistan. **Dr. Shoaib Ahmed Khatri** PhD, Pakistan. **Mr. Shafi Muhammad Jiskani** M.E, Pakistan. **Lecturers:** **Mr. Abdul Latif Samoon** M.E, Pakistan. **Mr. Faheem ShafeequeChannar** M.E, Pakistan. **(**On study leave) **Mr. Shoaib Shaikh** M.E, Pakistan. **(**On study leave) **Mr. Mustafa Memon** M.E, Pakistan. **(**On study leave) **Ms. Rabail Memon** M.E, Pakistan.

5.8.3 Laboratory Facilities

It possesses state of the art laboratories and equipped with latest equipment up to mark for the electrical engineering program such as:

1. Power System Lab.
2. Power Electronics Lab
3. Electrical Machines Lab
4. High Voltage Engineering Lab
5. Clean Energy Lab
6. Control and Automation Lab
7. Electrical Circuit & Measurement Lab
8. Equipment and Training Lab
9. Applied Electricity Lab
10. Communication Lab
11. Computer Lab
12. Advance Computer Lab
13. Electrical Workshop Lab
14. Electrical PowerTransmission & Distribution Lab

5.8.4 The Courses

	Course Code	Subject Name	Credit Hours	
			Theory	Practical
1st Semester	EH112	Islamic Studies / Ethics	2	0
	ES113	Linear Algebra and Calculus	3	0
	ES123	Applied Physics	2	1
	ES133	Introduction to Computing Fundamentals	1	2

	ET113	Basic Mechanical Technology	2	1
	ET123	Engineering Drawing	1	2
		Total	**11**	**6**

	Course Code	Subject Name	Credit Hours	
			Theory	Practical
2nd Semester	EH122	Pakistan Studies	2	0
	EH133	Communication Skills	3	0
	ES143	Differential Equations	3	0
	ET134	Electronic Devices & Circuits	2	2
	ET143	Linear Circuit Analysis	2	1
	ET152	Electromagnetic	2	0
		Total	**14**	**3**

	Course Code	Subject Name	Credit Hours	
			Theory	Practical
3rd Semester	ET214	Digital Electronics	2	2
	ET222	Power Generation Systems	2	0
	ET234	Electrical Instruments and Measurements	2	2
	ET243	Electrical Network Analysis	2	1
	ET254	Electrical Machines-I	2	2
		Total	**10**	**7**

	Course Code	Subject Name	Credit Hours	
			Theory	Practical
4th Semester	ES213	Probability and Statistics	3	0
	ET263	Microprocessor Theory and Interfacing	2	1
	ET273	Electrical Machines-II	2	1
	ET284	Communication Technology	2	2
	ET292	Electrical Power Transmission	2	0
	ET210	Electrical Power Distribution & Utilization	2	1
		Total	**13**	**5**

	Course Code	Subject Name	Credit Hours	
			Theory	Practical
5th Semester	EH313	Technical Report Writing	3	0
	EM312	Total Quality Management	2	0
	ET314	Data and Computer Communication	2	2
	ET324	Power Electronics	2	2
	ET333	Control Technology	2	1
	ET342	Power System Analysis	2	0
		Total	**13**	**5**

	Course Code	Subject Name	Credit Hours	
			Theory	Practical
6th Semester	EM323	Project Management	3	0
	ET354	Industrial Drives and PLC	2	2
	ET363	Switchgear and Protective Devices	2	1
	ET373	High Voltage Technology	2	1
	ET383	Project	0	3
		Total	**9**	**7**

6th Semester	Course Code	Subject Name	Credit Hours	
			Theory	Practical
	ET363	Project Management	0	3
		Total	**0**	**3**

7th Semester	Course Code	Subject Name	Credit Hours	
			Theory	Practical
	ET4116	16 Weeks Supervised Industrial / Field Training (8x5=40Hrs / Week)	2	0
		Total	**0**	**16**

8th Semester	Course Code	Subject Name	Credit Hours	
			Theory	Practical
	ET4116	16 Weeks Supervised Industrial / Field Training (8x5=40Hrs / Week)	2	0
		Total	**0**	**16**

5.8.5 Career Opportunities

Electrical engineering is a field of engineering that generally deals with the study and application of electricity, electronics and electromagnetism. Electrical engineering is an amalgamation of what is now called electrical, electronics, communication, instrumentation and computer engineering. The well recognized branches of electrical engineering are power & energy, communications, robotics, electronics and control systems. In broader sense, this field covers a wide range of sub-disciplines including those that deal with power& energy, digital electronics, analogue electronics, artificial intelligence, control systems, electronics, signal processing and telecommunications. Overlapping of this field with computer has opened up the door to a career distribution in almost every industry. Following are the few companies and institutions in which the electrical graduates can find job.

1. WAPDA
2. Fertilizer Industries
3. Chemical Industries
4. Textile Industries
5. Pharmaceutical Companies
6. Mechanical & Automobile
7. K-Electric
8. Pakistan Atomic Energy Commission (PAEC)
9. Oil & Gas Companies
10. Research Institutes
11. Lucky Cement Factory
12. Al Rahim Textile Industries
13. KAD Consultants Electrical & Solar System Engineers
14. Dawlance United Refrigeration Industries Ltd.
15. Civil Aviation Authority
16. Johnson & Philips Pakistan Ltd
17. Tuwairqi Steel Mills Ltd.
18. National Transmission and Dispatch Company (NTDC) Ltd.
19. Philip Morris Pakistan Ltd.
20. Technology Links Pvt. Ltd
21. National Electric Power Regulatory Authority **(**NEPRA)
22. Distribution companies (HESCO, IESCO, PESCO, QUESCO etc.)
23. Sugar Industries
24. Karachi Port Trust (KPT)
25. Environmental Network International

5.9 Bachelor of Science in Mechanical Engineering Technology (BSMET)

5.9.1 The Department:

Mechanical engineering department endeavors to produce engineers, technologist and researchers with sound knowledge of traditional and emerging areas of engineering together with innovative design abilities to achieve sustainable national development. Moreover, it attempts to develop the skill of the students to make them globally competitive engineers, technologist and researchers by providing quality education and research facilities.

In the recent decade, the Government of Pakistan has focused on the technical education in the country; in this regard many technical colleges are being upgraded to Technical Universities. Keeping in view ever changing demand of industries and government policies the Department of Mechanical Engineering launched the B.S. program in Mechanical Engineering Technology to cope the situation.

Vision of the Program
To produce highly qualified persons which can understand complicated designs and to implement and create them to physical positions on the ground.

Mission of the Program

1. To produce experienced and knowledgeable technologists which can understand the information given to them in 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.

Program Education Objectives (PEOs)

i. Apply the concepts of basic technical knowledge and skills to solve industrial and technical problems in mechanical related technology.
ii. To meet the requirements of rapid changing/growing technologies in the world.
iii. To provide experienced and technical hands.

5.9.2 The Faculty:

Chairman of the Department:
Prof. Dr. Abdul Fatah Abbasi
Phone: +92-022- 2771275, 022-22772250-70 / **Ext.:** 2300

PROFESSORS: **Dr. Abdul Fatah Abbasi** PhD, Pakistan. **Dr. Khanji Harijan** PhD, Pakistan. **Dr. Rizwan Ahmed Memon** PhD, Hong Kong. **Dr. Dur Muhammad Pathan** PhD, Pakistan. **Dr. Tanweer Hussain Phulpoto** PhD, United Kingdom.	**Engr. M. Jurial Sangi** M.E, Pakistan. **Engr. M. Sharif Jamali** M.E, Pakistan. **Engr. M. Atif Qaimkhani** M.E, Pakistan. **Engr. Imtiaz Ali Memon** M.E, Pakistan. **Dr. Laveet Kumar** PhD, Malaysia.	**Engr. Roshan Kumar** M.E, Pakistan. (On Study Leave) **Engr. Abdul Hafeez Khoharo** M.E, Pakistan. (On Study Leave) **Engr. Samiullah Qureshi** M.E, Pakistan. (On Study Leave) **Engr. Farhan Haider Joyo** M.E, Pakistan. **Engr. M. Chandio** M.E, Pakistan.

Dr. Abdul Ghafoor Memon PhD, Pakistan. **ASSISTANT PROFESSORS:** **Engr. Shoukat Ali Memon** B.E, Pakistan.	**LECTURERS:** **Engr. Javed Rehman Larik** M.E, Pakistan. **Engr. Zain-ul-Abdin Qureshi** (ME in Progress)	**Engr. Intizar Ali Tunio** M.E, Pakistan. **Engr. Ans Memon** M.E, Pakistan.

5.9.3 Laboratory& Library Facilities

The Department of Mechanical Engineering has following laboratories. All the laboratories are well equipped with latest and conventional Equipment.

1. Energy Technology Laboratory
2. Heat Transfer Laboratory
3. Refrigeration & Air Conditioning (HVAC)
4. Aerodynamics Laboratory
5. Engineering Mechanics Laboratory
6. Mechanics of Machines Laboratory
7. Thermal Power Plant Laboratory
8. Fluid Mechanics Laboratory
9. Instrumentation Laboratory
10. Control Engineering Laboratory
11. Thermodynamics Laboratory
12. Mechanical Vibrations Laboratory
13. Material Testing Laboratory
14. Automobile Laboratory
15. Mechanical Engineering Workshop
16. Computer & Modelling Simulation Laboratory
17. Drawing Hall
18. Seminar Library

5.9.4 The Courses

	Course Code	Subject	Credit Hours	
			Theory	Practical
1st Semester	MH112	Islamic Studies/ Ethics	2	0
	MS113	Applied Physics	2	1
	MS123	Linear Algebra and Calculus	3	0
	MS133	Applied Chemistry	2	1
	MS143	Introduction to Computer Fundamentals	1	2
	MT113	Workshop Technology	1	2
		Total	**11+06=17**	

	Course Code	Subject	Credit Hours	
			Theory	Practical
2nd Semester	MS153	Differential Equations	3	0
	MH122	Pakistan Studies	2	0
	MT124	Technical Drawing and CAD-1	2	2
	MT134	Applied Thermodynamics- 1	2	2
	MT144	Basic Electrical & Electronics	2	2
		Total	**11+06=17**	

	Course Code	Subject	Credit Hours	
			Theory	Practical
3rd Semester	MH213	Communication Skills	3	0
	MT213	CAD - II	0	3
	MT223	Engineering Statics	2	1
	MT233	Mechanics of Material	2	1
	MT243	Applied Thermodynamics - II	2	1
		Total	**09+06=15**	

	Course Code	Subject	Credit Hours	
			Theory	Practical
4th Semester	MT253	Engineering Dynamics	2	1
	MT264	Fluid Mechanics	2	2
	MT273	Industrial Material	2	1
	MS213	Probability and Statistics	3	0
	MM212	Total Quality Management	2	0
	MH223	Technical Report Writing	3	0
		Total	**14+04=18**	

	Course Code	Subject	Credit Hours	
			Theory	Practical
5th Semester	MT313	Heat Transfer	2	1
	MT324	I C Engine	2	2
	MT333	Machine Design	2	1
	MT343	Manufacturing Process	2	1
	MM313	Instrumentation and Control	2	1
	MH312	Engineering Economics	2	0
		Total	**12+06=18**	

	Course Code	Subject	Credit Hours	
			Theory	Practical
6th Semester	MT353	Project Management	3	0
	MT363	Mechanical Vibrations	2	1
	MT373	Refrigeration & Air Conditioning	2	1
	MT384	Material Handling and Safety	3	1
	MT393	Project	0	3
		6th Semester Third Year Summer Project Work:		
	MT3103	Project (Continue)	0	3
		Total	**10+09=19**	

	Course Code	Subject	Credit Hours	
			Theory	Practical
7th Semester	MT4216	16 Weeks Supervised Industrial / Field Training (8x5=40 Hrs / Week)	0	16
		Total	**0+16=16**	

	Course Code	Subject	Credit Hours	
			Theory	Practical
8th Semester	MT4216	16 Weeks Supervised Industrial / Field Training (8x5=40 Hrs / Week)	0	16
		Total	**0+16=16**	

5.9.5 Career Opportunities

After completion of four-year degree program in B.E mechanical engineering and BS in mechanical engineering technology, the graduates will find diverse jobs in the field of mechanical engineering as an engineer and technologist in the private and public sector institutions.

5.10 BS Garment Engineering Technology (GET)

5.10.1 Introduction

In the recent decade, the Government of Pakistan has taken an initiative to build three garment cities in the country. The site has already been located in Karachi, Lahore and Faisalabad. Keeping in view the need of garment engineering technology graduates with concrete theoretical concepts and skill personnel who fulfil the requirement of Garment and denim industry, the department of textile engineering is launching 04-year B.S Garment Engineering Technology program along with existing programs. This program will provide graduates with specialized knowledge and skill (in the fields of computerized apparel and garment designing, denim manufacturing, garment fitting, garment comfort requirements, dyeing and finishing of garments) required for Garment and Denim industry.

Mission of the Program

To establish conducive learning environment through excellence in education and industrial experience to produce professionals for garment, apparel and denim industries.

5.10.2 The Faculty

Chairman of the Department:
Prof. Dr. Zeeshan Khatri
Phone: 022-2771565

PROFESSORS: **Dr. Zeeshan Khatri** PhD, Japan. **Dr. Farooq Ahmed** PhD, Pakistan. **ASSOCIATE PROFESSORS:** **Dr. Mazhar Hussain Peerzada** PhD, England. (Lien) **Dr. Awais Khatri** PhD, Australia. **Dr. Iftikhar Ali** PhD, South Korea. **Dr. Samander Ali Malik** D.Eng., Germany. **Dr. Abdul Wahab Jatoi** PhD, Japan.	**Dr. Naveed Mengal** PhD, South Korea. **Dr. Noor Ahmed Sanbhal** PhD, China. **Dr. Raja Fahad Qureshi** PhD, Pakistan. **Dr. Alvira Ayoub Arbab** PhD, South Korea. **ASSISTANT PROFESSORS:** **Dr. Sanam Irum Memon** PhD, Pakistan. **Mr. Abdul Wahab Memon** M.E, Pakistan. **Dr. Anam Ali Memon** PhD, South Korea.	**Dr. Umaima Saleem Memon** PhD, Turkey. **Dr. Rabia Almas Arain** PhD, Pakistan. **Dr. Pardeep Kumar Gianchandani** PhD, Italy. **LECTURERS:** **Dr. Sadaf Aftab Abbasi** PhD, Australia. **Engr. Nadir Ali Rind** M.E, Pakistan. **Engr.Abdul Khalique Jhatial** M.E, Pakistan. (on study leave)

5.10.3 Laboratory Facilities

1. Garment Manufacturing
2. Yarn Manufacturing
3. Weaving
4. Knitting and embroidery
5. Textile Chemical Processing
6. Textile Testing and Quality Control
7. Colour research
8. Nonwoven Materials
9. Nano-materials
10. Software / CAD

5.10.4 The Courses:

	Course Code	Subject Name	Credit Hours	
			Theory	Practical
1st Semester		Applied Physics	02	01
		Introduction to Computing	01	01
		Islamic Studies/Ethics	02	00
		Applied Mathematics	03	00
		Introduction to Textile & Garments Technology	02	00
		Functional English	03	00
		Technical Drawing and CAD	00	01
		Total	**13**	**03**

	Course Code	Subject Name	Credit Hours	
			Theory	Practical
2nd Semester		Workshop Practices	00	02
		Communication & Presentation Skills	03	00
		Applied Statistics	03	00
		Pakistan Studies	02	00
		Textile Raw Materials	02	01
		Applied Chemistry	02	01
		Total	**12**	**04**

	Course Code	Subject Name	Credit Hours	
			Theory	Practical
3rd Semester		Electrical & Electronic Technology	02	01
		Fundamentals of Yarn Manufacturing	02	01
		Fundamentals of Fabric Manufacturing	02	01
		Raw Materials for clothing	02	00
		Garment Design Fundamentals	01	01
		Entrepreneurship	03	00
		Total	**12**	**04**

	Course Code	Subject Name	Credit Hours	
			Theory	Practical
4th Semester		Computer Programming	01	01
		Organizational Behavior	03	00
		Garment Technology-I	02	01
		Garment Production Machinery	02	01
		Anthropometry and Garment Construction	01	02
		Fundamentals in Textile Chemical Processing	02	01
		Total	**11**	**06**

	Course Code	Subject Name	Credit Hours	
			Theory	Practical
5th Semester		Computer Aided Pattern Making	01	02
		Functional Textile and Garments	03	00
		Garment Technology-II	02	01
		Garment Merchandizing and Sourcing	02	00
		Project-I	00	03
		Total	**18**	**06**

6th Semester	Course Code	Subject Name	Credit Hours	
			Theory	Practical
		Garment Finishing Processes	02	01
		Process Improvements in Garment Industry	03	00
		Sewn Product Technology	02	01
		Compliances in Garment Industry	02	01
		Leadership and Personal Grooming	03	00
		Project-II	00	03
		Total	**12**	**06**

7th Semester	Course Code	Subject Name	Credit Hours	
			Theory	Practical
		Nondestructive Testing	02	01
		Product Development	02	01
		Sustainable Garment Production	02	01
		Color Science	02	01
		Denim Processing Technology	02	01
		Clothing Comfort	02	00
		Total	**12**	**05**

8th Semester	Course Code	Subject Name	Credit Hours	
			Theory	Practical
		Supervised Industrial Training	00	16
		Total	**00**	**16**

5.10.5 Carrier Opportunities

After graduation, the candidate will be:

- able to join any Garment and Denim manufacturing industry in Pakistan and abroad as a management trainee or at similar position.
- able to join textile services sector such as testing, merchandising, and auditing.
- able to establish his/her own company for garments and related items.
- eligible for admission in postgraduate programs in any reputed university in the country and around the globe. The areas of further study may be expanded to other science, management, and applied sectors, such as technical and smart garment, textile value addition and so on.

5.11 Affiliated Colleges/Institutes

The following Colleges/Institutes are affiliated with Mehran UET, Jamshoro:

5.11.1 Government College of Technology, Hyderabad

5.11.2 The Hyderabad Institute of Arts, Science and Technology, Hyderabad

6. RESEARCH AND DEVELOPMENT

6.1 PhD Faculty

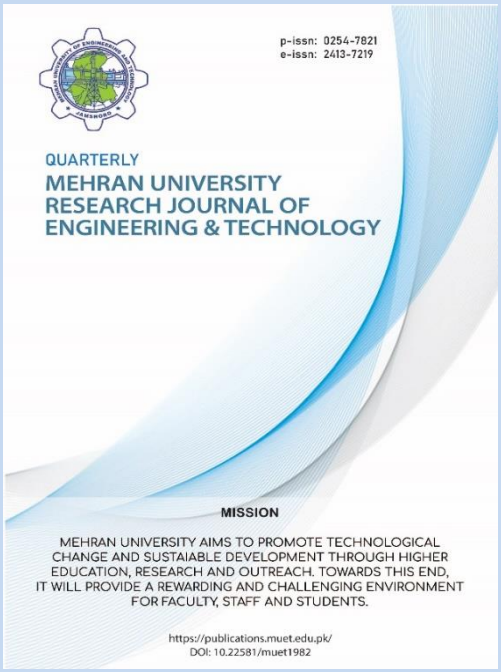
PhD faculty is considered to be the backbone of any educational institute; it not only adds to the University ranking but also works for the betterment of community by focusing and proposing solutions to the current problems of the community.

Mehran UET has a significant number of PhDs, apart from PhDs in the core engineering disciplines, the University has PhD faculty also in the subjects of Basic Sciences, Linguistics and Management Sciences.

At Mehran UET, students will learn from renowned researchers and industry leaders recognized globally for their outstanding achievements. They are passionate, brilliant, and dedicated to sharing their insights and discoveries.

6.2 Mehran University Research Journal of Engineering & Technology

(a). About the Journal



Mehran University Research Journal of Engineering and Technology is an international, multidisciplinary and open access scholarly journal accessible at https://publications.muet.edu.pk/index.php/muetrj/index. This journal publishes high quality original research articles describing the latest research and developments in all the fields of engineering and technology. Review and survey papers are also considered for publication in the priority areas mainly by invitation. The journal is recognized by Higher Education Commission Pakistan and is indexed in Clarivate Web of Science, Directory of Open Access Journals, EBSCO, Inspec, Portico, Gale, Ingenta and many other international agencies.

Aim and Scope

The journal aims to support academicians, researchers and practitioners with the latest trends and better practices through our published articles in the fields of engineering and technology and serves as a platform for addressing and discussing theoretical and practical knowledge of advancement in but not limited to the following engineering and technology domains: Civil, Agriculture, Food, Irrigation and Water Supply, Environmental, Mechanical, Chemical, Process, Energy, Electrical, Electronics, Computer Systems, Software, Information Technology, Mechatronics, Automotive, Aerospace and Aeronautical, Naval Architecture and Maritime, Telecommunications, Mining, Metallurgy, Petroleum and Gas, Materials, Polymer, Textile, Biotechnology, Biomedical, Industrial, Urban Engineering and Planning; and the applied sciences domain particularly Materials Sciences, Applied Natural Sciences. However, the domains of medical sciences, management sciences, social sciences and the art and design are not covered by this journal.

(b). About the Journal

Repertus a peer reviewed Journal of Linguistics, Language Planning and Policy (e-ISSN 2791-1934) is an initiative of Centre of English Language & Linguistics (CELL), Mehran University of Engineering & Technology (MUET). It welcomes submissions focusing on areas of linguistics, language planning and policy particularly in the context of South Asia and generally worldwide. It focuses on the recent developments on issues related to linguistics-theoretical and practical a wide range of subfields of linguistics. Repertus aims to add the diversity to the linguistic research in overall world scenario. It will also help the researchers who focus on other colonial countries.

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Published: 2022-05-25

6.3 Conferences, workshops and symposia

International research conferences are aimed to bring together a wide spectrum of international experts to facilitate a creative environment for the promotion of collaboration and knowledge transfer. In particular, a research conference facilitates a dialogue between major industry players, entrepreneurs and academia to help create a roadmap for the development of tangible research environment in the country.

Mehran UET is making history amongst the engineering universities of Pakistan by organizing several international conferences in a single calendar year in diversified fields of engineering. In 2018-19 Mehran UET, hosted many international conferences including 1st International Conference on English Language and Linguistics (ICELL'19), 1st International Conference on Computational Sciences and Technologies with the slogan "Engineering, Science and Technology at the Intersection of Solving Problems to Humanity" (INCCSST'19), 1st International Conference on Sustainable Mineral Resources Development and Utilization (SMRDU'19), 1st International Conference on Computational Sciences and Technologies, 5th International Conference on Energy, Environment and Sustainable Development 2018 (EESD'18). In 2017-18 Mehran UET hosted several international conferences including 5th International Multi Topic Conference (IMTIC'18), 2nd International Conference on Chemical Engineering, 1stInternational Conference on Sustainable Development in Civil Engineering (ICSDC'17). In 2015-2016, Mehran UET hosted five international conferences including, 4th International Conference on Energy, Environment and Sustainable Development, 1st International Conference on Science, Technology, Innovation Policy and Management, Global Conference on Wireless and Optical Communications, held in Spain, 1st International Conference on Industrial Engineering and Management, and Management Accountant Conference on Economy Challenges and Opportunity.

Taking the lead in engineering sector of Pakistan, Mehran UET arranged an international conference at Malaga, Spain. Global Conference on Wireless & Optical Communications GCWOC '16, with the collaboration of University of Malaga.

Beside conferences a number of workshops and symposia of national and international repute were called upon at Mehran UET including, 1st International Training Workshop: Industrial Clusters in Sindh Fostering Research &Development, Comprehensive Training on Garment Engineering, Workshop "Institutional Repository Management (DSpace) IRM-2018", 33rd All Pakistan IEEEP Students Seminar, Mehran University Education Expo 2017, International Seminar and Workshop on Design of Tall Buildings: Trends and Advancements for Structural Performance.

The above organized technical meetings are a tangible proof of the fact that Mehran UET is well aware of the current demands and issues of our society and the University is constantly contributing its share to work for the betterment of the community. This also helps to aware our students of the current market trends and better guide them to be parallel with those trends.

6.4 Office of Research Innovation and Commercialization (ORIC)

The Office of Research Innovation and Commercialization (ORIC) at Mehran University of Engineering and Technology (MUET) is a newly established office that was notified by the Higher Education Commission (HEC) on February 26th, 2018. The purpose of ORIC is to develop linkages with emerging and existing business firms nationally and internationally for technological innovation and commercialization of research. ORIC serves as an umbrella to coordinate with researchers and the business community.

ORIC has a number of initiatives that it is working on to achieve its goals. These initiatives include:

- Establishing a business incubation center at the Innovation and Entrepreneurship Centre (IEC). The business incubation center will provide space, mentorship, and other resources to start-up businesses that are based on research conducted at MUET.
- Developing a science and technology park to invite companies to establish their office/ headquarters within the university. The science and technology park will provide companies with access to MUET's research facilities and talent.
- Participating in community service to help as a channel to local, regional, and federal partners to ensure research outcomes contributing in the growth of country's economy. ORIC will work with local, regional, and federal partners to identify and address the needs of the community. ORIC will also work to promote research and innovation within the community.
- Developing a mechanism for research commercialization and establishing a business/ technology incubator to promote innovation and entrepreneurship culture. ORIC will work to develop a mechanism for research commercialization that will allow researchers to translate their research into marketable products and services. ORIC will also establish a business/ technology incubator to promote innovation and entrepreneurship culture within the university.

ORIC is committed to supporting the youth to grow them as an Entrepreneurship for their future and support the country's economy with their ideas. ORIC will provide resources and support to students and faculty who are interested in starting their own businesses. ORIC will also work to promote entrepreneurship within the community.

ORIC is a valuable resource for researchers, businesses, and the community. ORIC is working to promote research and innovation, and to support the growth of the country's economy.

6.4.1 MUET ORIC Building Structure:

ORIC in MUET consist of three main buildings, each serves different role;

1) The main building is Office of research innovation and commercialization

a) Main Administration
b) Office of University Industry Linkages and Technology Transfer
c) Office of Research and Development
d) Funds allocation,
e) Grant Management,
f) CPD Courses
g) Short courses (Vocational Trainings)
h) International Language Development Centre,
i) Distance learning Centre
j) Content Management lab

k) Computer Lab
l) Seminars
m) Smart Classroom
n) University FM

2) The Science and Technology Park.

The Science and Technology Park (STP) is a single-storey building located on the campus of Mehran University of Engineering and Technology (MUET) in Jamshoro, Sindh, Pakistan. The building was inaugurated on, 2023, by the Federal Minister for Planning and Development, Ahsan Iqbal.

The Pakistan Software Export Board (PSEB) and the Mehran University of Engineering and Technology (MUET) have partnered to establish a Software Technology Park (STP) in Jamshoro, Sindh, Pakistan. The STP is a joint initiative of the PSEB and the MUET, and is funded by the Higher Education Commission (HEC) of Pakistan.

The STP is designed to provide a conducive environment for the development of the IT industry in Pakistan. The STP will provide IT companies with access to office space, shared facilities, and other resources. The STP will also provide IT companies with access to a pool of skilled IT professionals from the MUET.

The STP is expected to create jobs for IT professionals in Pakistan, and to boost the IT exports of Pakistan. The STP is also expected to help Pakistan to become a regional hub for the IT industry.
The following are the benefits of the PSEB and MUET STP:

- Job creation: The STP is expected to create jobs for IT professionals in Pakistan.
- Boost in IT exports: The STP is expected to boost the IT exports of Pakistan.
- Regional hub for the IT industry: The STP is expected to help Pakistan to become a regional hub for the IT industry.

Overall, the PSEB and MUET STP is a positive development for the IT industry in Pakistan. The STP has the potential to create jobs, boost exports, and help Pakistan to become a regional hub for the IT industry.

The STP is a valuable resource for the MUET community, and for the wider region. It is a place where students, faculty, and researchers can come together to collaborate on research projects, and to develop new ideas and technologies. The STP is also a place where start-up businesses can get the support they need to grow and succeed.

The STP is a symbol of the university's commitment to research and innovation. It is a place where new ideas are born, and where new technologies are developed. The STP is a place where the future is being created.

3) The Innovation and Entrepreneurship Centre IEC / Business incubation Centre BIC

The Innovation and Entrepreneurship Centre (IEC) at ORIC MUET is a one-stop shop for students, faculty, and researchers who are interested in entrepreneurship. The IEC provides a variety of services, including:

- Counseling and mentorship: The IEC provides counseling and mentorship to students and faculty who are interested in starting their own businesses.
- Training: The IEC provides training on a variety of topics related to entrepreneurship, such as business planning, marketing, and finance.
- Networking: The IEC provides opportunities for students and faculty to network with other entrepreneurs and business leaders.
- Funding: The IEC can help students and faculty to secure funding for their business ideas.

The IEC is a valuable resource for anyone who is interested in entrepreneurship. The IEC can help you to turn your business idea into a reality.

6.4.2 Activities of ORIC in 2023 with Industries and Academia:

Pak Navy recruitment drive
Pak Matiari transmission line recruitment
Hero towers recruitment
Japanese language Centre
Chinese language Centre
SIREN start working at oric (Sindh innovation research education network)
CPD courses
Vocational Trainings
Business Incubation Centre at IEC
National incubation Centre at science and Technology Park
HEC Smart Classrooms
Startup program Zindigi JS bank
PhD, online admission system started at MUET under HEC policy
MUET IMTIC23 international conference
UTM and MUET Malaysia international conference 2023
HEC PEC training
FM Radio Studio

Photo Gallery of Event in 2023

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<tr><td> </td><td> </td></tr>
<tr><td>Japanese Language MOU</td><td>Pak Navy Recruitment drive</td></tr>
<tr><td> </td><td> </td></tr>
<tr><td>Science and Technology Park</td><td>Pak Matiari transmission line Recruitment</td></tr>
</table>

6.4.3 National & International MoUs Signed with Industries and Academia:

SNO	NAME		DEPARTMENT	LOCATION	DATE
1	EDVON	EDVON	KARACHI UNIVERSITY	KARACHI	10/1/2019
2	FAST CABLES	FAST CABLES	COMPANY	LAHORE	6/3/2019
3	SUI SOUTHERN GAS COMPANY	SSGC	COMPANY	KARACHI	20/03/2019
4	BRITISH COUNCIL	BRITISH COUNCIL	FORIGEN	KARACHI	17/06/2019
5	Benazir Bhutto Shaheed Human Resource Research & Development Board	BDSHRRDB	GOVERNMENT	KARACHI	19/08/2019
6	99MEGAPIXEL	99MEGAPIXEL	MEDIA COMPANY	HYDERABAD	7/5/2019
7	SECURITY AND EXCHANGE COMMISION OF PAKISTAN - SECP (JAMA PUNJI)	SECP	GOVERNMENT	KARACHI	16/12/2019
8	PLANNERS INN TRANING INSTITUTE	PITI	TRANING INSTITUTE	QASIMABAD HYDERABAD	14/11/19
9	NATIONAL CENTER IN BIG DATA AND CLOUD COMPUTING NCBC (NIC-STP)	NCBC	GOVERNMENT	KARACHI	11/3/2020
10	NATIONAL VOCATTIONAL AND TECHNICAL TRANING COMMISSION	NAVTTC	GOVERNMENT	ISLAMABAD	21/02/2020
11	KHADIM ALI SHAH BUKHARI INSTITUTE OF INFORMATION AND TECHNOLOGY	KASBIT	UNIVERSITY	KARACHI	21/07/2020
12	MOHAMMAD ALI JINNAH UNIVERSITY	MAJU	UNIVERSITY	KARACHI	8/9/2021
13	NED	NED	UNIVERSITY	KARACHI	24/02/2021
14	UNIVERSITY OF SUFISM AND MODERN SCIENCES	USMS	UNIVERSITY	BHIT SHAH	25/10/2021
15	Nuclear Institute of Medicine & Radiotherapy	NIMRA	LIQUAT UNIVERSITY OF MEDICAL SCIENCE	JAMSHORO	25/10/2021
16	JEEJAL MAU	JEEJAL MAU	HOSPITAL	HYDERABAD	30/08/2021
17	HERBIN	HERBIN	THERMAL POWER COMPANY	CHINA	20/10/2021
18	HUAQIAO	HUAQIAO	UNIVERSITY	CHINA	17/12/2021
19	LAHORE COLLAGE FOR WOMEN UNIVERSITY	LCWU	UNIVERSITY	LAHORE	1/7/2022
20	INTERNATIONAL INSTITUTE OF DIGITAL FORENSIC SCIENCE AND TECHNOLOGY	IIDFST	TRANING INSTITUTE	KARACHI	22/09/2022
21	SMART MENTOR TECHNOLOGY	SMART MENTOR TECHNOLOGY	STARTUPS-COMPANY	DUBAI	10/5/2022
22	SAMANE FOUNDATION MEDICAL EQUIPMENT	SAMANE FOUNDATION MEDICAL EQUIPMENT	COMPANY	KARACHI	10/5/2022
23	UNIVERSITI KEBANGSAAN MALAYSIA	UKM	UNIVERSITY	MALAYSIA	1/8/2022
24	HEC BUSINESS INCUBATION CENTRE(BIC)	HEC BIC	GOVERNMENT	ISLAMABAD	22/04/2022
25	CIVIL AVIATION TRANING INSTITUTE	CATI	CIVIL AVIATION AUTHORITY	HYDERABAD	UNDER PROCESS
26	PAKISTAN JAPAN INTELLECT FORUM	PAKISTAN JAPAN INTELLECT FORUM	JAPAN CONSULATE	KARACHI	7/14/2022

27	PAKISTAN SOFTWARE EXPORT BOARD	PSEB	GOVERNMENT OF PAKISTAN	ISLAMABAD	7/14/2022
28	GUANGZHOU CITY CONSTRUCTION COLLAGE	GUANGZHOU CITY CONSTRUCTION COLLAGE	UNIVERSITY	CHINA	UNDER PROCESS
29	PRINCE SULTAN UNIVERSITY RIYADH	PRINCE SULTAN UNIVERSITY RIYADH	UNIVERSITY	SAUDIA ARABIA	UNDER PROCESS
30	HAMDARD UNIVERSITY	HAMDARD UNIVERSITY	CIVIL	JAMSHORO	7/12/2022
31	HANDS INDEPENDENCE LIVING CENTRE HYDERABAD	HANDS, ILC	DISABLE PERSONS CSR ACTVITIES	JAMSHORO	1/3/2023
32	UNIVERSITI TUN HUSSEIN ONN MALAYSIA	UNIVERSITY MALAYSIA	UNIVERSITY	MALAYSIA& PAKISTAN	3/3/2023
33	UNIVERSITY OF NOVISAD	SERBIA	UNIVERSITY PROJECT,TEXTILE BASE ANTEENA	ONLINE	3/4/2023
34	TANG	CHINA	INDUSTRY-EDUCATION	MUET	UNDER PROCESS
35	MOBILINK	NATIONAL	COMMUNICATION	MUET	UNDER PROCESS
36	ASPIRE	USA	WOMEN EMPOWERMENT	MUET	UNDER PROCESS
37	UNIVERSITY OF SUNDERLAND	UK	EDUCATION	KARACHI	UNDER PROCESS

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7. CAMPUS LIFE

7.1 Student Teacher Centre (STC)

This University has established Student Teacher Centre to provide communal facilities to students and staff. STC has been constructed over an area of 20,000 sft. as per Vision &Perspective Plan of the University. The Centre hosts the following:

7.1.1 Indoor Sports & Communal Facilities:

- Information Service
- Students' Advisory Office
- Hostel Provost Office
- Students' Welfare Office
- Dispensary
- Tuck Shop
- Bank Counter
- Cafeteria (for Boys & Girls)
- Debating and Dramatic Society Office
- Indoor Games
- Alumni Office

7.2 MUET Library & Online Information Center, Jamshoro

The Mehran UET, Library & Online Information Center contains more than **180700** books related to Engineering Science and Technology. The library has online e-resources under Higher Education Commission Digital Library Program. The access **of 11 e-databases** for electronics journals, Research thesis online e-books available under e-brary program which are accessed within the University campus and outside the campus in full text format.

There are more than **32000** text books in the Book Bank which are loaned to students for one term on nominal rent. The collection of books is updated continuously and new books are acquired on the recommendations of experienced faculty members, which makes collection most suited and beneficial to graduate and under-graduate students. In addition, latest reference and other books are also acquired every year to keep the users of the library abreast with the latest information on Science & Technology specially engineering and its allied subjects.

In addition to providing the readers with in-house collection, services are also provided for inter-library loan and photocopying of literature including technical information centers within and outside Pakistan.

The Mehran UET Library & Online Information Center also offers following services:

- **The E-Resources for Online Classes have been established to support the students during COVID-19 and are available on the following link:**library.muet.edu.pk/ebooks.php
- MUET Library & Online Information Center offer service of e-resources to under graduate, post graduate students and faculty members for their research project, assignments online classes through Library Web page during the **COVID-19.**
- The MUET Library provides the facility of Multimedia & Research Development Center, which includes softcopy of books, CD/DVD Writing, Scanning and printing to students, faculty members and researchers. Multimedia & Research Center also provide space for researcher with I-7 Computer (Wireless Headphones; Hi Fi Audio system) connected with Wi-Fi Networks. Full access of HEC Digital Library provided possible assist to create bibliography of work electronically (Endnote, Mendeley, Zotero). In Multimedia & Research development Center research articles and e-books are provided to the faculty members and students on their demands.

- The MUET library offer the trainings program regarding awareness of HEC digital library resources ebrary, science direct and IEEE to the students of all faculties of the University.
- There are also blogs muetloic.blogspot.com to give the awareness trainings regarding HEC Digital Library, muetloiceresources.blogspot.com/ access of E-books, Journals, Tutorials and Thesis's Guidance, video lectures, dictionaries and encyclopedias etc.
- The Catalog of books is computerized and accessible to the library of Congress gateway loc.gov/z39.50 serving one point access interface for books catalog, full text electronic journals, and e-books on the web.
- Koha Catalogue is also available with check in check out system for library users on opac.muet.edu.pk
- The MUET Library & Online Information Center also offered Wi-Fi service in the whole Library inside/outside Building.
- The library is open from 8:00 am to 12:00 Midnight whole the year heavily used by undergraduate and postgraduate students, faculty members, and researchers.
- Professional staff available at service points to meet the needs of the readers. Besides this under the library system program seminar libraries have been established in various institutes/ departments.

For further information, please contact:

Mr. Zahid Hussain Sahito
Librarian
Tel. No. 022-2771169
Ext. No. 6300
Email: librarian@admin.muet.edu.pk

7.3 Student Financial Aid Office (SFAO)

The primary objective is to provide assistance through Scholarships, Financial Assistance /Aid, Zakat and Educational Loans (Qarz-e-Hasna) programs, to the students who are unable to pursue their higher education due to financial barriers. To accomplish the main objective, the office also establishes the following objectives:

- To provide financial relief to the meritorious and needy students.
- To provide quality advising services by addressing individual student needs, responding to student inquiries in a timely manner.
- To use effective procedures to ensure that the funds are provided to students who demonstrate the greatest financial need.
- To comply with all prescribed rules, regulations, and policies of financial aid and scholarship programs as set by the Donor Agency and the University.

The ISAC Interviews for Flood Effected Scholarship under USAID Funded Merit and Need Based Scholarship Program held on Monday, 22nd May 2023.

Outreach session for PHD scholarship under "US-Pakistan Knowledge Corridor" on December, 6th 2022 under Higher Education Commission.

7.3.1 List of Donors / Scholarships Opportunities:

Sr. No.	NAME OF SCHOLARSHIP	DONOR
1.	Internal Merit Scholarship	Mehran UET, Jamshoro
2.	Financial Assistance	
3.	Student Advancement fund Endowment Scholarship	
4.	USAID Merit & Need Based Scholarship	USAID Pakistan with the collaboration of HEC, Islamabad
5.	USAID Flood Effected Areas Scholarship	USAID Pakistan with the collaboration of HEC, Islamabad
6.	HEC Need Based Scholarship Program	Higher Education Commission, Islamabad.
7.	OGDCL Need Based Scholarship	OGDCL with the collaboration with HEC, Islamabad.
8.	SSGC Scholarship	Sui Sothern Gas Company limited
9.	BHP (Pakistan) Need Cum Merit Based Scholarship	BHP Billiton (Pakistan)
10.	National ICT Scholarship	PM National ICT R&D Fund, Islamabad.
11.	NBP Loan	National Bank of Pakistan.
12.	Sindhi Association of North America Dr. Feroz A. Memorial Educational (FAME) Scholarships.	Sindhi Association of North America.
13.	PEC Scholarship	Pakistan Engineering Congress, Lahore.
14.	PEC Merit Scholarship	Pakistan Engineering Council, Islamabad.
15.	Balochistan Scholarship	Directorate of Collages Higher and Technical Education Balochistan, Quetta.
16.	PIP Scholarship	Petroleum Institute of Pakistan (PIP), Karachi.
17.	IEP-SAC Scholarship	Institution of Engineering Pakistan, Saudi Arabian Center.
18.	MUTA - Need Cum Merit Scholarship	Mehran University Teachers Association (MUTA), Jamshoro.
19.	Merit Scholarship (formerly called MORA)	All District Zakat & Ushar Committees of Sindh
20.	Endowment Fund Scholarship	Education & Literacy Department, Govt. of Sindh
21.	PEF Scholarship	Professional Educational Foundation
22.	Provision of Higher Education Opportunities for Student of Baluchistan and Fata	Higher Education Commission, Islamabad.
23.	Minority Scholarship	Ministry of Religious Affairs, Islamabad.
24.	PEEF Scholarship	Punjab Education Endowment Fund (PEEF), Lahore.
25.	Scholarship for Foreigner students	Various Embassies
26.	Zila Nazim Khairpur Scholarship	Office of Zila Nazim District Govt., Khairpur
27.	Scheduled Caste (Tharparkar)	Office of Deputy Commissioner, Tharparkar
28.	SEAFA Scholarship	Mr. Tufail A. Memon and Friends from USA
29.	Sain G.M. Sayed Need cum Merit Based Scholarship	Shah Hyder Educational Society SANN (SHESS), SANN UC, District Jamshoro
30.	DIYA Scholarship	Kaneez Fatima Welfare Trust, Rawalpindi
31.	FFC- Scholarship	Fauji Fertilizer Company Limited
32.	HBL Foundation Need Cum Merit Scholarship	Habib Bank Limited Foundation
33.	Quaid-E-Azam Aligarh Scholarship	Quaid-E-Azam Aligarh Trust

Sr. No.	NAME OF SCHOLARSHIP	DONOR
34.	Mentoring a Talent	TEXPO, IT consultant Company
35.	FF_ Scholarship	Fauji Foundation, Rawalpindi
36.	(Late) Abdul Qayoom Uqaili Need cum Merit Based Scholarship	Prof. Dr. M. Aslam Uqaili, Ex-Vice-Chancellor, MUET, Jamshoro.
37.	(Late) Taj Mohammad Sahrai Need cum Merit Based Scholarship	Prof. Dr. Mujeeb-u-ddin Sahrai, Professor, Mechanical Engineering MUET, Jamshoro.
38.	Sardar Begum Sehrai Need cum Merit Based Scholarship	
39.	(Late) Master Kishan Chand Chowdhry Need cum Merit Based Scholarship	Prof. Dr. B.S. Chowdhry, Dean FEECE, MUET, Jamshoro.
40.	(Late) Mr. & Mrs. Jhando Khan Lashari Need cum Merit Based Scholarship	Prof. Dr. Bakhshal Khan Lashari, Director, Water Resources Engineering & Management, MUET, Jamshoro
41.	Agha Habibullah Khan, Need Cum Merit Based Scholarship	Prof. Dr. Agha Faisal Habib, Civil Engineering.
42.	Mr. & Mrs. Pyaro Khan Shaikh, Need Cum Merit Based Scholarship	Dr. Ghulam Yaseen Shaikh, Industrial Engineering Department
43.	Dr. Asma Junejo, Need Cum Merit Based Scholarship for a Female Student	Dr. Asma Junejo, Senior Gynecologist, Hyd.
44.	Dr. Khadija Qureshi, Need Cum Merit Based Scholarship	Prof. Dr. Khadija Qureshi, Chemical Engineering.
45.	Mr. Jawed Akhtar Arbab. Scholarship	(Late) Muhammad Khan Arbab, Need Cum Merit Based Scholarship
46.	United Memon Jamat Scholarship	United Memon Jamat of Pakistan
47.	Mrs. Anwar Muhammad Memon.	(Late) Mr. Anwar Mohammad Memon, Need Cum Merit Based Scholarship
48.	Mrs. Noshaba Qabool Muhammad, Need Cum Merit Base Scholarship and Mrs. Sonia Abdul Manan Need Cum Merit Based Scholarship	Mr. Mian Abdul Manan, Team Leader (I & C), Karachi.
49.	Scholarship for Foreigner students	Various Embassies in Pakistan
50.	Other Foundations / Agencies	General Scholarships
51.	Indian Occupied Kashmiri Scholarship / J&K State Financial Assistance	Government of Pakistan Ministry of Inter Provincial Coordination (IPC Division)
52.	Mr. Ilyas Ishqie to a needy female student, Need Cum Merit Based Scholarship.	Madam Rosy Ilyas, Retired Professor ELDC, MUET.
53.	(Late) Mr. Zahid Suleman, Need Cum Merit Based Scholarship.	Mr. & Mrs. Qazi Suleman,
54.	Mr. Muhammad Hassan Laghari, Need Cum Merit Based Scholarship. MUET.	Mr. Muhammad Hassan Laghari, Ex-Chief Security Officer
55.	Engr. Ghulam Ali Mirza Need Cum Merit Based Scholarship.	Mr. Ghulam Ali Mirza, from UK.
56.	93-Batch Need Cum Merit Based Scholarship	Ex-Students of 93 Batch
57.	Mir Hassan Rind Need Cum Merit Based Scholarship	Mir Hassan Rind Former Member of National Highway Authorities (NHA).
58.	(Late) Mrs. Mahrunish Shaikh Need Cum Merit Based Scholarship	Engr. Arz Mohammad Shaikh, Hyderabad.
59.	Dr. Mir Saad Hussain Sacharvi, Need Cum Merit Based Scholarship	Dr. Mir Saad Hussain Sacharvi, Hyderabad.
60.	Mr. Mir Mahammad Talpur, Need Cum Merit Based Scholarship.	Mr. Mir Mahammad Talpur

Sr. No.	NAME OF SCHOLARSHIP	DONOR
61.	Late Mr. Ghulam Hussain Brohi, Need Cum Merit Scholarship	Pro. Dr. Khan Muhammad Brohi Dean Faculty of Architecture & Civil Engineering
62.	Karwan-E-Ilm Foundation Need Cum Merit Scholarship	Karwan-E-Ilm Foundation, Lahore
63.	Sachal Engineering Works (Pvt) Ltd, Islamabad Need Cum Merit Scholarship	Sachal Engineering Works (Pvt) Ltd, Islamabad
64.	Kuldeep Kumar (Late) Need Cum Merit Scholarship	Mehran UET, Jamshoro

Dr. Amir Mahmood Soomro
Focal Person, Student Financial Aid Office
Phone: +92 22 2771274. Exchange: +92 22 2772250-72 / Ext. 7715

7.4 Students' Advisory Committee

Introduction of the Office of Advisor Students' Affairs
Mehran University Students' Advisory Committee was formed to bridge the gap between the administration, teaching community, and students. The Committee helps students to organize academic and social activities and to resolve their academic and legal grievances.

Role of the Students' Affairs Office
The committee leads, directs, and administers overall functions of student societies, student counseling, hostel residence allocation, as well as matters related to disciplinary issues. The important role of the Student Affairs Office is to enhance the quality of student experience both in and outside of the classroom.

The Advisory Committee also provides proactive support and capacity-building services to promote co-curricular activities to enhance the interpersonal skills of the students.

Achievements of the Directorate / Center / Section / Office
The Student Affairs Office has maintained a friendly environment to guide the students. It manages their needs from the time they step in the University until their graduation. We provide proactive support and capacity building services to promote healthy co-curricular activities to enhance interpersonal skills of the students. Using the platform of the Students' Affairs Office, students have built strong relationships with their peers, faculty, administration, and other stakeholders of the University.

The Mehran University Students' Advisory Committee is composed of the following members:

Prof. Dr. Tanweer Hussain
Advisor Students' Affairs
Landline: 0222772251-72 (Ext: 2030)
Email: tanweer.hussain@faculty.muet.edu.pk
asa@admin.muet.edu.pk

Dr. Muhammad Shuaib Shaikh
Deputy Advisor Students' Affairs
Email: shuaib.shaikh@faculty.muet.edu.pk

Dr. Isma Farah Siddiqui
Deputy Advisor Student' Affairs
Email: isma.farah@faculty.muet.edu.pk
Landline: 0222772251-72 (Ext: 6907)

Dr. Samander Ali Malik
Deputy Advisor Students' Affairs
Landline: 0222772251-72 (Ext: 2512)
Email: samander.malik@faculty.muet.edu.pk

Engr. Junaid Ahmed Baloch
Deputy Advisor Students' Affairs
Landline:0222772251-6917
Email: Junaid.baloch@faculty.muet.edu.pk

7.5 Quality Enhancement Cell (QEC)

QEC was first established in 2001 under the name of ISO 9000 Cell, as Mehran UET, Jamshoro decided to enhance quality of education by implementing ISO 9000 Quality Management System (QMS). The University has ultimately achieved ISO 9000 certification in 2003 and the course continuous to include additional areas for quality improvement and the directorate was renamed as Quality Enhancement Cell (QEC) in 2007.

Today QEC coordinates between Higher Education Commission (HEC) Pakistan and MUET Jamshoro primarily and also includes quality personnel of different institutes of Pakistan to promote quality at MUET Jamshoro. The basic activities carried out to cover quality parameters of HEC and ISO 9000 include conduct of Self-Assessment (SA), Institutional Performance Evaluation (IPE), Postgraduate Program Review (PGPR), Internal Quality Audit (IQA), Management Review (MR), Anti-plagiarism, seminars, workshops, conferences and Surveillance.

7.5.1 Key achievements of QEC:

- Implementation of ISO 9001:2015 quality management system requirements and certification for three years from Lloyd's Register Quality Assurance (LRQA) UK
- Successfully implemented HEC quality assurance criteria and secured 93.53% marks inHEC QECs ranking for the year 2017-18
- Mehran UET awarded with "Excellent Performance" for the year 2018-19

7.5.2 Future Objectives:

To strive for accreditation of engineering programs through Accreditation Board of Engineering and Technology (ABET)

Contact us:
Quality Enhancement Cell (QEC)
Mehran UET, Jamshoro.
Phone: +92-22-2109013 / Ext.: 7712
E-mail: qec@admin.muet.edu.pk
Website Link: http://www.muet.edu.pk/qec

7.6 Information and Communication Processing Centre (ICPC)

The ICPC (Information and Communication Processing Center) serves as the foundation of our university, providing essential networks for seamless communication among departments and facilitating internet and voice communication. Through a high-speed fiber link with an impressive bandwidth of 612 Mbps, the ICPC connects the MUET Intranet to the outside world, ensuring a reliable and efficient connection.

At the heart of the ICPC lies a robust and scalable switching fabric, enabling the transmission of gigabit traffic over our fiber optics backbone. This advanced infrastructure interconnects all key buildings on campus, including the administration building, departments, and hostels. Our network is built on VLAN technology, ensuring efficient management and segmentation for enhanced performance.

In addition to delivering reliable data services, the ICPC also provides cutting-edge voice services through the modern Alcatel-Lucent OmniPCX 4400 EPABX system, which has been serving our university since 2003. This system enables seamless voice communication within our university community.

As part of our commitment to delivering comprehensive services, the ICPC offers the following facilities and services throughout our university:

- Data and Voice Services: Ensuring seamless connectivity and communication for both data and voice traffic.
- Wireless Connectivity: Providing blanket coverage of wireless internet access across our entire campus, empowering our community to stay connected from anywhere.
- Training & Internships for Employees & Students: Offering valuable training programs and internships to enhance the skills and knowledge of our employees and students in the realm of information and communication technologies.
- Smart ID Cards for Employees & Students: Equipping our community with smart identification cards that go beyond traditional identification, providing additional features and functionalities.
- Security Surveillance System: Implementing a comprehensive security surveillance system to ensure the safety and well-being of our university premises.
- Email Service: Enabling reliable and secure email communication for all members of our university community.
- SMS Alert Service: Keeping our community informed and updated through SMS alerts and notifications, ensuring timely dissemination of important information.
- Web Services: Providing a range of web services, hosting and managing websites to support various academic and administrative needs.

These services and facilities offered by the ICPC contribute to fostering a technologically advanced and interconnected environment within our university, empowering our community to thrive and succeed in their academic pursuits.

7.6.1 Surveillance System

The University has a state-of-the-art surveillance system (a closed-circuit television system) to with a central control room to maintain close observation to the students, visitors and employees of the University within the University premises around the clock to reduce the level of all risks associated with higher education institutions.

Engr. Saleem Ahmed Memon
Director
Phone: (022) 2772250 Ext: 2090
Email: director.icpc@admin.muet.edu.pk

7.7 Medical Assistance

A double-bed clinic located at Student-Techer Centerprovides medical facilities from 4:00 to 6:00 in the evening for residents of boys' hostels and a part-time dispensary has been established in one of the female hostels for the residents, which is manned by a qualified doctor and a dispenser. Adequate quantities of essential medicines are also available in the dispensary for the minor ailments. Major sickness problems are referred to nearby hospital. Besides that, day and night emergencies are attended by the ambulance service and duty vehicle which areavailable for 24/7.
For further information, please contact:

1. **Prof. Ghulam Abbas Mahar**,
   Provost Hostels,
   Tel. No. 022 2109137
   Ext. No. 3005
   Email: provost.hostels@admin.muet.edu.pk

2. **Khalid Hussain Bhatti,**
   Assistant Registrar (Hostels)
   Tel. No. 022 2109135
   Ext. No. 2031
   Email: khalid.bhatti@admin.muet.edu.pk

7.8 Transport Facilities

The University boasts a comprehensive fleet of buses, strategically designed to enhance convenience for its students, faculty, and staff. These buses operate on multiple routes, linking the campus with prominent locations including Jamshoro, Hyderabad City, Qasimabad, Latifabad, and Kotri. In order to utilize this transportation service, students are obligated to pay nominal fees.

Furthermore, the University diligently maintains a diverse range of specialized equipment and vehicles, dedicated to upholding the campus's cleanliness and fostering an optimal environment. Moreover, as part of its future plans, the University intends to introduce solar shuttles exclusively for student transportation within the premises.

Mr. Fawad Ahmed Lashari
Additional Registrar
Transport Section
Phone: +92 222109073 and 22 2771153 / Ext.: 6800
http://www.muet.edu.pk/transport-section

7.9 Sports Facilities

The Directorate of Sports has been arranging a wide range of indoor as well as outdoor sports activities and provides health and fitness facilities to the University students on daily basis. The University has a keen interest in arranging facilities of highly specialized training, coaching camps along with indoor and outdoor sports events for students residing on and out of campus. Inter-batch, Interdepartmental, and Inter-hostel Sports events for Boys & Girls are regular features of the University.

We have a state-of-the-art Sports Complex in campus, having a modern Gymnasium and fitness center that is, equipped with latest fitness tools to provide our students best possible health and Sport activities in a better environment.

The University also hosts/organizes and participates in a number of Inter-University Sports events organized under HEC annually. The University students have been winning these tournaments and awarded with Gold, Silver and Bronze Medals respectively. Every incoming batch is encouraged to participate and represent the University team in Inter Department, Inter Hostel, Inter Batch and Inter University events particularly in Athletics, Cricket, Football, Volleyball, Handball, Basketball, Squash, Table Tennis, Tennis, Badminton, Hockey, Tug of War, Chess, Judo, Wushu, Body Building, Weight lifting Swimming, Gymnastics and Boxing etc.,

One of the most popular events at the University is the annual Sports Week/Gala, where a large number of students participate in both indoor and outdoor sports competitions.

The Sports Calendar for Academic Session 2023-24 containg the details of the Indoor and Outdoor Sports Events is as under:

MEHRAN UNIVERSITY OF ENGINEERING & TECHNOLOGY, JAMSHORO

DIRECTORATE OF SPORTS

SPORTS CALENDAR 2023-2024

INDOOR & OUTDOOR SPORTS EVENTS (TENTATIVE)

July 2023	August 2023	September 2023	October 2023	November 2023	December 2023	January 3024	February 2024	March 2024	April 2024	May 2024	June 2024
Summer Vacations	Mid-Term Examinations and Entry Test 2023 (23-Batch)	HEC Inter-University Championship Participation	HEC Inter-University Championship Participation	HEC Inter-University Championship Participation	HEC Inter-University Championship Participation	HEC Inter-University Championship Participation	HEC Inter-University Championship Participation	Ramadan ~~Nul~~ Mubarak 2024	HEC Inter-University Championship Participation	HEC Inter-University Championship Participation	Summer Vacations
			Preparation of Teams for Sports Week 2023	Final / Semester Examination	Inter-Departmental Tug of War Tournament (Boys)		Inter-Departmental Cricket Tournament (Girls)				
		Inter-Departmental Throw Ball Tournament (Girls) (Objective)	Sports Week 2023 Proposed from October 31 to November 3, 2023		Inter-Departmental Kabaddi Tournament (Boys)	Inter-Departmental Hardball Cricket Tournament (Boys)	Inter-Departmental Futsal Tournament (Boys)	Ramadan Night Cricket Tournament (Boys)		Inter-Departmental Volley Ball Tournament (Boys)	

Note: Event(s) can be changed / revised subject to the Examination Schedule and Academic Calendar

Abdul Ghaffar Chandio
Director Sports
Ph.: 022-2109103, 022-2772250 (Ext: #2026)
Email: dir.sports@admin.muet.edu.pk
http://www.muet.edu.pk/directorates/directorates-sportds

7.10 Residential Accommodation

The MUET hostels have rich legacy of academic excellence and responsible community life. It is an affordable, homely and safe accommodation for almost 1800 male and female Pakistani, overseas Pakistani and foreign students. Almost all eight, including three female students', hostels are spacious and airy two-storied buildings, located near to the main academic buildings, with well-furnished rooms to accommodate two to three students with internet facility. Every student is allotted a bed, a cupboard, a study table and a chair. The premises of male and female hostels are separate and the messing system and cleanliness of hostels supervised by male and female wardens respectively.

The University is not bound to provide hostel accommodation to every student, even if he / she is entitled. However, accommodation is provided to the male and female students seeking admission only in undergraduate studies at various departments / institutes of the University subject to availability and according to the merit. The interested students can apply through a prescribed Admission Form available with the Office of the Provost Hostels, at the Student Teacher Center of the University. The seats in the hostels are allotted by allocating the district-wise quota proportional to seats allocated for admission in university. Further the district-wise seats are allotted to the students on first come first served basis, **excluding the districts where the bus service is provided from by the University (like Jamshoro, Hyderabad, Matiari, TandoAllahyaar, Tando Muhammad Khan and Mirpurkhas).** The cases of the interested applicants belonging to the above-mentioned districts and far-flung areas thereof may be considered, in case of availability of seats after regular allotment is done. The seats allotment process is fully transparent. The University administration reserves the right to reject any application for allotment or cancel the allotment of any student at any stage without assigning any reason.

Purified drinking water and hot / cold water is available around the clock. Separate canteens / messes with common dining halls are available in each hostel with around to 30 to 40 students siting capacity and offer meals, tea, juice and soft drink at modest prices. The menu and quality of the food are regulated by the students mess committee. The common halls are well equipped with recreational facilities like large wall-mounted televisions / LCDs, table tennis, badminton and newspapers and magazines. Most of the hostels have outdoors basketball courts and inter-hostels sports events and debate contests are organized regularly. A state-of the-art Gymnasium is located near the hostel buildings to provide health care and fitness facilities from morning till 9:00 PM. An ATM electronic banking service is nearby available around the clock. All the hostels' residents have been provided with transport facility from morning till 9:00 PM. All hostels offer lush green lawn for the students to sit and relax, beautiful natural surroundings, mango, guava and banana orchard, green environment conducive for studies, calm & quite atmosphere, pollution free and safe & secured environment with 24 hours security surveillance. Security guards have been deployed on main entrances of male and female students' hostels round the clock to ensure the strict security. The CC Tv cameras are installed in all the hostels to monitor the activities of staff, visitors and residents of hostels by Provost Hostels.

University hostels are built upon the principles of professionalism, caring and mutual respect to the students. During the stay in the hostels, they maintain high standards of professional ethical values and for development of personal relationship which provides the best grooming facilities to fulfill our mission. The residents of MUET hostels have always demonstrated the ethos of dedication, sincerity and care for others. The hostel inculcates the characteristics like co-operation and respect for different cultures in the residents as they come from diverse cultures. As a part of extended family of the University fraternity, MUET hostels add a dimension of vigor and commitment to the academic and extracurricular ambience of the institution. While providing an opportunity of campus living, MUET hostels look forward residents to shoulder and maintain the best traditions of the University as a whole.

All the students are required to abide by the rules and regulations governing residence and are encouraged to develop community life conducive to healthy growth of the social aspects of their personalities.

7.11 Auditorium

The Auditorium with the capacity for approximately 500 people is the most stunning meeting room with seating for up to 500 and state-of-the-art audio-visual equipment. It promises to make events unforgettable. The acoustics in the auditorium are ideal for musical recitals as well as lectures.

7.12 Cafeteria

There are many cafeterias / canteens across the campus which provide provides fresh quality edibles / meals prepared according to hygienic rules at affordable prices. The cafeterias serve almost 7,000 students. A committee is deputed to check and examine quantity, quality and rates of the food at the University. It also monitors the hygienic conditions of the cafeteria to ensure quality and hygiene of the food. The Committee also looks after the menu selection and quality of service. Taste buds come alive with our vast dining selections. Fast food, lunch, snack bars, baked goods, tea and coffee can be found at our campus.

Cafeteria is a place where students enjoy their favorite meals and have social interaction and they discuss academic and social issues with fellow students. This place is especially very much crowded during lunch or recess time.

8.1 MEHRAN UET, SHAHEED ZULFIQAR ALI BHUTTO CAMPUS, KHAIRPUR MIRS'

8.1.1 Introduction

In order to promote Engineering Education in the interior region of the province and to reduce the supply-demand gap of engineering professionals, the Government of Sindh vide notification No. SO(C-IV) SGA & CD/ 4 29/09, dated 2nd April, 2009 established a constituent College of Mehran University of Engineering & Technology, Jamshoro named as Mehran University College of Engineering & Technology, Khairpur Mir's.

The College has been further upgraded as Campus of MUET, Jamshoro vide Notification No. Estt(Teach:)/30 of 2013 dated 19-02-2013 and named as MUET Shaheed Zulfiquar Ali Bhutto (SZAB) Campus, Khairpur Mir's. The main objectives of the establishment of the College/Campus are as under:

- To provide science and technology education to the people of interior Sindh at their door step.
- To upgrade the technical skills of the people of Sindh.
- To meet the national demand for qualified engineers required for national industrial development.
- To promote the rural talent, enabling it thereby to participate in mainstream of national growth.

8.1.2 Officers of the Campus

The number of students admitted to the First-Year classes in all undergraduate disciplines is 340 out of which 60 candidates are admitted under the self-finance scheme.

The MUET SZAB Campus, Khairpur Mir's offers undergraduate program in six disciplines, viz. Civil Engineering, Mechanical Engineering, Electrical Engineering, Petroleum & Natural Gas Engineering, Electronics Engineering and Software Engineering.

Being a campus of Mehran University of Engineering & Technology, the campus adopts the same teachings system, courses of studies, rules and procedures for admissions, examination system and student conduct and discipline as those of practiced by the university.

The campus headed by the Pro-Vice Chancellor is working under the administrative and academic Supervision of Mehran University of Engineering & Technology, Jamshoro.

1. Prof. Dr. Dur Muhammad Pathan Pro-Vice Chancellor, MUET, SZAB Campus	**8. Prof. Dr. Rafique Ahmed Memon** Chairman, Department of Basic Sciences & Related Studies
2. Prof. Dr. Syed. Hyder Abbas Musavi Director Academics/In-charge Postgraduate	**9. Dr. Noman Qadeer Soomro** Incharge Chairman, Department of Software Engineering
3. Dr. Mujeeb Iqbal Soomro Director Administration	**10. Dr. Muhammad Rafique Naich** Incharge Chairman, Department of Electronics Engineering
4. Dr. Sajjad Ahmed Mangi Incharge Chairman, Department of Civil Engineering / Focal Person, ORIC	**11. Mr. Muhammad Rakhial Bhutto** Project Director
5. Dr. Aqeel Ahmed Bhutto In-Charge Chairman Department of Mechanical Engineering	**12. Mr. Sajjad Ali Memon** Executive Engineer
6. Dr. Tauqeer Ahmed Jumani Incharge Chairman, Department of Electrical Engineering / Additional Provost Hostels.	**13. Shoaib Ahmed Shah** Incharge Finance
7. Dr. Asadullah Memon Chairman, Department of P & NG Engineering	

8.1.3 Fields of Study and Teaching Faculty

Mehran University of Engineering and Technology, SZAB Campus, Khairpur Mir's offers courses leading to Bachelors' degrees in the following disciplines. All the six degrees are in Engineering and are titled Bachelor of Engineering (Name of Field), e.g., B.E Civil.

1. Civil Engineering
2. Electrical Engineering
3. Mechanical Engineering
4. Petroleum & Natural Gas Engineering
5. Electronics Engineering
6. Software Engineering
7. BS Mathematics

8.1.4 ICPC (Information and Communication Processing Centre)

All Departments/Sections and Residential Complex are connected through Fiber Optic cable to provide Internet (LAN & Wireless Wi-Fi) Service through ICPC installed latest Computer Server machine and Network switches, intranet at Campus and Residential Complex. The Campus is connected through Fiber link with HEC PERN bandwidth of 64Mbps.Voice (Intercom) Service is also provided through latest EPABX installed at ICPC. Official Email accounts, and Microsoft Dreamspark accounts are also provided to Faculty/Staff and students of Campus.

8.1.5 Transport Facilities

The campus provides transport service to the students, faculty and staff along the routes, viz. Sukkur-Khairpur Mir's, Ranipur-Khairpur Mir's, Nangreja-Khairpur Mir's, Pir Jo Goth-Khairpur Mir's, Pano Aqil-Khairpur Mir's and within Khairpur Mir's City.

8.1.6 Sports Facilities

The campus has established a sports section which arranges various indoor and outdoor sports occasion on its own as well as in liaison with the Directorate of Sports of the University. However, sports complex has been planned in the premises of residential complex for students & staff where the construction work has already commenced. Gymkhana Khairpur is facility this campus to have sports activities there also.

8.1.7 Surveillance

The campus has a state-of-the-art surveillance system with a central control room to monitor & review the entire Campus premises for security concerns.

8.1.8 Library

The Campus Library contains more than 25000 books related to Engineering Science and Technology and its allied subjects. There are more than 7000 (approximately) in form of textbooks.

The Campus Library offers video conferencing with excellent image and sound quality, which includes video conferencing equipment. The room is available to campus departments; faculty and students also Library has two Group Discussion Rooms available for academics or students.

In Library & Online Information Center students and faculty members are also provided internet facility to use Digital Library for their project work for which Advance PCs are installed in the Online Information Center of the library.

Online Public Access Catalogue (OPAC) accessible through this urlhttp://121.52.155.178:8000. To access interface for books catalog, full-text electronic journals and e-books on web. The Campus Library also offers Wi-Fi service.

The library is heavily used by the students, faculty members and researchers and is open from 8:00 am to 9:00 p.m. and also on Holidays during examination period. Professional staff available at service points to meet needs of the readers.

8.1.9 Residential Accommodation for Students & Staff:

The residence facility for boys students & male staff is being provided at Residential Complex (New Land). The resident facility for girls is also provided within the campus premises for the time being. The two (02) boys' hostels will start functioning in next session. The following facilities are available:

1.	Boys Hostel	-02 Nos.
2.	Girls Hostels	-02 Nos.
3.	Teachers /Hostel	-01 No.
4.	Mosque	-01 No. (Within Campus)

The following are in planning and construction phase:

5.	Shopping Centre	-01 No.
6.	Health Centre	-01 No.
7.	Sports Complex including Gymnasium.	-01 No.
8.	Girls Hostels	-01 No.
9.	Teachers Houses	-40 Nos.

8.1.10 Cafeteria

The Campus cafeteria was inaugurated in December-2015 with sitting capacity of approximately 100 people. The cafeteria is providing mess facility to the students (Male and Female), staff and teachers.

8.1.11 Auditorium

The Campus has state of the art Auditorium facility with the capacity of approximately 500 persons seating to hold conferences, seminars, symposiums etc.

8.2 Department of Basic Sciences & Related Studies (BSRS)

8.2.1 The Department.

The faculty of this department teaches / offers various fundamental compulsory courses including Mathematics, Statistics, English, Pakistan Studies and Islamic Studies/ Ethics. Students are also assisted to understand theoretical work of Mathematics with the help of programming languages such as C++ and MATLAB in well-equipped computer laboratory of the departments. The courses of Mathematics and Computer Sciences are also being taught to the Postgraduate students at the University campus by the faculty of Basic Sciences and Related Studies Department. In this way, this department is helping students to equip with necessary mathematical expertise to deal with problems being occurred in current technological era. The department also participates in offered short courses on various aspects of computer-oriented courses and Linguistic. The department currently comprises of 06 teachers of Mathematics, 02 teachers of English, 01Research Associate (English),02 teachers of Islamic Studies/Ethics, 01 teachers of Pakistan Studies,01on Contract Faculty (Mathematics), and 06 non-academic staff.

The department has main focus to provide overall knowledge of Mathematics and other subjects to not only students at this university but also other interested public across country and outside. Several faculty members of this department are maintaining their blogs and share academic notes and other things online for interested audience. This way the Department is providing global knowledge sharing and tries to continuously improve it. In addition, some of books on topics courses are also written by our faculty members as author/co-author.

Vision of the Department:
The department of Basic Sciences and Related Studies aspires to the highest standards of excellence in teaching and service.

Program Educational Objectives (PEOs):
To skill students with the instinctive knowledge in the field of Mathematics, Statistics, English, Pakistan Studies and Islamic Studies/ Ethics and its uses in all fields in general and engineering in particular and further to equip them for higher studies and research in different disciplines.

8.2.2 Laboratory Facilities:

The department of Basic Sciences and Related Studies comprises of following one computer laboratory. The labs have latest Corei-7 PCs with high-speed internet connection. Forty PCs for undergraduate students are used for conducting C++ programming practical of students in addition to that same are being used for conducting various short courses related to C++, MATLAB and many others. The lab is extensively used by undergraduate student in order to complete their assignments and projects with the help of various software such as Microsoft Office etc.

8.2.3 The Faculty:

Chairman
Prof. Dr. Rafique Ahmed Memon

Professor: **Dr. Rafique Ahmed Memon** PhD, Pakistan. **Associate Professor:** **Dr. Hadi Bux Chhijan** PhD, Pakistan.	**Ms. Quratulain Talpur** M.Phil, Pakistan. (On Study Leave) **Dr. Baseer Ahmed Dars** PhD - Islamic Studies, Pakistan.	**Lecturers:** **Mr. Sanaullah Memon** M.S, Pakistan. **Mr. Abdul Majid Indher** M.Sc, Pakistan.

Assistant Professors: **Mr. Kaleemullah Bhatti** M.S, Pakistan.	**Mr. Jalil Ahmed Chandio** M.Phil. Pakistan. **Mr. Nek Muhammad Katber** M.S, Pakistan. (On study leave)	**Mr. Masoom Ali Shahani** M.S, Pakistan. **Mr. Sajid Ali Magsi** M.Phil, Pakistan. **Ms. Nimra Arain** M.S, Pakistan.

8.2.4 The Courses

The Curses of BS Mathematics followed at MUET Shaheed Zulfiqar Ali Bhutto campus and MUET Jamshoro campus are same. The students are advised to see the page(s) of BS Mathematics Courses mentioned on the relevant section of MUET Jamshoro in this prospectus.

8.3 Department of Civil Engineering

8.3.1 The Department

The Department of Civil Engineering of the Mehran UET, Shaheed Zulfiqar Ali Bhutto Campus, Khairpur Mir's provides state-of-the-art, essential, and advanced Civil Engineering education to the aspiring Civil Engineering graduates according to the requirements of field in a dynamic learning environment that emphasizes problem solving skills, team-work, communication skills and leadership qualities. The Department also evolves as a research-based solution provider to the construction industry. The Undergraduate program of the Department also offers the selection of the field of interest related to the Civil Engineering to the final year students by assigning them a thesis/project. The thesis/project may be specific to a specialization of Civil Engineering like Structural Engineering, Material Engineering, Geotechnical Engineering, Highway & Transportation Engineering, Hydraulics, Irrigation & Drainage Engineering, Construction Mgt. and Environmental Engineering. After successful completion of the undergraduate program, our graduates acquire great opportunities at entry level positions and finally, recognized as highly competent professionals worldwide.

The Department teaches many courses relevant to the various fields of Civil Engineering. Theory classes of different subject are complemented by tutorials and laboratory works, for which adequate facilities and advanced equipment are available. In addition, the students are taken to field visits of the Civil Engineering projects such as building structures, road construction works, geotechnical works, water treatment plants, dams, steel mills and on-going construction projects. During the summer vacations, the students are encouraged to undertake the internship on various Civil Engineering projects in the industry. The Department also has a Software Laboratory which provides computing facility and opportunity to learn latest software being used globally in the field of Civil Engineering. The Department also offers Master of Engineering in Civil Engineering.

The Department strictly follows the Outcome Based Education (OBE) system to fulfill the requirements of Pakistan Engineering Council as per Washington Accord. Evaluation of students through various means strictly follows the OBE criteria and based on specific course learning outcomes associated with each course. This student centric approach focuses on outcomes from individual student by the end of the course.

Vision of the Department:

The vision of the Department of Civil Engineering is to become an institution that provides state-of-the-art education to aspiring civil engineering graduates and to evolve as a research-based solution provider to the civil engineering industry.

Mission of the Program:

The undergraduate program of the Department of Civil Engineering aims to develop highly competent professionals, preparing them for entry-level positions in civil engineering, further study in graduate school, lifelong learning, and societal leadership. This is achieved by providing a dynamic learning environment that emphasizes problem-solving skills, teamwork, communication, and leadership skills.

Program Educational Objectives (PEOs):

i. Solve civil engineering problems faced by the industry by utilizing their theoretical, technical, and professional knowledge.
ii. Function in team-oriented activities considering the societal, environmental, and economic impacts.
iii. Continue professional growth through ethical, moral, and learning attitude.

8.3.2 The Faculty:

CHAIRMAN:
Dr. Sajjad Ali MAngi
Phone: 0243-9280312 /Ext.: 7301

PROFESSOR Prof. Dr. Kanya Lal Khatri PhD, Australia. Dr. Syed Naveed Raza Shah PhD, Malaysia. **ASSOCIATE PROFESSORS** Dr. M. Jaffar Memon PhD, China. Dr. Ghulam Shabir Solangi PhD, Pakistan. Dr. Sajjad Ali Mangi PhD, Malaysia. **ASSISTANT PROFESSORS** Dr. Dildar Ali Mangnejo M.E, Pakistan.	Engr. Abdul Razzaque Sandhu M.E, Pakistan. Engr. Rabia Soomro M.E, Pakistan. (On study leave) **LECTURERS** Engr. Abdul Qayoom Memon M.E, Pakistan. Engr. Hemu Karira M.E, Pakistan. Engr. Touqeer Ali Rind M.E, Pakistan. Engr. Dhanesh Kumar M.E, Malaysia.	Engr. Sanghaar Bhutto M.E, Malaysia. Engr. Mudasar H. Janwery M.E, Pakistan. Engr. Sajjad Ali Buriro (on Contract Basis) M.E, Pakistan Engr. Subash Kumar (on contract basis) M.E, Pakistan Dr. Rizwanullah Faiz (on contract basis) PhD, Malaysia

8.3.3 Laboratory Facilities

The Department of Civil Engineering, MUET, SZAB Campus, has nine fully functional laboratories equipped with advanced equipment for academics and research purposes. The list of the laboratories is given below:

1. Concrete Laboratory
2. Fluid Mechanics & Hydraulics Laboratory
3. Surveying Laboratory
4. Highway Engineering Laboratory
5. Soil Mechanics Laboratory
6. Environmental Engineering Laboratory
7. Computer Laboratory
8. Software Laboratory
9. Engineering Drawing Hall

8.3.4 The Courses

The Curses of B.E Civil Engineering followed at MUET Shaheed Zulfiqar Ali Bhutto campus and MUET Jamshoro campus are same. The students are advised to see the page(s) of B.E Civil Engineering Courses mentioned on the relevant section of MUET Jamshoro in this prospectus.

8.3.5 Career Opportunities

The knowledge provided at the Civil Engineering Department, MUET, SZAB Campus enables our students to join the Civil Engineering industry as fresh graduate, educational institutions as entry level instructors, or set up their own businesses. Typical employment sectors for Civil Engineering include public sector departments (Buildings, Highways, Railways, Airports, Irrigation, Water and Power, Ports), consultation companies, contractors, local authorities, and non-profit organizations. Due to the equivalent focus on research and academics from initial level, many of our graduated students have chosen various Universities as an academia or researcher and achieved good fame in their relevant field. The B.E program at MUET, SZAB Campus provides clear route to a professional career in Civil Engineering.

8.4 Department of Electrical Engineering

8.4.1 The Department

The Department of electrical engineering at Mehran UET is one of the pioneer and prestigious department. The department was established in 2010. The department is equipped with qualified faculty and state of the art laboratories. These laboratories serve not only undergraduate and postgraduate students but also provide services to the public and private sectors in the context of training, equipment testing calibration and consultancy services. Besides the academic activities, the faculty and students are involved in research and development activities in collaboration with industries.

Vision of the Department
To provide the world class education and research opportunities in the field electrical engineering at par with national and international levels.

Mission of the Program
The department of electrical engineering aims to provide a high quality of education to produce skilled, dynamic, creative and ethical professionals to take an active part in the development of the society.

Program Educational Objectives (PEOs)
The B.E Electrical Engineering Program aims at producing engineering Graduates who will:

i. To harness in depth knowledge of electrical engineering for problem analysis in the relevant field.
ii. Effectively utilize their technical and managerial skills for the solution of engineering problems.
iii. Demonstrate professional standards of moral and ethical values as a team leader or as an individual.

8.4.2 The Faculty

Chairman:
Dr. Touqeer Ahmed Jumani
Phone: 0243-715365, Ext: 7401
Email: chairmanelectrical@muetkhp.edu.pk

ASSOCIATE PROFESSOR: **Dr. Mazhar Hussain Baloch** PhD, China, Post. Doc., Malaysia **Dr. Touqeer Ahmed Jumani** PhD, Malaysia **ASSISTANT PROFESSORS:** **Engr. Shakir Ali Soomro** PhD, (on study leave) **Engr. Nadeem Ahmed Tunio** PhD, Pakistan **Dr. Mohsin Ali Tunio** PhD, Malaysia **Engr. Irfan Ahmed Bajkani** PhD Pakistan.	**Dr. Ahsanullah Memon** PhD, Malaysia **Dr. Sajid Hussain Qazi** PhD, Malaysia **LECTURERS:** **Engr. Kalsoom Baghat** M.E, (On study leave) **Engr. Shafqat Hussain Memon** M.E, (On study leave) **Engr. Rasool Akhtar Alias Osama** M.E, (On study leave) **Engr. Muhammad Amir Raza** (On Contract) M.E, Pakistan

8.4.3 Laboratories

The Department of Electrical Engineering is equipped with state-of-the-art labs to cater the practical/ experimental requirements to supplement the course work of the B.E Electrical Program. Following Laboratories have been established in the department:

Sr. No.	List of Laboratories	Sr. No.	List of Laboratories
01.	Power System	06.	Communication System
02.	Instrumentation & Control	07.	Electrical Machines
03.	Basic Electrical Engineering	08.	Power Electronics
04.	High Voltage Engineering	09.	Computer Lab
05.	Basic/Applied Electronics Engineering	10.	Software Lab

8.4.4 The Courses

The Curses of B.E Electrical Engineering followed at MUET Shaheed Zulfiqar Ali Bhutto campus and MUET Jamshoro campus are same. The students are advised to see the page(s) of B.E Electrical Engineering Courses mentioned on the relevant section of MUET Jamshoro in this prospectus.

8.4.5 Career Opportunities

Electrical Engineers have vast career opportunities in wide range of industries and organizations depending on their respective specializations. In Pakistan industries and organizations both Public and Private sector, such as, Pakistan Atomic Energy Commission, Pakistan International Airlines, Civil Aviation Authority (CAA), Pakistan Steel Mills, PEPCO, NTDC, GENCOs, DISCOs, K-Electric, PTCL, NTC, IPPs, Fertilizer and chemical industries such as OGDCL, SNGPL, Engro, FFC and various other national and international industries and organizations hire Electrical Engineers for design, control, operation and managerial jobs. Electrical Engineers are generally encouraged to attend continual professional development course (CPD) and acquire skills required in the job market to secure attractive and challenging career opportunities. This department also conducts such CPD courses which help in career development of the young engineers.

8.5 Department of Electronic Engineering

8.5.1 The Department

Electronic Engineering has played a very vital role in modern industrial and human development since decades that is why it is growing field with the passage of every passing time. Continuous advancement in Electronic Engineering in terms of fabrication processes including material, devices, circuit and control has led it to have significant importance in emerging technologies for its use in all major industrial applications. Thus, it has as a strong share in the market, which needs such quality programs to be initiated regarding educating the youth of society to create highly skilled individuals in this important and most challenging discipline of engineering at both the undergraduate as well as post graduate levels.

Electronic Engineering has revolutionized the standard of mankind, living style and industrial growth using modern electronics and microprocessor technology, therefore its significance cannot be denied. The Department of Electronic Engineering offers quality degree program at undergraduate level i.e., B.E (Electronic Engineering). The focus of this program is to produce sound technical manpower to further strengthen planning, designing of innovative projects in this particular area. The students during the entire degree program will learn different subjects on diversified field including Microprocessors & Microcontrollers, Mechatronics Applications, Analog & Digital Communication, Signal Processing, Power Electronics, Artificial Intelligence, Measurements & Instrumentation, FPGA-Based System Design, Sequential Circuit Design, Optoelectronics, Computer Communication & Networking etc.

The Department initially offers Undergraduate Program. The courses of the program have been drawn from the curriculum guidelines of HEC/PEC and duly approved by the Academic Council of the University.

Vision of the Department:

To provide the highest quality of learning and research opportunities for the students in the field of Electronic Engineering as well as make them competent professionals with high professional ethics to compete on a global scale.

Mission of the Program:

To produce Quality Electronic engineers with high intellect and broad vision who can meet current needs and foresee future needs of the nation in the field of Electronics by serving research and professional practice.

Program Educational Objectives (PEOs):

i. Apply in-depth electronic engineering knowledge and analytical skills to initiate innovative solutions for the society.
ii. Quest for learning, establishing collaborations and engaging in continuous professional development nationally and internationally.
iii. Adaptive in multidiscipline and multicultural environment and work effectively as a team lead or team member possessing strong soft skills and high moral ethics.

8.5.2 The Faculty

In-Charge Chairman of the Department:
Dr. Muhammad Rafique Naich
Phone: 0243-686074 / **Ext.:** 7701

PROFESSOR: **Prof. Dr. Hyder Abbas Musavi** PhD, Pakistan. **Dr. M. Rafique Naich** PhD, China.	**Ms. Kaneez Fatima** M.E, Pakistan. **LECTURERS:** **Mr. Maroof Panhwar** M.E, Pakistan.	**Engr. Saleemullah** M.E, China. (Contract Basis) **LECTURER:** **Engr. Nauman Memon** M.E, Pakistan.

ASSISTANT PROFESSORS: **Mr. Halar Haleem Memon** M.E, Pakistan. (On Study Leave)	**Ms. Bushra Shaikh** M.E, Pakistan. **Ms. Darshna Tulsi Das** M.E, Pakistan.	**Engr. Falak Naz** M.E, Pakistan.

8.5.3 Laboratory Facilities

The Department of Electronic Engineering is equipped with the latest equipment ranging from basic electronic devices, simulators and trainers to more advanced FPGA trainers & development boards. Excellent course work and due practical experience, provide ample job opportunities to over graduates and both public and private sector organization, national and multinational companies. The Department of Electronic Engineering facilitates its students with the following 12 laboratories:

1. Applied/Basic Electronics Lab
2. Basic Electrical Engineering Lab
3. Communication Systems Lab
4. Power Electronics Lab
5. Instrumentation and Control Lab
6. Digital Electronics & Microprocessor Lab
7. Electrical Machines Lab
8. Signal Processing and FPGA Lab
9. Software Lab
10. Industrial Automation and Robotics Lab
11. Computer Lab
12. Advanced Electronics Lab

8.5.4 The Courses

The Courses of B.E Electronic Engineering followed at MUET Shaheed Zulfiqar Ali Bhutto campus and MUET Jamshoro campus are same. The students are advised to see the page(s) of B.E Electronic Engineering Courses mentioned on the relevant section of MUET Jamshoro in this prospectus.

8.5.5 Career Opportunities

An Electronic Engineer can find lucrative jobs in well reputed private and public sector organizations such as: PTCL, KE, SUPARCO, Fertilizer Industry, Petrochemical sector, CAA, WAPDA, Pharmaceutical companies, Research & Development Organizations, Mobile Operators and Telecom Sectors, Electric Utility companies (MEPCO, HESCO, SEPCO etc.), Petroleum companies (PPL, OMV), Manufacturing Industries (Engro, Lucky Cement, Nestle etc.) and various other national and multinational organizations.

8.6 Department of Mechanical Engineering

8.6.1 The Department

The Mechanical Engineering Department (MED), MUET, SZAB Campus Khairpur Mirs' intends to become a hub of high-quality engineering education and research to produce skilled, innovative, entrepreneurial mechanical engineers who meet the ever-changing engineering demands. Mechanical Engineering Department, MUET, SZAB Campus Khairpur Mirs' always strive hard to produce engineers and researchers with sound knowledge of traditional and emerging areas of engineering together with innovative design abilities to achieve sustainable national development. This department also intends to develop the skills of the students to make them among the globally competitive engineers and researchers by providing quality education and research facilities, organizing conferences, seminars, and workshops, the opening of students' chapters, and technical lectures. Internships that relate academic knowledge to lifelong job experiences are encouraged by the department. MED also provides students with the opportunity to join professional societies such as ASME (American Society of Mechanical Engineers) and ASHRAE (American Society of Heating, Refrigeration, and Air-Conditioning Engineers), and is working to join and become affiliated with IMechE (Institute of Mechanical Engineers).This department has recently launched a society "Soft Skills and Character Building Society" to work for the improvement of undergraduate students and our alumni's soft skills and their character building.

The Mechanical Engineering Department (MED) of MUET, SZAB Campus Khairpur Mirs' is the first to provide graduate degrees. Currently, the department offers a Master of Engineering (M.E.) degree with a major in Energy Systems Engineering (Evening).

The department has a policy of assessing its graduate and undergraduate programs regularly to ensure that they are up to date with the newest and emerging developments and trends in mechanical engineering. The main campus BoS (Department Board of Studies) is responsible for revising the present curricula after feedback from MUET SZAB Campus. The BoS is made up of senior faculty members from the department's main campus, the Chairman from the MUET SZAB Campus, and a fewsenior faculty members/Professors from Mechanical Engineering Departments at other top institutions/universities around the country. The Chairman of the Department from the main campus leads the BoS.

Vision of the Department
Mechanical Engineering Department intends to become a hub of **quality engineering education** and research so as to produce **ethical, responsible, skilled, innovative, entrepreneurial mechanical engineers** who meet the ever-changing demands **and socio-economic needs**.

Mission of the Program
Mechanical Engineering program strives to produce **professional** engineers and researchers with sound knowledge of traditional and emerging areas of mechanical engineering together with the ability of having critical and innovative thinking and make them globally competitive.

Program Education Objectives (PEOs)
After four years Program of in B.E. Mechanical Engineering, graduates of this department are expected to be able to:

i. Practice outstanding knowledge of mechanical engineering and interdisciplinary subjects to solve analytical and practical engineering problems.
ii. Address sustainable socioeconomic and technical development, and use modern tools and techniques.
iii. Maintain a high level of professionalism, ethical responsibility, and integrity at work.
iv. Demonstrate effective communication and leadership skills, as well as a desire to continue improving their knowledge using a holistic approach.

8.6.2 Laboratory Facilities

Following labs are established in this department to cater to the practical/ experimental requirements of the program offered:

1. Automobile Laboratory
2. Aerodynamics Laboratory
3. CAD/CAM Laboratory
4. CNC Laboratory
5. Engineering Statics Laboratory
6. Fluid Mechanics Laboratory
7. Heat Transfer Laboratory
8. Heating Ventilation & Air Condoning Laboratory
9. Material Testing Laboratory
10. Mechanics of Machine Laboratory
11. Mechanical Vibrations Laboratory
12. Control Engineering Laboratory
13. Renewable Energy Laboratory
14. Thermodynamics Laboratory
15. Fitting Shop
16. Machine Shop
17. Welding Shop
18. Wood Workshop

8.6.3 The Faculty

Chairman of the Department:
Dr. Aqeel Ahmed Bhutto
Phone:0243-715365 / **Ext.:**7501

ASSOCIATE PROFESSORS: **Dr. Sadiq Ali Shah** PhD, United Kingdom. **Dr. Muhammad Ali Abro** PhD, South Korea, (On study leave for Post-PhD) **Dr. Mujeeb Iqbal Soomro** PhD, South Korea, **ASSISTANT PROFESSORS:** **Dr. Aqeel Ahmed Bhutto** PhD, Malaysia, **Dr. Bilawal Ahmed Bhayo** PhD, Malaysia, **Dr. Danish Ali Memon** PhD, Malaysia.	**Dr. Zaheer Ahmed** PhD, Turkey **Engr. Jahanzaib Soomro** M.E, Pakistan. **Engr. Ali Nawaz Sanjrani** ME, Pakistan. (On study leave for PhD) **Engr. Majid Ali Wassan** M.E, Malaysia. (On study leave for PhD) **Engr. Qadir Nawaz** M.E, Pakistan. (On study leave for PhD)	**LECTURERS:** **Engr. Aurangzaib Wadho** M.E, Pakistan. **Engr. Ali Anwar Brohi** M.E, China. **Engr. Abdul Ahad Noohani** M.E, Pakistan. **Engr. Talib Hussain Ghoto** M.E, Pakistan. **Engr. Awais Junejo** M.E, Pakistan. (On study leave for PhD) **Engr. Muhammad Haris Khan** M.E, Pakistan.

8.6.4 The Courses

The Courses of B.E Mechanical Engineering followed at MUET Shaheed Zulfiqar Ali Bhutto campus and MUET Jamshoro campus are same. The students are advised to see the page(s) of B.E Mechanical Engineering Courses mentioned on the relevant section of MUET Jamshoro in this prospectus.

8.6.5 Career Opportunities

Mechanical Engineering graduates have a wide range of job prospects due to the discipline's breadth. Their education equips students with the creative thinking needed to develop an innovative product or system, as well as the analytical tools needed to meet their design objectives, the capacity to overcome any restrictions,

and the teamwork required to design, sell, and produce a system. Employers in practically every sector of the engineering business are looking for mechanical engineering graduates. Here are a few examples: With a bachelor's degree in mechanical engineering, you may be able to work in the following fields:

- Aerospace industry – Aerospace equipment research, design, manufacture, and maintenance.
- Automotive industry – Designs, Manufactures, and Maintenance of Automobiles.
- Defense industry – Design Fabrication and Maintenance of Defense Equipment.
- Electronics industry – Design and manufacture of components for a variety of industries, including automotive, medicine, and the military.
- Fast-moving consumer goods industry – Manufacturing of products such as household cleaning items, personal hygiene goods, and convenience foods.
- Marine industry – Design, Fabrication, and Maintenance of Marine Systems.
- Materials and metals industry – Material Specimen Testing, Selection of Material, and Evaluation.
- Power Generation Industry- Operation, repair, and maintenance of pressure vessel equipment.
- Rail industry – From trains and rails to electrical power systems and train control systems, the rail industry designs, manufactures, and maintains rail system components.

8.7 Department of Petroleum and Natural Gas Engineering

8.7.1 The Department

In recent years, Petroleum and Natural Gas Engineering has gained considerable importance due to the vital role of oil & gas sector in the economy of the country. Considering the fact that province of Sindh is very rich in oil and gas reserves and also plays an important role in country's energy development, consumption and economic growth, the **Department of Petroleum & Natural Gas Engineering** was established at the campus in the year 2010.

The department supported and equipped with highly qualified faculty and technical staff. Every faculty member is actively involved in research activities within their areas of interest either individually or in groups. The department is also supported by a strong system of committees. It has established various committees to facilitate students as well as to govern, manage and improve different functional aspects within the department.

The key feature of the Department is to provide basis for better learning of theoretical concepts and up-to-date practical knowledge, for that the Department organizes oil/gas field visits along with internships (during summer vacation to the third and final year students) as per scheduling with industrial linkages and coordination of national and international oil and gas / Exploration & Production companies that operating in Pakistan.

The Department promotes technical and professional development/learning activities for which a platform is provided to the students that interconnects professionals and undergraduate students of the department. The fifth (in Pakistan) student chapter of Society of Petroleum Engineers (SPE)-Mehran University College of Engineering & Technology (now renamed as SPE MUET SZAB Khairpur Student Chapter) was established on March 25th 2012 at the department.

A good number of simulators are available at the Department that help the students in learning and understanding the conceptual models and behavior of simple to complex structure and phase behavior reservoirs, production and processing systems, and drilling engineering. This facility also provides strong basis for research development activities.

Vision of the Department
The visionary approach of department is concentrated in petroleum and natural gas engineering education at international standard, technical achievements through research and producing competent engineers to serve petroleum industry at home and abroad.

Mission of the Program
The mission of Petroleum and Natural Gas Engineering Department is to provide student focused excellent teaching and educational environment that nurtures the intellectual and professional growth of students, who will become leading human resource in upstream / downstream petroleum industry.

Program Educational Objectives (PEOs)
The Program Educational Objectives (PEOs) were prepared by the OBE committee for Outcome Based Education implementation and approved through the DBoS, BoF and academic council. The PEOs of B.E. Petroleum & Natural Gas Engineering degree program are:

i. To produce dynamic petroleum graduates capable of practicing advanced knowledge to promote oil and gas industry.
ii. To provide the leadership and communication skills to promote teamwork for strengthening the petroleum industry.
iii. To provide quality research for innovative strategies to enhance environmentally sustainable oil and gas production to meet the global fuel demand.

8.7.2 The Faculty

Chairman:
Dr. Asadullah Memon
Phone: 0243-920312-3**Ext.:**7601

ASSOCIATE PROFESSOR: **Dr. Asadullah Memon** PhD, China **ASSISTANT PROFESSORS:** **Dr. Bilal Shams Memon** PhD, China. (On Lien) **Engr. Imran Ali Memon** M.E, Pakistan. **Engr. Faisal Hussain Memon** M.E, Pakistan. (On Study Leave) **Engr. Ghulam Abbas Qambrani** M.E, Malaysia. (On Study Leave)	**LECTURERS:** **Engr. Adnan Aftab Nizamani** M.Phil., Malaysia. **Engr. Abdul Samad Shaikh** M.E, Pakistan. **Engr. Sunder Sham Jeswani** M.E, Pakistan. **Engr. Shoaib Ahmed Memon** M.E, Pakistan. **Engr. Zaheer Hussain Zardari** M.E, Pakistan. (On Study Leave) **Eng. Waseem Mumtaz Kalwar** M.E, Pakistan. (On Lien)	**Engr. Temoor Muther** M.E, Pakistan. (On Study Leave) **Engr. Khalique Wazir** M.E, Pakistan. (On contract) **LAB ENGINEERS:** **Engr. Abdul Wajid Shaikh** M.E, Pakistan. **Engr. Umaid Ali Uqaili** M.E, Pakistan. **Engr. Sohail Ahmed Shaikh** M.E, Pakistan. **Engr. Faheem Mumtaz Kalwar** B.E, Pakistan.

8.7.3 Laboratory Facilities

Well-equipped laboratories have been established to conduct experimental work and measuring rock properties, reservoir fluid properties, drilling fluid properties and interfacial properties. The computer labs feature software for reservoir simulation (Exodus V90 & Sendra), Drilling Engineering (Drilling & work over simulator) and Production Engineering (IPM suits).
The following Laboratories are available at the department:

1. Oil Testing Laboratory
2. Drilling and Production Laboratory
3. Reservoir Engineering Laboratory
4. Gas Engineering Laboratory
5. Petroleum Software Lab
6. General Computer Lab

8.7.4 The Courses

The Courses of B.E Petroleum and Natural Gas Engineering followed at MUET Shaheed Zulfiqar Ali Bhutto campus and MUET Jamshoro campus are same. The students are advised to see the page(s) of B.E Petroleum and Natural Gas Engineering Courses mentioned on the relevant section of MUET Jamshoro in this prospectus.

8.7.5 Career opportunities

A petroleum engineer is involved in nearly all of the stages of oil and gas field evaluation, development and production. The aim of their work is to maximize hydrocarbon recovery at minimum cost while maintaining a strong emphasis on reducing environmental impact. The various opportunities are available in oil and gas sector during the exploration, drilling and production phases. After graduation, our graduates will be able to work with national and multinational E&P and service companies such as OGDCL, PPL, UEP, Schlumberger, Weatherford, Polish Oil & Gas Company, Hilong oil service and Engineering, and refinery sectors.

8.8 Department of Software Engineering

8.8.1 The Department

Software Engineering is the field of technology, which is related to the application of theoretical approaches to the development, operation, and maintenance of software. It is not only about the simple stereotypical knowledge of only writing code for programs. However, it is also the study of how these approaches work in the real world based on different factors and engineering them accordingly to reach the desired goals. Software Engineering is about creating software that is of higher quality, more affordable, maintainable, and quicker to build.

Software Engineering is normally subdivided into the following sub-disciplines:

1. Software Requirement
2. Software Design
3. Software Development

Software Engineering is an important aspect of technology and it brings significant changes as well as is a major factor in future developmental periods of the world. The department offers an undergraduate degree program i.e., B.E (Software Engineering), which provides in-depth knowledge of the subject, wherein students can develop all the skills regarding the design and implications of modern Software Engineering through integrated courses. The courses are revised from time-to-time keeping because of the software needs of the emerging market at the national & international levels.

The department initially offers an undergraduate program. The courses of the program have been drawn from the curriculum guidelines of HEC/ PEC and duly approved by the Academic Council of the University.

Vision of the Department
Vision: To become the center of excellence and the aspiration in the discipline of software engineering by producing highly skilled professionals having leadership qualities, who with their analytical capabilities and proficiencies apply the technical knowledge for socio-economic development.

Mission of the Department
To provide a technically sound ambiance of learning and to realize the frequently changing traits of the software industry to pursue sustainable socio-economic growth with a sense of ethics, professionalism, and leadership to serve the community and humanity at large.

Program Education Objectives (PEOs):

The Program Educational Objectives (PEOs) of B.E. Software Engineering degree program are given below:

i. Performs his/her professional role in the Software industry and related fields.
ii. Adheres to professional responsibilities in multicultural environment with continual improvement.
iii. Works effectively as a team lead or team member in challenging ventures.
iv. Communicates technical and managerial information efficiently in oral and written forms.

8.8.2 The Faculty

In-charge Chairman:
Dr. Nouman Qadeer Soomro
Phone: 0243-715365 /**Ext.:** 7801

ASSOCIATE PROFESSORS **Dr. Nouman Qadeer Soomro** PhD, China	**Engr. Sajida Raz Bhutto** M.E, Pakistan (On Study Leave)	**Engr. Shamshad Naveed** (Germany)

Dr. Liaquat Thebo PhD, Pakistan **ASSISTANT PROFESSORS** **Engr. Irfanullah Memon** M.E, Pakistan (On Study Leave)	**LECTURERS** **Engr. Munazza Zaib** M.E, Pakistan On Study Leave **Engr. Qamar-U-Nisa Kamal** M.E, Pakistan	**Engr. Um-E-Habiba Alvi** M.E, Pakistan **Engr. Uroosa** M.E, Pakistan

8.8.3 Laboratory Facilities

To meet the latest trends in software and hardware technology, the department has the following state-of-the-art laboratories. Where students are trained to meet the future needs of the technology.

1. Software Quality Assurance and Testing Laboratory
2. Software Research and Development Laboratory
3. Data Warehousing and Management Laboratory
4. Parallel Programming and Cluster Computing Laboratory
5. Open-Ended/FYP Lab
6. VIDEO Conference
7. 3DModeling and Visualization Laboratory

8.8.4 The Courses

The Courses of B.E Software Engineering followed at MUET Shaheed Zulfiqar Ali Bhutto campus and MUET Jamshoro campus are same. The students are advised to see the page(s) of B.E Software Engineering Courses mentioned on the relevant section of MUET Jamshoro in this prospectus.

8.8.5 Career Opportunities

A Software Engineer can find lucrative jobs in well-reputed private and public sector organizations such as PTCL, K-Electric, Fertilizer Industry, Petrochemical sector, CAA, WAPDA, Pharmaceutical, Research Organizations, Mobile Operators, Software Houses, CAA, PSO, PPL, Telecom Sectors and various other national and multinational organizations. The employers of Software Engineers cover startup companies to established industry leaders.

Due to the emerging use of the internet, e-mail, communications systems, firms from electronics to engineering as they are traditionally associated with unrelated disciplines, which in turn, allows the software engineers to hire more and more in engineering firms specializing in building bridges and power plants. For example, software engineers are designated in designing and developing advanced geographic data systems and automated drafting systems. Communication industries also require software engineers, which indeed help the personal communications market as well. The major communications companies have many job opportunities for both software engineers and computer systems engineers. A growing number of Software Engineers are also employed on a temporary or contract basis (with many being self-employed) who work on their own as consultants. Some of these consultants work for firms that specialize in the development and maintenance of Web sites and intranets of client companies.

A Software Engineering Degree will also open doors for careers in Research, Software Development, and Business analysis with companies such as Microsoft, Oracle, Systems Limited, Hewlett Packard Enterprise, and IBM.

By getting a degree in Software Engineering, graduates can work in any number of fields creating Video Games, developing Internet Applications, running Computer Networks, or implementing Computer Security measures for an organization.

Career opportunities are not limited to technology. The problem-solving, innovative, and personal skills you learn in this course will be sought after in many organizations.

9. RULES AND PROCEDURES FOR ADMISSION

A(I). For B.E., B.Arch. and B.CRP Programs under Regular Scheme

9.1 Admission

(i) Admissions to the First Year for all the degree courses are made according to the policies and rules, framed by the authorities of the University from time to time. The rules mentioned in this prospectus are subject to revision by the competent authority as and when deemed necessary and without any notice. The number of seats has been fixed as shown in **Table-9.6.1**. There are other categories of candidates who are also eligible for admission, which are described in detail in the subsequent clauses.

(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 cancelled. Additionally, they may also be debarred for a period of three years for future admission and all payments made to the University shall be forfeited in favor of the University.

9.2 Eligibility for Admission

(i) a). The candidates who have passed their **HSC Part-I** in Annual Examination of 2022 or **HSC-II** earlier up to 2020 with 60% marks under **Pre-Engineering Group or equivalent** with Physics, Chemistry and Mathematics **(excluding Grace Marks)** from any recognized Board of Intermediate and Secondary Education in Pakistan or from foreign countries, are eligible to apply for admission.

b). In addition, the candidates who have passed their **HSC Part-I** in Annual Examination of 2022or **HSC-II** earlier up to 2020with 60% marks under **General Science Group or equivalent (excluding Grace Marks)** from any recognized Board of Intermediate and Secondary Education in Pakistan or from foreign countries are eligible to apply for admission only in Computer Systems Engineering, Software Engineering, Electronic Engineering, Telecommunication Engineering, **Architecture, and City & Regional Planning** provided that they shall not claim their admission in any other BE disciplines.

c). The candidates who have passed their **HSC Part-I** in Annual Examination of 2022 or **HSC-II** earlier up to 2020 with 60% marks under **Pre-Medical Group or equivalent (excluding Grace Marks)** from any recognized Board of Intermediate and Secondary Education in Pakistan or from foreign countries are eligible to apply for admission only in Bio-Medical Engineering provided that they shall not claim their admission in any other BE disciplines.

(ii) The candidates who have passed their Diploma of Associate Engineer **(DAE*)** in Annual Examination of 2022or earlier up to Annual Examination 2020 with 60% marks **(excluding Grace Marks)** from any recognized Board of Technical Education in Pakistan in any approved discipline (i.e., Civil, Construction Technology, Civil with any Specialization, Architecture, Environmental, and Land & Mine Surveying) are also eligible to apply for admission only in the relevant discipline under the Regular and Self-Finance Schemes.

* **Diploma of Associate Engineer (DAE)** is a three **years'** post-secondary program of instruction in various **engineering** disciplines. It includes regular **studies** with classroom lectures, workshop assignments, laboratory experiments, industrial projects and industrial tours.

(iii) The candidates who have passed their HSC Part-II/DAE in the Annual Examination before 2020 under any of the above-mentioned groups or equivalent shall not be eligible to apply for admission.

(iv) The candidates who are getting admission on the basis of the result of HSC Part-I have to secure 60% marks **(excluding Grace Marks)** in HSC-II, otherwise, their admission shall stand canceled and none of the fees shall be refunded. However, for students of Civil Engineering Technology/Electrical Engineering Technology/Mechanical Engineering Technology, the candidates have to secure at least 50% marks **(excluding Grace Marks)** in HSC-II/DAE (Refer **Clause 9.30 of Section-B** of BS Programs).

(v) Those students, who were admitted to any other institutes/universities before applying for admission in Mehran UET and were rusticated, debarred or their admissions were canceled, shall not be considered for admission in the University. Additionally, if the students withhold information regarding such disciplinary action and they were granted admission; their admission shall be canceled immediately after ascertaining such facts. Those candidates who have been convicted involving of moral turpitude shall also be refused admission in the University.

(vi) The candidates who have been allowed admission previously with any batch by this University shall not be considered for fresh admission. Their admission forms, if received by the University shall be rejected without any notice and their admission shall be cancelled at any stage later on. However, if any of the admitted students desires to seek admission in any discipline under Self-Financing Scheme or University Support Program, he/she may apply for the same for which he/she will be required to submit an undertaking on the stamp paper to the effect that he/she will not claim admission under Regular Scheme. Similarly, if any of the students admitted under SFS or USP, applies for admission under Regular Scheme, he/she may apply for the same for which he/she will be required to submit an undertaking on the stamp paper to the effect that if he/she is admitted in the desired discipline he/she will not claim the refund of the money whatsoever, he/she has paid with the previous batch. Besides that, all the students of BS Programs of the University are eligible to apply for admission in any of the Engineering, B.Arch. and B.CRP Programs, if they meet the eligibility criteria.

9.3 Admission Form

Call for admissions is advertised in the prominent newspapers of national and regional repute as well as on the University website **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**. A valid email address is mandatory to complete the registration process. The candidates are required to deposit the admission processing fee in any branch of Habib Bank Ltd. The candidates have to upload the scanned copies of all the required documents and paid copy of bank challan as indicated. The candidates have to download their admit slips for pre-admission test, which will be uploaded by the Admission Office after verifying their application form and processing fee. The candidates have to print their admit slips and bring them on the day of pre-admission test 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 candidate for admission is decided by the admission office of the University after scrutinizing the documents provided by the candidates. The eligibility criteria for admission are given in **Clause 9.2**. 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.

9.4 Pre-Admission Test

In accordance with the policies adopted by the Federal as well as Provincial Governments, all the eligible candidates applying under all categories except nominees are required to appear in the Pre-Admission Test organized by the University. Candidates having secured less than 40% marks in the Pre-Admission Test shall not be eligible for the admission in this University.

The final merit list of the candidates for each district/category 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 (Science Group) - Matriculation:	**0.10**
B.	Higher Secondary School Certificate (HSC-I)/Equivalent: (Pre-Engineering/Pre-Medical/General Science/Humanities/Commerce Groups or equivalent with adjusted marks[1])/DAE.	**0.30**
C.	Pre-admission Test Score:	**0.60**

For example, if a candidate has secured 70% marks in SSC, 60% marks in HSC-I and 50% marks in Pre-Admission Test; his/her CPN[2] would be calculated as under:
(70x0.1) + **(60x0.3)** + **(50x0.6)** = **7+18+30** = **55.0000**

[1] Adjusted marks mean marks secured in HSC examination plus additional marks if any, as defined in **Clause 9.11**, or minus marks to be deducted as defined in **Clause 9.12**.

[2] 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 HSC-I 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-I/Biology-I marks will be higher in merit.

Note: All local/foreign nominees are required to submit the result of HEC, SAT, UETs, NUST, officially approved National/International Organization or other International-Level Test which they have passed for their admission purpose or appear in the Pre-Admission Test of this University and clear the same. In case they do not clear the test, they would not be considered for admission at this University.

9.5 Interviews

After the receipt of the result of Pre-Admission Test, a comprehensive merit list is prepared for each district/category and a number of candidates roughly equivalent to the reserved seats of concerned category is called for interview before the Admission Committee.

The candidates must be accompanied with his/her guardian declared in his/her admission form during interview. The interviews are held at Mehran UET, Jamshoro on the dates as announced on MUET website: **muet.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 HSC Part-I (Pre-Engineering/General Science/Pre-Medical Group - in case of change of group from Pre-Medical to Pre-Engineering, marks certificate of Pre-Medical Group) / DAE (Pass).
(iii) Domicile Certificate of candidate.
(iv) PRC on 'C' Form of candidate.
(v) National Identity Card / B-form (as applicable).
(vi) Medical Certificate on prescribed proforma*.
(vii) Undertaking Certificate on prescribed proforma*.

* Proformas can be downloaded from **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 in any of the disciplines 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 year**. The candidates are advised to keep a photocopy of all the documents with them. The candidates have to deposit the fees as mentioned in **Clause 9.21** at the time of interview.

9.6 Distribution of Seats

The distribution of seats for admissions is strictly made according to the rules framed for the purpose by the authorities of the University on population basis among the rural and urban areas for Hyderabad, Mirpurkhas, Larkana and Sukkur Divisions. Twenty (20) seats have also been reserved for the candidates of Karachi Division. The admission in various districts/ categories at Mehran UET, Jamshoro and Mehran UET, SZAB Campus, Khairpur Mirs' is given on quota basis for the urban and rural areas. However, the award of discipline shall be given on the interview day as per availability of seats of the district / category. Any saving from the urban areas seats of any district is given to the rural areas of the same districts and vice-versa. Any saving of seats from district quota will be given to respective division on open merit basis. The number of seats allocated to each district, discipline and category at MUET, Jamshoro is given in **Table-9.6.1**, while the distribution of seats among urban and rural areas of Sindh Province is given in **Table-9.6.2** and the description of the seat under **Category-B** is given in **Table-9.6.3**.

The number of seats allocated to each district, discipline and category at MUET, SZAB Campus, Khairpur is given in **Table-9.6.4**, while the distribution of seats among urban and rural areas of Sindh Province is given in **Table-9.6.5**.

The distribution and description of discipline-wise extra seats reserved for nominees are given in **Table-9.6.6** and **Table-9.6.7**.

Table-9.6.1 Distribution of Seats Discipline-wise for various Districts, Disciplines, and Categories at Mehran UET, Jamshoro.

Cat.	Description	CE	EL	ME	ES	CS	TL	SW	CH	IN	MN	MT	PG	AR	CRP	TE	EE	BM	MTE	Total
A-1	**Sukkur**	1	1	1	2	2	2	2	2	1	2	2	2	1	1	2	1	1	2	**28**
	Ghotki	1	1	1	2	2	3	2	2	1	1	1	2	2	2	2	1	1	2	**29**
	Khairpur	2	2	2	3	3	4	4	3	2	2	2	3	3	3	3	1	1	1	**44**
	S. Benazirabad	1	1	1	3	2	3	3	2	1	1	1	2	3	2	2	1	1	1	**31**
	N. Feroze	1	2	1	3	2	3	3	2	1	2	2	2	1	1	3	1	1	1	**32**
A-2	**Larkana**	1	1	1	2	2	2	3	2	1	2	2	2	2	1	2	1	1	1	**29**
	K.Shahdadkot	1	1	1	2	2	2	2	2	1	1	2	2	1	1	2	1	1	1	**26**
	Shikarpur	1	1	1	2	2	3	2	1	1	1	2	1	1	1	2	1	1	1	**25**
	Jacobabad	1	1	1	2	2	2	2	2	2	1	1	2	1	1	2	1	1	1	**26**
	Kashmore	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	-	1	1	**18**
A-3	**Hyderabad**	7	7	8	6	8	7	7	2	4	3	2	3	4	4	5	3	2*	4	**86**
	Matiari	2	3	2	2	2	2	2	1	2	2	1	1	1	1	2	1	2*	1	**30**
	T. M. Khan	3	3	3	2	2	2	3	1	1	1	1	2	1	1	2	1	2*	1	**32**
	T. Allahyar	2	2	3	1	2	3	2	1	1	1	2	1	1	1	1	1	2*	1	**28**
	Dadu	5	6	7	4	5	5	6	3	3	2	2	2	2	3	4	2	2*	3	**66**
	Jamshoro	3	3	3	3	3	3	2	1	1	1	1	2	1	1	2	1	2*	2	**35**
	Thatta	3	3	4	2	3	2	3	2	1	1	1	1	2	1	2	1	1	1	**34**
	Sujawal	3	3	2	2	2	3	2	1	1	1	1	2	1	1	2	1	1	1	**30**
	Badin	6	6	7	4	5	5	5	3	3	2	2	3	3	3	4	2	2*	3	**68**
A-4	**Mirpurkhas**	5	6	6	3	4	4	4	2	2	2	2	2	1	2	3	2	2*	3	**55**
	Umarkot	3	3	3	3	3	3	3	2	2	2	2	2	1	1	2	1	2*	2	**40**
	Tharparkar	5	5	5	4	4	4	4	2	2	3	3	2	1	2	3	2	2*	2	**55**
	Sanghar	7	8	8	6	6	7	7	3	3	3	2	4	4	4	5	3	2*	4	**86**
A-5	**Karachi** (All Districts)	-	-	-	2	2	2	2	2	0	2	2	-	1	2	2	-	1	-	**20**
B**	**MUE**, Jamshoro	12	8	6	4	4	2	4	-	-	-	-	2	-	-	-	-	2	-	**44**
	Total	**77**	**78**	**78**	**70**	**75**	**79**	**81**	**45**	**38**	**40**	**40**	**48**	**40**	**41**	**60**	**30**	**37**	**40**	**997**

CE	Civil Engineering	**TL**	Telecommunication Engg.	**MT**	Metallurgy & Materials Engg.
EL	Electrical Engineering	**SW**	Software Engineering	**PG**	Petroleum & Nat. Gas Engg.
ME	Mechanical Engineering	**CH**	Chemical Engineering	**AR**	Architecture
ES	Electronic Engineering	**IN**	Industrial Engineering & Mgt.	**CRP**	City & Regional Planning
CS	Computer Systems Engg.	**MN**	Mining Engineering	**TE**	Textile Engineering
EE	Environmental Engineering	**BM**	Biomedical Engineering	**MTE**	Mechatronics Engineering
MUE	MUET, Jamshoro Employees				

* One seat of Biomedical Engineering discipline shall be reserved for the candidates with Pre-Engineering Group in the districts having two seats.

The students of the University who had already availed **MUE** Quota (under **Category-B** of the Prospectus) shall not be eligible to apply again under the same quota in any of the undergraduate programs of the University.

Table-9.6.2 Distribution of Seats for various Districts (Urban/Rural basis) in Sindh Province at Mehran UET, Jamshoro.

Category	Districts	Number of Seats		
		Urban Areas	Rural Areas	Total Seats
A-1	**Sukkur**	10	18	28
	Ghotki	3	26	29
	Khairpur	5	39	44
	Shaheed Benazirabad	5	26	31
	Naushahro Feroze	2	30	32
	Total	**25**	**139**	**164**
A-2	**Larkana**	9	20	29
	Kambar / Shahdadkot	3	23	26
	Shikarpur	4	21	25
	Jacobabad	4	22	26
	Kashmore	2	16	18
	Total	**22**	**102**	**124**
A-3	**Hyderabad**	73	13	86
	Matiari	2	28	30
	Tando Muhammad Khan	4	28	32
	Tando Allahyar	5	23	28
	Dadu	10	56	66
	Jamshoro	3	32	35
	Thatta	2	32	34
	Sujawal	0	30	30
	Badin	6	62	68
	Total	**105**	**304**	**409**
A-4	**Mirpurkhas**	10	45	55
	Umerkot	0	40	40
	Tharparkar	0	55	55
	Sanghar	13	73	86
	Total	**23**	**213**	**236**
A-5	**Karachi (**All Districts)	20	*	20
	Grand Total	**195**	**758**	**953**

* All districts of Karachi are considered as urban areas.

Table-9.6.3 Description of Category-B Candidates Seeking Admission.

Category	Description	Seats
(B)	Real sons/daughters/brothers/sisters of Mehran University employees (serving or retired, deceased, on lien or working on deputation with other Institutions) shall be considered for admission to first year class against the reserved seats on the following criteria: i. First preference is given to real sons/daughters of employees who are confirmed in the University service and have at least three years continuous university service at their credit. ii. Second preference is given to real sons/daughters of regular employees who are not confirmed in the University service but have at least three years continuous university service at their credit. iii. Third preference is given to real brothers/sisters of employees who are confirmed in the University service and have at least three years continuous university service at their credit. iv. Fourth preference is given to real brothers/sisters of regular employees who are not confirmed in the University service and have at least three years continuous university service at their credit. v. Fifth preference is given to real sons/daughters of employees who are confirmed in the University service and have less than three years continuous university service at their credit. vi. Sixth preference is given to real sons/daughters of employees who are not confirmed in the University service and have less than three years continuous university service at their credit. vii. Seventh preference is given to real brothers / sisters of employees who are confirmed in the University service and have less than three years continuous university service at their credit. viii. Eighth preference is given to real brothers / sisters of employees who are not confirmed in the University service and have less than three years continuous university service at their credit. **Note:** ▪ The merit with regard to the **Category-B** is determined as per policy of the University. A copy of the appointment order, confirmation order and Affidavit regarding relationship of the candidate with the employee be attached with the admission form. ▪ The students of the University who had already availed MUE Quota (under **Category-B** of the Prospectus) shall not be eligible to apply again under the same quota in any program (BE or BS).	**44**
	Total Seats of Category-B	**44**

Table-9.6.4 Distribution of Seats for various Districts and Disciplines at Mehran UET, SZAB Campus, Khairpur Mirs'.

Category	Description	Number of Seats and Disciplines						
		K-CE	K-EL	K-ME	K-PG	K-SW	K-ES	Total
A-1	**Sukkur**	6	7	4	4	3	4	**28**
	Ghotki	7	7	4	4	4	3	**29**
	Khairpur	10	10	7	6	5	6	**44**
	Shaheed Benazirabad	7	7	3	3	3	2	**25**
	Naushahro Feroze	7	7	3	3	3	2	**25**
A-2	**Larkana**	4	4	3	2	2	2	**17**
	Kambar Shahdadkot	3	4	3	2	2	2	**16**
	Shikarpur	3	4	2	2	2	2	**15**
	Jacobabad	3	4	3	2	2	2	**16**
	Kashmore	3	3	1	1	1	2	**11**
A-3	**Hyderabad**	3	3	2	1	2	1	**12**
	Matiari	0	0	1	1	1	0	**3**
	T. M. Khan	0	1	0	1	1	0	**3**
	T. Allahyar	1	1	0	0	0	1	**3**
	Dadu	1	1	1	2	1	2	**8**
	Jamshoro	1	1	0	1	1	1	**5**
	Thatta	0	1	1	1	0	1	**4**
	Sujawal	1	0	0	1	0	1	**3**
	Badin	1	1	1	2	1	1	**7**
A-4	**Mirpurkhas**	1	1	1	1	1	1	**6**
	Umerkot	1	0	1	1	1	1	**5**
	Tharparkar	1	1	1	1	1	1	**6**
	Sanghar	3	3	2	1	2	1	**12**
A-5	**Karachi (**All Districts)	1	1	0	1	1	0	**4**
B*	**MUE**, Khairpur	3	2	1	1	1	1	**9**
	Total:	**71**	**74**	**45**	**45**	**41**	**40**	**316**

K-CE Civil Engineering
K-EL Electrical Engineering
K-SW Software Engineering
K-MUE Employees of Mehran UET, SZAB Campus Khairpur.
K-ME Mechanical Engineering
K-PG Petroleum & Natural Gas Engineering
K-ES Electronics Engineering

***** The students of the University who had already availed **MUE** Quota (under **Category-B** of the Prospectus) shall not be eligible to apply again under the same quota in any of the undergraduate programs of the University.

Table-9.6.5 Distribution of Seats for Urban and Rural areas of the Districts in Sindh Province, Mehran UET, SZAB Campus Khairpur Mirs' (Category-A) and (Category-B).

Category	Districts	Number of Seats		
		Urban Areas	Rural Areas	Total Seats
A-1	**Sukkur**	8	20	28
	Ghotki	3	26	29
	Khairpur	9	35	44
	Shaheed Benazirabad	5	20	25
	Naushahro Feroze	2	23	25
	Total	**27**	**124**	**151**
A-2	**Larkana**	6	11	17
	Kambar Shahdadkot	2	14	16
	Shikarpur	2	13	15
	Jacobabad	4	12	16
	Kashmore	3	8	11
	Total	**17**	**58**	**75**
A-3	**Hyderabad**	9	3	12
	Matiari	0	3	3
	Tando Muhammad Khan	0	3	3
	Tando Allahyar	0	3	3
	Dadu	2	6	8
	Jamshoro	0	5	5
	Thatta	0	4	4
	Sujawal	0	3	3
	Badin	0	7	7
	Total	**11**	**37**	**48**
A-4	**Mirpurkhas**	2	4	6
	Umerkot	0	5	5
	Tharparkar	0	6	6
	Sanghar	2	10	12
	Total	**4**	**25**	**29**
A-5	**Karachi (**All Districts)	4	*	**4**
	Grand Total	**63**	**244**	**307**

* All districts of Karachi are considered as urban areas.

Table-9.6.6 Discipline-wise Extra Seats Reserved for Nominees.

Cat.	Description	CE	EL	ME	ES	CS	TL	SW	CH	IN	MN	MT	PG	AR	TE	EE	BM	MTE	Total
C-1	Balochistan	-	-	-	2	2	-	-	2	-	-	2	-	2	-	-	-	-	**10**
C-2	Foreigners	3	2	3	4	2	4	5	2	1	1	-	4	-	3	2	2	2	**40**
C-3	Azad Kashmir	1	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	**2**
C-4	Ex-FATA	-	1	-	-	-	1	-	-	-	1	-	-	-	1	-	-	-	**4**
C-5	Govt. of Punjab	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	**1**
C-6	Northern Areas	1	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	**2**
C-7	GHQ, Rawalpindi	3	2	2	-	1	-	-	-	-	-	-	-	-	-	-	-	-	**8**
C-8	Indian Occupied Kashmir	2	1	1	-	-	-	1	-	-	-	-	-	-	-	-	-	-	**5**
	Total	**10**	**6**	**6**	**6**	**5**	**5**	**7**	**4**	**2**	**2**	**2**	**4**	**3**	**4**	**2**	**2**	**2**	**72**

CE	Civil Engineering	**TL**	Telecommunication Engg.	**MT**	Metallurgy & Materials Engg.
EL	Electrical Engineering	**SW**	Software Engineering	**PG**	Petroleum & Nat. Gas Engg.
ME	Mechanical Engineering	**CH**	Chemical Engineering	**AR**	Architecture
ES	Electronic Engineering	**IN**	Industrial Engg. & Mgt.	**CRP**	City & Regional Planning
CS	Computer Systems Engg.	**MN**	Mining Engineering	**TE**	Textile Engineering.
EE	Environmental Engg.	**BM**	Biomedical Engineering	**MTE**	Mechatronics Engineering

Table-9.6.7 Description of Discipline-wise Seats Reserved for Nominees from Govt. Departments/ Agencies

Category	Description	Seats
C-1	**i).** Candidates domiciled in Balochistan Province, nominated by the Education Department, Government of Balochistan. (02 in Electronics Engineering, 01 Chemical Engineering, 01 Metallurgy& Materials Engineering and 01 Architecture).	**5**
	ii). Candidates domiciled in Balochistan Province, nominated by the Higher Education Commission, Islamabad. (02 in Computer Systems Engineering, 01 Chemical Engineering, 01 Metallurgy& Materials Engineering and 01 Architecture).	**5**
C-2	Foreign students (under Pakistan Technical Assistance Program) nominated by the Ministry of Finance and Economic Affairs (Economic Affairs Division), Government of Pakistan, Islamabad.	**40**
C-3	Candidates belonging to Azad Kashmir, nominated by the Azad Govt. of the Azad State of Jammu & Kashsmir, Muzafarabad.	**2**
C-4	Candidates belonging to Federally Administered Tribal Area, nominated by the State and Frontier Region Division, Government of Pakistan, Islamabad.	**4**
C-5	Candidate domiciled in Punjab Province, nominated by the Education Department, Government of Punjab.	**1**
C-6	Candidates belonging to Northern Areas, nominated by the Directorate of Education, Government of Gilgit Baltistan.	**2**
C-7	Candidates nominated by the General Head Quarters, Rawalpindi.	**8**
C-8	Candidates belonging to Indian Occupied Kashmir, nominated by the Ministry of Economic Affairs & Statistics (Economic Affairs Division), Government of Pakistan, Islamabad.	**5**
	Total Seats	**72**

9.7 Designation of Urban Areas of Sindh Province.

The Urban areas designated in each district are given below:

MUNICIPALITIES WITHIN DISTRICTS	
1 **Sukkur District** a) Sukkur Municipality b) Rohri Municipality	13 **Tando Muhammad Khan District** a) Tando M. Khan Municipality
2 **Ghotki District** a) Ghotki Municipality b) Mirpurmathelo Municipality	14 **Tando Allahyar District** a) Tando Allahyar Municipality
3 **Khairpur District** a) Khairpur Municipality b) Gambat Municipality c) Pir Jo Goth Municipality	15 **Dadu District** a) Dadu Municipality b) Mehar Municipality c) K.N. Shah Municipality
4 **Shaheed Benazirabad District** a) Nawabshah Municipality	16 **Jamshoro District** a) Kotri Municipality
5 **Naushahro Feroze District** a) Moro Municipality	17 **Thatta District** a) Thatta Municipality
6 **Larkana District** a) Larkana Municipality b) Ratodero Municipality c) Naudero Municipality	18. **Sujawal District** No Urban Areas
7 **Kambar Shahdadkot District** a) Shahdadkot Municipality b) Kambar Municipality	19 **Badin District** a) Badin Municipality b) Matli Municipality
8 **Shikarpur District** a) Shikarpur Municipality	20 **Mirpurkhas District** a) Mirpurkhas Municipality
9 **Jacobabad District** a) Jacobabad Municipality	21 **Umerkot District** No Urban Areas
10 **Kashmore District** a) Kandhkot Municipality	22 **Tharparkar District** No Urban Areas
11 **Hyderabad District** a) Hyderabad Municipality b) Tandojam Municipality	23 **Sanghar District** a) Sanghar Municipality b) Shahdadpur Municipality c) Tando Adam Municipality d) Sinjhoro Municipality
12 **Matiari District** a) Hala Municipality	24 **Karachi District** No Rural Areas

9.8. Award of Discipline

The award of discipline/technology is made on the day of interview. The candidates have to opt discipline/technology from their own respective districts/categories. However, if any candidate has applied in more than one category, he/she has to select/decide on any one of them on the day of interview. On the contrary, if he/she is not interested in any of them, he/she has to withdraw from admission in writing and his/her name shall be deleted from the list(s). The candidates shall have to pay the admission fees on the same day and obtain roll number accordingly.

The candidates who are selected but do not get the discipline of their choice they may give up to five (5) choices of their desired disciplines/technologies. They are considered on merit, in accordance with the order of their choices, for their desired discipline/technology if later on any of them becomes available.

The candidates who cancel their given choices after selection by exercising their retaining / freezing option of the system (freeze their selected discipline) but later on cancel their admission for any reason, they will not be entitled for refund of their paid fees.

9.9 Rectification of Mistakes

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

9.10 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, his/her seat will be allotted to the following candidate on the merit list.

9.11 Additional Marks

The candidates, who have produced certificates of Hafiz-e-Quran on printed form from registered Madressahs 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.

9.12 Deduction of Marks Due to Gap in Education

In case of a gap or repetition of HSC-I / Diploma Examinations, 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 HSC-I/Diploma examination or equivalent for the purpose of determination of merit in each District/Category. This deduction is applicable whether the HSC-I/Diploma Examination had been repeated or the gap had occurred owing to any other reason.

9.13 Selection Procedure against various Categories

All the candidates who have applied for admission against the seats reserved under **Category-C** are considered first for admission against the seats reserved for their respective districts under **Category-A**. If a candidate who is selected against the district quota but does not get the discipline of his/her choice, his/her seat and discipline of that district may be transferred to the category applied for and he/she is given priority on merit basis in that category.

9.14 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 admission is made. However, any change of discipline on merit is made up to seven (7) days after the closing date of admissions. The seats fallen vacant are not filled-up.

9.15 Transfer on Reciprocal Basis

There is a provision for transfer of students admitted in Mehran UET with some other Institutions of Pakistan as described below:

Three candidates, two in Chemical Engineering and one in Civil Engineering having the domicile of **Categories-A.1** to **A.4** (Sukkur, Larkana, Hyderabad and Mirpurkhas Divisions) are nominated for admission in the *University of Engineering & Technology, Lahore,* on reciprocal basis.

One candidate in Civil Engineering having the domicile of **Categories-A.1** to **A.4** (Sukkur, Larkana, Hyderabad and Mirpurkhas Divisions) is nominated for admission in the *University of Engineering & Technology, Taxila* on reciprocal basis.

Three candidates, one in Civil Engineering, one in Mechanical Engineering and one in Architecture having the domicile of **Categories-A.1** to **A.4** (Sukkur, Larkana, Hyderabad and Mirpurkhas Divisions) are nominated for admission in the *University of Engineering & Technology, Peshawar, Khyber Pakhtunkhwa* on reciprocal basis. They are required to pay Rs. 38,000/- as educational expenses in addition to admission and other normal user charges at the time of admission in the University of Engineering & Technology, Peshawar, Khyber Pakhtunkhwa. Similarly, the nominees from the University of Engineering & Technology, Peshawar, Khyber Pakhtunkhwa on reciprocal basis are required to pay Rs. 38,000/- as educational expenses in addition to admission and other normal user changes at the time of admission in Mehran UET, Jamshoro.

The candidates desiring to be considered for this nomination are required to give their intent in writing at the time of interview. The final selection for this purpose is made by the Mehran University authorities as per merit. Similarly, the UET, Lahore is authorized to nominate three candidates, UET, Taxila is authorized to nominate one candidate and UET, Peshawar is authorized to nominate three candidates for admission in Mehran UET in the same disciplines as mentioned above.

9.16 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 Bachelor's Degree Program is a regular full time and day program and no student admitted in this University is allowed to engage himself / herself in any employment during his/her studies.

9.17 Admission in any Other Institute

Being a full-time program of studies, no student of this University is allowed to enroll 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.

9.18 University Smart Identity Card

The students, after getting admission at the University, are issued university smart identity cards by ICPC. It is necessary for the students to keep their valid identity cards with them while attending the classes, traveling in the point buses or staying on the campus.

9.19 Re-Admission Policy

The Re-admission Policy may be read with the Revised Regulations regarding the General Scheme of Studies for the Bachelor's Degree Programs (including B.E., B.Arch., B.CRP, BS, and BBA) of Mehran University of Engineering and Technology under Section 47(1)(n) of the Act 1977.

Those students who are eligible for any semester of any year but 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 with full admission fee excluding enrollment card fee, smart card fee and caution money.

9.20 Enrolment Card

Each student is required to enroll himself / herself in the University after the finalization of the discipline in the First Semester of First Year and obtain smart enrolment card accordingly.

9.21 Fees

(1)	**Fees payable at the time of admission:**	**Amount**	
a.	Admission Fee (Per Year)	Rs.	20,000
b.	Subject Society / PERN Fee (Per Year)	Rs.	2,200
c.	Student Identity Card Fee (Per Year)	Rs.	600
d.	Enrolment Card Fee (Once)	Rs.	1,350
e.	HSC Marks Certificate Verification Fee (Once)	Rs.	2,500
	Total Fee Payable:	**Rs.**	**26,650**
	University Caution Money Deposit – Refundable*	**Rs.**	**6,000**

* Refundable only after Completion of Degree Course, in case of cancellation of admission at any stage Caution Money will not be refunded.

(2)	**Fees and Charges payable at the start of each semester**	**Amount**	
a.	Tuition Fee (Per Semester)	Rs.	18,000
b.	Games Fee (Per Semester)	Rs.	1,100
c.	Development Charges (Per Semester)	Rs.	1,100
d.	Examinations Fee (including Marks Certificate) for Regular Examinations (Per Semester)	Rs.	2,200
e.	Transport Charges (Per Semester)	Rs.	14,000
	Total Fee Payable:	**Rs.**	**36,400**

(3)	**Fees payable at the time of hostel allotment:**	**Amount**	
a.	Admission Fee (Per Year)	Rs.	5,000
b.	Allotment Processing Fee (Once)	Rs.	1,000
c.	Hostel Identity Card Fee (Per Year)	Rs.	500
	Total Fee Payable:	**Rs.**	**6,500**
	Room Deposit – Refundable (Once)	**Rs.**	**6,000**

(4)	**Fees to be charged at the start of each semester (For Boarders):**	**Amount**	
a.	Room Charges (Per Semester)	Rs.	9,000
b.	Medical Charges (Per Semester)	Rs.	500
c.	Sports Charges (Per Semester)	Rs.	500
d.	Utility Charges (Per Semester)	Rs.	5,000
e.	Transport Charges (Per Semester from 2nd Semester onwards)	Rs.	10,000
	Total Fee Payable:	**Rs.**	**25,000**

Note: The foreign students are charged USD 1,000.00 / equivalent per year (USD 500.00 / equivalent per semester) as room charges. The other fees are the same as given above.

A(II). For B.E, B.Arch. and B.CRP Programs under Self Financing Scheme

9.22 Admission

The admission under Self-Financing Scheme is made on the basis of district quota as per **Table-9.22 (a)** and **(b)** at Mehran UET, Jamshoro and Mehran UET, SZAB Campus, Khairpur Mirs' respectively and further explained in **Clause 9.1** of Regular Scheme.

The saving seats are filled up on overall open merit basis of the Province of Sindh. Following rules have been framed for admissions under the Self-Financing Scheme. These rules are subject to revision by the competent authorities of the University at any time and without any prior notice.

9.22.1 Eligibility for Admission

The eligible candidates under Self Financing Scheme should have:

i. As prescribed in **Clause 9.2** under Regular Scheme.
ii. Appeared in Pre-Admission Test and secured at least 40% marks.
iii. Produced domicile of Sindh Province.

9.22.2 Pre-admission Test

As prescribed in **Clause 9.4** under Regular Scheme.

9.22.3 Interviews

As prescribed in **Clause 9.5** under Regular Scheme.

9.22.4 Available Seats

Under this scheme the disciplines have been distributed in three categories, i.e., **Category-I**, **Category-II, Category-III, Category-IV, and Category-V** as mentioned below:

The number of seats for each discipline is reserved on district basis and given in **Table-9.22(a)** and **Table-9.22(b)**.

Category-I: (Rs. 1,260,000-00)

1. Civil Engineering
2. Electrical Engineering
3. Software Engineering

Category-II: (Rs. 945,000-00)

1. Mechanical Engineering
2. Computer Systems Engineering
3. Civil Engineering (at Khairpur Mirs')

Category-III: (Rs. 735,000-00)

1. Mechatronics Engineering

Category-IV: (Rs. 630,000-00)

1. Architecture
2. Biomedical Engineering
3. Electrical Engineering (at Khairpur Mirs')
4. Mechanical Engineering (at Khairpur Mirs')

Category-V: (Rs. 420,000-00)

1. Electronics Engineering
2. Petroleum & Natural Gas Engineering
3. Environmental Engineering
4. Chemical Engineering
5. Industrial Engineering & Management
6. Textile Engineering
7. City & Regional Planning
8. Telecommunication Engineering

9.22.5 Admission fee under Self-Financing Scheme

The following fees are payable to the University by the candidates applying for admission under Self-Financing Scheme:

Category-I

Admission fee of Rs. 1,200,000/- (Rupees One Million Two Hundred Thousand Only) + Applicable Tax *currently 5%** (**Total Rs. 1,260,000/-**) in the form of Demand Draft prepared by any branch of Bank, in favor of "Director Finance, Mehran UET, Jamshoro". The draft in original must be submitted in the office of Director Admissions, MUET, Jamshoro before closing date.

Category-II

Admission fee of Rs. 900,000/- (Rupees Nine Hundred Thousand Only) + Applicable Tax *currently 5%** (**Total Rs. 945,000/-**) in the form of Demand Draft prepared by any branch of Bank, in favor of "Director Finance, Mehran UET& Technology, Jamshoro". The draft in original must be submitted in the office of Director Admissions, MUET, Jamshoro before closing date.

Category-III

Admission fee of Rs. 700,000/- (Rupees Seven Hundred Thousand Only) + Applicable Tax *currently 5%** (**Total Rs. 735,000/-**) in the form of Demand Draft prepared by any branch of Bank, in favor of "Director Finance, Mehran UET, Jamshoro". The draft in original must be submitted in the office of Director Admissions, MUET, Jamshoro before closing date.

Category-IV

Admission fee of Rs. 600,000/- (Rupees Six Hundred Thousand Only) + Applicable Tax *currently 5%** (**Total Rs. 630,000/-**) in the form of Demand Draft prepared by any branch of Bank, in favor of "Director Finance, Mehran UET, Jamshoro". The draft in original must be submitted in the office of Director Admissions, MUET, Jamshoro before closing date.

Category-V

Admission fee of Rs. 400,000/- (Rupees Four Hundred Thousand Only) + Applicable Tax *currently 5%** (**Total Rs. 420,000/-**) in the form of Demand Draft prepared by any branch of Bank, in favor of "Director Finance, Mehran UET, Jamshoro". The draft in original must be submitted in the office of Director Admissions, MUET, Jamshoro before closing date.

All other fees as payable under regular scheme shall also be payable after the admission has been granted to the candidate under this scheme.

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* **Advance Tax on payment of fee to Educational Institutions (Section 2361)**
As per newly inserted **Section 2361** every educational institution is required to collect advance income tax at the rate of 5% on the amount of fee paid to an educational institution. The person responsible for preparing monthly, bimonthly or quarterly fee voucher or challan shall also charge withholding tax in case the fee exceeds Two Hundred Thousand Rupees annually.

Table-9.22(a) Distribution of Seats under Self-Financing Scheme (SFS) at Mehran UET, Jamshoro.

Cat.	District	CE	EL	ME	ES	CS	TL	SW	CH	IN	PG	AR	CRP	TE	EE	BM	MTE	Total
A-1	**Sukkur**	2	2	2	2	1	1	2	1	0	1	1*	1*	1	0	0	1*	**15**
	Ghotki	2	1	1	1	0	0	2	1	0	1			0	0	0		**9**
	Khairpur	3	1	1	2	1	1	2	1	0	1			1	1	0		**15**
	S. Benazirabad	3	1	1	1	1	0	2	1	0	0			0	0	0		**10**
	N. Feroze	3	1	1	1	1	1	2	1	0	1			1	0	0		**13**
	Total	**13**	**6**	**6**	**7**	**4**	**3**	**10**	**5**	**0**	**4**	**1**	**1**	**3**	**1**	**0**	**1**	**65**
A-2	**Larkana**	2	2	1	1	1	1	2	1	0	1	1*	1*	1	0	0	1*	**13**
	K.Shahdadkot	3	1	1	1	0	0	2	1	0	1			1	0	0		**11**
	Shikarpur	2	1	1	1	1	1	2	1	0	1			1	0	0		**12**
	Jacobabad	2	1	1	1	1	0	2	0	0	1			1	0	0		**10**
	Kashmore	2	1	1	1	0	0	2	1	0	1			0	0	0		**9**
	Total	**11**	**6**	**5**	**5**	**3**	**2**	**10**	**4**	**0**	**5**	**1**	**1**	**4**	**0**	**0**	**1**	**58**
A-3	**Hyderabad**	5	4	4	5	1	1	5	2	1	2	3*	1*	1	1	1	3*	**33**
	Matiari	3	1	1	1	1	1	2	1	0	1			1	1	0		**14**
	T. M. Khan	3	1	1	2	1	1	2	1	0	1			0	0	0		**13**
	T. Allahyar	3	1	1	1	1	1	2	1	0	1			1	0	0		**13**
	Dadu	5	2	2	3	1	1	2	2	0	2			1	0	1		**22**
	Jamshoro	3	1	2	2	1	1	2	1	0	1			1	1	0		**16**
	Thatta	3	1	1	2	1	1	2	1	0	1			0	1	0		**14**
	Sujawal	3	1	1	1	0	1	2	1	0	1			0	0	0		**11**
	Badin	5	2	2	3	1	0	2	2	0	1			1	0	0		**19**
	Total	**33**	**14**	**15**	**20**	**8**	**8**	**21**	**12**	**1**	**11**	**3**	**1**	**6**	**4**	**2**	**3**	**162**
A-4	**Mirpurkhas**	4	2	3	2	1	1	3	2	1	1	2*	1*	1	1	0	3*	**22**
	Umerkot	3	2	1	2	1	1	2	1	0	1			0	0	0		**14**
	Tharparkar	3	2	1	3	1	0	3	1	0	1			1	0	1		**17**
	Sanghar	5	3	3	4	1	1	4	3	0	2			1	1	0		**28**
	Total	**15**	**9**	**8**	**11**	**4**	**3**	**12**	**7**	**1**	**5**	**2**	**1**	**3**	**2**	**1**	**3**	**87**
A-5	**Karachi** (All Districts)	2	0	1	1	1	0	2	1	0	1	0	0	0	0	0	0	**9**
	Total Seats	**74**	**35**	**35**	**44**	**20**	**16**	**55**	**29**	**2**	**26**	**7***	**4***	**16**	**7**	**3**	**8***	**381**

* Seats reserved for respective divisions.

Table-9.22(b) Distribution of Seats for various Districts under Self-Financing Scheme (SFS) at Mehran UET, SZAB Campus Khairpur Mirs'.

Category	Districts	Number of Seats in Each Discipline			
		CE	EL	ME	Total Seats
A-1	**Sukkur**	1	1	1	3
	Ghotki	1	0	1	2
	Khairpur	2	1	1	4
	Shaheed Benazirabad	1	0	0	1
	Naushahro Feroze	1	0	0	1
	Total	**6**	**2**	**3**	**11**
A-2	**Larkana**	2	1	1	4
	Kambar Shahdadkot	2	2	0	4
	Shikarpur	2	1	0	3
	Jacobabad	2	1	0	3
	Kashmore	1	1	1	3
	Total	**9**	**6**	**2**	**17**
A-3	**Hyderabad**	2	2	0	4
	Matiari	1	1	0	2
	T. M. Khan	0	1	0	1
	T. Allahyar	1	1	0	2
	Dadu	2	3	0	5
	Jamshoro	1	1	0	2
	Thatta	0	1	0	1
	Sujawal	0	1	0	1
	Badin	1	2	0	3
	Total	**8**	**13**	**0**	**21**
A-4	**Mirpurkhas**	1	2	0	3
	Umerkot	2	1	0	3
	Tharparkar	1	1	0	2
	Sanghar	1	0	0	1
	Total	**5**	**4**	**0**	**9**
A-5	**Karachi (**All Districts)	1	1	0	2
	Total Seats	**29**	**26**	**5**	**60**

9.23 Admissions under University Support Program (USP)

For this scheme, **37** seats in Civil and **13** seats in Software Engineering disciplines have been reserved for the candidates having the domicile of Sindh Province as shown in **Table-9.23**. The basic requirement for admission is the same as approved for admission under Regular Scheme. The candidates are required to pay Rs. 1,400,000/- (Rupees One Million Four Hundred Thousand Only - once) + Applicable Tax *currently 5%* (Total Rs. 1,470,000/-) in the form of Demand Draft prepared by any branch bank, in favor of "Director Finance, Mehran UET, Jamshoro". The draft in original must be submitted to the office of Director Admissions, MUET, Jamshoro before the closing date. All other fees as payable under the regular scheme shall also be payable after the admission has been granted to the candidate under this scheme.

Table-9.23.1 Distribution of Seats for various Districts under the University Support Program (USP) at Mehran UET, Jamshoro.

Category	Districts	Number of Seats in Each Discipline		
		CE	SW	Total Seats
A-1	**Sukkur**	2	3*	**11**
	Ghotki	1		
	Khairpur	2		
	Shaheed Benazirabad	1		
	Naushahro Feroze	2		
A-2	**Larkana**	2	1*	**7**
	Kambar Shahdadkot	1		
	Shikarpur	1		
	Jacobabad	1		
	Kashmore	1		
A-3	**Hyderabad**	2	5*	**19**
	Matiari	2		
	T. M. Khan	1		
	T. Allahyar	1		
	Dadu	2		
	Jamshoro	2		
	Thatta	1		
	Sujawal	1		
	Badin	2		
A-4	**Mirpurkhas**	2	4*	**12**
	Umerkot	2		
	Tharparkar	2		
	Sanghar	2		
A-5	**Karachi (**All Districts)	1	00*	**1**
	Total Seats	**37**	**13***	**50**

* Seats reserved for respective divisions.

The refund of admission fee is only allowed to every unsuccessful/withdrawing* candidate who has applied for admission under Self-Financing Scheme and University Support Program through special cross cheque mentioning the name of refundee with bank account, the name of bank and branch. Therefore, in case of refund of the fee candidates are required to download the fee refund application proforma (from **admissions.muet.edu.pk**), fill-in and submit the same at Directorate of Admissions.

* Conditions apply as mentioned in **Clause 9.27**.

9.24 Admissions of Foreign Candidates under Self-Financing Scheme at Mehran UET, Jamshoro.

The following seats in each discipline are reserved for foreign candidates at main campus under this Self-Financing Scheme who are otherwise eligible for admission as described in **Clause 9.22.4**. The foreign candidates must apply for admission through their Embassies, via Higher Education Commission, Islamabad.

CE	EL	ME	ES	CS	TL	SW	CH	IN	MN	MT	PG	AR	CRP	TE	EE	BM	MTE	Total
6	3	3	4	2	2	-	4	-	-	-	4	-	-	2	1	-	1	32

The foreign candidates are required to pay admission fee in US$ 13,000/- (Dollars Thirteen Thousand Only) along with the admission form. They will also be charged the usual fees as payable by other students under regular scheme.

The saving seats of the above Self-Financing Scheme, if any, may be allocated to the candidates of Sindh Province under University Support Program (USP) on open merit.

9.25 Admission of Overseas Pakistani Candidates under Self-Financing Scheme at Mehran UET, Jamshoro.

The following seats in each discipline are reserved for Overseas Pakistani Candidates under this Self-Financing Scheme who are otherwise eligible for admission. They are required to pay admission fee of US$ 13,000/- (Dollars Thirteen Thousand Only) along with the admission form. They will also be charged the usual fees as payable by other students.

CE	EL	ME	ES	CS	TL	SW	CH	IN	MN	MT	PG	AR	CRP	TE	EE	BM	MTE	Total
4	3	3	2	2	2	-	2	-	-	-	2	-	-	2	1	-	1	24

The saving seats of the above Self-Financing Scheme, if any, may be allocated to the candidates of Sindh Province under University Support Program (USP) on open merit.

9.26 Admission of Candidates from Azad Jammu & Kashmir under Self-Financing Scheme at Mehran UET, Jamshoro.

Maximum eight (8) seats in the following disciplines are reserved for the candidates domiciled in Azad Jammu and Kashmir under this Self-Financing Scheme:

CE	EL	ME	ES	CS	TL	SW	CH	IN	MN	MT	PG	AR	CRP	TE	EE	BM	MTE	Total
2	1	1	-	1	1	1	-	-	-	-	-	-	-	-	1	-	-	8

The candidates are required to apply directly to the Directorate of Admissions in response to the advertisement. All the other conditions concerning eligibility and fees are the same as described in **Clauses 9.2** and **9.22.5** also apply.

The saving seats of the above scheme, if any, may be allocated to the candidates of Sindh Province under the Self-Financing Scheme (SFS) on open merit.

9.27 Other Information

- Admission fee is payable only once in the beginning.
- Candidates once admitted under these schemes shall not be allowed to change the discipline unless the seats in the desired disciplines are available.
- The University follows the National Level Fee Refund Policy at Higher Education Institutions of Pakistan which is as under:

% of Tuition Fee	Timeline for Semester
Full 100% fee refund	Up to 7th day of convene of classes
Half 50% fee refund	Up to 15th day of convene of classes
No Refund 0%	From 16th day of convene of classes

- The candidates applying under these schemes is also considered for admission under Regular Scheme, if they are in merit against their districts.
- The University also follows the Fee Refund Policy for the students admitted against Self-Financing Scheme which is as under:

% of Self-Finance Fee	Timeline for Refund
20% Penalty	Up to 7th day of convene of classes.
40% Penalty	From 8th to 15th day of convene of classes.
100% Penalty – No Refund	From 16th day of convene of classes.

9.28 Migration / Transfer

(i). Migration is only allowed to and from any Public Sector University accredited by PEC and foreign university(ies) recognized by Higher Education Commissions (HEC).

(ii). Migration / Transfer is not allowed to the students in the first and final years with less than 50% Credit Hours required for the degree.

(iii). Migration / Transfer is not allowed to the students admitted on reciprocal basis.

(iv). Migration / Transfer is allowed only in the cases of extreme hardship for the students or if it is considered in the best interest of the University by the competent authority. The decision of the University is final and binding in this regard.

(v). The students failing in previous semesters (i.e., less than 50% marks) shall not be eligible for admission on migration / transfer basis.

(vi). The migration / transfer of the local students would be allowed on the payment of Rs. 800,000/- (Rupees Eight Hundred Thousand Only) + Applicable Tax *currently 5%* (Total Rs. 840,000/-) to the Mehran UET; while foreign students would be required to pay Rs. 1,200,000/- (Rupees One Million Two Hundred Thousand Only) + Applicable Tax *currently* 5% (Total Rs. 1,260,000/-) as migration fee. The nominees are required to submit NO OBJECTION CERTIFICATE (NOC) of the nominating agency.

(vii). Admission on migration basis is made up to the fourth week of the start of the classes of a particular session.

(viii). The migration cases be reported within the same semester to PEC. NOC be also obtained in the light of Article-3(d) of PEC Regulations.

B. BS Programs

9.29 Admission

As prescribed in **Clause 9.1** under Regular Scheme.

9.30 Eligibility for Admission

(i) The candidates who have passed their **HSC Part-I** Annual Examination of 2022 under any of the following group or equivalent or have passed their **HSC Part-II** Annual Examination earlier up to 2020 and have secured at least 60% marks (**whereas, 50% for all Engineering Technology Programs)** with no Grace marks shall be considered from any recognized Board of Intermediate and Secondary Education in Pakistan or from foreign countries, are eligible to apply for admission in the disciplines mentioned against them in the table given below. Besides that, all the students of Engineering, B.Arch. and CRP Programs of the University can also apply for admission in any of BS programs, if they meet the above eligibility criteria.

Name of Degree Program		Name of Group
Morning Programs		
Bachelor of Business Administration.		• Pre-Engineering • Pre-Medical • General Science • Commerce • A-Level in Business/Humanities
Bachelor of Science in Computer Science.		• Pre-Engineering • Pre-Medical (On Condition)* • General Science
Bachelor of Studies in English.		• All Groups.
Bachelor of Science in Mathematics.		• Pre-Engineering • General Science
Bachelor of Science in Environmental Science.		• Pre-Engineering • Pre-Medical
Evening Programs		
Bachelor of Science in Cyber Security.		• Pre-Engineering • General Science
Bachelor of Science in Artificial Intelligence.		
Engineering Technology Programs	BS in Garment Engineering Technology**	• Pre-Engineering Group • Pre-Medical Group • General Science Group • DAE in Garments, Textile Dyeing & Printing, Textile Weaving and Textile Spinning Technologies from any recognized Board of Technical Education in Pakistan
	BS in Civil Engineering Technology	• Pre-Engineering • DAE in Civil, Construction Technology, Civil with any Specialization, Architecture, Environmental, and Land & Mine Surveying.
	BS in Electrical Engineering Technology	• Pre-Engineering • DAE in Electrical, Electronics, Automation, Avionics, Computer / Computer & Information Technology, Information, Instrumentation, Instrumentation & Process Control, Mechatronics, Precision Mechanical & Instrument, RADAR, RADIO, and Telecommunication.

	BS in Mechanical Engineering Technology	• Pre-Engineering • DAE in Mechanical, Dies & Mold, 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, Automation, and Bio-Medical.

* The students need to clear Foundation Mathematics-I and II in the first year of their studies.
** Subject to the approval of National Technology Council (NTC).

(ii) The candidates who have passed the above examinations or equivalent before Annual Examination 2020 shall not be eligible for admission. The candidates who are getting admission on the basis of the result of HSC Part-I/DAE have to secure 60% marks **(Excluding Grace Marks)** in HSC-II/DAE, otherwise, their admission shall stand canceled and none of the fees shall be refunded.

(iii) Those students, who were admitted to any other institutes / universities before applying for admission in Mehran UET and were rusticated, debarred or their admissions were cancelled, shall not be considered for admission in the University. 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 in the University. 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.

9.31 Admission Form
As prescribed in **Clause 9.3** under Regular Scheme.

9.32 Pre-Admission Test
As prescribed in **Clause 9.4** under Regular Scheme.

9.33 Interviews
After the receipt of the result of Pre-Admission Test, a comprehensive merit list is prepared for each district/category and a number of candidates roughly equivalent to the reserved seats of concerned category are called for interview before the Admission Committee.

The candidates must be accompanied with his/her guardian declared in his/her admission form during interview. The interviews are held at Mehran UET, Jamshoro on the dates as announced in the newspapers and also on MUET website: **muet.edu.pk**.

The candidates will also be required to bring following their original documents for verification:

(i) Marks Certificate of SSC – (Matriculation).
(ii) Marks Certificate of HSC Part-I (relevant to the BS program applied for as per **Clause 9.30**).
(iii) Domicile Certificate of candidate.
(iv) PRC on 'C' Form of candidate.
(v) National Identity Card / B-form (as applicable).
(vi) **Medical Certificate** and **Undertaking Certificate** on prescribed proforma*.

* Proformas can be downloaded from **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 in any of the disciplines 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 year**. The candidates are advised to keep a photocopy of all the documents with them. The candidate has to deposit the fees as mentioned in **Clause 9.21** at the time of interview.

9.34 Distribution of Seats

The distribution of seats for admission are strictly made according to the rules framed for the purpose by the authorities of the University on population basis among the rural and urban areas for the Hyderabad, Mirpurkhas, Larkana and Sukkur Divisions. Five (5) seats have also been reserved for the candidates of Karachi Division. The admission is given on quota basis among various districts / categories at Mehran UET, Jamshoro. However, the award of discipline shall be given on the interview day as per availability of seats of the district/category. Any saving seats from any district are given on open merit basis. The number of seats allocated to each district in various disciplines is given in the **Table 9.34.1** and the description of the seat under **Category-B** and **C** is given in **Table-9.34.2**.

Table-9.34.1 Distribution of Seats Discipline-wise for various Districts, Disciplines and Categories at Mehran UET, Jamshoro.

Cat.	Description	Morning Programs					Evening Programs**						Total
		BBA	BSCS	BSE	BSM	BSES	BSGET	BSCYS	BSAI	BSCET	BSEET	BSMET	
A-1	**Sukkur**	1	1	1	1	1	1	1	1	1	1	1	**11**
	Ghotki	1	1	1	1	1	1	1	1	1	1	1	**11**
	Khairpur	1	1	1	1	1	1	1	1	1	1	1	**11**
	Shaheed Benazirabad	1	1	1	1	1	1	1	1	1	1	1	**11**
	Naushahro Feroze	1	1	1	1	1	1	1	1	1	1	1	**11**
A-2	**Larkana**	1	1	1	1	1	1	1	1	1	1	1	**11**
	Kambar Shahdadkot	1	1	1	1	1	1	1	1	1	1	1	**11**
	Shikarpur	1	1	1	1	1	1	1	1	1	1	1	**11**
	Jacobabad	1	1	1	1	1	1	1	1	1	1	1	**11**
	Kashmore	1	1	1	1	1	1	1	1	1	1	1	**11**
A-3	**Hyderabad**	6	6	6	6	6	6	6	6	6	6	6	**66**
	Matiari	2	2	2	2	2	2	2	2	2	2	2	**22**
	Tando Muhammad Khan	2	2	2	2	2	2	2	2	2	2	2	**22**
	Tando Allahyar	2	2	2	2	2	2	2	2	2	2	2	**22**
	Dadu	3	3	3	3	3	2	3	3	2	2	2	**29**
	Jamshoro	4	4	4	4	4	3	4	4	3	3	3	**40**
	Thatta	3	3	3	3	3	2	3	3	2	2	2	**29**
	Sujawal	2	2	2	2	2	2	2	2	2	2	2	**22**
	Badin	3	3	3	3	3	2	3	3	2	2	2	**29**
A-4	**Mirpurkhas**	3	3	3	3	3	3	3	3	3	3	3	**33**
	Umerkot	2	2	2	2	2	2	2	2	2	2	2	**22**
	Tharparkar	3	3	3	3	3	2	3	3	2	2	2	**29**
	Sanghar	3	3	3	3	3	3	3	3	3	3	3	**33**
A-5	**Karachi**	1	1	1	1	1	1	1	1	1	1	1	**11**
B*	**MUE**, Jamshoro	1	1	1	1	1	1	1	1	1	1	1	**11**
	Totals	**50**	**50**	**50**	**50**	**50**	**45**	**50**	**50**	**45**	**45**	**45**	**530**

BBA Bachelor of Business Administration
BSCS BS in Computer Science.
BSE Bachelor of Studies in English
BSM BS in Mathematics
BSES BS in Environmental Sciences
BSGET BS in Garment Engineering Technology
BSCYS BS in Cyber Security
BSAI BS in Artificial Intelligence
BSCET BS in Civil Engineering Technology
BSEET BS in Electrical Engineering Technology
BSMET BS in Mechanical Engineering Technology

*The students of the University who had already availed **MUE** Quota (under **Category-B** of the Prospectus) shall not be eligible to apply again under the same quota in any of the undergraduate programs of the University.

**The minimum number of students should be 30 for running the program. Additionally, Garment Engineering Technology Program will be started subject to getting approval from NTC.

Table-9.34.2 Description of Category B Candidates Seeking Admission.

Category	Description	Seats
(B)	Real sons/daughters/brothers/sisters of Mehran University employees (serving or retired, deceased, on lien or working on deputation with other Institutions) shall be considered for admission to first year class against the reserved seats on the following criteria: i. First preference is given to real sons/daughters of employees who are confirmed in the University service and have at least three years continuous university service at their credit. ii. Second preference is given to real sons/daughters of regular employees who are not confirmed in the University service but have at least three years continuous university service at their credit. iii. Third preference is given to real brothers/sisters of employees who are confirmed in the University service and have at least three years continuous university service at their credit. iv. Fourth preference is given to real brothers/sisters of regular employees who are not confirmed in the University service and have at least three years continuous university service at their credit. v. Fifth preference is given to real sons/daughters of employees who are confirmed in the University service and have less than three years continuous university service at their credit. vi. Sixth preference is given to real sons/daughters of employees who are not confirmed in the University service and have less than three years continuous university service at their credit. vii. Seventh preference is given to real brothers/sisters of employees who are confirmed in the University service and have less than three years continuous university service at their credit. viii. Eighth preference is given to real brothers/sisters of employees who are not confirmed in the University service and have less than three years continuous university service at their credit. **Note:** ▪ The merit with regard to the **Category-C** is determined as per policy of the University. A copy of the appointment order, confirmation order and Affidavit regarding relationship of the candidate with the employee be attached with the admission form. ▪ The students of the University who had already availed MUE Quota (under **Category-C** of the Prospectus) shall not be eligible to apply again under the same quota in any program (BE or BS).	**11**
	Total Seats (B)	**11**

Table-9.34.3 Distribution of Seats Discipline-wise for various Districts, Disciplines and Categories at Mehran UET, SZAB Campus, Khairpur Mirs'.

Cat.	Description		K-BSM
A-1	**Sukkur**	**5**	49
	Ghotki	**5**	
	Khairpur	**5**	
	Shaheed Benazirabad	**4**	
	Naushahro Feroze	**5**	
A-2	**Larkana**	**5**	
	Kambar Shahdadkot	**5**	
	Shikarpur	**5**	
	Jacobabad	**5**	
	Kashmore	**5**	
B*	**MUE**, Khairpur	**1**	1
	Totals	**50**	**50**

K-BSM Bachelor of Science in Mathematics at MUET, SZAB Campus, Khairpur.

* The students of the University who had already availed **MUE** Quota (under **Category-B** of the Prospectus) shall not be eligible to apply again under the same quota in any of the undergraduate programs of the University.

Note: The above program shall not be started with less than 30 students.

9.35 Award of Discipline
As prescribed in **Clause 9.8** under Regular Scheme. Whereas, the saving seats of the above scheme, if any, may be allocated to the candidates of Sindh Province on open merit.

9.36 Rectification of Mistakes
As prescribed in **Clause 9.9** under Regular Scheme.

9.37 Admission of Candidates Who Fail to Deposit the Admission Fees on the Interview Day
As prescribed in **Clause 9.10** under Regular Scheme.

9.38 Additional Marks
As prescribed in **Clause 9.11** under Regular Scheme.

9.39 Deduction of Marks Due to Gap in Education
As prescribed in **Clause 9.12** under Regular Scheme.

9.40 Selection Procedure against Various Categories
As prescribed in **Clause 9.13** under Regular Scheme

9.41 Closing of Admissions Process
As prescribed in **Clause 9.14** under Regular Scheme

9.42 NOC and Study Leave Order for Candidates already in Service
As prescribed in **Clause 9.16** under Regular Scheme

9.43 Admission in any Other Institute
As prescribed in **Clause 9.17** under Regular Scheme

9.44 Identity Card
As prescribed in **Clause 9.18** under Regular Scheme

9.45 Re-Admission Policy
As prescribed in **Clause 9.19** under Regular Scheme

9.46 Enrolment Card
As prescribed in **Clause 9.20** under Regular Scheme

9.47 Roll Numbers
The roll numbers assigned to the successful candidates shall be as under:

i.	23BBA	v.	23BSES	ix.	23BSCE
ii.	23BSCS	vi.	23BSGET	x.	23BSEE
iii.	23BSE	vii.	23BSCYS	xi.	23BSEE
iv.	23BSM	viii.	23BSAI	xii.	K-23BSM

9.48 Fees

Fees Payable at the Time of Admission:

Sr. No.	Description	Amount	
a).	Admission Fee (Per Year)	Rs.	22,000
b).	Student Identity Card Fee (Per Year)	Rs.	600
c).	Marks Certificate Verification Fee (Once)	Rs.	2,500
d).	Enrollment Card Fee (Once)	Rs.	1,350
e).	Tuition Fee (Per Quarter)*	Rs.	33,000
f).	Examinations Fee (including Marks Certificate) for Regular Exams (Per Quarter)	Rs.	1,100
g).	Transport Charges (Per Quarter)	Rs.	7,000
	Total Fee Payable:	**Rs.**	**67,550**
	University Caution Money Deposit – Refundable**	**Rs.**	**6,000**

* Tuition fee per month is Rs. 11,000 which is payable quarterly (11,000 x 3 = 33,000). The deserving students are provided financial support for the payment of tuition fee.

** Refundable only after Completion of Degree Course, in case of cancellation of admission at any stage Caution Money will not be refunded.

10. REGULATIONS FOR SEMESTER SYSTEM

MEHRAN UNIVERSITY
OF
ENGINEERING AND TECHNOLOGY

Regulations (Revised) regarding **the General Scheme of Studies for the Bachelor's Degree Programs (including B.E, B.Arch, B.CRP, BS and BBA)** of 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 2022, 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 **22-Batch.**
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. "**Summer Semester**" means a Period of 08 weeks out of an academic year for teaching and evaluation and /or guidance of the students of the University.
   v. "**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.
   vi. "Departmental Committee". Each Department/ Institute will have a Departmental Committee consisting of three senior most teachers of the Department / Institute including Chairman/ Chairperson/ Director as convener.
   vii. "Credit Hours (C.H.)" have been defined in section 6.
   viii. "Quality Point (Q.P.), Grade Point Average (G. P.A.), and "Cumulative Grade Point Average (C.G. P.A.) has been defined in section 17.

Approved by Academic Council in its 100th meeting held on 24th August 2021, vide resolution 100.8 and approved by the Syndicate in its 152nd meeting held on 23rd September 2021, vide Resolution No. 152.5(xiii).

5. Undergraduate Structure of Bachelor's Degree Course in Engineering, City & Regional Planning, Architecture, Business Administration, Mathematics, Computer Science and English is given below Table 5.1

Table 5.1

	Degree Programs	
	04 Year	***05 Year***
Total No. of Credit Hours (Minimum)	130	160

Total No. of Credit Hours (Maximum)	140	180
Semester Duration	Minimum of 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	Minimum of 10 semesters Maximum time limit of 7 years, further extendable for one year with the approval of Statutory Bodies
Summer Session	For deficiency / failure, repetition of courses up to 9 credit hours (08 Weeks duration)	
Course Load per Fall / Spring 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 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 firstdigit 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) / (0 + 4)

7. Course layout for undergraduate students

7.1 4-year undergraduate degree programs are 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 5-year undergraduate degree program (Bachelor of Architecture) is composed of 160-180 Credit Hours in which 160 represents the minimum and 180 represents the maximum credit hours required to be completed, subject to meeting the requirements of the respective Accreditation Councils.

7.3 Undergraduate curriculum structure

i. ***For Engineering programs:*** The courses for the Engineering & Computer Science programs will consist of minimum 130 credit hours out of which a minimum of 85 credit hours of engineering and computer science courses and a minimum of 30 credit hours of non-engineering (mathematics, humanities and natural sciences) courses offered over a period of four years (8 semesters), subject to meeting the requirement of the respective Accreditation Councils.

ii. ***For Computer Science programs:*** The courses for the Computer Science program will consist of minimum 130 credit hours, out of which a minimum of 100 credit hours of Computing and Computer Science courses and minimum of 30 credit hours of general and university courses, subject to meeting the requirement of the respective Accreditation Councils.

iii. ***For Social & Basic Sciences programs***: The courses for social and basic sciences disciplines will consist of 60-65% of curriculum towards the discipline specific areas, and 35-40% minor/electives, subject to meeting the requirement of the respective Accreditation Councils.

7.4 Final Year Project (FYP)/ Thesis / Business Plan: Every student should write a thesis project report /Business Plan in the final year, of 06 credit hours individually or in a group comprises of maximum 03 students, on approved research.

7.5 Internship: Students should be encouraged to do internship in industry / research /business organization.

8 Fall/spring semester

8.1 There will be two regular semesters (Fall, Spring) in an academic year. Following is the breakup:

i	Teaching duration of Fall semester	16 Weeks
ii	Conduct of Mid Semester Exam	01 Week
iii	Preparation of final Fall Semester Exam	01 Week
iv	Conduct of final Fall Semester Exam	02 Weeks
v	Semester Break	01 Week
vi	Teaching duration of Spring Semester	16 Weeks
vii	Conduct of Mid Semester Exam	01 Week
viii	Preparation of final Spring Semester Exam	01 Week
ix	Conduct of final Spring Semester Exam	02 Weeks
x	Semester Break	01 Week
xi	Summer Break / Summer Semester	08 Weeks
xii	Winter Break	**02 Weeks**
		TOTAL 52 WEEKS

9 Summer semester

9.1 Summer semester will be offered as an optional semester of 08 weeks duration. Students will be offered courses to remove deficiencies and can register up to 09 credit hours for summer semester.

9.2 Moreover, a student who has either failed or has been stopped to take the examination due to shortage of class attendance or wishes to improve his/her grade (if obtained 'C' & below) is allowed to register in summer semester.

9.3 The contact hours per week during the Summer Semester will be doubled to ensure that the course is completely taught in a summer session with half of the duration as compared to a regular (Fall/Spring) semester.

9.4 All the qualifying rules for Fall / Spring semester will be applicable to summer semester.

9.5 There will be no supplementary / special examination after the adoption of summer semester.

9.6 The course in Summer Semester will be offered with the minimum course registration of 05 students (where intake of students is small, minimum course registration should be 50 % failure students)

10 Academic Calendar

10.1 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. Display of sessional marks
e. Examination preparation up to
f. Conduct of final semester exam
g. Semester Break
h. Announcement of results

The academic calendar will be prepared for Fall Semester and Spring Semester of each academic year.

10.2 In case a university is closed due to unusual circumstances, then makeup classes may be arranged converting weekends or holidays or evening classes to working days or evening classes to cover the lapsed period of the students**.**

11 Withdrawal of Courses from Fall / Spring Semester

11.1 Students may be allowed to withdraw from a course during first 6 week of the semester. In such a case the transcript shall record that the student enrolled in the course and withdrew. Consequently, grade W will be awarded to the student which shall have no impact on the calculation of the CGPA of the student**.**

11.2 A student withdrawing after the 6^{th} week shall be automatically awarded "F" grade which shall count in the GPA and stay on the transcript.

12 Repeating courses / improvement of CGPA

12.1 If a student gets 'F' grade, she/he will be required to repeat the course. However, “F” grade obtained earlier will also be recorded on the transcript.

12.2 Undergraduate students may be allowed to repeat a course in which she/he has obtained grade “C” & bellow. In such a case both the previous and new grade obtained will be recorded on the transcript, however, only the better grade shall be used in the calculation of CGPA.

12.3In case of CGPA improvement, it would be recorded with (Imp) on the transcript.

13 Attendance

Minimum 75 % attendance in a course is required to appear in the examination of that course. (Condonation may be limited to 70%)

14 Examination

14.1 In each semester, students may be required to appear in quizzes, tests, mid semester, final semester examinations, presentations (individual/group), group discussion, and submit projects/ assignments/lab reports etc. These assessment marks (to be determined by the teacher concerned) may have different weightage contributing towards the overall assessment in percent marks. This weightage may be determined on the basis of following table:

THEORY			
		Theory of Maximum **100 marks**	Theory of Maximum **50 marks**
i.	Quizzes / Test(s)	10	05
ii.	Assignments/ Project / Presentation	10	05
iii.	Mid Semester Exam	30	15
iv.	Final Examination*	50	25

PRACTICAL			
		All Departments	**Subjects having Course Code of Architecture Department**
i.	Lab Rubrics	30%	30%
ii.	30%	20%	20%
iii.	Final Exam; Objective Test*		20%
iv.	Final Exam; Conduct of Practical / Viva Voce / Jury*	20%	30%

*Appearance in Final Examinations is mandatory

FINAL YEAR PROJECT (FYP)/ THESIS / BUSINESS PLAN

All Department *(except Architecture and City & Regional Planning)*

Semester	**Thesis CH**	**Thesis Credit marks**	**Maximum Sessional Marks (By Supervisor)**	**Maximum Marks for Thesis Viva Voce / Exam**		
				Internal	*Expert*	*Chairman*
7th	3	100	25	25	25	25
8th	3	100	25	25	25	25

***Department: City & Regional Planning*[1]**

Semester	**Thesis CH**	**Thesis Credit marks**	**Maximum Sessional Marks (By Supervisor)**	**Maximum Marks for Thesis Viva voce/Exam/**		
				Internal	*External*	*Chairman*
7th	3	100	25	15	45	15
8th	3	100	25	15	45	15

***Department: Architecture*[1]**

1Action Reported to 105th Academic Council w.e.f. 19 Batch onwards

Semester	Thesis CH	Marks	Maximum Sessional Marks (By Supervisor)	Maximum Marks for Thesis Viva voce/Exam / Jury		
				Internal	*External*	*Chairman*
9th	5	250	50	40	120	40
10th	10	500	100	80	240	80

14.2 In the beginning of a semester, the Instructor of each course should hand out a syllabus providing information to the students about assessment criteria, paper specification, schedule of material to be taught (TTP and Lesson Plan), take home assignment policy, recommended reading materials and any other information important for the successful completion of the course and its requirements.

14.3 To implement semester system effectively the subject teacher must display his/her provisional result within five days after the conduct of final exam of that subject and submit the same to the controller of examination for final announcement.

14.4 Expert / External examiner will be called only for Final Year Project/ Thesis / Business Plan Examination.

15 Grade Equivalent

GRADE	GRADE POINT	PERCENTAGE OF MARKS THEORY / PRACTICAL / PROJECT
A+	4.0	≥ 90%
A	3.5	89% - 81%
B+	3.0	80% - 73%
B	2.5	72% - 65%
C+	2.0	64% - 60%
C	1.5	59%- 55%
C-	1.0	54% - 50%
F	0.0	< 50%
W*	N/A	N/A
I**	N/A	N/A

** Withdrawn*

*** Incomplete*

Note: *The results will be prepared on the basis of Grade Point Average (G.P.A). Fraction is to be considered as a whole number.*

16 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 using following relationship:

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

Total Credit Hours taken in all Semesters

17 CGPA required for the completion of undergraduate

17.1 For completion of the degree, the minimum qualifying CGPA for Bachelor's Degree Programs (including B.E, B.Arch, B.CRP, BS and BBA) is 2.00.

17.2 In case a student secures less than 2.00 CGPA (minimum qualifying CGPA) at the end of final Semester, she/he may be allowed to get re-admission in one or more courses, in which his/her Grade is below C, provided that she/he is not debarred under the time duration specified for the program (as defined in Table 5.1)

18 Transfer of credit hours for undergraduates

18.1 Credits are transferred on course-to-course basis i.e. a person taking course A at University X is allowed to transfer his/her credits to University Y provided that course A is equivalent to course B taught at the Y University.

18.2 No credit hour of a course will be transferred if the grade is less than C for undergraduate.

18.3 Credit hours may only be transferred between duly recognized HEIs and Internationally recognized Universities.

19 Format of final transcript

The final transcript for the award of degree includes following information:

Front Side:

- Name of Student
- Father's Name
- Surname/Last Name
- Date of Birth
- Roll No.
- Enrolment No
- Name of the Programme
- Date of Admission into Degree Program
- Semester Wise Break-up
- Subjects Name along with Credit Hours
- Type of Enrolment – Full Time
- Picture of the Applicant be Printed on Transcript
- Date of Completion of Degree Requirements
- Mode of Study – Regular
- Medium of Instruction- English
- Online Result Verification Key/ID (Front Side at the End of the Transcript)
- GPA/CGPA (at the End of the front side of Transcript)

Back Side:

- Basic Admission Requirement of the Programme
- Previous Degree held by the Student along with Institution Name
- Credit Hours Exempted/Transferred if any/applicable.
- CNIC No. for Pakistani and Passport No. for Foreign Students
- Grading System must be mentioned on Back Side of the Transcript
- Charter Date of the University/DAI may be mentioned

- Name of Campus/College be mentioned along with HEC Permission Date
- Signature of Issuing Officer(s) (Front and Back Side at the end of the Transcript)
- The transcript must have the water-mark seal on it.
- For equivalence of CGPA to percentage, for Transcript purpose only, below Table be placed

CGPA	4.00	3.5 – 3.99	3.3 - 3.49	2.5 - 2.99	2.0 - 2.49	1.0 - 1.99
Equivalent %age	95	87	79	70	62	55

20 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 and the results of all the examinations including the final semester examination. In case of any discrepancy in the results, during scanning process, the concerned committee will assign a subject expert (other than the Subject teacher) for rechecking the Scripts. The final recommendations of the Departmental Committee concerning the results will be submitted through the concerned Dean and Pro Vice Chancellor/Vice Chancellor for consideration and approval.

21 Course file

Maintaining the Course File is compulsory for all faculty members. It should have complete record of every activity that happens during the course. The course file should contain:

(For Theory)

1. Academic Calendar
2. Course contents with defined CLOs, taxonomy level and linking to PLOs
3. Tentative Teaching Plan
4. Lesson Plan
5. Classes Time Table and student counselling hours including record of makeup classes (if any)
6. Semester Progress Report
7. Student’s attendance register
8. Teaching material
9. Class sessional activities and record (Tests/ Assignments / etc. with solutions)
10. Mid Semester and Final Exams Question papers and solutions
11. Sample of best, worst and average answer sheets of Tests / Assignment / Exams
12. Award Lists
13. Assessment Sheet conforming to the CLOs and PLOs
14. Course Evaluation Report

(For Practical)

1. Academic Calendar
2. List of Experiments
3. Tentative Teaching Plan
4. Laboratory Time Table
5. Student’s attendance register
6. Laboratory Manual / Workbook
7. Rubrics Sheet
8. Sample of Objective type paper with solution
9. Sample of Best, Worst, and average Objective type test
10. Award Lists
11. Assessment Sheet conforming to the CLOs and PLOs

12. Course Evaluation Report

22 Freezing of semester

22.1 If a student freezes a semester(s), she/he will resume his/her studies from the same stage where she/he left (froze). No freezing during the semester will be allowed. The maximum duration of the degree program shall remain the same.

22.2 The duration of Freezing is one year; a candidate who gets a semester freeze can get readmission next year with upcoming session.

23 Indiscipline in examinations (Unfair Means Cases Committee)

23.1 Any candidate found guilty of 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 Copies from any paper book or notes.
v Mutilates the Answer Book.
vi Possesses any kind of material, which may be helpful to his/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 or creates any kind of disturbance in or around the examination centre
x Uses abusive or obscene language on the answer script.
xi Possesses any kind of weapon in or around 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 programme for one semester.
(iii) Heavy and light Fine
(iv) Expulsion forever from the University.
(v) Any other.

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

24. Appeal against the decision of the Unfair Means Cases Committee

If a student is not satisfied with the decision of the Unfair Means Cases Committee, she/he 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.

25. Probation

Probation is a status granted to the student whose academic performance falls below the minimum University standard.

i. The students acquiring less than 2.00/4.00 GPA in a semester but passing in all papers will be promoted with the condition to achieve more than 2.0 GPA in the next semester

and she/he will be put on probation for the next semester**.** In this case, the registration in summer semester is optional.

ii. The students acquiring GPA 1.7 and above but failing in any paper(s) will be placed on probation and promoted to the next semester conditionally. They will have to be registered for summer semester to improve the grade.

iii. Students acquiring GPA less than 1.7 in two consecutive semesters and failing in any paper(s) even after attending summer semester for one academic year will be dropped from university rolls. However, she/he will be eligible to seek re-admission. Re-admission will be allowed only once during 4 years Bachelor degree program. Re-admission will be allowed after the payment of full admission fee.

iv. Students on probation in two consecutive semesters (even after attending summer semester in one academic year) will take re-admission in that particular academic year once only.

v. There will be maximum two academic probations in 04-year / 05-year Bachelor degree programs. Both the probations cannot be granted / availed in first four semesters. A student who is on probation 2nd time even after attending summer semester in first four semesters shall be removed from university rolls. However, she/he can take re-admission only once during 4 years Bachelor degree program.

vi. In case of valid reason / excuse, the period of study may be extended for one additional year (Two semesters) in all university programs. The student(s) who will not complete studies within stated periods including extension shall be struck off from the university rolls. The students who have been given the right to extend the duration of study for one additional year are required to pay full admission fee.

26 Permission of writer for special students

26.1 A visually impaired student may be allowed to attempt the Mid/Final Examinations of the University on Braille/ Computer/any other means of facilitation.

26.2 In case a student is physically handicapped/visually impaired, she/he may apply to the Chairperson of the respective department (with medical certificate as proof of her/his disability) for permission to engage a writer in Tests/ Examinations of the University two weeks before the start of Tests/ Examinations. She/he will be allowed 45 minutes (maximum) extra time to solve the question paper.

26.3 The qualification of the person who acts as writer of a handicapped student must be at least one step lower than that of the student. (e.g. for level 6 student, the writer should be at the most of level 5).

27 Damaged/lost answer script

In an exceptional case where an answer script is damaged, lost or destroyed due to unavoidable circumstances, then the student may be given the following options:

i Average marks shall be awarded to the student in that subject/course.

ii In case of Final Year Examination, if the candidate so desires, she/he shall be given another chance as a special case to take the Examination in that subject/course in the next examination and no examination fee shall be charged from the student.

28 Awards and distinctions

i. Medals/Positions will be awarded to the students passing their courses/papers in Semester System in the first attempt only.

ii. 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.
iii. No medal and position will be granted to candidates who passed the examination in 2nd attempt.
iv. No Medal/Roll of Honor will be awarded in the case of improving CGPA.
v. The disciplines where number of students is less than 05, no position will be awarded in semester system.

29 Re-admitted Students

These rules & regulations are also applicable to those student(s) who have got re-admission with 22 and onward batch(s).

11. STUDENTS CONDUCT AND DISCIPLINE REGULATIONS

The **Regulations (Revised)** regarding **the conduct and discipline of students** of Mehran University of Engineering and Technology, under section 47(1) of the Act, 1977.

1. Short Title

These Regulations may be called the Mehran University of Engineering & Technology Students' Conduct and Discipline Regulations, 1978 as amended up to 31.03.2007.

2. Commencement and Applications

These Regulations shall come into force with immediate effect and shall apply to all the students of the University / Campus, and the Colleges / Institutes / Centre of Excellence affiliated to the University.

3. Definitions

In these regulations, unless otherwise expressly stated:

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

(ii) "Campus" means all area-, anti-building structures including Academic Block/ teaching departments, Hostels or Halls of residence of students, Administration Block, sports grounds- gymnasium and any staff residential area, recreational areas for students and staff and my other such areas, buildings or facilities created within the specified boundary of the University and likewise areas of affiliated Colleges/ Instin1tes/Center of Excellence.

(iii) "Syndicate" means the Syndicate of the University.

(iv) "Vice-Chancellor" means the Vice-Chancellor of the University.

(v) "Pro-Vice Chancellor means the Pro-Vice Chancellor of the main campus or any other campus of the University

(vi) "Discipline Committee" means the Discipline Committee of the University constituted under the First Statutes appended to Mehran University Act, 1977, and/or constituted separately for the constituent or affiliated Colleges/ institutes/ Center of Excellence by the governing body or management of that College/ Institute/Center of Excellence with the approval of the Vice-Chancellor, Mehran University of Engineering & Technology.

(vii) "Deans*, "Director of an Institute/Chairman of the Department", "Teacher In-charge of the Class / Class Advisor", "Subject Teacher", "Workshop Instructor", "Workshop Superintendent", "Provost", "Deputy Provost", "Warden", "Director Sports", "Games Jn- charge", "Director Students Affairs", "Student Welfare Officer", "Advisor Student's Affairs" and "Principal"/"Director" of the Affiliated College / Institute / Center of Excellence, respectively, means the Dean, Director of Teaching institute/Chairman of a Teaching Department, Teacher in-charge of the class / Class Advisor, Subject Teacher, Workshop Instructor, Workshop Superintendent, Provost, Deputy Provost, Warden, Director Sports, Games In-charge, Director Students' Affairs, Sh1dems Welfare Officer, Advisor Students' Affairs appointed as such by the competent authority and mutatis-mutandis officers/teachers in the affiliated college / Institute / Center of excellence.

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* **In case of Campus "Director Administration"**
The Regulation approved by the Syndicate vide Resolution No. 104.3 (ix.x), dated 31st March, 2007.

* ***Amended by the Academic Council vide Resolution No. 97.18, dated 4th, June 2020 and approved by the Syndicate vide Resolution No.150.4 (iv), dated 11th July, 2020.***

4. Every Student shall Observe the Following:

(a) He / She must be faithful to his/her religious duties and respect the convictions of others in matters of religion and customs.

(b) Ile / She must be loyal to his/her country and refrain from doing anything which might lower its honor and prestige.

(c) He / She shall be truthful and honest in his/her dealings with all people.

(d) He / She must respect the elders and be polite to all specially to the women, the children, the old people, the weak and the helpless.

(e) He / She must respect his/her teachers and others in authority in the University.

(f) He / She must keep his/her mind clean and be clean in speech, sports and habits.

(g) He / She shall help his/her fellow beings especially those in distress.

(h) He / She must devote himself/herself faithfully to his/her studies and obey and follow the rules, instructions, guidelines issued by the University authorities from Lime to time.

(i) He / She must observe thrift and protect property.

5. No Student Shall:

(a) Smoke in his / her classroom, laboratory, workshop, library, examination hall or convocation hall, within any University building and during any academic functions/ academic activity.

(b) Consume alcoholic liquor or other intoxicating drugs within the University Campus or during the instructional, sports or cultural tours or survey camps or enter any such place or attend any such tour or camp while under the influence of such intoxicants.

(c) Organize or take part in any function within the University Campus, organize any club or society of students without prior permission from the University authorities.

(d) Invite any speaker without the permission of the University authorities.

(e) Indulge into activities against the Islamic and Pakistan Ideology or national solidarity.

(f) Indulge into activities promoting, prompting or involving violence or hatred or contempt.

(g) Affiliate himself / herself with any political party or group and organize or take part in holding political gatherings and invite any politician, expelled or rusticated or debarred students, and anti-social elements in the University Campus.

(h) Use pressure tactics or political or personal influence in seeking academic / non- academic favor concessions or financial benefits or in other matters concerning academic / non-academic and administrative functions of the University authorities.

(i) Copy or help others in copying in examination, or cause by any means any disturbance in examinations including harassment of any teacher or other staff member or staging of walkout / boycott by himself / herself or by forcing others to do so or appear in examination in place of a bonafide eligible candidate or manage an outsider for impersonation or take unauthorizedly the whole or part of answer book/script out of an examination premises or tear scripts or any part thereof or indulge in substitution of Answer nooks or influence any employee to indulge in any malpractices;

(j) Bring, keep or use any kind of weapon or firearms within the University Campus.

(k) Use or occupy fully or partially any room or any building of the University Campus without prior permission from universities authorities.

(l) Organize or take part in procession or meeting within the University Campus, prejudicial to the peaceful atmosphere of the University.

(m) Stage, incite, or participate in or abet any walk-out, strike, or any other form of agitation against the University or its employee.

(n) Collect any money or receive donations or pecuniary assistance for or on behalf of the University or any organization except with the written permission of the Vice- Chancellor or any other person authorized by him in this regard.

(o) Bring, keep, or use mobile phone during Examinations.

(p) Use mobile phone during class/practical or in the library without prior permission from the concerned authority.

(q) Commit any cyber offense against individuals or group of individuals or organization with a criminal motive to intentionally harm the reputation of the victim or cause physical or mental harm/loss, threaten a person or a nation's security or financial health, or loss, to the victim directly or indirectly, using modern telecommunication networks and mobile phones.

(r) Commit online defamation, harassment, threat and blackmailing via social networking sites such as Facebook, Twitter etc. against university or any employee of the University.

(s) Use official logo(s) of the University on any form without prior permission from the University authorities.

(t) Snatch any item, tease any male / female students, demonstrate indecent or immoral gestures / attitude towards any male/ female students on the Campus.

(u) Show indecent behavior during the class (including online class) and /or disturb Teacher or any other student of the class by any means

(v) Abuse/violate TT policies framed or to be framed from time to time.

6. Responsibi1ity to Maintain Discipline

The teachers and officers of the University or committees formed under them for the purpose and others concerned with the students in the University are responsible for the maintenance of discipline and order among the students, \ while under their charge, and for dealing with any disorderly behavior promptly in the manner prescribed by these regulations.

7. Discipline Committee

The Discipline Committee shall deal with serious cases of indiscipline requiring such actions as prescribed by Regulation 10.

8. Act of Indiscipline

A teacher or an officer in whose presence or in relation to whom an act of indiscipline is committed or who obtains knowledge of such an act on report or otherwise, shall deal with the case himself/herself as he/she may be competent as provided under the Regulation 10 below, and in other cases, he/she shall inform and recommend the case to the higher authorities/bodies for necessary action as prescribed.

9. Grounds of Penalties

(i) Any one or more of the penalties mentioned in Regulation 10 may be imposed on a student who is guilty of one or more of the following acts/ charges:

(a) commits breach of any of the clauses specified in Regulations 4 or 5 above; or

(b) disobeys the lawful order of a teacher or other person in authority in the University; or

(c) habitually neglects his/her work or habitually absents himself / herself from the class without reasonable cause; or

(d) willfully damages University property or the property of a fellow student or any teacher or any employee of the University; or

(e) does not pay the fees, fines or other dues livable under the University Regulations; or

(f) does not comply with the Regulations relating to the residence in the hostels or halls of residences.; or

(g) uses indecent language, wears immodest dress, makes indecent remarks or gestures or behaves in a disorderly manner; or

(h) commits any criminal, immoral or dishonorable act (whether commit within the University Campus or otherwise) which brings bad name to the University.

(ii) The penalty or penalties imposed shall be appropriate and proportional to the nature and gravity of the above act or acts.

10. Penalties

The penalties which may be imposed and the authority or authorities competent to impose each kind of penalty are specified below:

CATE-GORY	PENALTY	AN OFFICER OR AUTHORITY COMPETENT TO IMPOSE THE PENALTY
(A).	(i) Exclusion from classroom /laboratory/ field work/workshop for a period not exceeding one week from his / her own classes	Subject Teacher / Workshop Instructor
	(ii) Impose a fine up to Rs. 1000/-	-do-
(B).	(i) Exclusion from the games or the field for the day	ln charge concerned
	(ii) Exclusion from Study or sports tour or survey camp	-do-
(C).	Fine not exceeding Rs. 1,000/-	Teacher In Charge/Class Advisor or Superintendent of Workshop.
(D).	Taking any digital device, containing objectionable data, into custody.	ln charge concerned.
(E).	(i) Exclusion from the department for a period not exceeding one week.	Chairman/Chairperson of the Teaching Department/ Director of the Teaching Institute.
	(ii) Impose fine up to Rs. 3,000/-	-do-
	(iii) With-holding of issuance of character certificate.	-do-

CATE-GORY	PENALTY	AN OFFICER OR AUTHORITY COMPETENT TO IMPOSE THE PENALTY
(F).	Fine not exceeding Rs. 7,000/-	Advisor Students' Affairs or on the recommendation of Advisory Committee Member(s)
(G).	(i) Exclusion from the department for a period not exceeding two weeks.	Dean of concerned Faculty on recommendations of the concerned Departmental Committee.
	(ii) Suspension of admission from the University for a period specified or unspecified pending the final decision.	-do-
	(iii) Fine not exceeding Rs. I0,000/-.	Dean of concerned Faculty on recommendations of the concerned Departmental Committee.
(H).	(i) Fine not exceeding Rs. 25,000/-	Pro-Vice Chancellor; (i) on the recommendations of the Dean of the concerned and the concerned Departmental Committee. (ii) on the recommendations of the Advisory Committee.
	(ii) Exclusion from the department for a period not exceeding three weeks.	-do-
(I).	(i) Fine not exceeding Rs. l00,000/-	Vice Chancellor on the recommendations of Pro-Vice Chancellor/discipline committee / unfair means committee.
	(ii) Cancellation of examination or part there-of or debarring from appearing in any examination or part there-of	Vice-Chancellor on the recommendations of the Discipline Committee.
	(iii) Cancellation of remission of fee or University Scholarship.	Vice-Chancellor on the recommendations of the Pro-Vice Chancellor / Dean of the Faculty concerned/ Advisor Student Affairs
	(vi) Suspension or removal from position of authority in the University Sports	Vice-Chancellor on the recommendations of the Executive Committee of the University Sports Board
	(v) Rustication / Expulsion from the University for a period not exceeding one year	Vice-Chancellor on the recommendations of the Discipline Committee.
(J).	(i) Rustication/expulsion from university for a period exceeding one year	Syndicate 011 the recommendations of the Discipline Committee.
	(ii) Cancellation of admission from the University.	Syndicate on the recommendations of the Discipline Committee.
	(iii) With-holding issuance of any degree	Syndicate on the recommendations of the Discipline Committee.

Provided that the superior authorities shall be equally competent to impose lighter penalties with the competence of interior authorities as prescribed above.

11. Chance of Defense

No student shall be rusticated or expelled from the University unless he/she has been allowed a reasonable chance of defending the accusation against him/her provided that if the competent authority is satisfied it may take such an action under emergency to avoid any grave consequences.

12. Appeal against penalties

(i) An appeal against imposition of the penalties shall lie with the Vice-Chancellor, provided that where the penalty has been imposed by the Vice-Chancellor, himself: an appeal shall lie with the Syndicate.

Provided that when a penalty has been imposed by the Syndicate, an application for review can be made to the Syndicate.

(ii) No appeal by a student under these Regulations shall be entertained unless it is presented within two weeks from the date on which the decision is communicated to him/her, provided that the Vice-Chancellor may for valid reasons condone delay in any individual case.

13. Compensation

The Vice-Chancellor or any teacher or officer duly authorized by the Vice Chancellor / Principal / Director of the Affiliated Colleges / Institutes / Center of Excellence may direct a student to pay compensation for any loss or damage to property belonging to the University or to fellow student or to an employee of the University, caused by willful act or gross negligence of the student and if the student does not pay such compensation within a reasonable time, competent authority, as the case may be, may take suitable action against him / her for indiscipline and impose upon him/her any of the penalties prescribed by Regulation 10 above.

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

(A) FOR PRE-ENGINEERING, PRE-MEDICAL AND GENERAL SCIENCE GROUPS

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

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----------

(B) FOR OTHER GROUPS

General Instructions

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

Part I: English 25 Questions

- Vocabulary
- Grammar
- Comprehension
- Sentence correction

Part II: General Mathematics 30 Questions

- Sets and series problems
- Algebraic problems
- Arithmetic problems
- Geometric and trigonometric problems

Part III: General Science 25 Questions

- Physics
- Chemistry
- Biology
- Computer Science

Part IV: Intelligence Quotient (IQ) 20 Questions

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

1. I _____ tennis every Sunday morning.

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

Comprehension

A man is known by the book he reads as well as by the company he keeps; for there is a companionship of books as well as of men and one should always live in the best company, whether it be of books or of men.

A good book may be among the best of friends. It is the same today that it always was, and it will never change. It is the most patient and cheerful of companions. It does not turn its back upon in times of adversity or distress. It always receives us with the same kindness; amusing and interesting us in youth, comforting and consoling us in age.

1. Which of the following would be the most appropriate title for the given passage?

a) Books show the reader's character
b) Books as man's abiding friends
c) Books are useful in the youth
d) The importance of books in old age

Sentence Correction

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

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

Part II

General Mathematics

Sets and Series Problems

1. If A = {a, b, c, d} then how many subsets of A can be formed?

a) 16
b) 32
c) 12
d) 8

Algebraic Problems

2. If P(x) = 3x2+(k-1)x+9 and P(3) = 0; then k = ?

a) – 13
b) 11
c) 13
d) – 11

Arithmetic Problems

3. If the ratio of two numbers is 8:3, and their difference is 25. Then what are the two numbers?

a) 15 and 40
b) 17 and 42
c) 20 and 45
d) 22 and 47

Geometric and Trigonometric Problems

4. In a right-angle triangle, the highest possible measure of an angle is ___ degrees.

a) 90
b) 180
c) 60
d) 180

Part III

General Science

Physics

1. The product of mass and velocity is called:

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

Chemistry

2. The Chemistry of Carbon is Called:

a) Organic Chemistry
b) Inorganic Chemistry
c) Physical Chemistry
d) Pharmaceutical Chemistry

Biology

3. Which blood cells are called 'Soldiers' of the body?

a) WBC
b) Platelets
c) RBC
d) All of the above

Computer Science

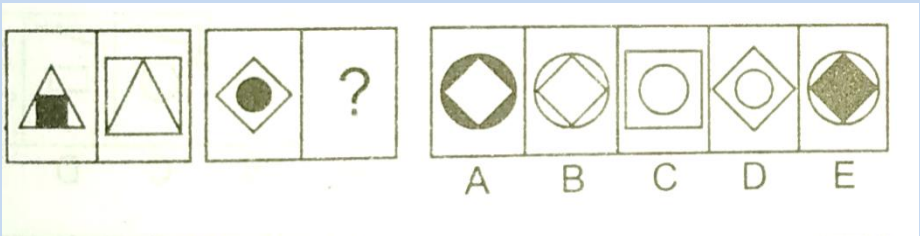
4. Keyboard is a:

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

Part IV

Intelligence Quotient (IQ)

1. Find the missing pattern in the next pair.



2. Which three words have the same meaning?

i. Information; ii. Indoctrinate; iii. Brainwash; iv. Convince; v. Class

a) ii; iii; iv
b) i; iii; iv
c) iii; iv; v
d) i; ii; iv

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

MEHRAN UNIVERSITY OF ENGINEERING & TECHNOLOGY, JAMSHORO

INSTRUCTIONS & ADMISSION SCHEDULE SESSION 2023-24

Undergraduate Program (23-Batch)

All the candidates who have qualified the Pre-admission Test of this University, are hereby advised in their own interest to **read the following INSTRUCTIONS very carefully**. Those having their names appear in the Interview Call List / First Provisional Merit List should also note down the schedule for their personal appearance to submit their original documents, interview and admission.

1. All the pre-admission test qualified candidates shall enter **their obtained marks of HSC-I/ DAE/IBCC or Equivalent and upload their Marks Certificates of HSC-I/DAE or Equivalent/IBCC Equivalency Certificates within three days of the announcement of their result** on their respective accounts on the Admissions Portal of the University. All those who fail to follow the above conditions shall be excluded from the General Merit List / First Provisional Interview Call List.

2. The **Data Record (Provisional General Merit List)** of all the candidates will be displayed on the website of the Directorate of Admissions: **admissions.muet.edu.pk** once their obtained marks of HSC-I /DAE / IBCC or Equivalent are uploaded. If any of the candidates wants to make correction(s) in his / her Data Record, may contact Admissions Office soon after publication of Provisional General Marit List.

3. The **First Provisional Merit Interview Call List** for each category under Regular and Self-finance Schemes will be notified and displayed on the official websites of the University: **admissions.muet.edu.pk**; **muet.edu.pk**.

4. Each candidate shall then be required to appear before the Admissions Committee of the University for an interview at Mehran UET, Jamshoro campus on specific date and time as per schedule displayed on the Admissions website to choose the discipline of his / her choice from the available seats in their respective categories. **Each candidate shall report personally along with a parent / a guardian for his / her interview according to the order of the Interview Call List.**

5. All the candidates must bring **ALL** the following **ORIGINAL** documents (including previous and improved/changed group marks certificates, if available) along with photocopies of the documents as mentioned on the date and time according to the schedule. Candidate should come prepared to choose the discipline. No candidate in any circumstances will be entertained with short of the any of the following documents:

a)	**SSC or Equivalent Marks Certificate**	**Original – (to be retained) and one attested photocopy**
b)	**HSC-I/DAE or Equivalent Marks Certificate**	**Original – (to be retained)** and one attested photocopy
c)	**IBCC Equivalency Certificate** *(For foreign examinations)*	**Original – (to be retained)** and one attested photocopy
d)	**Domicile Certificate of Candidate**	**Original – (to be retained)** and one attested photocopy
e)	**PRC (Form-C) of Candidate**	**Original – (to be retained)** and one attested photocopy
f)	**CNIC / B-Form**	**Original** and one attested photocopy
g)	**Affidavit and Physical Fitness Certificate***	**Original – (to be retained)**
h)	**Hifz-e-Quran Sanad** (*for Hafiz*)	**Original – (to be retained)** and one attested photocopy

* The specimen of the Affidavit and Physical Fitness Certificate proformas can be downloaded from Admissions Website.

6. If any of the candidates is unable to attend the interview in case of ***exceptional circumstances*** shall contact the Directorate of Admissions at least 24 hours prior to his / her interview date. He/ She shall be required to present the proof of his / her absence. The candidate if allowed, must authorize (authority letter) any of his parents/ guardians to appear and carryout all decisions/formalities in the interview on his / her behalf. The authority letter must contain specimen signature of the candidate and a copy of CNIC.

7. All the candidates/parents shall bear in mind that they are appearing in the interview with their own consent and they shall wear mask as precautionary measure to avoid any infection while traveling to / from the university, during interview, and after they leave the university premises.

8. If any of the candidates reports after his / her scheduled final reporting time, University authority may consider him / her for admission on merit against leftover seats under respective category at the end of the day.

9. If any of the candidate does not report on his / her scheduled day, the University authority may consider him / her for admission on merit against leftover seats in subsequent lists of respective categories.

10. The candidates who do not appear for interview on the specified schedule dates for any category shall not be considered for admission and his / her name shall be deleted from the Merit List.

11. All candidates should bring **CASH (Payment shall be made on spot)** to deposit the following fees (whichever applicable) on the day of interview:

Discipline	Regular Scheme*	Self-Finance Scheme*	BS Programs*
Fee	**Rs. 69,350/-**	**Rs. 49,350/-**	**Rs. 73,850/-**

* Library fee amounting to Rs. 300 is also included in the total fee at the time of admission.

Note: For the purpose of reference the printed documents related to admission (e.g., Prospectus, Merit List, and Admission Schedule etc.) shall be quoted in case of any objections / claims. No telephonic or personal statements shall be considered relevant in any of such claims. The University will not be responsible for any infection to any of the candidates / parents / guardians appear in the interview.

Director Admissions

Contact: 022 2771704
Email: admissions@admin.muet.edu.pk