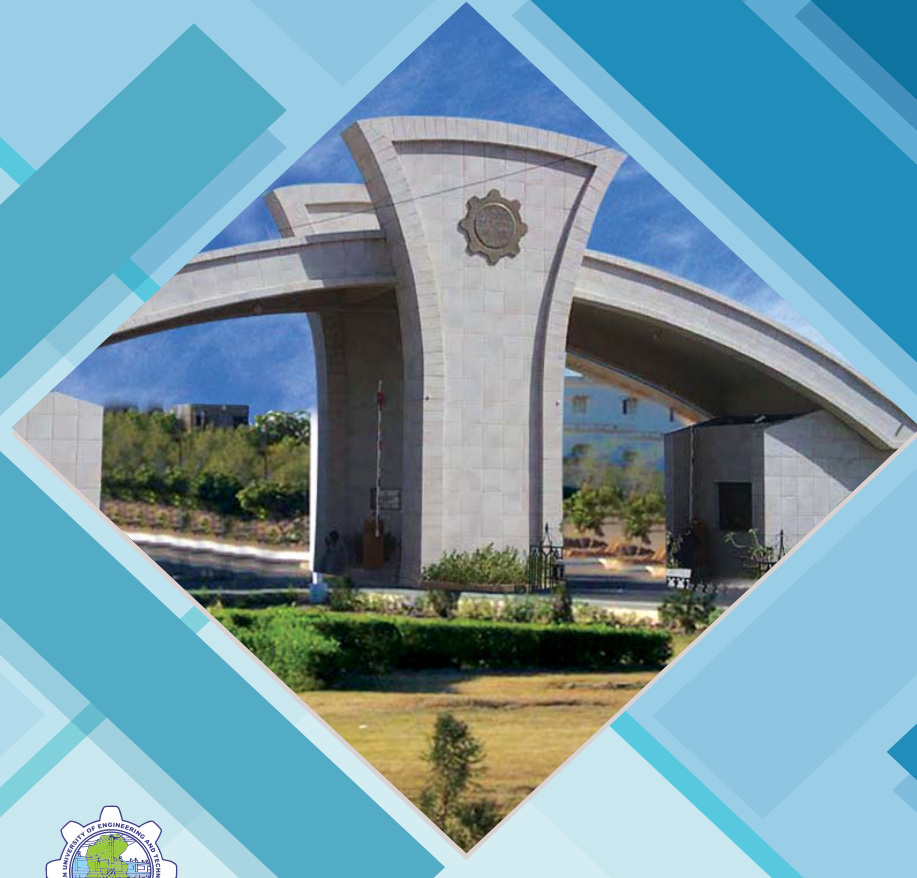
PROSPECTUS

Bachelor's Degree Program

2018-19



ISO 9001 Certified

MEHRAN UNIVERSITY
OF ENGINEERING & TECHNOLOGY
JAMSHORO, SINDH, PAKISTAN

www.muet.edu.pk

Acknowledgment

All Photographs in this Prospectus feature our current students. We'd like to thank them for their involvement.

Disclaimer

The information in this prospectus is correct at the time of publishing. The Institute reserves the right to add or remove courses and to make changes in syllabuses, courses options and modules, fees etc. without prior notice. 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 or for alternative formats of this prospectus please contact us on admissions@admin.muet.edu.pk

PROSPECTUS 2018

For Undergraduate Studies
in
Engineering, Architecture and City & Regional Planning
SESSION 2018-19
MEHRAN UNIVERSITY OF ENGINEERING AND TECHNOLOGY, JAMSHORO
and
SHAHEED ZULFIQAR ALI BHUTTO (SZAB) CAMPUS, KHAIRPUR MIR'S

MEHRAN UNIVERSITY OF ENGINEERING & TECHNOLOGY

Vision, Mission & Quality Policy

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 ensure that every individual working for or studying in the university shall comply with the University Act, Statutes, Regulations and Rules.

3. Stakeholders Focus

University consider 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.

OUR MAJOR ACHIEVEMENTS

UNIVERSITY OF TODAY – WORKING FOR TOMORROW

- Ranked amongst top 400 engineering universities of the world in 2010
- Ranked 2nd best public sector engineering university of country and 1st in Sindh province
- 14 Patents registered
- Lifelong Learning Resource Centre Established
- FM Radio Frequency 96.2 Allotted
- Five start-up Companies Registered
- Launching of Mechatronics Engineering Program
- 150+ 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 (www.muet.edu.pk/sites/default/files/MUET-Gender-Policy-Statement.pdf)

LOCATION PLAN

ISO 9001 Certified

MEHRAN UNIVERSITY OF ENGINEERING & TECHNOLOGY, JAMSHORO

ACADEMIC CALENDAR 2019

ACADEMIC AND EXAMINATION SCHEDULE FOR 15 (Arch), 16, F-16, 17 & 18 BATCHES

Duration of a Semester	
Teaching: (including Mid Semester Exam) :	16 weeks
Final Examination Preparation:	02 weeks
Final Examination conduct :	04 weeks
Total	**22 weeks**

Two Semester Duration:	22x2 = 44 weeks
Summer Vacation:	06 weeks
Winter Vacation:	02 weeks
Total	**52 weeks**

Minimum attendance requirement to be eligible to appear in the Semester Examination is 75%
Minimum number of Lectures during the Semester in a subject of 3 CH shall be 45. Minimum number of contact hours for a practical of 1 CH per Semester is 45.

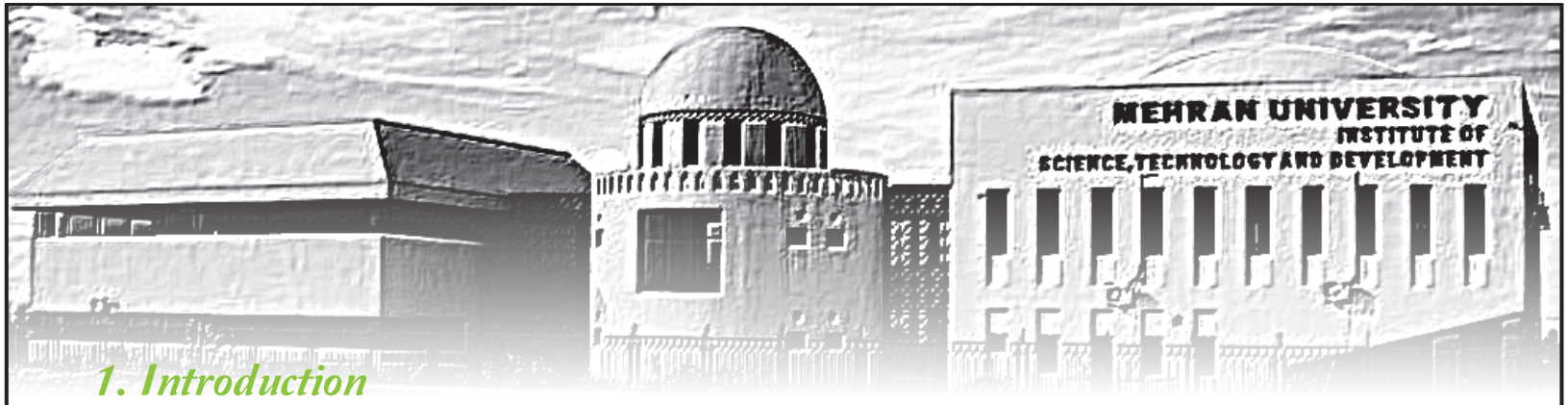
FALL SEMESTER

Batch & Semester	18-Batch (1st Semester) 17-Batch (3rd Semester) F-16-Batch(5th Semester) 16-Batch (7th Semester) 15-Batch (Arch) 9th Semester
Date of Start of Classes	15-10-2018
Conduct of Mid Semester Exam	10-12-2018
WINTER VACATION : 22-12-2018 TO 06-01-2019	
Date of suspension of classes	15-02-2019
Schedule of Examination	18-02-2019
Display of Sessional Marks	22-02-2019
Examination Preparation up to	27-02-2019
Conduct of Final Semester Exam	28-02-2019
Announcement of results (Expected)	24-06-2019

SPRING SEMESTER

Batch & Semester	18-Batch (2nd Semester) 17-Batch (4th Semester) F-16-Batch (6th Semester) 16-Batch (8th Semester) 15-Batch (Arch) 10th Semester
Date of Start of Classes	01-04-2019
Conduct of Mid Semester Exam	20-05-2019
SUMMER VACATION 24-05-2019 TO 07-07-2019	
Date of suspension of classes	30-08-2019
Schedule of Examination	03-09-2019
Display of Sessional Marks	06-09-2019
Examination Preparation up to	10-09-2019
Conduct of Final Semester Exam	11-09-2019
Announcement of results (Expected)	08-12-2019

TABLE OF CONTENTS



1. Introduction

1.1 The University

The Mehran University is a distinctive, pioneering and connected university that shapes the future through educating and empowering people to meet the real challenges of tomorrow.

Industrial and technological development in Pakistan has been quite rapid since its independence and particularly during the sixties and seventies. The main fields of development have been related to the enhancement of agriculture, establishment and up-gradation of industries and exploration of its indigenous resources. This development has resulted in increased demand for qualified engineers in different fields in addition to other professionals. In order to meet this demand and to provide an opportunity of engineering education to the people hailing from the interior of Sindh Province, Sindh University Engineering College was established in 1963 as a constituent college of University of Sindh in Jamshoro about 15 km. from Hyderabad on the right bank of River Indus.

The Education Policy of 1972 provided for up-gradation of the Sindh University Engineering College to the level of a University of Engineering and Technology. Accordingly, the college was first declared as an additional campus of the University of Sindh in July, 1976 and later upgraded to the level of a full-fledged independent University on the 1st March, 1977 named as Mehran University of Engineering and Technology (Mehran UET), Jamshoro.

Mehran UET is one of the most engaged, supportive and responsive universities in Pakistan which focuses on making higher education and research accessible and relevant to all people of Sindh Province in particular and Pakistan in general. The University has continued to put in efforts to address community engagement opportunities, financial sustainability and growth, improvement in teaching and learning and research excellence, program up gradation and expansion into new discipline areas. Mehran UET believes that this scrutiny is an opportunity to provide the public with a confirmation of high standards in academic quality and student centered and holistic approach to education. This University is proud to claim that the students are getting the high-quality education which they expect and deserve.

Mehran UET is becoming a role model to other universities with desire to grow and flourish through engagement. This University is achieving this by working more closely with students, communities, industries, regional employers and with government at all levels. This year is Golden Jubilee celebration of Mehran UET. It is a dream of every individual at Mehran UET that with the dedicated, committed and motivated team who work together to reaffirm and pledge on the occasion of Golden Jubilee celebrations to keep up the name of the University as has been the tradition. Over the years, Mehran UET has focused on four core elements: becoming a national leader in the quality of our academic programs; being universally recognized for the quality of the learning experience; creating an environment that truly values and is enriched by pluralistic diversity; and expanding the mission to address our society's most challenging needs.

The end product of the University is academic excellence, measured by the quality of the research, scholarship, and graduates it produces along with their collective impact on the society at large. To be a leader of Public Sector Universities, the prevailing culture demands excellence in all endeavors, this can only be achieved when all parts of the University administration, faculty, staff, and students, and alumni are committed to the highest standards of performance.

1.2 Officers Of The University

Following are the main officers of the University, responsible for overall administration, academic activities and development work in the University.

Post	Name	Phone
Vice-Chancellor	*Prof. Dr. Muhammad Aslam Uqaili*	*022-2771197*
Pro-Vice-Chancellor, Main Campus, Jamshoro	*Prof. Dr.Tauha Hussain Ali*	*022-2771360*
Pro-Vice-Chancellor, MUET, SZAB, Khairpur Mir's Campus	*Prof. Dr. Mukhtiar Ali Unar*	*0243-714005*
Dean, Faculty of Architecture and Civil Engineering	*Prof. Dr. Khan Mohammad Brohi*	*022-2771638*
Dean, Faculty of Electrical, Electronic & Computer Engineering	*Prof. Dr. Bhawani Shankar Choudhary*	*022-2771558*
Dean, Faculty of Engineering	*Prof. Dr.Muhammad Moazam Baloch*	*022-2771312*
Dean, Faculty of Science, Technology & Humanities	*Prof. Dr. Abdul Sami Qureshi*	*022-2771352*
Registrar	*Prof. Dr. Abdul Waheed Umrani*	*022-2771371*
Director Finance	*Mr. Muneer A. Shaikh*	*022-2771442*
Controller of Examinations	*Mr. Suhail Ahmed Khatian*	*022-2771631*
Director Admissions	*Prof. Dr. Agha Faisal Habib*	*022-2771704*
Provost Hostels	*Prof. Ghulam Abbas Mahar*	*022-2772299*
Director Works & Strategic Planning	*Mr. Saghir Ahmed Memon*	*022-2771311*
Director Services / Incharge Transport Section Strategic Planning	*Mr. Qazi Riaz Hassan Qureshi*	*022-2109073*
Resident Auditor	*Mr. Muhammad Ashraf Abro*	*022-2772285*
Incharge Librarian	*Mr. Azam Ali Halepota*	*022-2771169*

FACULTY OF ARCHITECTURE AND CIVIL ENGINEERING

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 includes environmental consideration for both urban and sub-urban setting. Studies in Architecture are related to 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 to acquaint the students with basic planning, aesthetics, design and drawing of plans and specification of various buildings. At the same time, some subjects concerning the basic Architectural design including Computer Aided Design (CAD) and socio-economic design are also included in the curriculum. Teachings through lectures in the class rooms are adequately supported by studios and laboratory work.

Seminar Hall & Seminar Library have also been established to conduct the seminars and reference facilities in the department. In addition, frequent field visits are organized for the students to keep them abreast with 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 design, 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 of all examinations and tests for practical work.

2.1.2 The Faculty

Chairman of the Department
Prof. Muhammad Hashim Jokhio
Phone: 022-2772293 Ext: 3100

Assistant Professors	
Mr. Muhammad Hashim Jokhio	B.Arch. Pakistan
Mr. Abdul Rehman Halepoto	Pg.D., M.A(Sociology), Pakistan
Mr. Muazam Ali Pathan	Pg.D. Pakistan
Mr. Muhammad Afzal Brohi	B.Arch. Pakistan
Dr. Sabeen Qureshi	Ph.D. Malaysia
Mr. Irfan Ahmed Memon	Pg.D,M.A Sociology, IR, Economics Pk.
Ms. Raheela Laghari	M.E. Pakistan
Ms. Shahnila Ansari	M.E. Pakistan

Lecturers:	
Ms. Khalida Baloch	Pg.D. Pakistan
Ms. Fareeda Mughari	B.Arch. Pakistan
Mr. Abdul Waheed Memon	Pg.D, M.A(Sociology) Pakistan
Ms. Naheed Rohail	M.E. Pakistan
Mr. Abdul Salam Talpur	Pg.D, M.A(Economics) Pakistan
Ms. Firdous Parveen	Pg.D. Pakistan

2.1.3 Laboratory Facilities

The numbers of laboratories have been established in the department, which include;

1. Model Making Lab
2. Computer Graphics Lab
3. Computer Lab
4. Photographics Lab
5. Surveying and Environment Materials Lab

2.1.4 Courses

Course Code	Subject Name	Credit Hours	
1st Semester		Theory	Practical
AR 111	Foundation Studio-I	02	04
AR 112	Visual Communication	02	04
AR 113	Sociology	02	00
SS 111	Islamic Studies/Ethics	02	00
PS 106	Pakistan Studies	02	00
	Total	**10**	**08**

Course Code	Subject Name	Credit Hours	
2nd Semester		Theory	Practical
AR 121	Foundation Studio-II	02	04
AR 122	Building Materials-I	02	00
AR123	Model Making	00	03
CE 135	Surveying	02	01
EN 101	Functional English	03	00
	Total	**09**	**08**

Course Code	Subject Name	Credit Hours	
3rd Semester		Theory	Practical
AR 211	Architectural Design-I	02	04
AR 212	Building Materials-II	02	00
AR 213	Physical Environmental Studies	02	00
AR 214	History of Art & Architecture-I	03	00
AR 215	Computer Aided Design-I	00	02
CE 250	Statics	02	00
	Total	**11**	**06**

Course Code	Subject Name	Credit Hours	
4th Semester		Theory	Practical
AR 221	Architectural Design-II	02	04
AR 222	Building Construction-I	02	00
AR 223	Building Services-I	03	00
AR 224	History of Art & Architecture-II	03	00
AR 225	Computer Aided Design-II	00	02
AR 226	Structure In Architecture-I	02	00
	Total	**12**	**06**

Course Code	Subject Name	Credit Hours	
5th Semester		Theory	Practical
AR 311	Architectural Design-III	02	04
AR 312	Building Construction-II	02	00
AR 313	Building Services-II	02	00
AR 314	History of Art & Architecture-III	03	00
AR 315	Computer Aided Design-III	00	02
AR 316	Structure in Architecture-II	02	00
	Total	**11**	**06**

Course Code	Subject Name	Credit Hours	
6th Semester		Theory	Practical
AR 321	Architectural Design-IV	02	04
AR 322	Working Drawings & Details-I	00	03
AR 323	Landscape Design	02	01
AR 324	Muslim Architecture	02	00
AR 325	Theories & Criticism in Architecture	02	00
AR 326	Structure in Architecture-III	02	00
	Total	**10**	**08**

Course Code	Subject Name	Credit Hours	
7th Semester		Theory	Practical
AR 411	Architectural Design-V	02	04
AR 412	Working Drawings & Details-II	00	03
AR 413	Interior Design	02	01
AR 414	Architecture in Pakistan	02	00
AR 415	Buildings Economics	02	00
AR 416	Structure in Architecture-IV	02	00
	Total	**10**	**08**

Course Code	Subject Name	Credit Hours	
8th Semester		Theory	Practical
AR 421	Architectural Design-VI	02	04
AR 422	Urban Planning & Design-II	03	00
AR 423	Energy Efficient Architecture	03	02
AR 424	Architectural Conservation	02	01
AR 425	Architectural Research Methods	03	00
	Total	**13**	**05**

Course Code	Subject Name	Credit Hours	
9th Semester		Theory	Practical
AR 511	Architectural Design-VII	02	04
AR 512	Research & Development project -I (Thesis Report)	00	05
AR 513	Sustainable Architecture	03	00
CE 510	Quantity Surveying & Accounting	03	00
	Total	**08**	**09**

Course Code	Subject Name	Credit Hours	
10th Semester		Theory	Practical
AR 521	Research & Development Project-II (Thesis Report)	00	10
AR 522	Disaster Management	02	00
AR 523	Professional Practice & Management	02	00
	Total	**04**	**10**

2.1.5 Career Opportunities (Govt: Organization +Private & Self)

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 human kind through construction of various structures. It applies engineering practices to the planning, design, 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 of the University is the largest discipline in terms of student enrollment and faculty. It provides essential and advance engineering education according to the requirements of field. The various fields of specialization are introduced to the final year students by assigning them a thesis project. The thesis projects may be specific to a particular branch of Civil Engineering like Structural Engineering, Geotechnical Engineering, Irrigation Engineering, Highway Engineering and Construction Management etc.

The curriculum is designed to cover the wide range of various sub discipline of the department including Structural Engineering, Concrete Technology, Geotechnical Engineering, Foundation Engineering and Design, Irrigation & Drainage Engineering, Transportation Engineering, Environmental Engineering, Construction Engineering, Construction Project Management

etc. The course is designed to keep the present demands of construction industry by involving the industry's expert professionals. Theory classes of different subjects are complemented by tutorials and laboratory works, for which adequate facilities with equipment have been established. In addition, the students are taken to field visits of the Civil Engineering projects such as water distribution structures, bridge & building structures, road construction works, geotechnical works etc. During the summer vacations the students are also sent on various Civil Engineering projects in the form of internship to the organizations such as WAPDA, NESPAK, NHA, C&W Department, Irrigation Department, etc. This is to expose them to practical engineering knowledge being actually implemented.

The department has a well-organized student's based society which is actively engaged in conducting several curriculum & extra curriculum activities such as seminars, workshops, trainings, short courses, sports events, debates, competitions etc.

The Department also offers various postgraduate degrees such as Master of Engineering (ME.), Master of Philosophy (M.Phil.) and Doctor of Philosophy

(Ph.D.) in the following fields.

- Civil Engineering
- Structural Engineering
- Geotechnical and Highways Engineering
- Construction Management

The department has recently moved on Outcome Based Education (OBE) system in order to meet the criteria of Pakistan Engineering Council (PEC) as per Washington Accord. All the class tests, class & field assignments and semester exams are being assessed on the basis of specific course learning objectives associated with each course. This student centric approach focuses on outcomes from individual student by the end of the course.

All the class rooms of the department are equipped with multimedia tools. The laboratories are equipped with the latest equipment and tools and are supervised by the highly experienced faculty and technical staff.

2.2.2 The Faculty

Chairman of the Department

Dr. Aneel Kumar
Phone: 022-2772254-72 Ext. no 7100

Professors	
Dr. Abdul Sami Qureshi	Ph.D. Germany
Dr. Tauha Hussain. Ali	Ph.D.Australia
Dr. Aneel Kumar	Ph.D. Japan
Dr. Rizwan Ali Memon	Ph.D. Pakistan
Dr. Khalifa Qasim Laghari	Ph.D. Pakistan
Dr. Nafees Ahmed Memon	Ph.D.Romanin
Dr. Safi Muhammad Kori	Ph.D Pakistan
Dr. Zubair Ahmed Memon	On Lien Ph.D.Malaysia
Dr. Kamran Ansari	On Lien Ph.D. United Kingdom
Dr. Ashfaque Ahmed Memon	Ph.D. Pakistan
Dr. Agha Faisal Habib	Ph.D.United Kingdom
Dr. Zaheer Ahmed Almani	Ph.D. United Kingdom
Dr. Pervez Shaikh	Ph.D. Pakistan
Dr. Fareed Ahmed Memon	Ph.D.Malaysia
Dr. Naeem Aziz Memon	Ph.D. United Kingdom

Associate Professors:	
Dr. Ashfaque Ahmed Pathan	Ph.D. Pakistan

Assistant Professors:	
Mr. Ghulam Hussain Mahesar	P.Gd. Turkey
Mr. Jawaid Kamal Ansari	M.E. Pakistan
Mr. Arshad Ali Memon	M.E. Pakistan
Mr. Samar Hussain Rizvi	M.E. Pakistan
Mr. Azizullah Jamali	M.E. Pakistan
Mr. Amjad Ali Pathan	M.E. Pakistan

Lecturers:	
Mr. Shabir Hussain Khero	On Lien M.E. Malaysia
Mr. Masroor Ali Jatoi	PGD. Pakistan
Mr. Farhan Qureshi	M.E. Pakistan
Mr. Ali Murtaza Phull	M.E. Pakistan
Mr. Abdul Raqeeb Memon	PGD. Pakistan
Mr. Ali Raza Khoso	M.E. Pakistan
Mr. Fahad Ali Shaikh	M.E. Pakistan
Mr. M. Abu Bakar Shaikh	M.E. Pakistan
Mr. Fida Hussain Siddiqui	M.E. Pakistan
Mr. Anees Raja	B.E. Pakistan
Mr. M. Rehan Hakro	M.E. Malaysia
Mr. Lal Chand	B.E. Pakistan
Mr. Shankar Lal Meghwar	M.E. Pakistan
Mr. Muhammad Ali Moriyani	B.E. Pakistan
Mr. Awais Ahmed Mirza	B.E. Pakistan
Mr. Anees Ahmed Vighio	B.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 Courses

Course Code	Subject Name	Credit Hours	
1st Semester		Theory	Practical
CE102	Geometrical Drawing	02	01
CE106	Civil Engineering Materials	03	01
CE116	Engineering Mechanics	03	01
FE101	Functional English	03	00
CS146	Introduction to Computing &Programming	02	01
	Total	**13**	**04**

Course Code	Subject Name	Credit Hours	
2nd Semester		Theory	Practical
CE111	Surveying-I	03	01
MTH108	Applied Calculus	03	00
SS111/SS104	Islamic Studies / Ethics	02	00
PS106	Pakistan Studies	02	00
CE121	Civil Engineering Drawing	02	01
CE125	Engineering Geology	03	01
	Total	**15**	**03**

Course Code	Subject Name	Credit Hours	
3rd Semester		Theory	Practical
CE202	Surveying-II	03	01
CE206	Transportation Engineering	03	00
CE211	Strength Materials-I	03	00
MTH 204	Differential Equations, Fourier Series and Laplace Transforms	03	00
CE226	Fluids Mechanics and Hydraulics	03	01
	Total	**15**	**02**

Course Code	Subject Name	Credit Hours	
4th Semester		Theory	Practical
CE221	Theory of Structures	03	00
CE240	Applied Hydraulics	03	01
CE231	Construction Engineering	03	00
CE250	Strength of Materials II	03	00
MTH206	Complex Analysis, Statistical Methods and Probability	03	00
CE246	Architectural and Town Planning	02	00
	Total	**17**	**01**

Course Code	Subject Name	Credit Hours	
5th Semester		Theory	Practical
MTH303	Linear Algebra and Numerical Methods	03	01
CE306	Structural Analysis	03	00
CE345	Plain and Reinforced Concrete	03	01
CE350	Environmental Engineering –I	02	01
CE355	Project Management	02	00
	Total	**13**	**03**

Course Code	Subject Name	Credit Hours	
6th Semester		Theory	Practical
CE360	Hydrology	02	01
CE326	Soil Mechanics	03	01
CE336	Reinforced and Pre-Stressed Concrete	03	01
CE316	Steel Structures	03	00
CE360	Highway and Traffic Engineering	03	01
	Total	**14**	**04**

Course Code	Subject Name	Credit Hours	
7th Semester		Theory	Practical
CE406	Structural Design and Drawing	03	01
CE411	Geotechnical Engineering	03	01
CE416	Irrigation Engineering	03	01
CE445	Quantity Surveying and Estimation	03	00
CE499	Project / Thesis-I	03	00
	Total	**15**	**03**

Course Code	Subject Name	Credit Hours	
8th Semester		Theory	Practical
CE426	Foundation Engineering	03	00
CE431	Environmental Engineering-II	03	00
CE436	Construction Planning& Management	03	00
CE441	Drainage Engineering	02	00
CE499	Project / Thesis-II	03	00
	Total	**14**	**00**

2.2.5 Career Opportunities

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. The BE program at MUET, Jamshoro provides a clear route to a professional career in Civil Engineering.

2.3 DEPARTMENT OF CITY & REGIONAL PLANNING

2.3.1 The Department

In order to meet the ever-increasing demand for qualified Urban and Regional planners, to provide better and pollution-free living environment to 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 aim of the program is to produce Urban and Regional Planners with the interdisciplinary skills to meet the demands of rapidly increasing cities which can meet the sustainable development and planning millennium goals.

Keeping in view the baseline curriculum prepared by the National Curriculum Revision Committee constituted by the Higher Education Commission (HEC), the curriculum was revised and updated for 13-Batch and onwards, to bring it in line with local, national and international requirements and to introduce innovation to ensure quality of education and uniformity of curriculum in Pakistani universities, which is also in accordance with the recommendations of the Pakistan Council of Architects and Town Planners (PCATP).

The curriculum is designed in such a way that it involves a wide spectrum of activities regarding the preparation of master plans and development plans for villages, towns, cities and regions. To provide the practical knowledge, the study visits of different towns and cities are conducted to collect the primary data about the physical, social and economic aspects of housing, infrastructure, traffic and transportation, slums and katchi-abadies, etc. It also involves analysis, preparation and implementation of proposed policies, programs and plans for improvement of old urban areas and development of new settlements at both urban and regional levels.

Faculty of Architecture and Civil Engineering

On successful completion of the entire requirement for the degree, the students will be awarded the degree of Bachelor of City and Regional Planning (B.CRP). Four batches are admitted in year 2015, 2016, F-2016 & 2017 respectively. The department also offers the degree of Masters (M.CRP) and Doctor of Philosophy (Ph.D) in the field of City and Regional Planning.

Objectives of the Department

Following are the main objectives of the Department:

- To provide world-class advanced education knowledge and skills in the field of City and Regional Planning;
- To conduct outstanding technical basis and applied research in the field of City and Regional Planning profession;
- To provide professional in various streams of specializations in City and Regional Planning.

2.3.2 The Faculty

Chairman of the Department:

Dr. Imtiaz Ahmed Chandio
Tel: +92 (0) 22 2772294 Ext:7200

Associate Professor:	
Dr. Imtiaz Ahmed Chandio	Ph.D. Malaysia
Dr.Mir Aftab Hussain Talpur	Ph.D. Malaysia
Assistant Professors:	
Dr. Saima Kalwar	Ph.D. Malaysia
Mr. Fahad Ahmed Shaikh	M.CRP. Pakistan
Mr. Noman Sahito	M.CRP. Pakistan (On Study Leave)
Lecturer:	
Mr. Naveed Agro	B.CRP. Pakistan (On Study Leave)
Mr.Taufique Ahmed Qureshi	B.CRP. Pakistan (On Study Leave)
Mr. Irfan Ahmed Memon	M.CRP. Malaysia (On Study Leave)

Mr. Muhammad Yousif Mangi	B.CRP. Pakistan (On Study Leave)
Mr. Ubedullah Soomro	B.CRP. Pakistan
Mr. Shahbaz Khan	B.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 Courses

Course Code	Subject Name	Credit Hours	
1st Semester		Theory	Practical
CRP111	Introduction to Planning	03	01
CRP112	Technical Drawing	02	02
MATH110	Calculus & Statistical Methods	03	00
SS111	Islamic Studies / Ethics	02	00
PS106	Pakistan Studies	02	00
AR154	Model Making	00	02
	Total	**12**	**05**

Course Code	Subject Name	Credit Hours	
2nd Semester		Theory	Practical
CRP121	Socio-economic Aspects of Planning	03	00
CRP122	Architectural Design for Planners	02	02
CE120	Surveying-I	03	01
MATH 114	Planning Data Analysis	03	00
ENG 111	Functional English	03	00
	Total	**14**	**03**

Course Code	Subject Name	Credit Hours	
3rd Semester		Theory	Practical
CRP 211	History of Urban Planning	03	00
CRP212	Transportation Engineering	03	01
CRP213	Construction Technology	03	01
CE 201	Surveying-II	03	01
CRP214	Communication Skills & Report Writing	02	00
	Total	**14**	**03**

Course Code	Subject Name	Credit Hours	
4th Semester		Theory	Practical
CRP 221	Planning Law	03	00
CRP 222	Housing	03	00
CRP223	Transportation Planning	03	01
CRP224	Mapping & Remote Sensing	03	01
CRP 225	Computer Aided Design	02	01
	Total	**14**	**03**

Course Code	Subject Name	Credit Hours	
5th Semester		Theory	Practical
CRP 311	Urban Renewal	02	01
CRP 312	Planning Techniques	03	00
CRP313	Site Planning and Urban Design	03	01
CRP314	Environmental Engineering	03	01
CRP315	Information & Database Management	02	01
	Total	**13**	**04**

Course Code	Subject Name	Credit Hours	
6th Semester		Theory	Practical
CRP 321	Research Methods	03	00
CRP 322	Planning of New Towns	03	01
CRP 323	Rural Planning	02	01
CRP 324	Environmental Planning & Management	03	01
CRP 325	Introduction to Geographical Information System	02	01
	Total	**13**	**04**

Course Code	Subject Name	Credit Hours	
7th Semester		Theory	Practical
CRP 411	Master Planning-I	02	01
CRP 412	Landuse & Building Control	02	01
CRP 413	Project Planning and Management	03	01
CRP 414	District & Regional Planning	03	01
CRP 415	Community Development	02	01
CRP 499	Thesis/Project*	00	00
	Total	**12**	**05**

Course Code	Subject Name	Credit Hours	
8th Semester		Theory	Practical
CRP 421	Master Planning-II	03	02
CRP 422	Estate Management	03	00
CRP 423	Finance Planning & Management	03	00
CRP 424	Planning Practice	02	00
CRP 425	Project	00	06
	Total	**11**	**08**

2.3.5 Career Opportunities

After qualifying, our graduates can serve the nation as professional Planners in the public sectors such as, Ministry of Planning and Development (Housing and Physical Planning), Ministry of Local Government (Sindh Building Control Authority), Ministry of Communication, Planning Commission of Pakistan, Ministry of Environment, Military Engineering Services (MES) of Pakistan, Private Planning and Development Consultant Firms and nonprofit research organizations.

The department of City & Regional Planning has played a vital role not only in Town Planning Education but also in the development of Urban Research in the Country.

2.4 INSTITUTE OF ENVIRONMENTAL ENGINEERING & MANAGEMENT

2.4.1 The Institute

With increased awareness about environmental issues at the global and national levels, environmental engineering has become a fast-emerging discipline with vast scope for progression in the future. The Institute of Environmental Engineering & Management (IEEM) has been established with an aim of creating new knowledge and finding innovation solutions to local and global environmental issues through application of such knowledge. There is lot of hue and cry for control of the pollution in the urban and rural areas, oceans, rivers and agriculture lands. Today, Pakistan stands on the threshold of implementing environmental standards. Environmental Protection Agencies (EPAs) of the five provinces and federal government have assigned task to implement environmental standards and therefore, there will be great need for large number of qualified experts in the field of Environmental Engineering. The scope of Environmental Engineer goes beyond the community and regional levels to global level.

The Bachelor of Engineering (B.E.) program is based on sound theoretical knowledge and through the practical training supported by field practical and industrial training.

The syllabus includes subjects like, Basic Sciences, Computer Sciences,

Fluid Mechanics, Hydraulics, Surveying, Water & Wastewater Engineering, Renewable Energy, Waste Management, Environmental Health & Safety, Hazardous Waste Risk Assessment, Cleaner Production, Modeling of Environmental System and Numerical Analysis. The B.E. degree will make the students eligible for admission to postgraduate degree (M.E. and Ph.D in Environmental Engineering). We have highly qualified faculty having Ph.D and M.E. from abroad, prepare the IEEM graduates to achieve excellence in their career.

2.4.2 The Faculty

Director of the Institute:
Dr. Sheeraz Ahmed Memon
Phone: 022-2772253 Ext:7303

Professors:	
Dr. Khan Muhammad Brohi	Ph.D. Japan
Dr. Rasool Bux Mahar	On lien Ph.D. China

Associate Professors:	
Dr. Abdul Razaque Sahito	Ph.D. Pakistan
Dr. Sheeraz Ahmed Memon	Ph.D. Korea

Assistant Professor:	
Mr. Muhammad Ali Memon	M.E. Pakistan

Lecturers:	
Mr. Imdad Ali Kandhar	M.E. Pakistan
Mr. Muhammad Safar Korai	M.E. Pakistan
Ms. Murk Komal	M.E. United Kingdom
Mr. Azizullah Channa	M.E. Pakistan
Ms. Maryam	M.E. Pakistan
Mr. Zulfiqar Ali Effendi	On Study Leave M.E. Pakistan
Mr. Sajid Hussain Mangi	B.E. Pakistan
Mr. Ahsan Ali	B.E. Pakistan

2.4.3 Laboratory Facilities

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

- Hi-Tech Laboratory
- Water & Soil Pollution Control Laboratory
- Solid Waste Management Laboratory
- Air & Noise Pollution Control Laboratory
- GIS & Computer Laboratory
- Thermo Laboratory
- Microbiology Laboratory

2.4.4 Courses

Course Code	Subject Name	Credit Hours	
1st Semester		Theory	Practical
EE101	Introduction to Environmental Engineering	3	0
CS146	Introduction to Computing and Programming	2	1
CE135	Surveying	3	1
ENG101	Functional English	3	0
EE110	Environmental Physics	2	0
	Total	**13**	**02**

Course Code	Subject Name	Credit Hours	
2nd Semester		Theory	Practical
IS111/SS104	Islamic Studies/Ethics	2	0
PS106	Pakistan Studies	2	0
MTH108	Applied Calculus	3	0
EE121	Environmental Chemistry	2	1
CE115	Engineering Mechanics	3	1
EE131	Introduction to Microbiology	2	1
	Total	**14**	**03**

Course Code	Subject Name	Credit Hours	
3rd Semester		Theory	Practical
EE202	Ecological Management	3	0
CE278	Engineering Drawing Practices	2	1
MTH211	Linear Algebra & Analytical Geometry	3	0
CE260	Fluid Mechanics	2	1
MT250	Engineering Materials and Environment	2	1
EE203	Water Supply Engineering	3	1
	Total	**15**	**04**

Course Code	Subject Name	Credit Hours	
4th Semester		Theory	Practical
EE242	Environmental Economics	2	0
ME276	Applied Thermodynamics	3	1
MTH202	Differential Equations & Fourier Series	3	0
CE275	Computer Aided Design (CAD)	2	1
EE272	GIS & Remote Sensing	2	1
EE233	Wastewater Engineering	3	1
	Total	**15**	**04**

Course Code	Subject Name	Credit Hours	
5th Semester		Theory	Practical
ENG310	Communication Skills & Technical Writing	3	0
MTH319	Numerical Analysis	3	1
EL301	Electrical Technology	2	1
CE371	Water Resource Engineering and Management	3	1
EE331	Environmental Biotechnology	3	1
	Total	**14**	**4**

Course Code	Subject Name	Credit Hours	
6th Semester		Theory	Practical
ME390	Renewable and Emerging Energy Technologies	3	1
EE313	Solid Waste Engineering & Management	3	1
EE323	Entrepreneurship	2	0
MTH317	Statistics and Probability	3	0
EE325	Air & Noise Pollution Control Engineering	3	1
	Total	**14**	**03**

Course Code	Subject Name	Credit Hours	
7th Semester		Theory	Practical
CE460	Soil Mechanics for Environmental Engineers	3	1
EE414	Modeling of Environmental Systems	3	1
EE494	Natural Resources Management	3	0
CE470	Project Planning & Management	3	0
EE434	Environmental Management System & Standards	3	0
EE499	Design Project-I (3Credit Hours equals 3 Contact Hours)	0	3
	Total	**15**	**05**

Course Code	Subject Name	Credit Hours	
8th Semester		Theory	Practical
EE465	Hazardous Waste Risk Assessment & Management	3	0
EE424	Health, Safety &Environment	3	0
EE454	Environmental Impact Assessment	3	0
EE484	Cleaner Production Techniques	2	1
EE499	Design Project-II (3Credit Hours equals 3 Contact Hours)	0	3
	Total	**11**	**04**

2.4.5 Career Opportunities

Environmental Engineering undergraduate and post graduate program 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; storm water management; solid waste disposal; industrial hygiene; radiation protection; health; safety and environment (HSE), environmental impact assessment (EIA); 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 also are many sub-categories.

As per the MoUs signed by the university, this institute provides a student with great hands-on and pragmatic approach by arranging internships abroad to help student get aware of the environmental problem encompassed by world. Besides, this department provides all the guidelines regarding getting professional responsibilities of an individual as majority of the faculty is graduated from the universities abroad.

Environmental Engineering provides limitless opportunities as to type of work, for whom you work, and where you work. A career in Environmental Engineering provides a comfortable salary, job security, and considerable personal satisfaction.

FACULTY OF ELECTRICAL, ELECTRONICS AND COMPUTER SYSTEMS ENGINEERING

3.1 DEPARTMENT OF BIOMEDICAL ENGINEERING

3.1.1 The Department

Mehran university of Engineering and technology has got the privilege to establish the Biomedical Engineering Department for the first time in the history of all Public sector universities of Pakistan. The program of Biomedical Engineering was started in 2003. The Biomedical Engineering Department is housed in the newly built beautiful edifice with young, dynamic and visionary leadership.

The Biomedical Engineering Department is a progressive educational unit of Mehran UET and serving the nation by producing engineers who have a very versatile expertise of human engineering, bio sciences and other related domains. Our graduates are serving at highly reputed national and international organizations of repute here and abroad such as National Specialty Alloys Inc. USA, Almosawiq Al-Arabia SA, Al-Sharq Hospital, Fujairah Hospital Dubai, Al-Noor Hospital Bahrain, and many others.

Modern hospitals, Pharmaceutical Companies, Biomedical Device manufacturers, Biomedical Device Vendors, Research laboratories, Government, and even Software Development Companies hire Biomedical Engineers. Biomedical engineering is the design and manufacturing faction of the health-care industry. Employers look for biomedical engineers to help develop and use many innovative instruments to treat diseases and restore self-reliance and functionality to patients.

3.1.2 The Faculty

Chairman of the Department
Dr. Ahsan Ahmad Ursani
Phone:022-2772279

Professor:	
Dr. Ahsan Ahmad Ursani	Ph.D.France

Associate Professors:	
Dr. Syed Amjad Ali	Ph.D. China

Assistant Professors:	
Engr.N.P. Chowdhry	M.S. United Kingdom
Dr. Muhammad Arif	Ph.D. United Kingdom
Dr. Abdul Qadir Ansari	Ph.D. Pakistan
Ms. Rabia Chandio	M.E. Pakistan

Lecturers:	
Dr. Najma Baloch	MBBS. Pakistan
Mr. Syed Faisal Ali	B.E. Pakistan
Mr. Salman Afridi	M.E. Pakistan
Mr. M. Aamir Panhwar	M.E. Pakistan

3.1.3 Laboratory Facilities

Biomedical Engineering Department has the following five well equipped laboratories:

1. Biomedical Instrumentation lab
2. Biomedical Sciences Lab
3. Biomedical Computing Lab
4. Biomedical Engineering lab
5. Telemedicine and Research Lab

3.1.4 Course

Course Code	Subject Name	Credit Hours	
1st Semester		Theory	Practical
ENG101	Functional English	3	0
EL101	Basic Electrical Engineering	2	1
BM102 / MTH107	Basic Biology / Basic Mathematics*	3*	0
CS145	Introduction to Computing	3	1
BM105	Applied Physics	3	1
BM109	Applied Chemistry	2	1
	Total	**13**	**04**

** The credit hours are not to be considered in the total.*

Course Code	Subject Name	Credit Hours	
2nd Semester		Theory	Practical
ES133	Basic Electronics	3	1
EL201	Electrical Circuits and Systems	3	1
BM115	Biophysics	3	0
MTH102	Applied Calculus	3	0
PS106	Pakistan Studies	2	0
IS111 / SS104	Islamic Studies / Ethics	2	0
	Total	**16**	**02**

Course Code	Subject Name	Credit Hours	
3rd Semester		Theory	Practical
ES261	Electronic Circuit Design	3	1
ME221	Engineering Statics	2	0
BM218	Biochemistry	2	1
BM221	Physiology I	2	1
BM224	Human Anatomy	3	0
MTH236	Linear Algebra and Analytical Geometry	3	0
	Total	**15**	**03**

Course Code	Subject Name	Credit Hours	
4th Semester		Theory	Practical
ES284	Electronic Instrumentation	3	1
CE220	Strength of Materials	2	1
ME222	Engineering Dynamics	2	0
ES271	Digital Electronics	3	1
MTH224	Differential Equations	3	0
BM227	Physiology II	2	0
	Total	**15**	**03**

Course Code	Subject Name	Credit Hours	
5th Semester		Theory	Practical
BM300	Biomaterials and Design	3	1
BM310	Biomedical Instrumentation I	3	1
MTH315	Probability and Statistics	3	0
ES351	Microprocessor and Microcontroller	3	1
MTH306	Complex Variable and Transforms	3	0
	Total	**15**	**03**

Course Code	Subject Name	Credit Hours	
6th Semester		Theory	Practical
TL371	Signals and Systems	3	1
ENG301	Technical Report Writing and Presentation Skills	2	0
BM330	Biomedical Instrumentation II	3	0
BM340	Biophotonics	3	0
MTH336	Numerical Analysis and Computer Applications	3	1
ENG302	Communication Skills	2	0
	Total	**16**	**02**

Course Code	Subject Name	Credit Hours	
7th Semester		Theory	Practical
BM400	Digital Signal and Image Processing	3	1
BM410	Biomechanics	2	1
ES-	Control Systems	3	1
BM420	Modeling and Simulation	3	0
BM430	Medical and Healthcare Ethics	2	0
---------	BM Engineering Project*	0	0
	Total	**13**	**03**

**During one academic year: Requires literature survey and preliminary work during this semester.*

Course Code	Subject Name	Credit Hours	
8th Semester		Theory	Practical
BM440	Economics and Healthcare Management	3	0
BM450	Medical Imaging	3	0
BM460	Emerging Trends in Biomedical Engineering	3	1
BM499	BM Engineering Project	0	6
	Total	**09**	**07**

3.1.5 Career Opportunities

Biomedical Engineering is a broad and multidisciplinary field that encompasses industry ranging from Pharmaceutics to Genetics, and from Diagnostics to Rehabilitation. Therefore, its graduates find their full role within the auspices of state-of-the-art diagnostic centers, hospitals, telemedicine centers, biomedical equipment manufacturers and distributors, drug manufacturers, research laboratories and research institutions.

There is a huge demand for biomedical engineers in Pakistan. Biomedical engineers who monitor and maintain the databases of electronic patient records, medical instrumentation and work with physicians to adapt instrumentation for the specific needs of the physician and hospitals are highly in demand.

Rehabilitation engineers who develop hardware, software, computer adaptations and provide cognitive aids to assist patients with memory impairment are also sought after.

3.2 DEPARTMENT OF COMPUTER SYSTEMS ENGINEERING

3.2.1 The Department

Computer Systems Engineering is a discipline that integrates fields of Electrical Engineering and Computer Science required developing Computer Systems. Computer Engineers usually have training in Electronic Engineering, Software Design, and Hardware-Software integration instead of only Software Engineering or Electronic Engineering. Computer Engineers are involved in many hardware and software aspects of computing, from the circuit design of individual microprocessors, personal computers, and supercomputers, to latest development of communication system and networks. Therefore, this field of engineering not only focuses on how computer systems work, but also how they integrate into the larger picture.

Usual tasks involving Computer Engineers include writing software and firmware for embedded microcontrollers, designing analogue sensors, designing mixed signal circuit boards, and designing operating systems. Computer Engineers are also suited for robotics research, which relies heavily on using digital systems to control and monitor electrical systems like motors, communications, and wireless sensors. Due to increasing job requirements for engineers, who can concurrently design hardware, software, firmware, and manage all forms of computer, information and management systems used in industry. The department offers a carefully designed multidisciplinary courses and degree programs.

Faculty of Electrical, Electronics and Computer Systems Engineering

3.2.2 The Faculty

Chairman of the Department:
Prof. Dr. Sheeraz Memon
Phone: 92-22-2771206, 2772250-73 (Ext. 4201)

Meritorious Professor:	
Dr. Mukhtiar Ali Unar	Ph.D. United Kingdom

Professor Emeritus:	
Dr. A.Q.K. Rajput	Ph.D. United States of America

Professor:	
Dr. T.J. Saifullah Khanzada	Ph.D. Germany

Associate Professors:	
Dr. Sheeraz Memon	Ph.D. Australia
Dr. Shahnawaz Talpur	Ph.D. China

Assistant Professors:	
Dr. Liaquat Ali Thebo	Ph.D. Pakistan
Mr. Naveed Ahmed Jaffari	M.E. Pakistan
Mr. Arbab Ali Samejo	M.E. Pakistan
Ms. Zartasha Baloch	On Study Leave M.E. Pakistan
Mr. Rizwan Badar Baloch	M.E. Pakistan
Dr. Adnan Ashraf	Ph.D. Pakistan
Dr. M. Moazzam Jawaid	Ph.D. London
Dr. Noor-u-Zaman Leghari	Ph.D. United Kingdom
Dr. Sammer Zai	Ph.D South Korea
Dr. M. Ahsan Ansari	Ph.D South Korea
Mr. Ali Asghar Manjotho	M.E. Pakistan
Dr. Sanam Narejo	Ph.D Italy
Dr. Irfan Ali Bhacho	P.h.D South Korea

Lecturers:	
Ms. Bushra Naz	M.E. Pakistan
Mr. Salahuddin Jokhio	On Study Leave Ph.D. Canada
Mr. Fawad Ali Mangi	M.E. Pakistan

3.2.3 Laboratory Facilities

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

I. Computing Lab-I
II. Computing Lab-II
III. Microprocessor Lab
IV. Communication Lab
V. Advance Software Engineering & Research Lab
VI. Multimedia and Visual Design Studio Lab
VII. Data Management and Internet Lab
VIII. Software Development Lab

3.1.4 Course

Course Code	Subject Name	Credit Hours	
1st Semester		Theory	Practical
CS-101	Computer Fundamentals	3	1
EL-101	Basic Electrical Engineering	3	1
ES-121	Electronic Engineering	3	1
ENG-101	Functional English	3	0
MTH-102	Applied Calculus	3	0
	Total	**15**	**03**

Course Code	Subject Name	Credit Hours	
2nd Semester		Theory	Practical
CS-151	Computer Programming	3	1
CS-152	Digital Logic and Design	3	1
ENG-102	Communication Skills	2	0
MTH-112	Linear Algebra and Analytical Geometry	3	0
ISS-111/SS-104	Islamic Studies/Ethics	2	0
PS-106	Pakistan Studies	2	0
	Total	**15**	**02**

Course Code	Subject Name	Credit Hours	
3th Semester		Theory	Practical
CS-201	Computer Architecture and Assembly Programming	3	1
CS-202	Object Oriented Programming	3	1
CS-204	Computer Graphics	2	1
EL-103	Electrical Circuits	3	1
MTH-224	Differential Equations	3	0
	Total	**14**	**04**

Course Code	Subject Name	Credit Hours	
4th Semester		Theory	Practical
CS-251	Data Structure and Algorithm Analysis	3	1
CS-252	Microprocessors & Interfacing Techniques	3	1
CS-253	Modeling and Simulation	2	1
CS-255	Database Management Systems	3	1
MTH-226	Fourier Series and Transforms	2	0
	Total	**13**	**04**

Course Code	Subject Name	Credit Hours	
5th Semester		Theory	Practical
CS-301	Analogue and Digital Signal Processing	3	1
CS-302	Operating Systems Design Concepts	3	1
CS-305	Technical Report Writing	3	0
INM-302	Engineering Economics and Management	3	0
MTH-311	Statistics and Probability	3	0
	Total	**15**	**02**

Course Code	Subject Name	Credit Hours	
6th Semester		Theory	Practical
CS-351	Communication Systems	3	1
CS-354	Embedded Systems	2	1
CS-355	Professional Ethics	2	0
CS-356	Mobile Application Development	2	1
CS-370	Web Engineering	3	1
	Total	**12**	**04**

Course Code	Subject Name	Credit Hours	
7th Semester		Theory	Practical
CS-401	Digital Image Processing	3	1
CS-403	Computer Communication and Networks	3	1
CS-404	Software Engineering	3	1
CS-499	Computer Engineering Project*	0	3
	Total	**09**	**06**

Course Code	Subject Name	Credit Hours	
8th Semester		Theory	Practical
CS-451	Mobile and Wireless Communication	2	1
CS-452	Artificial Intelligence	3	1
CS-453	Entrepreneurship and Leadership	2	0
CS-454	Data Science and Analytics	3	1
CS-499	Computer Engineering Project	0	3
	Semester Total	**10**	**06**

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 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 25 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.

The degree conferred to the undergraduate students is based on successful completion of four year degree program. The postgraduate students receive M.E degree after successful completion of 18-months course and research work. Currently 535 undergraduate, 100 postgraduate and 10 PhD students are enrolled in the department.

The undergraduate and postgraduate students are drawn from 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 great confidence.

3.3.2 The Faculty

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

Professors:	
Dr. Muhammad Aslam Uqaili	Ph.D.United Kingdom
Dr. Abdul Sattar Larik	Ph.D. Pakistan
Dr. Ashfaque Ahmed Hashmani	Ph.D. Germany
Dr. Zubair Ahmed Memon	Ph.D. Pakistan
Dr. Syed Asif Ali Shah	Ph.D.Austria
Dr. Mukhtiar Ahmed Mahar	Ph.D. Pakistan
Dr. Ali Asghar Memon	Ph.D. United Kingdom

Associate Professor:	
Dr. Amir Mahmood Soomro	Ph.D.China
Dr. Anwar Ali Sahito	Ph.D. Pakistan

Assistant Professors:	
Mr. Anwar Ahmed Memon	On Study Leave M.E. Pakistan
Mr. Noor Nabi Shaikh	B.E. Pakistan
Dr. Faheemullah Shaikh	Ph.D. China
Mrs. Mokhi Maan	On Study Leave M.E. Pakistan
Mr. Muhammad Rashid Memon	M.E. Pakistan
Mr. Mansoor Ahmed Soomro	On Study Leave M.E. Pakistan
Mr. Shah Murad Tunio	On Lien M.E. Pakistan
Mr. Abdul Jabbar Memon	M.E. Pakistan
Mr. Nayar Hussain Mirjat	On Study Leave M.E. Pakistan

Lecturers:	
Dr. Abdul Hakeem Memon	Ph.D. China
Mr. Abdul Latif Samoon	On Study Leave M.E. Pakistan
Dr. Mahesh Kumar Rathi	Ph.D. Malaysia
Mr. Shoaib Ahmed Khatri	M.E. Pakistan
Mr. Shafi Muhammad Jiskani	M.E. Pakistan
Mr. Zohaib Ahmed Leghari	On Study Leave M.E. Pakistan
Mr. Faheem Shafeeque Channar	B.E. Pakistan
Mr. Shoaib Shaikh	B.E. Pakistan
Mr. Mustafa Memon	B.E. Pakistan

3.3.3 Laboratory Facilities

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

- Power System Lab
- Power Electronics Lab
- Electrical Machines Lab
- High Voltage Engineering Lab
- Clean Energy Lab
- Control and Automation Lab
- Electrical Circuit & Measurement Lab
- Equipment and Training Lab
- Applied Electricity Lab
- Communication Lab
- Computer Lab
- Advance Computer Lab
- Electrical Workshop Lab
- Electrical Power Transmission & Distribution Lab

3.3.4 Course

Course Code	Subject Name	Credit Hours	
1st Semester		Theory	Practical
EL-111	Electrical Workshop Practice	0	1
EL-112	Applied Physics	3	1
CS-104	Introduction to Computing & Programming	3	1
MTH-102	Applied Calculus	3	0
ENG-101	Functional English	3	0
	Total	**12**	**03**

Course Code	Subject Name	Credit Hours	
2nd Semester		Theory	Practical
EL-121	Linear Circuit Analysis	3	1
MTH-112	Linear Algebra and Analytical Geometry	3	0
PS-106	Pakistan Studies	2	0
IS-111, SS-104	Islamic Studies/ Ethics	2	0
ENG-102	Communication Skills	2	0
CE-118	Applied Mechanics	3	1
	Total	**15**	**02**

Course Code	Subject Name	Credit Hours	
3rd Semester		Theory	Practical
EL-211	Electronic Devices & Circuits	3	1
EL-212	Digital Logic Design	3	1
EL-213	Electrical Network Analysis	3	1
MTH-212	Differential Equations and Fourier series	3	0
ME-271	Applied Thermodynamics	3	0
	Total	**15**	**03**

Course Code	Subject Name	Credit Hours	
4th Semester		Theory	Practical
EL-221	Theory of Electromagnetic Field	3	0
EL-222	Electrical Machines	3	1
EL-223	Applied Electronics	3	1
CS-260	Microprocessor Systems	3	1
MTH-213	Complex Variables & Transforms	3	0
	Total	**15**	**03**

Course Code	Subject Name	Credit Hours	
5th Semester		Theory	Practical
EL-311	Advanced Electrical Machines	3	1
EL-312	Electrical Power Transmission	3	1
EL-313	Instrumentation & Measurement	3	1
MTH-336	Numerical Analysis & Computer & Computer Applications	3	1
ENG-304	Technical Writing	2	0
	Total	**14**	**04**

Course Code	Subject Name	Credit Hours	
6th Semester		Theory	Practical
EL-321	Power Generation Systems	3	1
ES-325	Linear Control Systems	3	1
TL-380	Communication Systems	3	1
EL-324	Power Economics & Management	3	0
MTH-311	Statistics and Probability	3	0
	Total	**15**	**03**

Course Code	Subject Name	Credit Hours	
7th Semester		Theory	Practical
EL-411	Power System Analysis	3	1
EL-412	Electrical Machines Design & Maintenance	3	1
EL-413	High Voltage Engineering	3	1
EL-414	Power Distribution & Utilization	3	1
	Senior Design Project –I*	0	0
	Total	12	04

Course Code	Subject Name	Credit Hours	
8th Semester		Theory	Practical
EL-421	Power Electronics	3	1
EL-422	Power System Stability & Control	3	1
EL-423	Power System Protection	3	1
EL-499	Senior Design Project-II	0	6
	Total	**09**	**09**

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. Philips Morrior 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 affects the other disciplines of engineering. It is in great demand in both developed and developing nations. Continual advances in electronic engineering in the areas of materials, processes, devices, and circuits have been leading to rapid advances, in the existing applications of engineering as well as in the emergence of new applications. To harness the full potential of electronic engineering developments and further advance the state of electronic technology, it is important to have strong programmes

to educate and train individuals in this key discipline of engineering.

Electronic Engineering artifacts play major role in the evolution of mankind and culture. Today, the Electronic Engineering profession and the education of engineers are challenged by the rapidly changing nature of those engineering systems which determine what is meant by 'modern technology'. The advent of Microprocessor Technology has probably made Electronic Engineering the examplary technology of this century, along with emergence of new species, with higher levels of integration. The existing and potential uses and applications of Electronics are multitudinous. Indeed it is difficult to point to any industrial or commercial area which may not eventually be affected by this technology.

The Department of Electronic Engineering offers degrees at undergraduate and postgraduate level equally. It offers:

- B.E. (Electronic Engineering)
- M.E. (Electronic System Engineering) under the umbrella of Institute of Information & Communication Technologies.

It fulfills the more acute need of the development of the country by producing more qualified Engineers at undergraduate & postgradaute levels. The programmes offered provide technical manpower for the development and production of the Electronic Engineering in the country to provide qualified human resources as engineers and technology experts to develop indigenous capability of planning, designing and executing various projects in Electronic Engineering.

The field of Electronic Engineering encompasses the knowledge of electronic circuits & devices and their applications. The students learn variety of subjects of diverse fields including, Microprocessors & Interfacing, Automation and Robotics, Analog & Digital Communication, Optoelectronics, Wired & Wireless Communications, Signal Processing, Industrial Electronics, Integrated Electronics, Instrumentation & Control, Embedded System, Sequential Circuit Design, Laser & Fiber Optics, Microwave Engineering, FPGA, Electromagnetic Fields, Computer Communication & Networking, Mechatornic Applications, Advanced Communication Systems, Artificial Intelligence etc.

The department has played major role in sending undergraduate and postgraduate students abroad (Europe and USA) on scholarships and short visits on Erasmus Mundus Program and US Fulbright Program.

Frequent visits to industries are also organized by the department to acquaint students with practical environment. Specifically internship program is launched in collaboration with local industry during summer break for third year and final year students. In addition to that, students are also encouraged to participate in Seminars, Conferences and Software Competitions, such as IEEEP student seminar, A.Q. Khan Software at national level software competition held annually on and around campus. The department has centrally air-conditioned seminar library named after the late Professor M.D. Makhdoom.

3.4.2 The Faculty

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

Professors:	
Dr.B.S Chowdhry	Ph.D.United Kingdom
Dr. Wajiha Shah	Ph.D. Austria
Dr. Arbab Nighat Kalhoro	Ph.D. China

Associate Professors:	
Dr. Tayab Din Memon	Ph.D. Australia
Dr. Irfan Ahmed Halepoto	Ph.D. Pakistan
Dr. Farzana Rauf Abro	Ph.D. Pakistan
Dr. Farida Memon	Ph.D. Pakistan

Assistant Professors:	
Engr. Tufail Ahmed Waseer	M.E. Pakistan
Dr.Khalil-ur-Rehman Dayo	Ph.D. Pakistan
Mr. Mehboob Khuwaja	M.E (Pakistan)
Dr. Attiya Baqai	Ph.D. Pakistan
Ms. Kehkashan Asma	On Study Leave
Mr. Kamran Kazi	M.E. Pakistan
Ms. Saba Baloch	M.E. Pakistan
Ms. Shakila Memon	M.E. Pakistan
Ms. Yasmeen Naz Panhwar	On Study Leave
Mr. Khuhed Memon	M.E. (Singapore)
Mr. M. Zaigham Abass Shah	M.E. United Kingdom
Mr. Aamir Ali Patoli	M.E. Pakistan
Ms. Sara Qadeer Rajput	M.E. Pakistan
Mr. Mansoor Ali Teevno	M.E. Pakistan

Lecturers:	
Mr. Qurban Ali Memon	M.E. Pakistan

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:

- Basic Electronics Laboratory
- Instrumentation & Control Laboratory
- Advanced Electronics Laboratory
- Digital Signal Processing Laboratory
- Digital Electronics & Microprocessor Laboratory
- Advanced Computer Applications Laboratory
- Communication System Laboratory
- Interactive Electronic Design Automation Laboratory
- Top Quality Centralized Instrumentation Laboratory-I
- Top Quality Centralized Instrumentation Laboratory-II
- Project Laboratory
- FPGA Laboratory
- PC Repair Shop

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 due practical experience, provide ample job opportunities to our graduates in both public and private sector organizations, national & multinational companies. There is a huge job market of Electronic Engineers in Middle East, Europe, USA and Canada.

On behalf of our quality work and intention towards developing industrial interaction a “Top Quality Centralized Instrumentation Center (TQCIC)” has been established in our department. The aims & objectives of TQCIC are as follows:

- To develop interaction between industries and the university.
- To design & develop instruments with cost effectiveness.
- To provide the cost effective Hi-Tech solutions & modernize the existing Instrumentation in our industry & educational institutions.
- To provide consultancy in the areas of Industrial Automation & Control, Communication & Electronics.
- To provide the trainings in the areas of Instrumentation, PLCs, PID Controllers, PCB Designing & Fabrication & Advanced Simulation Softwares.
- To provide the services & solutions in Industrial Electronics equipments.

3.4.4 Course

Course Code	Subject Name	Credit Hours	
1st Semester		Theory	Practical
ENG-101	Functional English	3	0
MTH-102	Applied Calculus	3	0
CS-150	Introduction to Computing	2	1
EL-116	Applied Physics	3	1
SS-107	Professional Ethics	2	0
ES-102	Electronics Workshop	0	1
	Total	**13**	**3**

Course Code	Subject Name	Credit Hours	
2nd Semester		Theory	Practical
MTH-112	Linear Algebra & Analytical Geometry	3	0
CS-113	Computer Programming	2	1
ES-112	Basic Electronics	3	1
EL-107	Electrical Circuits	3	1
PS-207	Pakistan Studies	2	0
IS-111/SS-104	Islamic Studies/Ethics	2	0
	Total	**15**	**3**

Course Code	Subject Name	Credit Hours	
3rd Semester		Theory	Practical
ES-203	Electronic Circuit Design	3	1
ES-213	Digital Electronics	3	1
ES-223	Measurements & Instrumentation	2	1
MTH-201	Differential Equations & Fourier Series	3	0
INM-203	Engineering Management	2	0
CS-215	Computer Aided Engineering Design	0	1
	Total	**13**	**4**

Course Code	Subject Name	Credit Hours	
4th Semester		Theory	Practical
ES-233	Sequential Circuit Design	2	1
ES-243	Electromagnetic Fields	3	0
ES-253	Integrated Electronics	3	1
EL-202	Electrical Machines	2	1
MTH-213	Complex Variables & Transforms	3	0
ENG-102	Communication Skills	2	0
	Total	**15**	**3**

Course Code	Subject Name	Credit Hours	
5th Semester		Theory	Practical
ES-304	Signals & Systems	3	1
ES-313	Microprocessors & Microcontrollers	3	1
ES-324	Probability & Random Signals	3	0
ES-319	Power Electronics	2	1
MTH-310	Numerical Methods	3	1
	Total	**14**	**4**

Course Code	Subject Name	Credit Hours	
6th Semester		Theory	Practical
TL-351	Analog & Digital Communication	3	1
ES-353	Control Systems	3	1
ES-363	Digital Instrumentation Systems	2	1
ES-373	FPGA-Based System Design	3	1
ES-393	Laser & Fiber Optics	3	0
	Total	**14**	**4**

Course Code	Subject Name	Credit Hours	
7th Semester		Theory	Practical
TL-411	Computer Communication & Networking	2	1
ES-413	Digital Control System	3	1
ES-423	Embedded Systems Design	3	1
ES-433	Digital Signal Processing	3	1
ENG-401	Technical Report Writing & Presentation Skills	2	0
ES-449	Electronic Engineering Project-1	0	3
	Total	**13**	**7**

Course Code	Subject Name	Credit Hours	
8th Semester		Theory	Practical
TL-451	Advanced Communication Systems	3	0
ES-451	Mechatronics Applications	3	0
CS-490	Artificial Intelligence	3	1
ES-499	Electronic Engineering Project-2	0	3
	Total	**9**	**4**

3.4.5 Career Opportunities

With acquired educational and technical skill set, an Electronic engineer can find a competitive position in well reputed public and private sector organizations for last several years. Highly recognized organizations such as SUPARCO, KE, Angro Pakistan, PTCL, etc arranges on campus recruitment test hiring candidates straightaway.

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 Software engineering. The Goal has been, and continues to be, to provide a high degree program in Software Engineering, that prepares students for lifelong learning as they take on professional careers in computing.

Software Engineering program enables to gain a thorough understanding of the role of IT in enterprise and how information systems impact on business and organizational processes.

The department offers a range of courses that teach the fundamentals of programming to advanced topics in computing such as software testing and software architecture and design etc. The courses are designed to equip students with advanced software engineering skills so that they are prepared to play a creative and leading role in the professional and research community.

Students will gain understanding, knowledge, and fluency in:

- The art of programming, including abstraction, algorithms, data structures, and web development.
- Software engineering fundamentals, such as functional and object-oriented styles of programming and models of computation.
- Core tenets of Software engineering, such as testing, project management, requirement engineering and human computer interaction.

How to design large programs to make them readable, maintainable, and efficient.

Faculty of Electrical, Electronics and Computer Systems Engineering

3.5.2 The Faculty

Chairman of the Department

Prof. Tahseen Hafiz
Ph: 022-2772255 Ext:6900

Associate Professors:	
Prof. Tahseen Hafiz	M.E. Pakistan
Dr. Sania Bhatti	Ph.D. United Kingdom
Dr. Naeem Ahmed Mahoto	Ph.D. Italy
Dr.Mohsin Ali Memon	Ph.D. Japan

Assistant Professors:	
Dr. Nasrullah Memon	On Lien Ph.D. Denmark
Mr. Qasim Ali Arain	On Study Leave Ph.D. China
Dr. Isma Farah Siddiqui	Ph.D. South Korea
Mr. Din Muhammad Sangrasi	M.E. Pakistan
Mr. Salahuddin Sadar	M.E. Pakistan
Dr. Shahzad Ahmed Nizamani	Ph.D.United Kingdom
Ms. Amirita	M.E. Pakistan
Ms. Areej Fatemah	On study Leave M.E. Pakistan
Mr. S. M. Shehram Shah	On study Leave Ph.D. Australia
Mr. Zahid Hussain Khaskheli	M.E. Pakistan
Ms. Hira Nouman	M.E. Pakistan
Ms. Shafia Qadeer Memon	M.E. Pakistan

Lecturers:	
Mr. Asif Sangrasi	On Study Leave M.E. Pakistan
Ms. Samita Bai	On Study Leave M.E. Pakistan
Mr. Zubair Sangi	B.E. Pakistan
Ms. Anoud Majid	On Study Leave M.E. Pakistan
Ms. Memoona Sami	M.E. Pakistan
Mr. Vijdan Khalique	On Study Leave M.E. Japan
Mr. Junaid Ahmed Baloch	M.E. Pakistan
Ms. Rabeea Jaffari	M.E. Pakistan
Ms. Maryam Memon	B.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. Computational Linguistic And Interactive E-Learning Lab
2. Visual Informatics, Image Processing, 3-D Modeling, Visualization Laboratory
3. Data Warehousing And Management Laboratory
4. Software Qaulity Assurance And Testing Laboratory
5. Software Research And Development Laboratory
6. Parallel Programming, Cluster Computing, Grid Research And Storage Management Laboratory

Laboratories maintain high standards through latest hardware and software support. Recently the Labs are updated with latest software such as, IBM Requisite pro, IBM functional & performance Testers, Lab View & latest version of Matlab @ Simulink software.

Many renowned companies related to the I.T field offer internships to the students of this department many of our students are engaged in the internships to shine their skills and understand the market standards.

3.5.4 Course

Course Code	Subject Name	Credit Hours	
1st Semester		Theory	Practical
MTH 108	Applied Calculus	03	00
EL101	Basic Electrical Engineering	03	01
SW111	Computer Programming	03	01
ENG111	Functional English	03	00
ES121	Electronic Engineering	03	01
	Total	**15**	**03**

Course Code	Subject Name	Credit Hours	
2nd Semester		Theory	Practical
SW120	Object Oriented Programming	03	01
SW125	Digital Computer & Logic Design	03	01
MTH112	Linear Algebra & Analytical Geometry	03	00
PS106	Pakistan Studies	02	00
SS111	Islamic Studies / Ethics	02	00
SS125	Professional Ethics	02	00
	Total	**15**	**02**

Course Code	Subject Name	Credit Hours	
3rd Semester		Theory	Practical
SW230	Software Economics & Management	02	00
SW233	Data Structures & Algorithms	03	01
SW235	Computer Architecture & Organization	03	00
SW238	Introduction to Software Engineering	03	00
MTH212	Differential Equation & Fourier series	03	00
	Total	**14**	**01**

Course Code	Subject Name	Credit Hours	
4th Semester		Theory	Practical
SW241	Operating Systems Concepts	03	01
SW243	Database Management & Administration	03	01
SW246	Operations Research	03	00
SW249	Microprocessor Technologies	02	01
MTH217	Laplace Transforms & Discrete Mathematics	03	00
	Total	**14**	**03**

Course Code	Subject Name	Credit Hours	
5th Semester		Theory	Practical
SW310	Theory of Automata & Formal Languages	03	00
SW313	Digital Communication	03	01
MTH317	Statistics & Probability	03	00
SW318	Data Analytics & Business Intelligence	03	01
SW315	Mobile Programming	03	01
	Total	**15**	**03**

Course Code	Subject Name	Credit Hours	
6th Semester		Theory	Practical
SW321	Computer Networks & Management	03	01
SW324	Software Project Management	03	01
SW326	Human Computer Interaction	03	01
SW329	Artificial Intelligence Concepts & Techniques	03	01
ENG319	Technical Report Writing & Presentation Skills	02	00
	Total	**14**	**04**

Course Code	Subject Name	Credit Hours	
7th Semester		Theory	Practical
SW411	Interactive Multimedia Systems & Graphics	03	01
SW412	Web Technologies	03	01
SW413	Software Design & Architecture	03	00
SW422	Computer Vision	03	01
SW424	Thesis/Project	00	03
	Total	**12**	**06**

Course Code	Subject Name	Credit Hours	
8th Semester		Theory	Practical
SW421	Data Warehousing & Mining Techniques	03	01
SW414	Distributed Computing	03	01
SW423	Software Testing & Quality Assurance	03	01
SW424	Thesis/Project	00	03
	Total	**09**	**06**

3.5.5 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 computer software engineers for designing, developing, testing, and evaluating the software and the systems that computers use to carry out various applications. Our software engineering program is a collection of disciplines responsible for designing, developing, testing and deploying software systems.

Our graduates have gone on to 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
- 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 Mobile and Wire-less Communication, Terrestrial Satellite Communication, Multimedia and Broadband Communication etc. The department is under the establishment of Institute of Communication Technologies (ICT). In last 12 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.

3.6.2 The Faculty

Chairman of the Department
Dr. Faisal Karim Shaikh
Phone: +92-22-2772277 Ext.6000

Meritorious Professor:	
Dr. Aftab Ahmed Memon	On Lien, Ph.D. Japan

Professor:	
Dr. Abdul Waheed Umrani	Ph.D. Singapore
Dr. Faisal Karim Shaikh	Post Doc, KSA, Ph.D. Journal

Associate Professor:	
Dr. Fahim Aziz Umrani	Ph.D. United Kingdom
Dr. Abdul Latif Memon	Ph.D. China

Assistant Professors:	
Dr. Imran Ali Qureshi	Ph.D. China
Dr. Faheem Yar Khuhawar	Ph.D. Italy
Dr. Badar Munir	Ph.D. China
Dr. Sajjad Ali Memon	Ph.D. China
Engr. Nafeesa Bohra	M.E. Pakistan

Mr. Naeem Aijaz Yousfani	M.E. Pakistan
Mr. Zulfiqar Ali Arain	On Study Leave M.E. Pakistan
Mr. Nasrullah Pirzada	M.E. Pakistan
Mr. Syed Mohsin Ali Shah	M.E. Pakistan
Ms. Shanzah Mohsin	M.E. Pakistan
Mr. Zafi Sherhan Shah	On Study Leave M.E. Pakistan
Mr.Riaz Ahmed Soomro	On Study Leave M.E. Pakistan
Ms. Saima Hafeez	M.E. Pakistan
Mr. Shakeel Ahmed Laghari	M.E. Pakistan
Mr. Mehran Memon	M.E. Malaysia
Mr. Saadullah Kalwar	On Study Leave M.E. Pakistan

Lecturers:	
Mr. Hyder Bux Mangrio	M.E. Pakistan
Mr. Faisal Ahmed Memon	On Study Leave M.E. Pakistan
Mr. Umair Mujtaba Qureshi	On Study Leave M.E. Pakistan
Ms. Zuneera Aziz Memon	On Study Leave M.E. Pakistan
Mr. Umair Ahmed Korai	On Study Leave M.E. Pakistan
Mr. Abi Waqas Memon	On Study Leave M.E. Pakistan
Mr. Syed Rizwan Ali Shah	M.E. Pakistan
Ms. Anum Talpur	M.E. Pakistan

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

3.6.4 Course

Course Code	Subject Name	Credit Hours	
1st Semester		Theory	Practical
MTH108	Applied Calculus	03	00
TL121	Applied Physics	03	01
CS104	Introduction to Programming	03	01
ENG101	Functional English	03	00
SSS111	Islamic Studies / Ethics	02	00
PS106	Pakistan Studies	02	00
	Total	**16**	**02**

Course Code	Subject Name	Credit Hours	
2nd Semester		Theory	Practical
ES112	Basic Electronics	03	01
CS123	Object Oriented Programming	03	01
TL112	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	
3rd Semester		Theory	Practical
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	
4th Semester		Theory	Practical
MTH213	Complex Variables & Transforms	03	00
TL202	Electromagnetics	03	00
SS221	Professional Ethics	03	01
ES256	Microprocessors and Microcontrollers	03	01
TL231	Signals & Systems	02	00
	Total	**14**	**02**

Course Code	Subject Name	Credit Hours	
5th Semester		Theory	Practical
TL323	Communication Systems	03	01
TL304	Antennas and Wave Propagation	03	01
TL354	Probability and Stochastic Processes	03	00
TL345	Digital Signal Processing	03	01
MTH336	Numerical Analysis and Computer Applications	02	01
	Total	**14**	**04**

Course Code	Subject Name	Credit Hours	
6th Semester		Theory	Practical
TL371	Digital Communication	03	01
TL334	Computer Communication and Networking	03	01
TL391	Optoelectronics	02	01
TL362	Microwave Engineering	03	01
ENG320	Technical Report Writing Skills	02	00
	Total	**13**	**04**

Course Code	Subject Name	Credit Hours	
7th Semester		Theory	Practical
TL474	Fiber Optic Communication Systems	03	01
TL445	Transmission and Switching Systems	03	01
TL431	Queuing Theory	02	01
TL424	Wireless Communications	03	01
STD951	Entrepreneurship	02	00
TL499	Thesis/Project	00	00
	Total	**13**	**04**

Course Code	Subject Name	Credit Hours	
8th Semester		Theory	Practical
TL413	Satellite and Radar Communications	03	00
TL484	Emerging Wireless Technologies and RF Planning	02	00
TL455	Network Protocols and Architecture	02	01
TL461	Telecom Policies and Standards	02	00
TL499	Thesis/Project	00	06
	Total	**09**	**07**

3.6.5 Career Opportunities

Telecommunication engineers 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. 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.

- Telecom Industries in Pakistan
  - Pakistan Telecommunication Corporation Limited (PTCL)
  - Pakistan Telecommunication Authority (PTA)
  - Wateen Telecom
  - Warid Telecom
  - Mobilink (VimpelCom)
  - Telenor (Telenor Group)
  - Zong (China Mobile)
  - Ufone (PTCL+Ehtisalat)
  - SCO (Special Communication Organization initially started from Azad Kashmir and Gilgit Baltistan, now available throughout Pakistan)

- WLL Companies in Pakistan
  - PTCL
  - Great Bear Int'l (Pvt.) Limited
  - Cyber Internet Services Limited
  - DV Com Data (Pvt.) Limited
  - Wi-Tribe Pakistan Limited
  - Telecard Limited
  - GO CDMA (Telecard Group)
  - Supernet (Telecard Group)
  - WorldCall Telecom Ltd.

- Telecom. Vendors in Pakistan
  - Siemens
  - Huawei
  - Ericson
  - ZTE
  - Nortel
  - Myson Telecom
  - Combit Telecom
  - People's Logic Telecom

- Satellite TV channels in Pakistan
  - Numerous group of channels such as Sindh TV, Geo Group, Dawn Group etc.

- Pakistan Forces
  - Pakistan Army (Communication Core)
  - Pakistan Navy (Communication Sector)
  - Pakistan Air
  - MTC
  - SUPARCO

- Aeronautical Companies
  - Civil Aviation Authority of Pakistan
  - Civil Aviation Training Institute
  - Pakistan International Airline (PIA)
  - Airblue
  - Air Indus
  - Shaheen Air

FACULTY OF ENGINEERING

4.1 DEPARTMENT OF CHEMICAL ENGINEERING

4.1.1 The Department

The Chemical Engineering Department is working since 1970 as a pioneer department of the university. Prof. Dr. Syed Wadal Shah was the founder of the Department. It is a multi-disciplinary field and deals with bio-chemical, environment, safety and materials processing. Courses have been designed to train the students in all relevant fields including the basic subjects such as English and Chemistry along with some more specialized subjects of Chemical Engineering and Bio chemical and Food Engineering. Well-equipped and relevant laboratories have been established for practical training of the students. Industrial trainings, tours and Internships to chemical and biochemical industries are organized for the students in order to expose them to real plants working conditions. National and multinational organizations arrange their 'Campus Drives' for the fresh graduates in the university premises.

The Department has been producing versatile Chemical Engineers of high caliber who are serving various national and multinational organizations in Pakistan & overseas to the best of theirt alents and capabilities. Our graduates are recognized in very reputable organizations including Engr. Abdul Razzaq of 1981 Batch of the department has worked in Atomic Energy Agency (IAEA), Vienna and won Nobel Prize in the Team working Organization for the Prohibition of Chemical Weapons (OPCW) an international organization working with United Nations Organizations(UNO). Around 300 students are registered in the Chemical Engineering from BE to PhD. 09 PhD and 07 Masters and approved Supervisors of Higher Education Commission (HEC) are available to inculcate the knowledge to the students. Students, enrolled in the Postgraduate Program carrying out the research in the areas of Processing and Bioprocess Engineering, Energy, Environment, Coal, Polymers and other relevant fields and strategic policy. The research is carried out in collaboration with reputable national & international institutions such as; Brunel University UK, DelPHE research project, Exeter University, UK, Winston University, UK, Arizona University, USA.

Department has organized a couple of International event such as; First Workshop on Food and Bioprocessing, International Workshop on Women Professsionals,3 International Conferences. The department provides

academic cooperation to other institutions in training their students and conduct Laboratory Practicals. Dawood College of Engineerig and Technology Karachi, Quaid e Awam University of Engineering, Sciences and Technology Nawabshah and Baluchistan University of Information and Technology, Quetta remained main beneficiary of this academic support. Laboratory facilities are being provided to Rafhan Maize Products Pakistan and Shah Murad Sugar Mills Jhoke Sharif, Thatta, Gul Paper Industry, Kotri. Faculty members are serving nation in many Professional bodies such as Pakistan Engineering Council, Pakistan Institute of Chemical Engineers, Institute of Engineers Pakistan, Society of Women Engineers, USA are the sole examples.

The department also organizes Professional training courses for students of the department and other Universities and institutes and young professional engineers from industry. The courses include Maintenance Management System (MMS), Aspen HYSYS, Computational Fluid Dynamics (CFD), ANSYS FLUENT, HPLC, Food and Bio Processing, Health. Safety and Environment, Fuel cell, process safety, Human Resources Management, Publication Skills and Analytical Techniques.

Sustainable Development Research Cell (SDRC) was established to carry out national and International research programs. Mehran University Chemical Engineers' Society (MUCES) has been established by this department. Graduates from all over the world are members of this Society. MUCES serves as a bridge between academia and industry.

Faculty of Engineering

4.1.2 The Faculty

Chairman of the Department

Prof. Dr. Syed Farman Ali Shah.
Phone: 022-2771262,022-772255-73

Professors:	
Dr. Syed Farman Ali Shah	Post. Ph.D. USA
Dr. Khadija Qureshi	Post. Ph.D. USA
Dr. Suhail Ahmed Soomro	Ph.D. Pakistan
Dr. Shaheen Aziz	Ph.D. Pakistan
Dr. Abdul Rehman Memon	Ph.D. UK
Dr. Zeenat Muhammad Ali	Ph.D. Pakistan
Associate Professor:	
Dr. Aziza Aftab	Ph.D. Pakistan
Dr. Shuaib Shaikh	Ph.D. Malaysia
Assistant Professors:	
Engr. Ashfaque Hussain Pirzada	M.E. Pakistan
Engr. Manzoor Ul Haq Rajput	M.E. Pakistan
Engr. Khan M. Qureshi	M.E. Pakistan, On Study Leave abroad
Engr. Zulfiqar Ali Bhatti	M.Sc. UK
Engr. Imran Nazir Unar	M.E. Pakistan
Engr. Aisha Kousar Effendi	M.E. Pakistan
Engr.Sikander Mustafah Almani	M.E. Pakistan, On Study Leave abroad
Lecturers:	
Engr. Masroor Ahmed Abro	M.E. Pakistan, On Study Leave abroad
Engr.Zulfiqar Ali Solangi	M.E. Pakistan, On Study Leave
Engr. Mairaj Mohammad	B.E. Pakistan

4.1.3 Laboratory Facilities

1. Analytical Chemistry Laboratory
2. Biochemical Engineering Laboratory
3. Computer Laboratory
4. Fuels & Combustion/Environmental Engineering Laboratory
5. Fluid Mechanics Laboratory
6. General Chemistry Laboratory
7. Heat Transfer Laboratory
8. Instrumentation and Control Laboratory
9. Polymer Engineering Laboratory
10. Quality Control Laboratory
11. Unit Operations Laboratory

4.1.4 Course

Course Code	Subject Name	Credit Hours	
1st Semester		Theory	Practical
CH102	Inorganic & Organic Chemistry	03	01
PS106	Pakistan Studies	02	00
SS111	Islamic Studies/ Ethics	02	00
MTH108	Applied Calculus	03	00
CH105	Basic Chemical Engineering	02	00
INM111	Engineering Drawing & Graphics*	02	02
ME121	Workshop Practice	00	02
	Total	**14**	**05**

Course Code	Subject Name	Credit Hours	
2nd Semester		Theory	Practical
MTH112	Linear Algebra & Analytical Geometry	03	00
ENG111	Functional English	03	00
CE115	Engineering Mechanics	03	00
EL102	Basic Electrical Technology	03	01
CH116	Chemical Process Technology	03	00
CH120	Chemical Process Calculations-I	02	00
	Total	**17**	**01**

Course Code	Subject Name	Credit Hours	
3rd Semester		Theory	Practical
CH202	Physical & Analytical Chemistry	02	01
CH206	Engineering Economics	02	00
CH211	Engineering Materials	02	00
CH216	Chemical Process Calculations-II	03	00
CH221	Engineering Thermodynamics	03	01
MTH201	Differential Equations and Fourier Series	03	00
	Total	**15**	**02**

Course Code	Subject Name	Credit Hours	
4th Semester		Theory	Practical
CH226	Chemical Engineering Thermodynamics	03	00
CS227	Introduction to modern Computer Languages	03	01
MTH211	Complex Variable and Laplace Transforms	03	00
CH240	Chemical Engineering Fluid Mechanics-I	03	00
CH236	Particulate Technology	03	01
	Total	**15**	**02**

Course Code	Subject Name	Credit Hours	
5th Semester		Theory	Practical
CH302	Maintenance Engineering & Risk Management	02	00
	Food Technology	02	01
CH331	Heat Transfer Operations	03	01
CH316	Chemical Engineering Fluid Mechanics-II	03	01
CH321	Mass Transfer	03	01
MTH301	Numerical Analysis and computer Applications	03	01
	Total	**16**	**05**

Course Code	Subject Name	Credit Hours	
6th Semester		Theory	Practical
CH326	Chemical Engineering Plant Design	03	00
CH341	Simultaneous Heat & Mass Transfer	03	01
CH306	Fuel and Energy	03	01
CH350	Chemical Reaction Engineering	03	00
	Statistical Analysis	02	01
	Total	**14**	**03**

Course Code	Subject Name	Credit Hours	
7th Semester		Theory	Practical
CH401	Biochemical Engineering	03	01
CH406	Transport Phenomena	03	00
CH411	Instrumentation & Process Control	03	01
CH416	Petroleum Refinery Engineering	03	00
CH421	Pollution Control Engineering	03	01
	Report writing and Presentation Skills	2	01
	Total	**17**	**04**

Course Code	Subject Name	Credit Hours	
1st Semesterv		Theory	Practical
CH426	Industrial Management	03	00
CH450	Chemical Process Design & Simulation	02	01
CH435	Petrochemicals	03	00
CH440	Nuclear Engineering	03	00
CH499	Thesis/ Project	06	00
CH335	Quality Control Laboratory	00	02
	Total	**17**	**03**

4.1.5 Career Opportunities

A chemical engineer may be involved in industry or university research where they are tasked in designing and performing experiments to create new and better ways of production, controlling pollution, conserving resources and making these processes safer. They may be involved in designing and constructing plants as a project engineer. In this field, the chemical engineer uses their knowledge in selecting plant equipment and the optimum method of production to minimize costs and increase profitability. After its construction, they may help in upgrading its equipment. They may also be involved in its daily operations. Chemical engineers may be permanently employed at chemical plants to manage operations. Alternatively, they may serve in a consultant role to troubleshoot problems, manage process changes and otherwise assist plant operators.

Many graduates of the chemical engineering department are now serving in important public as well as private sector organizations within Pakistan for example Engro Chemicals, Engro Polymers, FFBL, NRL, PRL, BYCO Refinery, PCSIR, OGDCL, SSGC, SNGPL, BHP Oil and gas, OMV Oil and gas PPL, Novatex etc and even outside the country. One of our graduates Mr. Abdul Razzaque won Noble Prize in a team of organization of prohibition of Chemical Weapon under UNO.

4.2 DEPARTMENT OF INDUSTRIAL ENGINEERING

4.2.1 The Department

This department was established in the year 1975 under the umbrella of Department of Mechanical Engineering and Full-fledged Department was shifted to new building in 1987. Our graduates are already serving the reputed organizations both in Pakistan and abroad. The department offers Bachelor of Engineering (B.E) undergraduate and postgraduate (M.E / PhD) programs exclusively in Industrial Engineering and Management.

Industrial Engineering is a rapidly developing and broad professional discipline. It deals with design, installation, operations and management of integrated systems of men, materials and machines drawing upon specialized knowledge of physical and social sciences and technology. It especially deals with managerial problems requiring knowledge of fundamental science and engineering practice for their solutions. While manufacturing industry has a wide scope and demand for Industrial Engineering, increasing numbers are finding satisfying employment in other kinds of business, hospitals, Hotels, Banks, Air Lines are availing the services of Industrial Engineers.

4.2.2 The Faculty

Chairman of the Department

Prof. Dr. Abdul Salam Soomro
Ph. No. +92 22 2771247

Professors:	
Dr. Abdul Salam Soomro	Ph.D. Malaysia
Dr. Ghulam Yasin Shaikh	Ph.D. Pakistan
Dr. Muhammad Saleh Jumani	Ph.D.United Kingdom

Associate Professors:	
Dr. Shakeel Ahmed Shaikh	Ph.D. United Kingdom

Assistant Professors:	
Mr. Abdul Qayoom Lakhair	Pgd. Pakistan
Mr. Mukhtiar Ali Korai	Pgd. Pakistan
Mr. Hafiz Karim Bux Indhar	On study leave M.E. Pakistan
Dr. Sonia Irshad Mari	Ph.D. South Korea
Dr. Muhammad Saad Memon	Ph.D. South Korea
Mr. Ali Arsalan Siddiqui	M.E. Pakistan

Lecturers:	
Mr. Muhammad Ali Khan	Pgd. Pakistan
Mr. Miskeen Ali Gopang	M.E. Pakistan

4.2.3 Laboratory Facilities

- Workshop
- Operations Research Lab
- Computer Aided Design and Simulation Modeling Lab
- Vicon Motion Capture System Lab
- Additive Manufacturing Lab
- Condition Monitoring Lab
- Human Factors and Time & Motion Study Lab
- Computer Integrated Manufacturing Lab (under construction)

4.2.4 Course

Course Code	Subject Name	Credit Hours	
1st Semester		Theory	Practical
MTH102	Applied Calculus	03	00
ISS111/SS104	Islamic Studies/Ethics	02	00
PS106	Pakistan Studies	02	00
INM101	Industrial Economics and Management	03	00
INM111	Engineering Drawing & Computer Graphics	03	01
EL102	Electrical Technology	03	01
	Total	**16**	**02**

Course Code	Subject Name	Credit Hours	
2nd Semester		Theory	Practical
MTH103	Linear Algebra Differential Equations & Analytical Geometry	03	00
INM121	Basic Business Management	03	00
ENG101	Functional English	03	00
CE145	Mechanics of Materials	03	01
INM131	Manufacturing Processes	03	02
	Total	**15**	**03**

Course Code	Subject Name	Credit Hours	
3rd Semester		Theory	Practical
MTIN220	Materials & Processes	03	01
INM201	Management Information Systems	03	00
ME281	Mechanics of Machines	02	01
INM211	Basic Thermodynamics	03	01
CS218	Introduction to Com & C++ Programming	03	01
	Total	**14**	**04**

Course Code	Subject Name	Credit Hours	
4th Semester		Theory	Practical
INM231	Production Planning and Control	03	00
INM241	Industrial Probability and Estimations	03	01
INM251	Managerial Accounting	03	00
INM261	Basic Machine Design	03	01
CE260	Fluid Mechanics	03	01
	Total	**15**	**03**

Course Code	Subject Name	Credit Hours	
5th Semester		Theory	Practical
INM301	Entrepreneurship	03	00
MTH336	Numerical Analysis & Com. Application (N.A.C.A)	03	01
INM311	Basic Operations Research	03	01
INM321	Manufacturing Strategy	03	00
ES361	Instrumentation & Control	03	01
	Total	**15**	**03**

Course Code	Subject Name	Credit Hours	
6th Semester		Theory	Practical
INM331	Organizational Behavior	03	00
INM341	Work Study & Methods Engineering	03	01
INM351	Production Systems Design	03	00
INM361	Project Management	03	01
INM371	Environmental Management	02	00
	Total	**14**	**02**

Course Code	Subject Name	Credit Hours	
7th Semester		Theory	Practical
INM401	Human Resources Management	03	00
INM411	Human Factors Engineering	03	01
INM421	Advanced Operations Research	03	01
INM431	Industrial Maintenance and Safety	03	00
INM441	Supply Chain and Logistical Management	03	00
INM499	Thesis/Project*	00	00
	Total	**15**	**02**

Course Code	Subject Name	Credit Hours	
8th Semester		Theory	Practical
INM451	Quality and Reliability Control	03	00
INM461	Marketing Principles and Practices	03	00
INM471	Principles of Decision Making	03	00
INM481	Computer Integrated Manufacturing	03	01
INM499	Thesis/Project	00	06
	Total	**12**	**07**

4.2.5 Career Opportunities

An industrial engineering and Management (IE&M) degree comes with countless career opportunities. Contrary to the common misconception that industrial engineers only work in manufacturing, IE&M graduates go on to work in a variety of different fields. Many choose to pursue a career in one of the following areas: Engineering Management, Human Factors, Process Engineering, Manufacturing Systems Engineering, Supply Chain Management, and Enterprise Informatics.

4.3 DEPARTMENT OF MECHANICAL ENGINEERING

4.3.1 The Department

Department of Mechanical Engineering was established in 1963. It is one of the prominent departments of the university with student's strength of about 600. With devoted faculty and staff, the department strives to produce the engineers, which are capable to contribute in exploration of affordable and sustainable development of the country.

Mechanical Engineering Department offers two undergraduate programs of four-year duration, leading to the degree of Bachelor of Engineering.
1- Mechanical Engineering
2- Mechatronics Engineering

The goal of the undergraduate programs is to produce the graduates that are globally competitive for the requirements of industries. The student, graduated from this department, becomes capable of taking leading positions in industry, academia and government in both Pakistan and abroad.

The department also offers the Ph.D and post graduate programs in Energy System Engineering, Manufacturing Engineering and Mechatronics Engineering.

4.3.1.1 Mechanical Engineering Undergraduate Program

Mechanical Engineering is one of the most popular undergraduate programs of Mehran University of Engineering and Technology Jamshoro. It is a professional engineering discipline that involves the application of principles of physics for analysis, design, manufacturing and maintenance of mechanical systems. Mechanical engineers learn about the Mechanical System Design and Manufacturing, Thermofluid Science, Engineering Economics, Management Science and Electromechanical System.
The Mechanical Engineering program also works on research and community projects to gain practical problem-solving experience. Mechanical engineering students usually hold one or more internships during studies

The department has started exercising Outcome-based education (OBE) system at the undergraduate level in Mechanical and Mechatronics Engineering from 17-Batch. The OBE is an educational theory that bases each part of an educational system around goals, which are supposed to be achieved by each student at the end. This system has been adopted in different levels of education around the world.

4.3.1.2 The Faculty

Chairman of the Department

Prof. Dr. Dur Muhammad Pathan
Phone: +92-022- 2771275,+92-22772250-70 (Ext: 2300)

Professors:	
Dr. Dur Muhammad Pathan	Ph.D. Pakistan
Dr. Memon Mujeeb-u-ddin Sahrai	Ph.D. United Kingdom.
Dr. Khanji Harijan	Ph.D. Pakistan
Dr. Rizwan Ahmed Memon	Ph.D.Hong Kong
Dr. Abdul Fatah Abbasi	Ph.D. Pakistan
Dr. Tanweer Hussain	Ph.D. United Kingdom

Assistant Professors:	
Mr. Shoukat Ali Memon	B.E. Pakistan
Mr. Ghulam Yasin Mughal	M.E. Pakistan
Mr. Abdul Samad Memon	M.E. Pakistan
Mr. Muhammad Jurial Sangi	B.E. Pakistan
Mr. Muhammad Sharif Jamali	M.E. Pakistan
Mr. M. Atif Qaim Khani	M.E. Pakistan
Dr. Abdul Ghafoor Memon	Ph.D. Pakistan
Mr. Imtiaz Ali Memon	M.E. Pakistan

Lecturers:	
Mr. Javed Rehman Larik	PGD. Pakistan
Mr. Zain-ul-Abdin Qureshi	PGD. Pakistan
Mr. Laveet Kumar	M.E. Pakistan
Mr. Roshan Manghwar	B.E. Pakistan
Mr. Samiullah Qureshi	M.E. Pakistan
Mr. Hafeez Khoharo	B.E. Pakistan
Mr. Farhan Haider Joyo	B.E. Pakistan
Mr. Raheel Ahmed Nazmani	M.E. Pakistan

4.3.1.3 Laboratory Facilities

Department of Mechanical Engineering is one of the oldest and prestigious department of the University supported and equipped with highly qualified faculty and modern laboratories.

1. Aerodynamics Laboratory
2. Automobile Laboratory
3. Computer Laboratory
4. Drawing Hall
5. Energy Technology Laboratory
6. Engineering Mechanics Laboratory
7. Fluid Mechanics Laboratory
8. Heat Transfer Laboratory
9. Material Testing Laboratory
10. Mechanical Vibrations Laboratory
11. Mechanics of Machines Laboratory
12. Mechatronics Laboratory
13. Refrigeration and Air Conditioning Laboratory
14. Thermodynamics Laboratory
15. Instrumentation and Control Laboratory

4.3.1.4 Course

Course Code	Subject Name	Credit Hours	
1st Semester		Theory	Practical
(SS 111)	Islamic Studies/Ethics	2	0
(PS 106)	Pakistan Studies	2	0
(MTH 102)	Applied Calculus	3	0
(ME 102)	Engineering Drawing & Computer Graphics	2	2
(ME 112)	Engineering Statics	2	1
(ME 122)	Engineering Materials	3	0
	Total	**14**	**03**

Course Code	Subject Name	Credit Hours	
2nd Semester		Theory	Practical
(EN 101)	Functional English	2	0
(MTH 113)	Linear Algebra, Differential Equations & Analytical Geometry	3	0
(ME 132)	Engineering Dynamics	2	0
(EL 102)	Electrical Technology	2	1
(ME 142)	Workshop Practice	0	2
(ES 281)	Basic Electronics	2	1
(ME 151)	Applied Physics	2	0
	Total	**13**	**03**

Course Code	Subject Name	Credit Hours	
3rd Semester		Theory	Practical
(MTH 213)	Complex Variables & Transforms	3	0
(ME 202)	Strength of Materials-I	2	0
(CH 202)	Applied Chemistry	2	0
(ME 222)	Thermodynamics-I	3	0
(ME 252)	Fluid Mechanics-I	3	1
(CS 255)	Computer programming	2	1
	Total	**15**	**02**

Course Code	Subject Name	Credit Hours	
4th Semester		Theory	Practical
(MTH 336)	Numerical Analysis & Computer Applications (NACA)	3	1
(ME 232)	Strength of Materials-II	3	1
(ME 242)	Thermodynamics-II	3	1
(ME 226)	Fluid Mechanics-II	3	1
(ME 212)	Mechanics of Machines-I	2	0
	Total	**14**	**04**

Course Code	Subject Name	Credit Hours	
5th Semester		Theory	Practical
(ME 302)	Heat & Mass Transfer	3	1
(ME 312)	Applied Aerodynamics	3	1
(EE 425)	Safety, Health & Environment	2	0
(ME 332)	Machine Design -I	3	0
(EN 306)	Communication Skills and Technical Writing	3	0
(ME 366)	Mechanics of Machine-II	2	1
	Total	**16**	**03**

Course Code	Subject Name	Credit Hours	
6th Semester		Theory	Practical
(ME 342)	Instrumentation & Measurement	2	1
(MTH 317)	Statistics & Probability	3	0
(ME 352)	Machine Design-II	3	0
(ME 372)	Refrigeration & Air Conditioning	3	1
(ME 382)	Mechanical Vibrations	3	1
(ME 356)	Computer Aided Machine Design (CAMD)	0	1
	Total	**14**	**04**

Course Code	Subject Name	Credit Hours	
7th Semester		Theory	Practical
(ME 402)	Entrepreneurship & Engineering Management	3	0
(ME 412)	Automobile Engineering	3	1
(ME 491)	Control Engineering	2	1
(ME 462)	Manufacturing Processes	3	1
(ME 442)	Thermal Power Plants	3	0
(ME 499)	Project/Thesis –I*		0
	Total	**14**	**03**

Course Code	Subject Name	Credit Hours	
8th Semester		Theory	Practical
(ME 452)	Renewable and Emerging Energy Technologies (REET)	3	1
(ME 472)	Maintenance Engineering	2	0
(ME 482)	Project Management & Optimization	3	0
(ME 499)	Project/Thesis-II	0	6
	Total	**08**	**07**

4.3.1.5 Career Opportunities

Mechanical Engineering has diverse applications in all fields of engineering and technology. The graduates of Mechanical Engineering have opportunities to work in many public as well as private sector industries. With the rapid growth in industrial sector, the employment potential for mechanical engineers has increased manifold. Graduating students with rich technical skills could find job opportunities in technical and managerial positions in public as well as private sector.
The Mechanical Engineers have opportunities to be employed in the following sectors

- Automation and Control
- Technical Wings of Armed Forces
- Automobile
- Renewable energy
- Power Plants
- Oil refineries
- Research and Development, etc.
- Manufacturing process plants
- Marine engineering
- Biomedical
- Food processing
- Petrochemical
- Railways.

4.3.1.6 Mechanical Engineering Workshop

The Mechanical Engineering Workshop is a central laboratory of the University for providing hands on knowledge to the students of almost all Engineering disciplines through the subjects of Workshop Practice, Manufacturing process, Machine Design & Manufacturing and Computer Integrated Manufacturing Process.

The Mechanical Engineering Workshop also provides Machines/equipment maintenance, Maintenance of steel structure and fabricates all types of furniture to cater the need of the University and help to the researchers to fabricate new machines and components.

Laboratory Facilities

- CAD/CAM Lab
- Machine Shop
- Fitting Shop
- Forging Shop
- Sheet Metal Shop
- CNC Shop
- Welding Shop
- Foundry Shop
- Woodwork Shop

Teaching Staff

Workshop Incharge	
Prof. Dr. Rafique Ahmed Jhatial	(Ph.D UK)
Workshop Instructor	
Mr. Afaque Rafique Memon	M.E China
Mr. Amir Ali Memon	B.E Pakistan
Mr. Pir Jawed Ahmed Sarhandi	B.E Pakistan
Mr. Jamil Ahmed Mangi	B.Tech Hons
Mr. Abdul Qadir Jamali	B.Tech Hons
Mr. Aurangzeb Halepoto	B.E Pakistan
Mr. Jamaluddin Vinjher	B.E Pakistan

4.3.2.1 Mechatronic Engineering Undergraduate Program

The Mechatronics Engineering undergraduate program is administered by the Department of Mechanical Engineering. 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. A Mechatronic system is composed of integration of mechanical and electronic components, sensors, actuators and controllers. The courses in Mechatronics undergraduate program are offered by Mechanical Engineering department in collaboration with Electrical Engineering, Electronics Engineering, Telecommunication engineering and Computer System Engineering departments. This makes it an ideal choice for students, who would prefer a broad interdisciplinary engineering education to counter the challenges of demanding technological horizons.

4.3.2.2 The Faculty

Chairman of the Department

Prof. Dr. Dur Muhammad Pathan
Phone:,+92-22772250-70 (Ext: 2300)

a- Dedicated Faculty:

Professor:	
Dr. Jawaid Daudpoto	Ph.D. United Kingdom

Assistant Professors:	
Dr. Saifullah Samo	Ph.D. China

b- Shared Faculty:

Professors:	
Dr. Khanji Harijan	Ph.D. Pakistan
Dr. Rizwan Ahmed Memon	Ph.D.Hong Kong
Dr. Dur Muhammad Pathan	Ph.D. Pakistan
Dr. Abdul Fatah Abbasi	Ph.D. Pakistan
Dr. Tanweer Hussain	Ph.D. United Kingdom

Associate Professor:	
Dr. Imtiaz Hussain Kalwar	Ph.D. United Kingdom

Assistant Professors:	
Mr. Shoukat Ali Memon	B.E. Pakistan
Mr. Ghulam Yasin Mughal	M.E. Pakistan
Mr. Abdul Samad Memon	M.E. Pakistan
Mr. Muhammad Jurial Sangi	B.E. Pakistan
Mr. Muhammad Sharif Jamali	M.E. Pakistan
Mr. M. Atif Khan Qaim Khani	M.E. Pakistan
Dr. Abdul Ghafoor Memon	Ph.D. Pakistan
Mr. Imtiaz Ali Memon	M.E. Pakistan
Dr. Aamir Mehmood Soomro	Ph.D. China
Dr. Arbab Nighat	Ph.D. China
Dr. Noor-u-Zaman Laghari	Ph.D. United Kingdom
Mr. Kamran Kazi	M.E. Pakistan
Mr. Zaigham Abbas	M.E. Pakistan

Lecturers:	
Mr. Javed Rehman Larik	PGD. Pakistan
Mr. Zain-ul-Abdin	PGD. Pakistan
Mr. Roshan Manghwar	B.E. Pakistan
Mr. Laveet Kumar	B.E. Pakistan
Mr. Samiullah Qureshi	M.E. Pakistan
Mr. Hafeez Khoharo	B.E. Pakistan
Mr. Farhan Haider Joyo	B.E. Pakistan
Mr. Raheel Ahmed Nizamani	M.E. Pakistan
Mr. Mansoor Ali	B.E. Pakistan
Mr. Shoaib Ahmed Khatri	B.E. Pakistan
Mr. Shafi Jiskani	B.E. Pakistan
Mr. Zohaib Hussain Laghari	B.E. Pakistan
Mr. Rizwan Ali Shah	B.E. Pakistan
Mr. Umair Ahmed Korai	M.E. Pakistan

4.3.2.3 Laboratory Facilities

Following lab facilities are available to students of Mechatronics Engineering.

1. Mechatronics Laboratory
2. Computer Laboratory
3. Electrical Measurements and Circuit Laboratory
4. Electrical Workshop
5. Instrumentation and Control Laboratory
6. Digital Electronics and Microprocessor Laboratory
7. Power Electronics Laboratory
8. Drawing Hall
09. Engineering Mechanics Laboratory
10. Fluid Mechanics Laboratory
11. Heat Transfer Laboratory
12. Automobile Laboratory
13. Mechanical Vibrations Laboratory
14. Mechanics of Machines Laboratory
15. Refrigeration and Air Conditioning Laboratory
16. Thermodynamics Laboratory

4.3.2.4 Courses

Course Code	Subject Name	Credit Hours	
1st Semester		Theory	Practical
MTH108	Applied Calculus	3	0
EN101	Functional English	3	0
EL117	Applied Physics	2	1
CS191	Computer Programming	2	1
ME106	Engineering Statics	3	1
ME116	Engineering Materials	2	0
	Total	**15**	**03**

Course Code	Subject Name	Credit Hours	
2nd Semester		Theory	Practical
ME126	Engineering Drawing and Computer Graphics	2	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
ME136	Fluid Mechanics	2	1
ME146	Workshop Practice	0	1
	Total	**13**	**05**

Course Code	Subject Name	Credit Hours	
3rd Semester		Theory	Practical
ME206	Mechanics of Materials	2	1
MTE201	Actuating Systems	3	1
ME216	Engineering Dynamics	3	0
CS291	Data Structures and Object Oriented Programming	2	1
ES216	Digital Logic Design	2	1
MTH227	Ordinary and Partial Differential Equations	3	0
	Total	**15**	**04**

Course Code	Subject Name	Credit Hours	
4th Semester		Theory	Practical
MTH217	Laplace Transforms and Discrete Mathematics	3	0
ME226	Fundamentals of Thermal Sciences	3	1
ES246	Electronic Devices and Circuits	3	1
ME236	Mechanics of Machines	3	1
MTE211	Instrumentation and Measurements	3	1
	Total	**15**	**04**

Course Code	Subject Name	Credit Hours	
5th Semester		Theory	Practical
MTH336	Numerical Analysis and Computer Applications	3	1
ES316	Microcontroller and Embedded Systems	3	1
TL301	Signals and Systems	2	1
ME306	Mechanical Vibrations	3	1
	Total	**11**	**04**

Course Code	Subject Name	Credit Hours	
6th Semester		Theory	Practical
MTH311	Statistics and Probability	3	1
MTE301	Control Systems	3	1
ME316	Machine Design and CAD / CAM	3	1
EN113	Communication Skills	2	0
EL329	Power Electronics	3	1
	Total	**14**	**04**

Course Code	Subject Name	Credit Hours	
7th Semester		Theory	Practical
ME406	Engineering Economics and Project Management	3	1
MTE401	Robotics	3	0
MTE411	Mechatronics System Design	2	1
CS492	Digital Signal & Image Processing	3	1
ME416	Manufacturing Processes	3	1
MTE499	Project / Thesis –I*	0	0
	Total	**14**	**04**

Course Code	Subject Name	Credit Hours	
8th Semester		Theory	Practical
CS491	Machine Intelligence	3	1
MTE421	Industrial Automation	2	1
EE425	Safety, Health and Environment	3	0
STD951	Entrepreneurship	2	0
MTE499	Project / Thesis -II	0	6
	Total	**10**	**08**

4.3.2.5 Career Opportunities

Mechatronic Engineers have opportunities to work in emerging fields in public and private sectors. 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.

Mechatronic Engineers are in demand in the following sectors:

- Automation and Control
- Robotics
- Automobile
- Renewable energy
- Power Plants
- Oil refineries
- Manufacturing process plants
- Marine engineering
- Biomedical
- Food processing
- Petrochemical
- Research and Development, etc

4.4 INSTITUTE OF METALLURGY AND MATERIALS ENGINEERING

4.4.1 The Department

The Department of Metallurgy & Materials Engineering is one of the leading department in the engineering disciplines at Mehran University of Engineering & Technology. MME 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

The mission of Metallurgy and Materials Engineering program is to produce material engineers and scientists with adequate understanding of structure-property-processing-perfor¬mance relationships for engineering materials. Metallurgy and Materials Engineering is the only discipline in MUET which is equipped with advanced research equipment and highly qualified academics staff of around 15, 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. All the courses are integrated with laboratory works and projects. 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 stu¬dents in the field of metallurgy and materials engineering. MME department has adopted the **out-come based education (OBE)** system on 2017 batch and onwards.

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.

Program Educational Objectives (PEOs):

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

1. **Professionalism:** Producing efficient graduates with adequate knowledge and competency in the field of Metallurgy & Materials Engineering and related fields
2. **Leadership:** Developing leadership qualities skills with high quality ethics and optimum attitude
3. **Professional** Development: Emerging interest in research and continuous profession development to enhance self esteem

4.4.2 The Faculty

Chairman of the Department
Prof. Dr. Muhammad Moazam Baloch
Phone: 022-2772250-73, Ext: 4500

Professors:	
Dr. Muhammad Moazam Baloch	Ph.D.United Kingdom
Dr. Muhammad Ishaque Abro	Ph.D.Pakistan
Assistant Professors:	
Mr. Sikandar Ali Memon	M.E. Pakistan
Mr. Riaz Ahmed Memon	M.E. Pakistan
Mr. Nisar Ahmed Memon	M.E. Pakistan
Mr. Ashfaque Ahmed Issani	M.E. Pakistan
Dr. Muhammad Wasim Akhtar	Ph.D. Korea
Mr. Umair Aftab	on study leave M.E. Pakistan
Mr. Shafique Ahmed	M.E. Pakistan
Lecturers:	
Mr. Muddassir Ali Memon	M.E. Pakistan
Mr. Imtiaz Ali Soomro	M.E. Pakistan
Mr. Ayatullah Qureshi	M.E. Pakistan
Mr. Mukesh Kumar	M.Phil. Pakistan

4.4.3 Laboratory Facilities

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

- Material Testing Lab-1
- Material Testing Lab-2
- Sand Testing Lab
- Heat Treatment Lab
- Fabrication Lab
- Advanced Characterization Lab
- Materials Synthesis Lab
- Metallography Lab
- Electrochemical and Corrosion Lab
- Computer and Simulation Lab

4.4.4 Course

Course Code	Subject Name	Credit Hours	
1st Semester		Theory	Practical
MT131	Introduction to Engineering Materials	3	0
MT132	Applied Chemistry	3	0
MT133	Applied Physics	3	0
MTH108	Applied Calculus	3	0
IS111	Islamic studies	2	0
SS104	Ethics (For Non-Muslims)		
PS106	Pakistan studies	2	0
MT134	Basic Science Lab	0	1
	Total	**16**	**01**

Course Code	Subject Name	Credit Hours	
2nd Semester		Theory	Practical
MT135	Mineral Processing	2	0
MT136	Engineering Drawing and CAD	2	1
MTH125	Linear Algebra and Differential Equation	3	0
ENG101	Functional English	3	0
CS115	Introduction to Computing	2	1
ME176	Workshop & Practice	0	2
MT137	Mineral Processing Lab	0	1
	Total	**12**	**05**

Course Code	Subject Name	Credit Hours	
3rd Semester		Theory	Practical
MT231	Materials Thermodynamics	3	0
MT232	Physical Metallurgy-I	3	0
EE214	Industrial Safety & Environmental Engineering	3	0
ENG201	Communication Skills	3	0
ES292	Instrumentation & Control	2	1
MT233	Metallurgy and Materials Lab-1	0	1
	Total	**14**	**02**

Course Code	Subject Name	Credit Hours	
4th Semester		Theory	Practical
MT234	Iron and Steel Making Technology	3	0
MT235	Non Ferrous Metallurgy	3	0
MT236	Mechanical Behaviour of Materials	3	0
MT237	Engineering Ceramics & Glasses	3	0
MTH215	Numerical Methods & Computation	3	1
MT238	Metallurgy and Materials Lab-2	0	1
	Total	**15**	**02**

Course Code	Subject Name	Credit Hours	
5th Semester		Theory	Practical
MT331	Inspection and Testing of Materials	3	0
MT332	Polymeric Materials	3	0
MT333	Physical Metallurgy-II	3	0
MT334	Advanced Steels	2	0
ENG301	Technical Writing and Presentation Skill	2	0
MTH317	Statistics & Probability	3	0
MT335	Inspection and Quality Control Lab	0	1
	Total	**16**	**01**

Course Code	Subject Name	Credit Hours	
6th Semester		Theory	Practical
MT336	Foundry Engineering	3	0
MT337	Powder Metallurgy	2	0
MT338	Manufacturing Processes	3	0
MT339	Welding & other Joining Process	3	0
MT340	Corrosion & Protection	3	0
MT341	Composite Materials	2	0
MT342	Metal Shaping and Joining Lab	0	1
MT343	Electrochemistry and Corrosion Lab	0	1
	Total	**16**	**2**

Course Code	Subject Name	Credit Hours	
7th Semester		Theory	Practical
MT431	Heat Treatment Processes	3	0
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
MT435	Heat Treatment Lab	0	1
MT436	Nanomaterials Synthesis Lab	0	1
MT499	Project	0	3
	Total	**12**	**05**

Course Code	Subject Name	Credit Hours	
8th Semester		Theory	Practical
MT437	Fracture Mechanics and Failure Analysis	3	0
MT438	Design and Selection of Materials	2	0
MT439	Computational Materials Science	2	1
MT440	Tribology and Surface Engineering	2	0
INM491	Entrepreneurship and Marketing	3	0
MT441	Failure Analysis Lab	0	1
MT499	Project	0	3
	Total	**12**	**05**

4.4.5 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 Pakistan Steel Mill, Bolan Casting limited, Agha Steel Mill, Pakistan Machine tool factory, Heavy Mechanical Complex, Pakistan Ordinance Factory. 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.

4.5 DEPARTMENT OF MINING ENGINEERING

4.5.1 The Department

“If it is not Grown, it is Mined”- Mining is the second earliest endeavours of the human civilization, granted that agriculture was the first. The two industries ranked together as the primary or basic industries of early civilaztion.

Mineral sector always plays a vital role for industrial development and economic growth of nations. The demand for minerals of all kinds is higher today than ever before and it continues to increase as the nations of the world strive to improve their standards of living. Mining engineering is a highly technical field. Today the challenges of mining are greater than before. Now high-tech techniques are being designed to make tomorrow's mines more productive, safer and economically successful. Mining engineers are seeking ways to extract essential raw materials without causing undue disturbance to the environment.

Mining provides the mineral resources for society, including coal, metallic & non-metallic minerals, ores, gemstones as well as basic products such as; gravel, limestone, sandstone etc., that are essential for the construction of highways, bridges, power pl ts, and building foundations. Wherever productive minerals deposits are found in our country the technical skills of mining and mineral processing engineers are required. The Department of Mining Engineering offers degrees in B.E. in Mining Engineering, M.E. in Mining Engineering and Ph.D. in Mining Engineering.

Department of Mining Engineering is actively engaged in various projects of national and strategic importance in the fields of reserves estimation, coal mining, coal gasification and mineral processing and has developed strong academic and research collaboration with University of Nottingham, UK, Montan University, Leoben Austria, Hacettepe University, Turkey and China University of Mining and Technology, Xuzhou, China

4.5.2 The Faculty

Chairman of the Department

Engr. Muhammad Yakoob Behan M.E. MUET, Pakistan
Phone: 022-2771391, 022-2772250-73 Ext. 4600
Fax: 022-2771327
Email: chairman.mn@admin.muet.edu.pk

Professor:	
Dr. Abdul Ghani Pathan	On Contract Ph.D. UK

Assistant Professors:	
Mr. Ahsan Ali Memon	B.E. MUET, Pakistan
Mr. M. Hashim Rind	B.E. MUET, Pakistan
Mr. Saeed Ahmed Memon	B.E. MUET, Pakistan
Mr. Sikandar Ali Channa	M.E. MUET, Pakistan
Mr. Fahad Irfan Siddiqui	M.E. UTP, Malaysia
Mr. Safiullah Memon	M.E. MUET, Pakistan

Lecturers:	
Mr. Munawar Ali Pinjaro	M.E. MUET, Pakistan (On Study Leave)
Mr. Agha Shafi Mohd Pathan	B.E. MUET, Pakistan
Mr. Muhammad Raheel Memon	M.E. MUET, Pakistan (On Study Leave)
Mr. Mairaj Hyder Soomro	M.E. NED, Pakistan (On Study Leave)
Mr. Sultan Ahmed Khoso	M.E. MUET, Pakistan (On Study Leave)

4.5.3 Laboratory Facilities

The department has 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 Laboratory
5. Mine Ventilation Laboratory
6. Advance Research Laboratory

4.5.4 Courses

Course Code	Subject Name	Credit Hours	
1st Semester		Theory	Practical
MTH102	Applied Calculus	3	0
IS111	Islamic Studies	2	0
PS106	Pakistan Studies	2	0
NM121	Engineering Drawing	0	2
ME181	Workshop Practice	0	2
MN101	Mining Engineering Fundamentals	3	0
	Total	**10**	**04**

Course Code	Subject Name	Credit Hours	
2nd Semester		Theory	Practical
MTH111	Linear Algebra and Analytical Geometry	3	0
EL102	Electrical Technology	3	1
EN101	Functional English	3	0
CE115	Engineering Mechanics	3	1
MN111	Applied Chemistry	3	1
	Total	**15**	**03**

Course Code	Subject Name	Credit Hours	
3rd Semester		Theory	Practical
MTH201	Differential Equation & Fourier Series	3	0
CE265	Strength of Material	3	1
MN201	General Geology	3	1
ENG201	Communication Skills	2	0
ME291	Applied Thermodynamics	3	1
	Total	**14**	**03**

Course Code	Subject Name	Credit Hours	
4th Semester		Theory	Practical
MN221	Mineralogy and Petrology	2	1
CE285	Fluid Mechanics	3	1
MN231	Mineral Processing – I	2	1
MN261	Mine Surveying	3	1
MN251	Coal Technology	2	1
	Total	**12**	**05**

Course Code	Subject Name	Credit Hours	
5th Semester		Theory	Practical
MTH301	Numerical Analysis and Computer Programming	3	1
MN371	Mining Laws	2	0
MN301	Structural Geology	3	0
MN361	Mine Management	2	0
MN321	Rock Mechanics	3	1
MN311	Mineral Processing - II	2	1
	Total	**15**	**03**

Course Code	Subject Name	Credit Hours	
6th Semester		Theory	Practical
MN351	Mine Ventilation	3	1
MN381	Drilling & Blasting Engineering	3	1
MTH317	Statistics and Probability	3	0
MN391	Mineral and Ore Deposits	3	0
EN301	Technical & Scientific Writing	3	0
	Total	**15**	**02**

Course Code	Subject Name	Credit Hours	
7th Semester		Theory	Practical
MN401	Strata Control	3	0
MN411	Mine Water and Dewatering Design	3	1
MN421	Planning and Design of Underground Mines	3	0
MN442	Mineral Resource Estimations	2	1
MN443	Mine Economics	2	0
MN491	Project/Thesis-I	0	0
	Total	**13**	**02**

Course Code	Subject Name	Credit Hours	
8th Semester		Theory	Practical
MN451	Computer Application to Mining Industry	0	2
MN461	Surface Mine Design and Practice	3	0
MN471	Mine Rescue and Safety	3	1
MN481	Cement Technology	2	0
MN491	Project / Thesis-II	0	6
	Total	**08**	**09**

4.5.5 Career Opportunities

A degree in Mining Engineering offers attractive careers both in private and public sectors. The graduates of the Mining Engineering Department are employed in the public sector including Directorate of Mineral Development, Government of Sindh, Directorate of Sindh Coal Authority, Inspectorate of Mines, Inspectorate of Coal Mines, Lakhra Coal Development Company (LCDC), Sindh Engro Coal Mining Company (SECMC), Pakistan Atomic Energy Commission (PAEC), Sino Sindh Resources (Pvt.) Ltd. Company (SSRL), Pakistan Mineral Development Corporation (PMDC), Oil and Gas Development Corporation Ltd. (OGDCL), Quarries of Pakistan Steel Mills and various other private organizations like, Coal Mines, Cement Industries and other mining and mineral processing related projects.

4.6 INSTITUTE OF PETROLEUM AND NATURAL GAS ENGINEERING

4.6.1 The Institute

In view of facts and figures regarding the explored resources of petroleum revealed that the province of Sindh is the leading producer of oil and gas in Pakistan. This plays an important role in the economic growth and the maintaining of life line of country's development. The exploration and production of these reserves offers broad spectrum challenges and opportunities for the graduates and post graduates to utilize their expertise and skills for the progress, betterment and uplift of the country.

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

Petroleum and Gas Engineering department has great history of Excellence through Innovation, pioneering and quality of graduates. In this regard, the tradition continued as the research and talent produced shapes the future of Institute of Petroleum & Natural Gas in 1996. The Institute is offering BE, ME & PhD in Petroleum and Natural Gas Engineering. We are leading centre of Excellence in Petroleum & natural Gas engineering recognized internationally for the quality of our teaching, training and research.

The aim of higher studies in petroleum Engineering is designed to equip students with the knowledge and skills to tackle the oil & gas industries; the most emerging problems. 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 a wide variety of urban and rural back ground of Sindh, Pakistan. Most of the graduates have been employed by oil and gas operating exploration companies, Services Company's, refinery and marketing companies in country and abroad.

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

The Institute has seminar hall with a capacity of 70 persons with latest audio visual facilities. The Institute of Petroleum and Natural Gas Engineering and Society of Petroleum Engineering (SPE) is regularly arranging and conducting technical lectures / Short courses / initial and Final Seminars of research projects / thesis of undergraduate and Post graduate students and technical sessions in the facility. The Institute has centrally air conditioned Seminar

Faculty of Engineering

Library with the original and latest books, research Journals, annual technical reports of 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:

The visionary approach of our Institute is concentrated in Petroleum Engineering Education at International Standard, technical achievements through research and producing competent engineers to serve petroleum industry.

MISSION:

The mission of IPNGE 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 petroleum industry.

Program Educational Objectives:

1. To produce petroleum graduates capable of practising knowledge to promote oil and gas industry.
2. To produce skilled engineers having potential of leading the petroleum industry.
3. To provide quality research for innovative solutions to enhance oil and gas production to support global fuel demand.

4.6.2 The Faculty

Director of the Institute

Prof. Dr. Abdul Haque Tunio
Ph:022-2771241, 2772250-73 (Ext. 4300), Fax No:022-2772453

Professor:	
Dr. Abdul Haque Tunio	Ph.D. Pakistan
Dr. Sarfaraz Ahmed Jokhio	Ph.D. U.S.A

Assistant Professors:	
Mr. Shahzad Ali Baladi	M.E. Pakistan
Mr. Allah Dino Samoon	B.E., PGD. Pakistan
Dr. Muhammad Khan Memon	Ph.D. Malaysia
Mr. Aftab Ahmed Mahesar	M.E. Pakistan
Mr. Khalil Rehman Memon	M.E. Malaysia
Mr. Naveed Ahmed Ghirano	M.E. Pakistan
Mr. Habib U Zaman Memon	M.E. Pakistan

Lecturers:	
Abdul Qadir Shaikh	B.E., PGD, Pakistan (On Lien)
Mr. Mukhtiar Ali Talpur	B.E. Pakistan
Mr. Ubedullah Ansari	M.E. Pakistan (On Study Leave)
Mr. Irshad Ali Gopang	M.E. Pakistan
Mr. Faisal Najam Abro	BE. Pakistan
Mr. Muhammad Zubair	M.E. Pakistan
Mr. Muhammad Ali Memon	B.E., PGD, Pakistan
Mr. Sohail Nawab	B.E. Pakistan
Mr. Imran ahmed Hullio	B.E. Pakistan

4.6.3 Laboratory Facilities

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

a) Petroleum Refinery Engineering
b) Gas Engineering
c) Drilling & Reservoir Simulation
d) Production Engineering
e) Drilling Fluids
f) Computer
g) General / Oil Testing

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

4.5.4 Courses

Course Code	Subject Name	Credit Hours	
1st Semester		Theory	Practical
PG-101	Fundamentals of Petroleum Engineering	3	0
HU-101	Functional English	3	0
PS-106	Pakistan Studies	2	0
IS-111/SS-104	Islamic Studies / Ethics	2	0
MTH-108	Applied Calculus	3	0
EL-112	Applied physics	3	1
	Total	**16**	**01**

Course Code	Subject Name	Credit Hours	
2nd Semester		Theory	Practical
WS-105	Workshop Practice.	0	2
ME-110	Engineering Drawing & Graphics	2	1
ENG-111	Communication Skills	2	0
PG-111	Applied Chemistry	2	1
MTH-112	Linear Algebra &Analytical Geometry	3	0
PG-121	Applied Geology	2	1
PG-131	Applied Thermodynamics	2	0
	Total	**13**	**05**

Course Code	Subject Name	Credit Hours	
3rd Semester		Theory	Practical
ENG-215	Technical Report Writing & Presentation Skills	2	0
EL-215	Introduction to Electrical Engineering	2	1
PG-221	Petroleum Geology & Geo-Physical Prospecting	3	0
MTH-223	Differential Equation & Complex Variable	3	0
CS-231	Computer Programming & Software Applications	2	1
CE-261	Fluid Mechanics	2	1
	Total	**14**	**03**

Course Code	Subject Name	Credit Hours	
4th Semester		Theory	Practical
PG-201	Petrophysics	3	1
PG-211	Drilling Engineering-I	3	1
PG-222	Organizational Behavior	3	0
PG-231	Properties of Reservoir Fluids	3	1
CE-281	Mechanics of Materials	2	1
	Total	**14**	**04**

Course Code	Subject Name	Credit Hours	
5th Semester		Theory	Practical
PG-321	Reservoir Geo Mechanics	2	0
PG-341	Drilling Engineering-II	3	1
PG-361	Reservoir Engineering	3	1
PG-371	Petroleum Refinery Engineering	3	1
PG-381	Environment & Safety Management	3	0
	Total	**14**	**03**

Course Code	Subject Name	Credit Hours	
6th Semester		Theory	Practical
PG-301	Instrumentation & Process Control	2	1
PG-311	Natural Gas Engineering	2	1
MTH-321	Applied Numerical Methods	2	1
PG-331	Gas Reservoir Engineering	3	1
PG-351	Well Logging	2	1
	Total	**11**	**05**

Course Code	Subject Name	Credit Hours	
7th Semester		Theory	Practical
PG-401	Well Testing	3	1
PG-411	Petroleum Production Engineering-I	3	1
PG-421	Reservoir Simulation	3	1
PG-441	Project Planning & Management	2	0
PG-491	Final Year Project	0	3
	Total	**11**	**06**

Course Code	Subject Name	Credit Hours	
8th Semester		Theory	Practical
PPG-451	Principles of Enhanced Oil Recovery	3	1
PG-461	Petroleum Production Engineering-II	3	1
PG-471	Unconventional Reservoirs	3	0
PG-481	Petroleum Economics	2	0
PG-491	Final Year Project	0	3
	Total	**11**	**05**

4.6.5 Career Opportunities

Internship/Graduate Training Program:
The Institute also arranges summer vacation internship to third/final year students with the coordination of oil and gas exploration and production companies operating in Pakistan. This internship enhances the knowledge of students on day-to-day field operation and working environment of the petroleum industry. In the final year the students are assigned to work on a project related to the field operations. The project is usually designed and completed in collaboration with the petroleum industry. After completing graduation, the reputed oil/gas sectors are usually requiring top ten students for their graduate training program.

Linkage with National / Int'l Organizations:

A Student Chapter of Society of Petroleum Engineers (SPE) International "Mehran Student Chapter" was also established at this Institute in 1998. The purpose to establish the chapter was to help the students in updating their relevant knowledge by organizing technical short courses, seminars and sessions, field trips. The chapter also helps the Institute to liaison with all the major national and multinational companies in the oil and gas sector in Pakistan.

The University has signed an agreement with Pakistan Petroleum Ltd to establish a PPL Chair in the Institute. The purpose of establishing such a Chair was to promote scientific research activities and higher learning in the field of Petroleum Engineering including laboratory research work, participation in technical conferences, seminars, workshops, short courses and to maintain the quality of undergraduate and postgraduate programs of the Institute in the line of international standard.

4.7 DEPARTMENT OF TEXTILE ENGINEERING

4.7.1 The Department

The Department of Textile Engineering was established in 1993 for undergraduate program (i.e. Bachelor of Engineering (B.E) in Textile Engineering). The aim of the department is to impart the knowledge and skills in the field of textile materials, manufacturing and processing to the Students as per international standards, so that, 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 postgraduate programs i.e., Master, MPhil and Phd in the field of Textile Engineering have been offered since 2005. Furthermore, since 2016 the Outcome Based Education (OBE) program has been implemented in department as per revised PEC accreditation manual 2014 and in pursuance of Washington Accord.

(a) **Vision of the department**

Our vision is to be an educational institution that provides an education at the international level and research based solution providers to the industry.

(b) **Mission of the department**

B.E. Textile Engineering program aims to provide a quality education for produce professionals with adequate knowledge, skills and attitude for successful career.

(c) Program Educational Objectives (PEO's)

The program educational objectives (PEOs) of the curriculum are prepared on the basis of stakeholders' needs and linked with different program learning outcomes. The PEOs of Bachelor of Textile Engineering describe that our graduates, 3-5 years after graduation, should be able to:

a) Imparting in-depth and broad knowledge of textile engineering and use of modern tools, starting from fiber to finished fabric and up to as a commodity in market.
b) To participate in professional engineering practices with appropriate consideration for health and safety, environmental, legal, social and cultural aspects.
c) Imparting skills of problem analysis, investigating and designing/developing solution to complex textile engineering problems, working individually and in a team, professional and effective communication, and managing projects and assignments.

4.7.2 The Faculty

Chairman of the Department

Prof. Dr. Rafique Ahmed Jhatial
Ph: 022-2771565

Professor:	
Dr. Rafique Ahmed Jhatial	Ph.D. England
Dr. Zeeshan khatri	Ph.D. Japan
Dr. Farooq Ahmed	Ph.D. Pakistan

Associate Professors	
Dr. Mazhar Hussain Peerzada	Ph.D. UK (On Sabbatical Leave)
Dr. Awais Khatri	Ph.D. Australia
Dr. Uzma Syed	Ph.D. UK (On Sabbatical Leave)
Dr. Iftikhar Ali Sahito	Ph.D. South Korea
Dr. Shamshad Ali Shaikh	Ph.D. South Korea

Assistant Professors:	
Mr. Raj Kumar Khiani	B.S. Pakistan
Engr. Raja Fahad Qureshi	M.E., Pakistan
Dr. Samander Ali Malik	Ph. D. Germany
Ms. Sanam Irum Memon	M.E. Pakistan
Dr. Alvira Ayoub Arbab	Ph.D. South Korea
Dr. Naveed Mengal	Ph.D. South Korea

Lecturers:	
Ms. Sadaf Aftab Abbasi	On Study Leave M.E. Pakistan
Mr. Abdul Wahab Jatoi	On Study Leave M.S. Italy
Ms. Rabia Almas Arain	On Study Leave M.E. Pakistan
Mr. Nadir Ali Rind	On Study Leave M.E. Pakistan
Ms. Umaima Saleem	On Study Leave M.E. Pakistan
Dr. Noor Ahmed Sanbhal	Ph. D. China
Ms. Anam Memon	On Study Leave M.E. Pakistan
Mr. Abdul Wahab Memon	On Study Leave M.E. Pakistan
M. Abdul Khalique Jhatial	M.E. Pakistan

4.7.3 Laboratory Facilities

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

a. Yarn Manufacturing
b. Weaving
c. Knitting
d. Textile Chemical Processing
e. Colour research
f. Garment Manufacturing
g. Textile Testing and Quality Control
h. Textile Composites
i. Nano-materials
j. Non Wovens

4.7.4 Courses

Course Code	Subject Name	Credit Hours	
2nd Semester		Theory	Practical
TE111	Introduction to Textile Engineering	03	00
TE112	Applied Chemistry	03	01
TE113	Engineering Drawing	00	02
EL112	Electrical Engineering	02	01
MTH116	Calculus	02	00
IS111/SS104	Islamic Studies/Ethics	02	00
PS106	Pakistan Studies	02	00
	Total	**14**	**04**

Course Code	Subject Name	Credit Hours	
5th Semester		Theory	Practical
TE121	Textile Raw Materials	03	00
TE122	Textile Mechanics	03	01
ES122	Electronics Engineering	03	01
MTH115	Differential Equations and Laplace Transform	02	00
ENG101	Functional English	03	00
TE123	Workshop Practice	00	02
	Total	**14**	**04**

Course Code	Subject Name	Credit Hours	
5th Semester		Theory	Practical
TE211	Fibre Science	02	01
TE212	Yarn Manufacturing – I	03	01
TE213	Applied Physics	02	01
CS240	Introduction to Computers and C++ Programming	02	01
TE214	Textile Engineering Utilities and Services	02	01
	Total	**11**	**05**

Course Code	Subject Name	Credit Hours	
5th Semester		Theory	Practical
TE221	Synthetic Fibre Manufacturing	02	00
TE222	Yarn Manufacturing – II	03	01
TE223	Fabric Manufacturing – I	03	01
TE224	Textile Pretreatment	03	01
MTH220	Numerical Analysis and Computer Applications	03	01
	Total	**14**	**04**

Course Code	Subject Name	Credit Hours	
5th Semester		Theory	Practical
TE311	Yarn Manufacturing – III	03	01
TE312	Fabric Manufacturing – II	03	01
TE313	Textile Dyes and Dyeing	03	01
TE314	Automation and Control Engineering	02	01
ENG301	Communication Skills	02	00
	Total	**13**	**04**

Course Code	Subject Name	Credit Hours	
5th Semester		Theory	Practical
TE321	Yarn Manufacturing – IV	02	01
TE322	Fabric Design and Structure	02	01
TE323	Textile Testing and Quality Control	03	01
TE324	Colour Physics	02	01
TE325	Environmental Engineering	02	00
MTH311	Statistics and Probability	03	00
	Total	**14**	**04**

Course Code	Subject Name	Credit Hours	
5th Semester		Theory	Practical
TE411	Fabric Manufacturing – III	02	01
TE412	Textile Printing	03	01
TE413	Textile Marketing and Merchandising	02	00
	Technical and Scientific Writing	03	00
TE414	Entrepreneurship	03	00
TE499	Thesis/Project - I *	00	00
	Total:	**13**	**02**

Course Code	Subject Name	Credit Hours	
5th Semester		Theory	Practical
TE421	Yarn Manufacturing - V	02	00
TE422	Fabric Manufacturing - IV	02	00
TE423	Textile Finishing	03	01
INM487	Production Management	02	00
TE499	Thesis/Project -II	00	06
	Total	**09**	**07**

4.7.5 Career Opportunities

After graduation, the candidate will be:

- able to join any textile manufacturing and processing 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, etc.
- eligible for admission in Master 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, Materials, Environment, Medical, Automobile and Aerospace, Defense, and so on.

FACULTY OF SCIENCE, TECHNOLOGY & HUMANITIES

5.1 DEPARTMENT OF BASIC SCIENCES & RELATED STUDIES (BSRS)

5.1.1 The Department

The faculty of this department teaches various fundamental and 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 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 21 teachers of Mathematics, 03 teachers of Islamic Studies/Ethics, 03 teachers of Pakistan Studies, 04 Teaching Assistants and 08 non-academic staff.

The extensive research work is also being carried out by the qualified faculty members of this department. One PhD student has been produced in the field of Computational Fluid Dynamics (2012), under the project approved by HEC entitled “Finite Element Modeling of Blood Flow”. This department was awarded Research productivity by Pakistan Council for Science & Technology in the year 2003-2004 on the basis of research conducted during the year 2002.

The department has also commenced a 2-year M.Phil. and 4-year PhD program in Applied and Computational Mathematics from the year 2014 and produced nineteen (19) M. Phil students in Applied Mathematics till 2017 and eighteen (18) PhD students are enrolled. This will help the students of Mathematics, Statistics, Physics and Engineering to further improve their qualifications and knowledge in Applied Mathematics and relevant fields. Presently, three batches of M.Phil. in Applied Mathematics are running, which comprise of about 46 students.

5.1.2 The Faculty

Chairman of the Department
Prof. Dr. Muhammad Anwar Solangi

Professor:	
Dr. Muhammad Anwar Solangi	Ph.D (Maths):Pakistan
Dr. Abdul Razzak Ghanghro	Ph.D (Islamic Culture): Pakistan
Dr. Syed Feroz Shah	Ph.D (Maths). China
Dr. Asif Ali Shaikh	Ph.D (Maths): Pakistan

Assistant Professors:	
Mr. Saifullah Abro	M.Phil (Maths). Pakistan
Mr. Ghulam Abbas Mehar	M.A (Pak Study): Pakistan
Mr. Abdul Saleem Memon	M.Phil (Maths): Pakistan
Ms. Sania Qureshi	M.Phil (Maths): Pakistan
Ms. Zaib-un-Nisa Memon	M.Phil (Maths): Pakistan
Mr. Muhammad Urs Jhatial	M.Phil (Maths): Pakistan (on Study leave)
Ms. Saima Bhatti	M.Phil (Maths): Pakistan
Ms. Fozia Shaikh	M.Phil (Maths): Pakistan
Mr. Imran Qasim Memon	M.Phil (Maths): Pakistan
Mr. Kashif Ali Abro	M.Phil (Maths): Pakistan
Mr. Hammeer Abro	M.Phil (Maths): Pakistan
Mr. Ayaz Ali Siyal	M.Phil (Maths): Pakistan
Mr. Ali Asghar Sangah	M.Phil (Maths): Pakistan
Dr. Muhammad Mujtaba Shaikh	PhD (Maths): Pakistan

Lectures:	
Ms. Naseem Khalid Memon	M.Sc (Maths): Pakistan
Dr. Raheem Bux Khokhar	PhD (Maths): U.K
Hafiz Abdul Aziz Memon	M.A (Islamic Culture): Pakistan
Mr. Shafqat Chandio	B.S (Maths): Pakistan
Ms. Sara Mahasar	M.Phil (Maths): Pakistan
Mr. Hafiz Shoaib Ahmed Kalhoro	M.A (Islamic Culture): Pakistan
Mr. Mansoor Ali Bhagat	B.S (Maths): Pakistan
Mr. Javed Iqbal Larik	M.A. (Pakistan Studies): Pakistan
Mr. Sarfraz Ali Banbhan	M.Sc. (Pakistan Studies): Pakistan

5.2 ENGLISH LANGUAGE DEVELOPMENT CENTRE

5.2.1 The Department

In 1988 a Directorate named 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 Directorate was initially run by a British Director Prof Brian Bamber. During this project the faculty members were awarded scholarships to pursue Masters in ELT/TESOL from British and American universities. The ELDC is relocated to its new state of the art building at MUET Jamshoro. The Directorate was amongst 5 shortlisted institutions in public universities of Pakistan considered by English Language Teaching Reforms Project (ELTR) of HEC Pakistan for establishment of National Centre for English Language Teaching and Research. The ELTR Project of the HEC of Pakistan has recently established the state of the art self-access center at the ELDC MUET. This is the first SAC in province Sindh and hub of teachers' training in the province. The SAC offers training on Computer Assisted Language Learning (CALL) and Internet based learning (IML). Catering to the needs of the teacher community, ELDC has successfully started its MS/MPhil and PhD program in field of Applied Linguistics.

Objectives:

- To assist various departments of the University in terms of teaching English as a compulsory and foundation course as required by HEC curriculum policy, Pakistan.
- 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 improve the research standards in the field of Applied Linguistics by offering MS leading to PhD degree programs.
- To facilitate Teaching and Non-Teaching Staff of the University in coping with academic, professional and language-related challenges by providing them with the congenial training environment.
- 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.

Academic Programs

Directorate offers following courses for Undergraduate Studies:

1. Functional English/EAP
2. Communication skills for Engineers/ESP
3. Technical Report writing & Presentation skills
4. Technical & Scientific Writing

Directorate of Postgraduate Studies offers following research degrees:

- MS/MPhil in Applied Linguistics

Other Programs

5. Teachers' training- ELT teachers' education
6. Computer Assisted Language Learning and Internet Mediated Language Learning
7. IELTS
8. TOEFL
9. GRE
10. GMAT
11. CSS/PCS Preparatory Classes

5.2.2 The Faculty

Director of the Center

Dr. Habibullah Pathan, Ph.D. UK
Phone: 022-2771286 Ext.6600

Associate Professor:	
Dr. Habibullah Pathan	Post Doc. United States of America
Assistant Professors:	
Ms. Quratul Ain Mirza	On Study Leave Ph.D Pakistan
Ms. SahibaTaheem	Ph.D Scholar (On Study Leave)
Mr. Shoukat Lohar	Ph.D Scholar Pakistan
Lectures:	
Mr. Jam Khan Muhammad	On Study Leave Ph.D Pakistan
Ms. Sadia Aftab Memon	M.A (Linguistic) : Pakistan
Ms. Sania Sachal Memon	M.A (Linguistic) : Pakistan
Mr. Syed Waqar Ali Shah	M.S (Linguistic) : Pakistan
Ms. Um-e-Farwa Thalho	M.Phil(Applied Linguistics) Pakistan
Adjunct Faculty:	
Dr. Shumaila Aijaz Memon	PhD: United Kingdom
Dr. Shabana Tunio	Ph.D Malaysia
Ms. Rosy Ilyas	M.Ed. TESOL (Leeds)
Visiting Faculty:	
Mr. Ali Raza Khoso	MS English (Applied Linguistics) Pakistan

5.3 AFFILIATED COLLEGES/INSTITUTES

Following Colleges/Institutes are affiliated with Mehran University.

1. Government College of Technology, Hyderabad is affiliated with Mehran University which offers courses in B.Tech.(Pass) and B.Tech.(Hons.) in Civil, Electrical and Mechanical Technologies. Mehran University conducts the examinations of this college and awards degrees. Further information of these courses may be obtained from:

   The Principal,
   Government College of Technology, Hyderabad.
   Phone: 022-9240124 & 022-9240122

2. The Hyderabad Institute of Arts, Science and Technology, Hyderabad is affiliated with Mehran University which offers courses in BS (Information Technology) and MS (Business Information Technology). The Pre-admission Test of the candidates will be conducted by the agency prescribed by Mehran University of Engineering and Technology, Jamshoro. Also Mehran University conducts the examinations of this Institute and award degrees. Further information of these courses may be obtained from:

   Justice (Retrd.) Abdul Majeed Khanzada
   Chairman,
   Hyderabad Institute of Arts, Science & Technology,
   Auto Bhan Road, Hyderabad
   Phone: 022-3821474

3. Hyderabad College of Science and Technology, Hyderabad is affiliated with Mehran University which offers courses in B.Tech.(Pass) and B.Tech.(Hons.) in Civil, Electrical and Mechanical Technologies. Mehran University conducts the examinations of this college and awards degrees. Further information of these courses may be obtained from:

   The Principal,
   Hyderabad College of Science & Technology, Hyderabad.
   Phone: 022-3820223

RESEARCH AND DEVELOPMENT

6. RESEARCH AND DEVELOPMENT

6.1 Our PhD Faculty

Mehran UET is consistently ranked among the top engineering universities in the country, but what does that mean for our students?

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 and English language. It means that, from day one of your degree, you will be taught by experts at the forefront of their fields. Your lecturers and tutors are engaged in research into everything from sensor networks to irrigation and environmental engineering.

Your teachers are industry leaders and researchers at the forefront of discovery. At Mehran UET, you'll 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 with you.

6.2 MEHRAN UNIVERSITY RESEARCH JOURNAL OF ENGINEERING & TECHNOLOGY

The main aim of Mehran University Research Journal of Engineering & Technology is to publish refereed, well written original research articles that describe the latest research and developments in Engineering, Science & Technology. This journal is being published since 1982, and is registered with ISSN. This year the journal is included in Thomson Reuters (Clarivate Analytics – Master Journal List), this is indeed a matter of high prestige as only few research journals of pakistan are indexed in Thomson Reuters. Mehran University Research Journal of Engineering & Technology is recognized by the Higher Education Commission (HEC) under Category X. The journal along with Thomson Reuters is also indexed by a number of international abstracting agencies including INSPEC, ACI (American Concrete Institute), British Library, Library of Congress and TRB

(Transportation Research Board). This journal is a peer-reviewed journal and is published in January, March, July and October, i.e. four times in a year.

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 2017-2018, Mehran UET hosted several international conferences including 5th International Multi Topic Conference (IMTIC'18), 2nd International Conference on Chemical Engineering. In 2015-2016, Mehran UET hosted five international conferences including 4th

Mega International event IMTIC'18 held at MUET

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 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 is 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 RESEARCH GROUPS

Since the age we are living in, research in isolation has become a stone age idea, the growth and acceleration appears when there is an active collaboration amongst researchers. For this purpose research groups play a vital role. At Mehran UET a number of research groups involving undergraduate and postgraduate (masters and PhD) students along with our skilled and experienced PhD faculty are working on a number of industrial projects.

A. Faculty of Engineering

a. Energy and Environmental Engineering research group (EEERG)
EEERG, is continually engaged in discovering solutions to the recent problems of the society and has successfully managed to bring

research out of the lab. EEERG has successfully organized conferences and symposia at national and international level, and has contributed by publishing their research work into the leading research journals of the world.

(For more details please visit http://sites.muet.edu.pk/eeerg/).

b. Nanomaterials research group (NRG)

Nanomaterial Research Group (NRG) was formed in January 2014 and run under Office of Research, Innovation and Commercialization (ORIC). The major facility of research is available at Nanomaterials Research Lab, Department of Textile Engineering. The team has been assembled with eminent senior scientists and young researchers, faculty members and students. The researchers are committed to address society's problems through scientific and innovative research.The growing application of nanomaterials in various fields has stimulated Nanomaterials research around the world. These materials have outstanding physical, chemical and mechanical properties usually not observed in conventional materials. NRG is rising star of Mehran University and has number unique credentials:

- 1 US Patent filed
- 2 US Patent submitted
- 12 International publications (Impact factor 30.0)
- 3 products ready for commercialization
- 4 various cities: Out reached and showcased product and technologies
- MoU with Shinshu University, Japan

(For more details please visit: http://nanorg.weebly.com)

c. Faculty of Electrical, Electronics and Computer Engineering

- Smart Grid and Energy Management
- Embedded Systems
- Computer Vision
- Communication Systems and Networks
- Semiconductor Devices and Materials
- Power System
- Software Engineering
- Electrical Machines
- Artificial Intelligence and Control Systems
- Wireless Sensor Networks

6.5 OFFICE OF RESEARCH INNOVATION AND COMMERCIALIZATION (ORIC)

Office of Research Innovation and Commercialization (ORIC) is established in MUET to develop linkage with emerging and existing business firms across Pakistan for commercialization of research. It serves an umbrella to work closely with the researchers, on campus Incubators and S&T Park, as well as channel to local, regional and federal partners to ensure research results contributing in the growth of Pakistan's economy. Each ORIC will develop it mechanism for research commercialization and will establish a Business/Technology Incubator to work closely for innovation and entrepreneurship.

ORIC ROLE

It has three important areas.

a. Research Development and operation
b. University Linkages and Technology Transfer
c. Research Commercialization/entrepreneurship

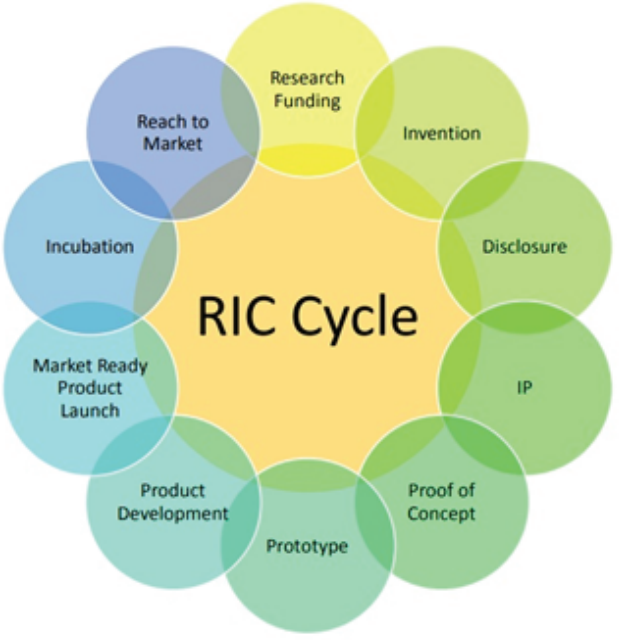
The major function of ORIC is to work on commercialization of research and helping startups to incubate, grow, create new jobs, products, services, markets, carry out innovation and universities and industries linkages to bring in funding.

Research and Development

They will be expected to:

i. Secure funds for contractual research
ii. Generate Revenues from Research commercialization/ Technology Transfer
iii. Secure Investments for Incubates
iv. Create Jobs and Internships
v. MOU's with universities and industries

ORIC activities will revolve around the following research cycle to ensure research impact on economy and society.



ORIC implements triple helix model in its true spirit while developing strong linkages with the Academia, Industry and the Government. Mehran University of Engineering & Technology is equipped with rich resources; PhDs, certified professionals, researchers in diversified fields which not only produce the skilled workers for industry but support the Industry, Corporate sector, development sector, as well as Public sector by providing basic technology, technical assistance and education, supplies human capital in public interest and commercialization for socio-economic development of the society, quality of life and ease of business ORIC highly encourages in making research groups and research Cells within departments and directorates of university and provides awareness on market oriented latest trends in research and development.

The ORIC provides opportunities for the students of the university in getting essential tools to sharpen their skills.

- Internships
- Trainings exposure and grooming during summer and winter vacations.
- Continuing education,
- Seminars, conferences and workshops, industrial visits

ORIC-MUETliaison with national and multinational organizations, industries to arrange job fair and Trade fair to recruit the fresh graduates of the Mehran UET on the basis of their merit.
ORIC facilitates university, its administrative and academic staff, and students:

- Capacity building
- Career advancement and
- Professional development by providing state-of-the-art trainings as well as certifications.
- International student exchange programs and international summer schools

The infrastructure of ORIC is equipped with all modern facilities, having up-to-date computer labs, conference room, class room, library and auditorium with audio visual systems.

ORIC never believes in the boundaries, but it excels with the innovation, encourage our faculty and students to think out of box and come up with new ideas, we will materialize your dreams.

Prof. Dr. Inamullah Bhatti
Director,
Office of Research Innovation and Commercialization (ORIC)

6.6 INSTITUTE OF INFORMATION AND COMMUNICATION TECHNOLOGIES

In order to contribute its share in diversified fields of Information Technology, attract the main from the country in general and all over Sindh in particular, train on the state-of-the-art technology and provide opportunity to serve the country, the Institute of Information and Communication Technologies (IICT) has been established at the university.

The institute consists of following Masters Degree programs:

- Biomedical Engineering
- Computer and Information Engineering
- Communication Systems and Networks
- Embedded Systems
- Electronic Systems Engineering
- Electrical Power Engineering
- Information Technology
- Mechatronics
- Telecommunication Engineering and Management
- Telemedicine and E-Health systems
- Software Engineering.

Currently more that 400 master degree students are enrolled in above programs. The master program has a mandatory research project to be completed by students going through several stages of examination, including initial seminar, final seminar and viva to be evaluated by external examiners. Beside this IICT is producing a significant number of PhDs every year. At the moment 20 PhD students are working in a number of diversified topics under the umbrella of various research groups.

Further information may be obtained from:

Prof. Dr. Zubair Ahmed Memon,
Director, Institute of information and Communication Technologies.
Telephone: 022-2771206 Fax: 022-2771382
Email: director.iict@admin.muet.edu.pk
Website: iict.muet.edu.pk

6.7 DIRECTORATE OF POSTGRADUATE STUDIES

The University started postgraduate programme through the Directorate of Postgraduate Studies in December 1978 in different fields of engineering. Currently the postgraduate programs are offered in the following disciplines:

- Applied Mathematics
- Chemical Engineering
- City and Regional Planning
- English Linguistic
- Geo-Tech and Highways Engineering
- Metallurgy and Materials Engineering
- Industrial Engineering & Management
- Construction Management
- Architecture
- Civil Engineering
- Energy Systems Engineering
- Manufacturing Engineering
- Structural Engineering
- Textile Engineering
- Mining Engineering

Other postgraduate Programs are also offered in the fields of Irrigation Engineering, Environmental Engineering and Petroleum Engineering, which are running under the Institute of Water Resources Engineering & Management, Institute of Environmental Engineering and Management, and the Institute of Petroleum & Natural Gas Engineering respectively.

Prof. Dr. Khanji Harijan
Director, Postgraduate Studies
Phone: 022-2771214
E-mail: director.pgs@admin.muet.edu.pk

Prof. Dr. Feroz Shah
Co-Director, Postgraduate Studies
E-mail: tanweer.hussain@faculty.muet.edu.pk

6.8 INSTITUTE OF WATER RESOURCES AND MANAGEMENT

Since irrigation plays a crucial role in the agriculture sector through out Pakistan, and particularly in Sindh province. The above named Institute was established in 1987 to cater for specialized needs of the water resources engineering and management. The Institute offers full-time (morning and evening) programs for degrees of M.E., M.Phil. & Ph.D.

The US-PCASW is part of a broader higher education initiative recently launched in Pakistan with financial support from the United States Government through its Agency for International Development (USAID). The objective of this initiative is to enhance the capacity of Pakistan's higher education institutions to contribute solutions to Pakistan's development challenges. The initiative entails the establishment of four Centers for Advanced Studies in water, energy and agriculture and food security in selected Pakistani universities. US-PCASW, is one of the four Centers, focused on identifying and developing solutions for the multifaceted waterrelated challenges facing the country, the Center is housed at the Mehran University of Engineering and Technology (MUET), Jamshoro. http://www.muet.edu.pk/institutes/iwrem-uspcasw.

The Center will contribute solutions to Pakistan's water-related challenges by educating and training the next generation of water sustainability leaders through advanced academic training in different water-related disciplines. The tangible deliverables of the Center include postgraduate degree programs, applied policy research, facilitation of public- private partnerships, and provision of policy advice in a range of water-related disciplines.

Prof. Dr. Bakhshal Khan Lashari
Director,
Institute of Water Resources Engineering & Management,
Phone: 022-2771226
E-mail: bakhshall@yahoo.com
bakhshal.lashari@faculty.muet.edu.pk

6.9 INSTITUTE OF ENVIRONMENTAL ENGINEERING AND MANAGEMENT

6.9.1 Introduction

Environment is now a global issue and it is deteriorating day by day. If protective measures are not addressed, the global economy would be adversely affected. Worldwide Ozone depletion and disposal of Waste are big issued which need to be solved by producing qualified Environmental Engineers. Pakistan is a developing country and relies on Agro-based industry that now faces competition under the umbrella of world trade Order (WTO). As per WTO, it certifies to those products, which must be ISO 9000 and ISO 14000.

Pakistan requires trained personnel needed to be dealt with Environmental Management System in which they be made skillful in Water Engineering, Wastewater Engineering, Solid waste Management and Air pollution and Control Equipment. Altogether 12 courses are designed which make student capable to make himself an environmental engineer. IEEM has very good faculty in the University and offers PGD/ME in Environmental Engineering meanwhile; M.Phil by research can be obtained as per rule and regulations.

6.9.2 Vision

To produce Environmentalists who share their skill in the establishment of Environmental Management system in all Industries, Agricultural Land, Irrigation and Drainage infrastructures, Communication network systems and Rural-Urban Utilities to enter in the development of 21st Century goal of making national Economy as per World Trade Organization (WTO) requirements.

6.9.3 Objectives

To produce undergraduate/post Graduate/Masters level students skillful by achieving the following goals to become useful for re-construction of National Environmental Economy.

1. For making Water potable, learning methodologies of Water Treatment Plant, water-softening techniques Osmosis techniques shall be procured.
2. For making safe Disposal of wastewater from various developments,

learning methodologies of Wastewater treatment technologies; like Wastewater treatment Plant, evaporation Ponds, Oxidation Ponds and in addition the design of Pipe network systems shall be procured.

3. For removing the solid Waste Problem in cities, industries, town and rural areas, a very comprehensive learning methodologies can be extended; like understanding the generation, collection, transferring and disposal techniques of Municipal Solid Waste, Industrial Waste and Hospital Waste.
4. To make efforts to clean the atmosphere, the learning methodologies; like understanding air pollutants and the design of Air pollution Control equipment shall be procured.
5. To make student capable to design the project in which he shall learn implementation of Environmental Management System under the Umbrella of ISO-14000, Environmental Impact assessment and Strategic Environmental assessment.

More details about the course and other activities of the Institute may be obtained from:

Dr. Sheeraz Ahmed Memon
Director,
Institute of Environmental Engineering & Management
Phone: Off. 022-2772250 Ext. 7300

6.10 MEHRAN UNIVERSITY INSTITUTE OF SCIENCE & TECHNOLOGY DEVELOPMENT

Mehran University Institute of Science, Technology & Development (MUISTD) is established at Jamshoro to produce much required highly qualified manpower at various levels of policy, management and administration for promotion and development of Science and Technology Enterprise and Innovation Management in private and public sectors.

The development of Science and Technology (S & T) is closely linked with an important national goal of rapid and sustainable socio- economic development. MUISTD is, hence established with a wide mandate to produce highly qualified manpower at M.S., M.Phil and Ph.D degree level. As well as, formally train the existing personnel already in charge in this field and conduct research on all aspects of an effective and viable S&T policy framework to achieve this objective.

It is envisaged to be a center of excellence for teaching, training and research required to respond to the modern day challenges and to cater to the needs of socio-economic development of the country. Its Research and Development (R&D) activities are aimed at focusing on all important issues relating to contents, development, management, and exploitation of human and natural resources and other means and methods for rapid socio-economic uplift of the country. The clients of research results and training of this institute would be the Universities, R&D organizations, Government, Industry, Business individuals in public and private sector, national and international organizations, other developed and developing countries etc. It is intended to serve as a nerve centre and conduct practical review of the situation currently and futuristically, and render suitable advice for the required scientific and technological development to Academics, Research, Industry, Business, Government, etc.

MUISTD, therefore, is aimed at developing knowledge and devising sustainable S&T policies in consonance with the national priorities and goals taking different perspectives of socio-economic development into account.


DEPARTMENT OF CIVIL ENGIN
CHAUDRY NISAR
SANAULLAH ZEHRI
SYRIA
PTI
ASAD UMAR
NETHERLAND
COSTA RICA
POLAND
SYRIA

CAMPUS LIFE

7. CAMPUS LIFE

7.1 Students Centre

It is a matter of immense pleasure that this University has developed befitting and communal facilities for students and staff like, Students Centre. Hence, the said Students Centre has been constructed over an area of 20000 sft. as per Vision & perspective Plan of the University. However the said Centre is consisting of the following facilities for the students.

7.1.1 Indoor Sports & Communal Facilities:

- Information Service
- Graduate Registration
- Indoor Games
- Space for Bank
- Shops 04 Nos
- Post Office
- Cafeteria (for Boys & Girls)
- Store
- Kitchen
- Internet Café
- Debating Society
- Indoor Games
- Alumni Office

7.2 LIBRARY

The Mehran University of Engineering & Technology Library & Online Information Center contains more than 1,62,500 books related to Engineering Science and Technology. Access to 29 E-databases for electronics journals and e-books are available on-line within the university campus and outside the campus under Digital Library Program; a Project of Higher Education Commission, most of these resources are available full text.

There are more than 24,800 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. This service is further enhanced by cooperation among Muslim Countries under COMSTECH.

The Mehran University of Engineering & Technology Library & Online Information Center also offers following services:

INTERNET FACLITIES

- MUET Library & Online Information Center provides the internet facilities to postgraduate and undergraduate students for their research projects, assignments and online lecturers work for which PCs are installed in the Online Information Center.
- The MUET Library & Online Information Center also offered Wi-Fi service inside and outside the Library Building.

E-SERVICES

- MUET Library & Online Information Center provides articles, abstract bibliographic information to the faculty members, researchers and undergraduate students under Whatsapp and email service.
- There are also a blogs http://muetlfacultycoordination.blogspot.com to give the access of books recommended in teaching plan. Another blog http://www.muetloic.blogspot.com to give the awareness trainings regarding HEC Digital Library, http://muetdigitallibrary.blogspot.com access of E-books, Journals, Tutorials and Thesis's Guidance, video lectures, dictionaries and encyclopedias etc.

DIGITAL LIBRARY AWARNESS PROGRAM

- The MUET library offer the trainings program regarding awareness of HEC digital library resources, e-brary, science direct and IEEE to the faculty members, post graduate students and undergraduate students of the University.

ONLINE PUBLIC ACCESS CATALOGUE (OPAC)

- The Catalog of books is marc-21 based and accessible through library of Congress gateway http://www.loc.gov/z39.50 serving one point access interface for books catalog, full text electronic journals and e-books on web.

MULTI-MEDIA & RESEARCH DEVELOPMENT CENTER

- 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 (zotero, Endnote). In Multimedia & Research development Center research articles and e-books are provided to the faculty members and students on their demands.

PASTIC DESK

- Pakistan Scientific & Technological Information Center (PASTIC) Desk is available at MUET library & Online Information Center providing free, fast and easy access to S&T literature, full text articles, Pakistan Science Abstract, Union Catalogue of Pakistan Libraries, Directory of Scientific Periodicals of Pakistan Information on Indigenous Technologies National Sciences Reference Library.

TIMINGS

- The library is heavily used by the students, faculty members and researchers and is open from 8:00 am to 12:00 Mid-night including Saturday and Sunday. Professional staff available at service points to meet the needs of the readers. Besides this under library s program the seminar libraries have been established in various institutes/ departments.

7.3 STUDENT FINANCIAL AID OFFICE (SFAO)

Established in 2006

A SINCERE COMMITMENT TO ALL DESERVING STUDENTS AND THEIR FAMILIES

We strive to eliminate financial and other barriers through merit and need based Scholarships, Financial Assistance/Aid, Zakat and Educational Loans (Qarz-e-Hasna)

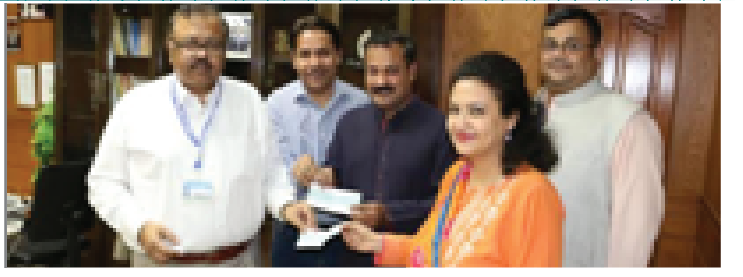
(National International Recognition)

Mehran University of Engineering & Technology, Jamshoro by realizing the continuous rise in educational expenses, took the initiatives and established the “Student Financial Aid Office” (SFAO) in August 2006, to elevate the socio-economic position of the needy & deserving students by providing access to quality education through Need-based and Merit Scholarships. All Scholarships / Financial Aid Cases are routed through Student Financial Aid Office (SFAO). A centralized record of all students getting any Financial Aid is kept in the Student Financial Aid Office (SFAO).

It is matter of pride that Student Financial Aid Office of Mehran University of Engineering & Technology has become one of the popular Financial Aid Office among the all Public and Private Sector Universities of Pakistan by having National and International reorganization. The Office is equipped by the support of more than sixty (60) numbers of national and international Donors and their contributions towards the needy, deprived and meritorious students of the University. The SFAO-MUET is committed to all the national and international Donors / Partners, i.e. Higher Education Commission HEC, Islamabad, USAID Pakistan, Promotion of Education in Pakistan (PEP) Foundation, USA, Prime Minister’s National ICT R&D Fund, BHP Pakistan, OGDCL, SSGC, PEC, SANA and many others for transparent and vigilant process/procedure. This is what we have proved that, our Faculty, Officers, Staff, also supports the needy students along with Alumni of the University. Consequently, the SFAO of University also supports the needy students from own income generated by getting profit from various endowment funds.

The office under the supervision of Prof. Dr. Tauha Hussain Ali, Pro. Vice-Chancellor/ Focal Person (SFAO) annually awards and facilitates more than 35% of students from the total strength of undergraduate students through various Scholarships, Financial Assistance / Aid, Zakat and Qarz-e-Hassna.

EXCELLENT DONOR & ALUMNI RELATIONSHIP MANAGEMENT

FLOORPROOF SCRUTINY


PHYSICAL VERIFICATION


Persons to be contacted

Prof. Dr. Tauha Hussain Ali (Focal Person SFAO), **Dr. Aamir Soomro (**Deputy Focal Person SFAO), **Mr. Kashif Usman Dars** (Deputy Director SFAO)
Phone # (Exchange) +92 22 2772250-70 (Ext. 7715) (Direct) +92 22 2771274, Email: sfao@admin.muet.edu.pk,

SCHOLARSHIPS / FINANCIAL ASSISTANCE OPPORTUNITIES

S#	NAME OF SCHOLARSHIP	DONOR
1.	Internal Merit Scholarship	Mehran U.E.T, 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.	HEC Needs Based Scholarship Program	Higher Education Commission, Islamabad.
6.	OGDCL Need Based Scholarship	OGDCL with the collaboration with HEC, Islamabad.
7.	SSGC Scholarship	Sui Sothern Gas Company limited
8.	BHP (Pakistan) Need Cum Merit Scholarship	BHP Billiton (Pakistan)
9.	National ICT Scholarship	Prime Minister's National ICT R&D Fund, Islamabad.
10.	NBP Loan	National Bank of Pakistan.
11.	Sindhi Association of North America Dr. Feroz Ahmed Memorial Educational (FAME) Scholarships	Sindhi Association of North America (SANA)
12.	PEC Scholarship	Pakistan Engineering Congress (PEC), Lahore.
13.	PEC Merit Scholarship	Pakistan Engineering Council, Islamabad.
14.	Balochistan Scholarship	Directorate of Collages Higher and Technical Education Balochistan, Quetta.
15.	PIP Scholarship	Petroleum Institute of Pakistan (PIP), Karachi.
16.	IEP-SAC Scholarship	Institution of Engineering Pakistan, Saudi Arabian Center.
17.	MUTA – Need Cum Merit Scholarship	Mehran University Teacher Association, MUTA, Jamshoro.
18.	Merit Scholarship (formerly called MORA)	All District Zakat &Ushar Committees of Sindh
19.	Endowment Fund Scholarship	Education & Literacy Department, Government of Sindh
20.	PEF Scholarship	Professional Educational Foundation
21.	Provision of Higher Education Opportunities for Student of Baluchistan and Fata	Higher Education Commission (HEC), Islamabad.
22.	Minority Scholarship	Ministry of Religious Affairs, Islamabad.
23.	PEEF Scholarship	Punjab Education Endowment Fund (PEEF), Lahore.
24.	Scholarship for Foreigner students	Various Embassies
25.	Zila Nazim Khairpur Scholarship	Office of Zila Nazim District Government Khairpur
26.	Scheduled Caste (Tharparkar)	Office of the Deputy Commissioner, Tharparkar
27.	SEAFA Scholarship	Mr. Tufail Ahmed Memon and Friends from USA
28.	Sain G. M Sayed Need cum Merit Scholarship	Shah Hyder Educational Society SANN (SHESS), SANN UC, District Jamshoro
29.	DIYA Scholarship	Kaneez Fatima Welfare Trust, Rawalpindi
30.	FFC- Scholarship	Fauji Fertilizer Company Limited

S#	NAME OF SCHOLARSHIP	DONOR
31.	SyedaMubarik Begum Scholarship	Babar Ali Foundation, Pakistan
32.	Quaid-E-Azam Aligarh Scholarship	Quaid-E-Azam Aligarh Trust
33.	Mentoring a Talent	TEXPO, IT consultant Company
34.	FF_ Scholarship	Fauji Foundation, Rawalpindi
35.	(Late) Abdul QayoomUqaili Need cum Merit Base Scholarship	Prof. Dr. M. Aslam Uqaili, Vice-Chancellor Mehran U.E.T, Jamshoro.
36.	(Late) Taj Mohammad Sahrai Need cum Merit Base Scholarship	Prof. Dr. Mujeeb-u-ddin Sahrai, Professor, Department of Mechanical
37.	Sardar Begum Sehrai Need cum Merit Base Scholarship	Engineering MUET, Jamshoro.
38.	(Late) Master Kishan Chand Chowdhry Need cum Merit Base Scholarship	Prof. Dr. B.S. Chowdhry, Dean FEECE, Mehran U.E.T, Jamshoro.
39.	(Late) Mr. & Mrs. Jhando Khan Lashari Need cum Merit Base Scholarship	Prof. Dr. Bakhshal Khan Lashari, Director, Water Resources Engineering & Management, MUET, Jamshoro
40.	Agha Habibullah Khan, Need Cum Merit Scholarship	Prof. Dr. Agha Faisal Habib, Depratament of Civil Engineering.
41.	Mr. & Mrs. Pyaro Khan Shaikh, Need Cum Merit Base Scholarship	Dr. Ghulam Yaseen Shaikh, Industrial Engineering Department
42.	Dr. Asma Junejo, Need Cum Merit Scholarship for a Female Student	Dr. Asma Junejo, Senior Gynecologist, Hyderabad.
43.	Dr. Khadija Qureshi, Need Cum Merit Scholarship	Prof. Dr. Khadija Qureshi, Department Of Chemical Engineering.
44.	Mr. Jawed Akhtar Arbab. Scholarship	Late) Muhammad Khan Arbab, Need Cum Merit Scholarship
45.	United Memon Jamat Scholarship	United Memon Jamat of Pakistan
46.	Mrs. Anwar Muhammad Memon.	(Late) Mr. Anwar Mohammad Memon, Need Cum Merit Base Scholarship
47.	Mrs. Noshaba Qabool Muhammad, Need Cum Merit Base Scholarship and Mrs. Sonia Abdul Manan Need Cum Merit Base Scholarship	Mr. Mian Abdul Manan, Team Leader (I & C), Karachi.
48.	Scholarship for Foreigner students	Various Embassies in Pakistan
49.	Other Foundations / Agencies	General Scholarships
50.	Indian Occupied Kashmiri Scholarship / J & K State Financial Assistance	Government of Pakistan Ministry of Inter Provincial Coordination (IPC Division)
51.	Mr. Ilyaslshqie to a needy female student, Need Cum Merit Base Scholarship.	Madam Rosy Ilyas, Retired Professor ELDC, MUET.
52.	(Late) Mr. Zahid Suleman, Need Cum Merit Base Scholarship.	Mr. & Mrs. Qazi Suleman,
53.	Mr. Muhammad Hassan Laghari, Need Cum Merit Base Scholarship. MUET.	Mr. Muhammad Hassan Laghari, Ex-Chief Security Officer
54.	Engr. Ghulam Ali Mirza Need Cum Merit Base Scholarship.	Mr. Ghulam Ali Mirza, from UK.
55.	93-Batch Need Cum Merit Scholarship	Ex-Students of 93 Batch
56.	Mir Hassan Rind Need Cum Merit Scholarship	Mir Hassan Rind Former Member of National Highway Authorities (NHA)`
57.	2K1- Batch(Civil) Need Cum Merit Base Scholarship Program	2K1-Batch (Civil).
58.	(Late) Mrs. Mahrunish Shaikh Need Cum Merit Base Scholarship	Engr. Arz Mohammad Shaikh, Hyderabad.
59.	Dr. Mir Saad Hussain Sacharvi, Need Cum Merit Base Scholarship	Dr. Mir Saad Hussain Sacharvi, Hyderabad.
60.	Mr. Mir Mahammad Talpur, Need Cum Merit Scholarship.	Mr. Mir Mahammad Talpur

7.4 QUALITY ENHANCEMENT CELL (QEC)

In order to provide Quality Higher Education, Mehran University of Engineering & Technology is` striving hard and adopted dynamic changes in the education system. Working on the mission, the University implemented Quality Management System under ISO 9001:2000 and was certified in September 2003. Quality Management System (QMS) was developed and implemented by the ISO-9000 Cell established in year 2000 and was redesigned as QEC on 15th February 2007 on the receipt of PC-1 from Quality Assurance Agency of Higher Education Commission and its scope was extended by adding the function of implementation of Self-Assessment Mechanism in the University.

The QEC is on the way of developing quality assurance processes and methods of evaluation to affirm that the quality of provision and the standard of awards are being maintained and to foster curriculum, subject and staff development, together with research and other scholarly activities. The QEC serves as the king pin to achieve the objective of quality learning standards by auditing academic standards and the quality of teaching, learning and management in each subject area. It promotes public confidence that the quality and standards of the award of degrees, management and overall quality of knowledge being imparted by the institutions are enhanced and safeguarded.

QEC's Core Processes

- Implement and continuously improve quality management system of the university as ISO 9001:2015 standard.
- Institutional Performance Evaluation (IPE) as per HEC guidelines.
- Self-Assessment of Postgraduate program as per HEC guidelines.
- PhD and MS/MPhil Program review as per HEC guidelines.
- Online Feedback system

Key achievements of QEC:

- Implemented ISO 9001 quality management system requirements and got certification five times (each certification for three years) from Lloyd's Register Quality Assurance (LRQA) UK.
- Successfully implemented HEC quality assurance criteria and secured 91% marks (W category) in HEC QECs ranking

Contact us:
Quality Enhancement Cell (QEC)
Mehran University of Engineering & Technology Jamshoro.
Website: http://www.muet.edu.pk/qec
Email: qec@admin.muet.edu.pk
Phone # 0222109013

7.5 TRANSPORT

The university has a fleet of buses to facilitate the students, running on various routes between the campus and Hyderabad / Qasimabad/ Latifabad / Kotri Students have to pay nominal transport charges on yearly basis for the use of this facility.

In addition to that the University has recently procured different type of Equipment /Vehicle viz Mechanical Sweeper, Aerial Plate Farm, Garbage Compactor etc for cleaning the entire campus to make the Better Environment.

Engr. Qazi Riaz Hassan Qureshi
Incharge Transport Section/ Director (Services)
Phone: (022)2109073

7.6 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 2100 male and female Pakistani, overseas Pakistani and foreign students. Almost all twelve, 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 with 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, Karachi, Matiari, Tando Allahyaar, 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 that can seat around 30 to 40 students 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. A double-bed clinic located at Students Techers Center provides medical facilities from 4:00 to 6:00 in the evening. Besides that, day and night emergencies are attended by the ambulance service and duty vehicle. 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.

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 them 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.

For further information, please contact:

Prof. Ghulam Abbas Mahar
Provost Hostels
Telephone No. 022 2109137, Ext: 3005, 3006
Email: provosthostels@admin.muet.edu.pk

7.7 INFORMATION AND COMMUNICATION PROCESSING CENTRE

ICPC Stands for “Information & Communication Processing Center". It is MUET’s backbone of voice & data networks that facilitates inter departmental communication related to Internet & voice communication. It also connects MUET Intranet to the outside world through a bandwidth of 800 Mbps on fiber link.

The ICP Center is having a powerful and scalable switching fabric that carries gigabit traffic on fiber optics backbone and interconnects all buildings of university including administration building, departments, and hostels. It is designed on the VLAN infrastructure. Apart from data service, ICPC is also providing voice services through the modern Alcatel-Lucent OmniPCX 4400, EPABX System since 2003.

Data and Voice Services
ICPC is facilitating each section of MUET with voice and data services. ICPC has deployed data points in every building and department of the university including all hostels. The internet service can be accessed anywhere by using internet account credentials provided by ICPC thru a very simplified online registration process. ICPC has also provided voice service and have deployed more than 750 voice points in campus.

Wireless Connectivity
ICPC has deployed 490 WIFI access points thru ought the campus including hostels with the support of HEC/PERN under Smart University Project recently and thus providing every department and building in the university with high speed internet thru WiFi service.

Trainings & Internships
ICPC has conducted many training sessions to help end users utilize domain resources effectively. Troubleshooting network related problems are also taught in the trainings. ICPC also conducts various HR capacity building trainings for ministerial staff of the University. ICPC also provides internship opportunities to various students of the MUET to enable them how to work professionally in the industry environment.

Smart ID Cards
ICPC has taken initiative to provide smart ID cards for faculty, officers, staff and students of the university. The new smart ID card has features like RF ID chips, QR Code and barcode. At the moment more than 8000 cards have been generated and remaining are in process.

Security Surveillance System
ICPC team is very actively contributing in the deployment of Security Surveillance System in various departments of the University such as at MUET Library and On-Line Information Center, New Admin Block and Student Center, MUET. The entire boundary of the campus has been covered thru state of the art and modern IP based surveillance system thru HEC/PERN under Safe Campus Project very recently and every movement on the boundary walls and Entry/Exit gates are under strict surveillance by 24x7.

SMS Alert Service
ICPC provides SMS alert service since 2013 to all stake holders for swift information broadcasting. SMS alerts also play vital role in online admission system developed by ICPC web team.

Web Services
ICPC Web team has developed and provides number of services including:

- Online Undergraduate Admission System (Developed under the supervision of PATCO Committee)
- Online course management system using Moodle CMS
- Online Feedback system conforming to QEC's standards
- Web hosting service for various departmental websites
- Web development & design services for various conferences and workshop websites

Engr. Saleem Ahmed Memon
Director
Information Communication and Processing Centre (ICPC)
Phone: (022) 2772277 Ext: 6000

7.8 MEDICAL ASSISTANCE

A part-time dispensary has been established in one of the hostels for the resident students, 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 Liaquat University Hospital, which is quite nearby. An ambulance is also available for the sick students to take them to the hospital in any emergency.

7.9 SPORTS FACILITIES

The Directorate of Sports has been arranging wide range of Indoor as well as outdoor sports activities and Fitness/health services to the university students on daily basis. The University has arranged facilities of highly specialized nature of training techniques, coaching camps and Indoor and Outdoor sporting events for boarding as well day scholar students. Inter batch, inter departmental and inter hostel sporting events for Boys & Girls are regular feature of our university sports calendar.

We have a state of the art Sports Complex in the campus, having a modern Gymnasium and fitness center facilities, equipped with latest fitness machines to provide our students a best possible sporting and healthy activities environment.

The University also hosts/organizes and participates in a number of Inter University Sports events under HEC every year regularly. Our University students have won Gold, Silver and Bronze Medals in such events. The new batch students are encouraged to participate 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.Every students gets a chance to play, compete and represent Mehran University sports teams.

Organizing of Sports week/ Gala event is becoming a very popular annual event at Mehran in which a huge number of students participate in a wide range of indoor as well as outdoor sports and games.

Engr. Saleem Ahmed Memon
Director Sports, Email:dir.sports@admin.muet.edu.pk
Phone Office: 022-2109103, 022-2772250 (Ext:2026)

7.10 STUDENTS' ADVISORY COMMITTEE

Mehran University Students' Advisory Committee was formed to bridge the gap between administration, teaching community and students. Committee helps students to organize academic and social activities and also to resolve their academic and legal grievances. The committee leads, directs, and administers overall functions of student counseling, hostel residence, student societies and discipline. The important function of Student Affairs Office is to enhance the quality of student life both in and outside of the classroom.

The Student Affairs Office functions as a friend and guide of a student, it administers their needs from the time they steps in the University, to their graduation. We provide proactive support and capacity building services to promote co- curricular activities to enhance interpersonal skills of the students. Using the platform of Students' Affairs Office, students can build strong relationships with their peers, faculty, administration and other stakeholders.

Basic responsibilities:

- Oversee in developing a wide variety of activities, events, and programs designed for social, cultural, and instructional development of students.
- Establish, coordinate, and maintain a broad and well-supported club and societies programs responding to the interests of the students.
- Review clubs and societies activities, expenditures, minutes, budgets, and legality and propriety of meetings and activities.
- Manage logistical support for effective and efficient execution of activities and coordinate with other departments of the university.

The formation of Mehran University Students' Advisory Committee

Dr. TanweerHusssain
Professor, Department of Mechanical Engineering Department,
Advisor Students' Affairs

Dr. Fareed Ahmed Memon
Professor, Department of Civil Engineering
Deputy Advisor Students' Affairs

Dr. Ifthikhar Ali Sahito
Assistant Professor, Textile Engineering Department.
Deputy Advisor Students' Affairs,

Dr. Faheemullah Shaikh
Assistant Professor, Electrical Engineering Department
Deputy Advisor Students' Affairs

Dr. Ismah Farah Siddiqui
Assistant Professor, Software Engineering Department
Deputy Advisor Student' Affairs

7.11 PUBLICATION SECTION

This Section publishes a quarterly journal titled "Mehran University Research Journal of Engineering & Technology". This journal is being published since 1982 without any interruption and is registered with ISSN. It is recognized internationally and is being abstracted by many national and international agencies. Further information may be obtained from:

Prof. Dr. Mukhtiar Ali Unar
Chief Editor,
Publication Section
Phone: 022-2772274-76

7.11.5 The University has signed Memorandum of Understanding with the following NATIONAL INDUSTRY-ACADEMIA

S.NO	NAME OF UNIVERSITY	DATE OF AGREEMENT	PERIOD
1.	Benazir Bhutto Shaheed Youth Development Program, Irrigation & Power Department, Government of Sindh, Pakistan	12-01-2009	No Limit
2.	Pakistan Atomic Energy Commission (PAEC), Islamabad	30-03-2009	Ten Years
3.	The United States Educational Foundation Islamabad	11-12-2009	No time limit
4.	Isra University, Hyderabad, Sindh, Pakistan	16-08-2010	No time limit
5.	The Promotion of Education PEP Foundation, USA, Islamabad.	4-03-2013	No time limit
6.	Indus University, Karachi	10-04-2014	Five Years
7.	Ms. Rafhan Maize Products limited, Kotri (ILP-2014), (ILP-2015)	13-05-2014, 10-02-2015	No time limit
8.	Pakistan Space & Atmosphere Research Commission (SUPARCO), Karachi, Pakistan	13-02-2015	Five Years
9.	Ms. Indus Resource Center, Karachi	23-02-2015	No time limit
10.	Pakistan Steel Mills, Karachi	25-06-2015	No time limit
11.	Pakistan Council of Research in Water Resources (PCRWR), Islamabad	03-08-2015	Five Years
12.	Sindh Irrigation & Drainage Authority (SIDA), Hyderabad	03-08-2015	Five Years
13.	Sindh Agriculture University Tandojam	03-08-2015	Five Years
14.	Water and Power Development Authority, Lahore	21-09-2015	Five Years
15.	Analytical Measuring Systems (Private) Limited, Karachi	5-11-2015	No time limit
16.	Pakistan Institute of Management (PIM)	07-12-2015	Five Years
17.	Institute of Cost & Management Accountants of Pakistan (ICMAP) Pakistan Council for Science and Technology, (PCST),	10-02-2016	Five Years
18.	Ministry of Science & Technology, Govt. of Sindh	16-11-2016	Five Years
19.	Eco Science Foundation (ECOSF) and Technology Times (TechTimes)	16-11-2016	Three Years
20.	Irrigation Department, Govt. of Sindh "Capacity Building of Officers/Officials of Sindh Irrigation Department"	23-09-2016	Five Years
21.	NORDTEC, Karachi	23-12-2016	Five Years
22.	Sustainable Development Policy Institute, Islamabad	05-05-2017	Five Years
23.	National Textile University, Faisalabad	01-06-2017	Five Years
24.	Archorma, Textile Chemical Company	1-08-2017	Five Years
25.	Institute of Business Administration (IBA), Karachi	25-08-2017	Three Years
26.	British Council Pakistan	19-07-2017	Three Years
27.	Sindh Engro Coal Mining Company (SECMC), Karachi	04-10-2017	Two Years
28.	World Wide Funds for Nature – Pakistan	22-01-2018	Two Years
29.	Confucius Class Rooms at Cadet College Petaro	06-03-2018	Four Years

7.11.6 The University has signed Memorandum of Understanding with the following INTERNATIONAL INDUSTRY-ACADEMIA

S.NO	NAME OF UNIVERSITY	DATE OF AGREEMENT	PERIOD
1.	University of Leeds, UK	28-06-2005	No time limit
2.	Middle East Technical University Ankara, Turkey	13-09-2006	No time limit
3.	Aalborg University Esbjerg, Denmark	09-06-2007	No time limit
4.	University of Bedfordshire, UK	20-11-2008	No time limit
5.	University of Malaya, Malaysia	20-09-2011	No time limit
6.	University of Limerick, Limerick, Ireland	12-10-2013	No time limit
7.	Hacettepe University, Turkey	12-08-2014	Five Years
8.	University Technology Malaysia, Malaysia	25-11-2014	Five Years
9.	Faculty of Textile Sc. & Tech., Shinshu, University, Japan	22-12-2014	Five Years
10.	China University of Mining and Technology (CUMT), Xuxhou, China	26-04-2015	Five Years
11.	University of Utah, USA	11-08-2015	Five Years
12.	Clothing and Designing Faculty, Minjiang, University, China	21-10-2015	Five Years
13.	Perdana School of Science, Technology & Innovation Policy, University Technology Malaysia, Kuala Lumpur, Malaysia	16-11-2016	Five Years
14.	Korea Institute of Science & Technology Evaluation and Planning (KISTEP), Republic of Korea	16-11-2016	Three Years
15.	Charles Sturt University, Australia	05-05-2017	Five Years
16.	AMC-Metropolitan College-Athens-Greece	06-10-2017	Five Years
17.	University of Nottingham, UK (This revised agreement applies to the University of Nottingham's campuses in the United Kingdom, China & Malaysia)	22-02-2018	Five Years
18.	Montan Universitaet, Leoben, Republic of Austria	22-02-2018	No time limit

MUET SHAHEED ZULFIQAR ALI BHUTTO KHAIRPURMIR'S CAMPUS

Muet Shaheed Zulfiqar Ali Bhutto Khairpurmir's Campus

8.1 INTRODUCTION

8.1.1 The Department

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, KhairpurMir,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 ShaheedZulfiquar 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.

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.

8.2 OFFICERS OF THE CAMPUS

Prof. Dr.Mukhtiar Ali Unar	Pro-Vice Chancellor, MUET, SZAB Campus
Dr. Rafique Ahmed Memon	Director Administration/Chairman, Basic Sciences & Related Studies
Dr. Naveed Raza Shah	Chairman, Civil Engineering Department
Prof. Dr. Hassan Ali Khan Durrani	Chairman/Incharge Transport Mechanical Engineering Department
Dr. Mohsin Ali Tunio	In-charge Chairman, Electrical Engineering Department
Dr. Muhammad Yakoob Soomro	Chairman/Focal Person SFAO, P&G Engineering Department
Dr. Noman Qadeer Soomro	Focal Person Software Engineering Department
Mr. Halar Haleem Memon	Focal Person, Electronics Engineering Department
Prof. Abdul Qadir Change	Focal Person, Industrial Liaison
Dr. Mazhar Ali Baloch	Focal Person ORIC
Dr. Muhammad Ali Abro	Focal Person QEC/ISO

Mr. Nadeem Ahmed Tunio	Focal Person Examinations/ Additional Provost Hostels
Mr. Waqas Ali Channa	Deputy Director Finance
Mr. Abdul Rasheed Phulpoto	Deputy Director ICPC
Mr. Sajjad Ali Memon	Project Director
Mr. Waseem Ahmed Bhatti	Assistant Registrar (MIS)
Mr. Allah Bachayo Memon	Assistant Librarian
Mr. Pir Syed Asif Hussain Shah Jilani	Assistant Director Sports
Pir Nadeem Ahmed Sarhndi	Estate cum Security Officer
Mr. Ayaz Ali Memon	Student Welfare Officer

8.3 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. Electronic Engineering
6. Software Engineering

8.3.1 Department of Basic Sciences & Related Studies (BSRS)

8.3.1.1 About The Department

This department teaches the various courses of Mathematics including Statistics, Computer Science, Pakistan Studies, Islamic Studies/Ethics, Functional English, Presentation & Technical Writing, and Communication Skills. The Department has its own beautiful state of art building. In addition the department has a furnished computer Lab equipped with Core i7 for fifty (50) students.

8.3.1.2 The Faculty

Chairman of the Department:
Dr.Rafique Ahmed Memon Ph: 0243-715365 Ext:7141

Professor:	
Prof. Lal Chand(Contract)	M.Sc (Maths):Pakistan
Associate Professor:	
Dr.Rafique Ahmed Memon	Ph.D. (Maths):Pakistan
Assistant Professor:	
Mr.Hadi Bux Chijjan	M.A (Islamic Studies):Pakistan
Mr. Kaleemullah Bhatti	On Study Leave M.Sc.(Maths): PK
Mr. Jalil Ahmed Chandio	M.Phil. (Pak Studies): Pakistan
Mr.Nek Muhammad Katber	M.Sc.(Maths): Pakistan
Lecturers:	
Mr. Ashfaque Hussain Soomro	On Study Leave M.A. (English): PK
Mr. Sanaullah Memon	On M.Sc.(Maths): Pakistan
Mr.Abdul Majid Indhar	M.Sc.(Maths): Pakistan
Mr.Basheer Ahmed Drus	M.A.(Islamic Studies): Pakistan
Mr.Masoom Ali Shahani	M.S. Pakistan
Ms. Quratulain Talpur	M.A.(English): Pakistan
Mr. Sajid Ali Magsi	M.A.(English): Pakistan

8.3.2 Department Of Civil Engineering

8.3.2.1 About The Department

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

The Department of Civil Engineering of the Mehran University of Engineering & Technology, Shaheed Z.A Bhutto Campus Khairpur Mir's provides essential and advance engineering education according to the requirements of field. The various fields of specialization are introduced to the final year students by assigning them a thesis project. The thesis projects may be specific to a particular specialization of civil engineering like Structural Engineering, Geotechnical Engineering, Transportation Engineering, Irrigation and Drainage Engineering, Construction Management, Environmental Engineering, etc.

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 are with equipment, have been established. 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, etc. During the summer vacations the students are also sent on various Civil Engineering projects for internship. This is to expose them to practical engineering practices being actually implemented.

The department has a set up a software Laboratory which provides computing facility using application of various software related to the field of Civil Engineering.

The Department also started Masters Program(ME.) in Civil Engineering, this year.

8.3.2.2 Laboratory Facilities

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

8.3.2.3 Career Opportunities

Our graduates can follow careers in many different field and organizations related with Civil Engineering Projects and they can also choose to set up their own businesses. Typical employment sectors for Civil Engineering includes: consulting, contractors, local authorities, public sector departments (Buildings, Highways, Railways, Airports, Irrigation, Water and Power, Ports etc) non-profit and research organizations. The B.E program at MUET SZAB Campus provides clear route to a professional career in Civil Engineering.

8.3.2.4 The Faculty

Chairman of the Department:
Dr. Syed Naveed Raza Shah

Professor:	
Dr. Abdul Aziz Ansari	On Contract Ph.D. Pakistan
Associate Professors:	
Dr. Kanya Lal Kahtri	Ph.D.Australia
Dr. Syed Naveed Raza Shah	Ph.D. Malaysia
Assistant Professors:	
Dr. Muhammad Jaffar Memon	Ph.D.China

Mr. Imtiaz Ahmed Memon	M.E. Pakistan
Mr. Ghulam Shabir Solangi	On Study Leave M.E. Pakistan
Mr. Sajjad Ali Mangi	On Study Leave M.E. Pakistan
Ms. Rabia Soomro	On Study Leave M.E. Pakistan

Lectures:	
Mr. Abdul Razzaque Sandhu	M.E. Pakistan
Mr. Hemu Karira	B.E. Pakistan
Mr. Dildar Ali Mangnejo	B.E. Pakistan
Mr. Mudasar Hussain Janwery	B.E. Pakistan
Mr. Abdul Qayoom Memon	On Study Leave B.E. Pakistan

8.3.3 Department of Electrical Engineering

8.3.3.1 About The Department

Electrical Engineering is an important discipline of engineering which deals with the study and application of electricity, Electronics & Electromagnetism. Electrical Engineering Department of this campus had been established in 2010 and first intake of 47 students (10 Batch), second intake of 56 students (11 Batch), third intake of 53 students (12 Batch), fourth intake of 49 students (13 Batch), and fifth intake of 41 students (14 Batch) have successfully completed their 04 years of B.E Electrical Engineering Program which has also been accredited by Pakistan Engineering Council as well.

The department offers both the undergraduate and postgraduate programs. the courses of the program have been drawn from the curriculum guidelines of HEC/PEC and dully approved by the academic council of the university. There are 70 seats offered every year for admission in undergraduate program and students across the province are eligible to apply for the program. The department has 12 full time qualified faculty members and 07 Lab Engineers with vast teaching and research experience.

For Academic Session July 2014, the department has also started postgraduate program, (M.E in Electrical Power) under the directorate of information and communication technologies (ICT) , MUET, Jamshoro.

8.3.3.2 Laboratory Facilities

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. In this respect, following 11 laboratories have been established and are fully functional.

i) Basic Electrical Engineering Lab.
ii) Basic/ Applied Electronic Lab.
iii) Electrical Machines Lab.
iv) Instrumentation and Control Lab.
v) Communication System Lab.
vi) Power System Lab.
vii) High Voltage Lab.
viii) Power Electronics Lab.
ix) Computer Lab.
x) Software Lab.
xi) Project Lab.
xii) Seminar Library.

8.3.3.3 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, Engro, FFC and various other industries and organizations hire Electrical Engineers for design operational 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.

8.3.3.4 The Faculty

Chairman of the Department:
Dr. Mohsin Ali Tunio
Phone: 0243-715365 Ext: 7006

Professor:	
Prof. Agha Zafarullah Pathan	On Contract M.Sc. Germany
Prof. Abdul Qadir Chang	On Contract M.E. Pakistan

Assistant Professors:	
Engr. Shakir Ali Soomro	(On Study Leave) M.E. Pakistan
Engr. Mazhar Ali Lund Baloch	On Study Leave M.E. Pakistan
Engr. Nadeem Ahmed Tunio	M.E. Pakistan
Dr. Mohsin Ali Tunio	Ph.D. Malaysia
Engr. Touqeer Ahmed Jumani	(On Study Leave) M.E. Pakistan
Engr. Irfan Ahmed	M.E. Pakistan
Engr. Ahsanullah Memon	M.E. Pakistan

Lectures:	
Mr. Sajid Hussain Qazi	On Study Leave M.E. Malaysia
Ms. Kalsoom Baghat	M.E. Pakistan
Mr. Rasool Akhtar	B.E Pakistan

8.3.3 Department Of Electronics Engineering

8.3.4 About 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 lead it to have significant importance in emerging technologies for its use in all major industrial applications. Thus 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, interfacing, Automation & Robotics, Analog & Digital communication, wired & wireless Communication, Signal Processing, Industrial Electronics, Neural Networks, Instrumentation & Control, Embedded System, Sequential Circuit Design, Laser & Fiber Optics, Microwave & Electromagnetic waves, Radiating System, and 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.

8.3.4.2 The Faculty

Chairman of the Department:
Engr. Halar Haleem Memon
Phone: 0243-715365 Ext: 7701

Meritorious Professor:	
Prof. Dr. Mukhtiar Ali Unar	Ph.D. United Kingdom

Professor:	
Prof. Dr. Abdul Qadir Chang	Ph.D. United Kingdom

Assistant Professors	
Dr. Muhammad Rafique Naich	Ph.D(China)
Mr. Halar Haleem Memon	M.E. Pakistan
Ms. Kaneez Fatima	M.E. Pakistan

Lectures:	
Mr. Maroof Panhwar	M.E. Pakistan
Ms. Bushra Shaikh	M.E. Pakistan
Ms. Darshna Tulsi Das	M.E. Pakistan

8.3.4.1 Laboratory Facilities

The department of electronic engineering is equipped with the latest equipment ranging from basic electronic devices, simulators and trainers to more advanced telecommunications trainers, such as microwave and antenna trainers. 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. In this respect following labs have been established and are fully functional.

1. Basic Electrical Engineering Lab.
2. Basic Electronic Lab.
3. Instrumentation and Control Lab.
4. Communication System Lab.
5. Advanced Electronics Design & Application Lab
6. Digital Electronics & Microprocessor Lab
7. Industrial Automation & Robotic Lab
8. Signal Processing & FPGA Lab
9. Power Electronics Lab.
10. Computer Lab.

Muet Shaheed Zulfiqar Ali Bhutto Khairpurmir's Campus

8.3.4.4 Courses

Course Code	Subject Name	Credit Hours	
1st Semester		Theory	Practical
ENG-111	Functional English	3	0
MTH-108	Applied Calculus	3	0
CS-150	Introduction to Computing	2	1
EL-116	Applied Physics	3	1
SS-125	Professional Ethics	2	0
ES-102	Electronics Workshop	0	1
	Total	**13**	**03**

Course Code	Subject Name	Credit Hours	
2nd Semester		Theory	Practical
MTH-112	Linear Algebra & Analytical Geometry	3	0
CS-113	Computer Programming	2	1
ES-112	Basic Electronics	3	1
EL-107	Electrical Circuits	3	1
PS-106	Pakistan Studies	2	0
SS-111	Islamic Studies/Ethics	2	0
	Total	**15**	**03**

Course Code	Subject Name	Credit Hours	
3rd Semester		Theory	Practical
ES-203	Electronic Circuit Design	3	1
ES-213	Digital Electronics	3	1
ES-223	Measurements & Instrumentation	2	1
MTH-201	Differential Equations & Fourier Series	3	0
INM-101	Engineering Management	2	0
CS-215	Computer Aided Engineering Design	0	1
	Total	**13**	**04**

Course Code	Subject Name	Credit Hours	
4th Semester		Theory	Practical
ES-233	Sequential Circuit Design	2	1
ES-243	Electromagnetic Fields	3	0
ES-253	Integrated Electronics	3	1
EL-202	Electrical Machines	2	1
MTH-211	Complex Variables & Transforms	3	0
ENG-113	Communication Skills	2	0
	Total	**15**	**03**

Course Code	Subject Name	Credit Hours	
5th Semester		Theory	Practical
ES-304	Signals & Systems	3	1
ES-313	Microprocessors & Microcontrollers	3	1
ES-324	Probability & Random Signals	3	0
EL-319	Power Electronics	2	1
MTH-310	Numerical Methods	3	1
	Total	**14**	**04**

Course Code	Subject Name	Credit Hours	
6th Semester		Theory	Practical
TL-351	Analog & Digital Communication	3	1
ES-353	Control Systems	3	1
ES-363	Digital Instrumentation Systems	2	1
ES-373	FPGA-Based System Design	3	1
ES-393	Laser & Fiber Optics	3	0
	Total	**14**	**04**

Course Code	Subject Name	Credit Hours	
7th Semester		Theory	Practical
TL-411	Computer Communication & Networking	2	1
ES-413	Digital Control System	3	1
ES-423	Embedded Systems Design	3	1
ES-433	Digital Signal Processing	3	1
ENG-401	Technical Report Writing & Presentation Skills	2	0
ES-449	Electronic Engineering Project-1	0	1
	Total	**13**	**05**

Course Code	Subject Name	Credit Hours	
8th Semester		Theory	Practical
TL-451	Advanced Communication Systems	3	0
ES-451	Mechatronics Applications	3	0
CS-490	Artificial Intelligence	3	1
ES-499	Electronic Engineering Project-2	0	6
	Total	**09**	**07**

8.3.4.5 Career Opportunities

An Electronic Engineer can find lucrative jobs in well reputed private and public sector organizations such as: PTCL, KE, 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.

8.3.5 Department Of Mechanical Engineering

8.3.5.1 About The Department

Mechanical Engineering science emerged in the 19thcentury as a result of developments in the field of physics. The field has continually evolved to incorporate advancements in technology, and mechanical engineers today are pursuing developments in such fields as composites, mechatronics, and nanotechnology. Mechanical Engineering overlaps with aerospace engineering, metallurgical engineering, civil engineering, electrical engineering, petroleum engineering, manufacturing engineering, chemical engineering, and other engineering disciplines. Mechanical engineers may also work in the field of Biomedical engineering, specifically with biomechanics, transport phenomena, bio-mechatronics, bio-nanotechnology and modeling of biological systems, like soft tissue mechanics.

To put it simply, Mechanical Engineering deals with anything that moves, including the human body, a very complex machine. Mechanical engineers learn about materials, solid and fluid mechanics, thermodynamics, heat transfer, control, instrumentation, design, and manufacturing to understand mechanical systems. Specialized Mechanical Engineering subjects include, cartilage-tissue engineering, energy conversion, laser-assisted materials. The American Society of Mechanical Engineers (ASME) currently lists 36 technical divisions, from advanced energy systems and aerospace engineering to solid-waste engineering and textile engineering.

Mechanical Engineering field requires an understanding of core concepts including mechanics, kinematics, thermodynamics, materials science, structural analysis, and electricity. Mechanical engineers use these core principles along with tools like computer-aided engineering, and product lifecycle management to design and analyze manufacturing plants, industrial equipment and machinery, heating and cooling systems, transport systems, aircraft, watercraft, robotics, and medical devices.

8.3.5.2 Laboratory Facilities

Following labs are established in this department to cater the practical/ experimental requirements of the program offered.

- Auto-Mobile Laboratory
- Aerodynamics Laboratory
- CAD/ CAM Laboratory
- CNC Laboratory
- Engineering Statics Laboratory
- Fluid Mechanics Laboratory
- Heat Transfer Laboratory
- Heating Ventilation & Air Condoning Laboratory
- Material Testing Laboratory
- Mechanics of Machine Laboratory
- Mechanical Vibrations Laboratory
- Mechatronics Laboratory
- Solar Energy Laboratory
- Thermodynamics Laboratory
- Fitting Shop
- Machine Shop
- Welding Shop
- Wood Workshop

8.3.5.3 The Faculty

Chairman of the Department:
Prof. Dr. Hassan Ali Khan Durrani

Professor:	
Dr. Hassan Ali Khan Durrani	Ph.D. Pakistan
Associate Professor:	
Dr. Sadiq Ali Shah	Ph.D. United Kingdom
Assistant Professors:	
Mr. Muhammad Ali Abro	Ph.D South Korea
Mr. Mujeeb Iqbal Soomro	On Study Leave M.E. Pakistan
Mr. Aqeel Ahmed Bhutto	On Study Leave M.E. Pakistan
Mr. Bilawal Ahmed Bhayo	On Study Leave M.Sc.Malaysia
Mr. Ali Nawaz Sanjrani	M.E. Pakistan
Mr. Jahanzeb Soomro	On Study Leave M.E. Pakistan
Mr. Majid Ali Wasan	M.E. Malaysia
Lectures:	
Mr. Osama Qasmi	B.E. Pakistan
Mr. Aurang Zaib Wadho	On Study Leave B.E. Pakistan
Mr. Ali Anwar Brohi	On Study Leave B.E. Pakistan
Mr. Aurang Zeb Wadho	M.E. Pakistan
Mr. Abdul Ahad Noohani	M.E. Pakistan
Mr. Talib Hussain Ghoto	B.E. Pakistan
Mr. Zaheer Ahmed Odho	On Study Leave B.E. Pakistan
Mr. Muhammad Haris Khan	M.E. Pakistan
Mr. Awais Junejo	M.E. Pakistan
Mr. Qadir Nawaz Shaffique	M.E. Pakistan
Engr. Danish Ali Memon	On Study Leave M.E. Pakistan

8.3.5.4 Courses

Course Code	Subject Name	Credit Hours	
1st Semester		Theory	Practical
SS III	Islamic Studies / Ethics	02	00
PS 106	Pakistan Studies	02	00
MTH 102	Applied Calculus	03	00
ME 101	Engineering Drawing & Graphics	02	02
ME 111	Engineering Statics	03	01
ME 121	Engineering Materials	03	00
	Total	**18**	

Course Code	Subject Name	Credit Hours	
2nd Semester		Theory	Practical
EN 101	Functional English	03	00
MTH 113	Linear Algebra, Differential Equations and Analytical Geometry	03	00
ME 131	Engineering Dynamics	03	00
EI 102	Electrical Technology	03	01
ME 141	Workshop Practice	00	02
	Total	**15**	

Course Code	Subject Name	Credit Hours	
3rd Semester		Theory	Practical
MTH 213	Complex Variables & Transforms	03	00
ME 201	Strength of Materials-I	03	01
ME 211	Mechanics of Machines-I	02	00
ME 221	Thermodynamics-I	03	01
ES 281	Basic Electronics	03	01
	Total	**17**	

Course Code	Subject Name	Credit Hours	
4th Semester		Theory	Practical
CS225	Introduction to Computers & C++ Programming	03	01
ME 231	Strength of Materials-II	03	00
ME 241	Thermodynamics-II	03	01
ME 251	Fluid Mechanics-I	03	01
ME 261	Mechanics of Machines-II	02	01
	Total	**18**	

Course Code	Subject Name	Credit Hours	
5th Semester		Theory	Practical
MTH 311	Numerical Analysis & Computer Applications	03	01
ME 301	Heat & Mass Transfer	03	01
ME 311	Applied Aerodynamics	02	01
ME 321	Fluid Mechanics-II	03	01
ME 331	Machine Design & CAD-I	03	00
	Total	**18**	

Course Code	Subject Name	Credit Hours	
6th Semester		Theory	Practical
ME 341	Instrumentation & Control	02	01
MTH 317	Statistics & Probability	03	00
ME 351	Machine Design & CAD-II	03	01
ME 371	Heating, Ventilation and Air Conditioning	03	01
ME 381	Mechanical Vibrations	03	01
	Total	**18**	

Course Code	Subject Name	Credit Hours	
7th Semester		Theory	Practical
ME 401	Industrial Economics & Management	02	00
ME 411	Automobile Engineering	02	01
ME 421	Mechatronics	03	01
ME 431	Manufacturing Processes-I	02	01
EE 425	Safety, Health & Environment	02	00
ME 441	Thermal Power Plants	03	01
	Total	**18**	

Course Code	Subject Name	Credit Hours	
8th Semester		Theory	Practical
ME 451	Renewable and Emerging Energy Technologies (REET)	03	01
ME 461	Manufacturing Processes -II	03	01
ME 471	Maintenance Engineering	02	00
ME 481	Project Management	02	00
ME 499	Project/Thesis	--	--
	Total	**12**	

8.3.5.3 Career Opportunities

The breadth of the Mechanical Engineering discipline allows graduates a variety of career options. Their education enables them with the creative thinking that allows them to design an exciting product or system, the analytical tools to achieve their design goals, the ability to overcome all constraints, and the teamwork needed to design, market, and produce a system.

Mechanical engineering graduates are sought by employers in almost all sectors of the engineering industry. These include:

- Aerospace industry – Research, Design, Manufacturing & Maintenance of Aerospace Equipment
- Automotive industry – Designs, Manufactures, Maintenance of Automobiles
- Defense industry – Design Fabrication and Maintenance of Defense Equipment
- Electronics industry – Design and Manufactures of components from automotive to 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 – Design, Manufacturing and Maintenance of rail system components from trains and tracks to electrical power systems and train control systems

8.3.6 Department of Petroleum and Natural Gas Engineering

8.3.6.1 About The Department

In recent years, Petroleum Engineering has gained considerable importance due to the vital role of oil& gas sector in the economy of the country. Considering the fact that especially the province of Sindh, is very rich in oil and gas reserves, the Department of Petroleum & Natural Gas Engineering was established at the campus in the year 2010. Successfully the first batch (K-10) had been passed out in th year 2014 while the two other batches (K-11 & K-12) had been passed out in the year 2015 & 2016.

The department offers the undergraduate program and the curriculum includes courses in evaluating oil and gas reserves, design well drilling, completion, work over, production and surface facilities, analyze reservoir performance for production optimization, perform advanced reservoir simulation and visualization, develop new techniques to enhance oil recovery and conduct modern reservoir management. Additional subjects such as geology, computer application & programming, mathematics are also included in the courses. Oil/Gas field visits are conducted for up-to-date practical knowledge is the key feature of the department.

SPE Student Chapter Mehran University College of Engg& Tech:, Khairpur Mir's is the fifth & Golden student chapter in Pakistan, established on March 25th, 2012at the department. The SPEchapter promotes and uphold the educational activities and creates healthy environment for the young petroleum engineers to harness their strength in collaboration with the industry.

The Campus has signed an agreement with Petroleum Expert limited on 2014 & 2015. In the agreement, Petroleum Expert limited has donated/sponsored the Integrated Production Modeling (IPM)software equivalent of € 1,105,43.00to the campus each year. One Petro Subscription grant has been approved by the One Petro grant program sponsored by the Society of Petroleum Engineers. Our Campus/university One Petro subscription is active till July, 2016 and all the faculty members, students and researcherhavean access to One Petro free of cost in the premises of campus, one of the industry's largest online technical libraries that allowing researcherto search and download more than 90,000 technical documents from multiple professional societies. The department also arranges internships during summer vacation to the third and final year students with the coordination of oil &gas / E&P companies operating in Pakistan.

The Seminar library has been established in the department. There are more than 220 title of petroleum text books are available for the students.

8.3.6.2 The Faculty

Chairman of the Department:
Prof. Dr. M. Yakoob Soomro

Professor:	
Dr. M. Yakoob Soomro	On Contract Ph.D.United Kingdom
Assistant Professors:	
Mr. Asadullah Memon	(On Study Leave) M.E. Pakistan
Engr. Imran Ali Memon	M.E. Pakistan
Mr. Faisal Hussain Memon	M.E. Pakistan
Lecturers:	
Mr. Bilal Shams Memon	On Study Leave M.E. Pakistan
Mr. Adnan Aftab Nizamani	M.Phil, Malaysia
Mr. Abdul Samad Shaikh	M.E. Pakistan
Mr. Sundar Sham Jeswani	B.E. Pakistan
Mr. Shoaib Ahmed Memon	Pg.D. Pakistan
Engr. Zaheer Hussain Zardari	B.E. Pakistan
Eng.Waseem Mumtaz Kalwar	B.E. Pakistan
Engr. Temoor Muther	M.E. Pakistan

8.3.6.3 Laboratory Facilities

Well-equipped laboratories have been established for measuring rock properties, reservoir fluid properties, drilling fluid properties and interfacial properties. The computer laboratories 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 Laboratory
6. General Computer Laboratory
7. Core Analysis Laboratory (Under procurement)

8.3.6.4 Courses

Course Code	Subject Name	Credit Hours	
1st Semester		Theory	Practical
PG-101	Fundamentals of Petroleum Engg.	3	0
PG-111	Applied Chemistry	3	0
MTH-102	Applied Calculus	3	0
SS-111	Islamic Studies/Ethics	2	0
PS-106	Pakistan Studies	2	0
ENG-101	Functional English	3	0
	Total	**16**	**0**

Course Code	Subject Name	Credit Hours	
2nd Semester		Theory	Practical
PG-121	Applied Geology	3	1
PG-131	Engineering Drawing & Graphics	2	1
PG-141	Applied Physics	3	1
ENG-111	Communication Skills	2	0
MTH-111	Linear Algebra & Analytical Geometry	3	0
ME-191	Workshop Practice	0	2
	Total	**13**	**5**

Course Code	Subject Name	Credit Hours	
3rd Semester		Theory	Practical
PG-201	Stratigraphy & Structural Geology	2	0
CS-831	Computer Programming & Software Application	2	1
EL-215	Introduction to Electrical Engg.	2	1
MTH-223	Differential Equations & Complex Variables	3	0
CE-260	Fluid Mechanics	2	1
ENG-215	Technical Writing & Presentation Skills	2	0
	Total	**13**	**3**

Course Code	Subject Name	Credit Hours	
4th Semester		Theory	Practical
PG-211	Drilling Engineering-I	3	1
PG-221	Petroleum Geology & Geophysical Exploration	3	1
PG-231	Applied Thermodynamics	2	0
CE-280	Mechanics of Materials	2	1
MTH-224	Applied Statistics	3	0
	Total	**13**	**3**

Course Code	Subject Name	Credit Hours	
5th Semester		Theory	Practical
PG-301	Petrophysics	2	1
PG-311	Natural Gas Engineering	3	1
PG-321	Organizational Behaviour	3	0
PG-331	Properties of Reservoir Fluids	3	1
PG-341	Drilling Engineering-II	3	1
	Total	**14**	**4**

Course Code	Subject Name	Credit Hours	
6th Semester		Theory	Practical
PG-351	Well Logging	2	1
PG-361	Reservoir Engineering	3	1
PG-371	Petroleum Refinery Engineering	3	1
PG-381	Environment & Safety Management	3	0
MTH-321	Applied Numerical Methods	2	1
	Total	**13**	**4**

Course Code	Subject Name	Credit Hours	
7th Semester		Theory	Practical
PG-401	Well Testing	3	1
PG-411	Petroleum Production Engineering-I	3	1
PG-421	Reservoir Simulation	3	1
PG-431	Instrumentation & Process Control	3	1
PG-441	Project Planning & Management	2	0
	Total	**14**	**4**

Course Code	Subject Name	Credit Hours	
8th Semester		Theory	Practical
PG-451	Principles of Enhanced Oil Recovery	3	1
PG-461	Petroleum Production Engineering-II	3	1
PG-471	Gas Reservoir Engineering	3	1
PG-481	Petroleum Economics	3	0
PG-491	Project	0	2
	Total	**12**	**5**

8.3.6.4 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.

8.3.7 Department Of Software Engineering

8.3.7.1 About The Department

Software Engineering is the field of technology that is related to the application of theoretical approaches to the development, operation and maintenance of software. It is not only pertains to the simple and rather stereotypical knowledge of only writing code for programs, but it is also the study of how these approaches actually work in the real world based on different factors and engineering them accordingly to reach the desired goals. Software engineering is the creating software that is of higher quality, more affordable, maintainable, and quicker to build.

Software engineering is normally sub divided into following sub disciplines.

1. Software Requirement
2. Software Design
3. Software Development

Thus, software engineering is an important aspect of technology and it will bring significant changes and at the same time be a major factor in future developmental periods of the world. The department offers undergraduate degree program i.e. B.E (Software Engineering) this program provides in-depth knowledge of the subject, wherein students will develop all skills regarding design and implications of modern Software Engineering through integrated courses. The courses are revised time to time keeping in view software needs of the emerging market at national & international level.

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.

8.3.7.2 The Faculty

Chairman of the Department:
Dr. Nouman Qadeer Soomro
Phone: 0243-715365 Ext: 7801

Assistant Professors:	
Dr. Nouman Qadeer Soomro	PhD. China
Ms. Sajida Raz Bhutto	M.E Pakistan
Dr. Mohsin Tunio	PhD. Malaysia
Mr. Irfan Bajkani	M.E. Pakistan

Lectures:	
Mr. Irfanullah Memon	M.E. Pakistan
Ms. Munazza Zaib	M.E. Pakistan
Mr. Maroof Ali	B.E. Pakistan
Mr. Bushra Shaikh	B.E. Pakistan

8.3.7.3 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. Computational linguistic and interactive e-learning lab
2. Visual informatics and image processing laboratory
3. Software quality assurance and testing laboratory
4. Software research and development laboratory
5. Data warehousing and management laboratory
6. Parallel programming and cluster computing laboratory
7. Grid research and storage management laboratory
8. 3-d modeling and visualization laboratory

8.3.7.4 Courses

Course Code	Subject Name	Credit Hours	
1st Semester		Theory	Practical
MTH108	Applied Calculus	3	0
EL101	Basic Electrical Engineering	3	1
SW111	Computer Programming	3	1
ENG111	Functional English	3	0
ES121	Electronic Engineering	3	1
	Total	**15**	**03**

Course Code	Subject Name	Credit Hours	
2nd Semester		Theory	Practical
SW121	Object Oriented Programming	3	1
SW122	Digital Computer & Logic Design	3	1
MTH112	Linear Algebra & Analytical Geometry	3	0
PS106	Pakistan Studies	2	0
SS111	Islamic Studies / Ethics	2	0
SS125	Professional Ethics	2	0
	Total	**15**	**02**

Course Code	Subject Name	Credit Hours	
3rd Semester		Theory	Practical
SW215	Software Economics & Management	2	0
SW224	Data structures & Algorithms	3	1
SW221	Computer Architecture & Organization	3	0
SW214	Introduction to Software Engineering	3	0
MTH212	Differential Equation & Fourier series	3	0
	Total	**14**	**01**

Course Code	Subject Name	Credit Hours	
4th Semester		Theory	Practical
SW211	Operating Systems Concepts	3	1
SW222	Database Management & Administration	3	1
SW223	Operations Research	3	0
SW212	Microprocessor Technologies	3	1
MTH217	Laplace Transforms & Discrete Mathematics	3	0
	Total	**15**	**03**

Course Code	Subject Name	Credit Hours	
5th Semester		Theory	Practical
SW311	Theory of Automata & Formal Languages	3	0
SW312	Digital Communication	3	1
SW313	Human Computer Interaction	3	1
SW314	Software Requirement Engineering	3	0
SW315	Mobile Programming	3	1
	Total	**15**	**03**

Course Code	Subject Name	Credit Hours	
6th Semester		Theory	Practical
SW321	Computer Networks & Management	3	1
SW322	Software Project Management	3	1
MTH317	Statistics & Probability	3	0
SW323	Artificial Intelligence Concepts & Techniques	3	1
ENG319	Technical Report Writing & Presentation Skills	2	0
	Total	**14**	**03**

Course Code	Subject Name	Credit Hours	
7th Semester		Theory	Practical
SW411	Interactive Multimedia Systems & Graphics	3	1
SW412	Web Technologies	3	1
SW413	Software Design & Architecture	3	1
SW422	Computer Vision	3	1
SW424	Thesis/Project	0	0
	Total:	**12**	**04**

Course Code	Subject Name	Credit Hours	
8th Semester		Theory	Practical
SW421	Data Warehousing & Mining Techniques	3	1
SW414	Distributed Computing	3	1
SW423	Software Testing & Quality Assurance	3	1
SW424	Thesis/Project	0	6
	Total	**09**	**09**

8.3.7.5 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 computer software engineers cover startup companies to established industry leaders and thus include a large number of clientele.

As the use of the Internet, e-mail, and other communications systems increases, firms from electronics to engineering which were traditionally associated as unrelated disciplines will expand, hiring more and more such engineers. Engineering firms specializing in building bridges and power plants, for example, also hire computer software engineers for designing and developing advanced geographic data systems and automated drafting systems. Communications industries also require computer software engineers, with whose help the personal communications market could be tapped into. The major communications companies have many job opportunities for both computer software applications and computer systems engineers. A growing number of computer 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 the client companies' Web sites and intranets.

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 on this course will be sought after in many organizations.

8.4 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.

8.5 TRANSPORT FACILITIES

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

8.6 SPORTS FACILITIES

The campus has established a sports section which arranges various indoor and outdoor sports activities 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. Gymkhana Khairpur has facilitated the campus to have sports activities there also.

8.7 SURVEILLANCE

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

8.8 LIBRARY

9 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.

10 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.

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

12 Online Public Access Catalogue (OPAC) accessible through this url http://121.52.155.178:8000

13 To access interface for books catalog, full-text electronic journals and e-books on web.
The Campus Library also offers Wi-Fi service.

14 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 is available at service points to meet needs of the readers.

8.9 RESIDENTIAL ACCOMMODATION FOR STUDENTS & STAFF HAS BEEN PLANNED WHICH IS COMPRISING OF

The residence facility for students and staff is being provided at the Residential Complex (New Land). Two boys hostel and one staff hostel is functional. A third boys hostel is under construction.

8.10 CAFETERIA

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

8.11 AUDITORIUM

The Auditorium with the capacity of approximately 500 people is under construction and it is expected that it will be completed in December 2018.

RULES AND PROCEDURES FOR ADMISSION

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 is fixed as per Table 9.6.1. There are other categories of candidates who are also eligible for admission, which are described in detail in the subsequent sections.

(ii) 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 will be cancelled at any stage. However, if any admitted student desires to seek admission in any discipline under Self-Financing Scheme or University Support Program, he/she may apply for the same and submit an undertaking on the stamp paper to the effect that he/she will not claim admission under Regular Scheme of the year. Similarly, if the admitted student under Self-Financing Scheme or USP, if apply 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.

(iii) The candidates who apply for their 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) The candidates who have passed the Higher Secondary School Certificate (HSC) Pre-Engineering Examination or equivalent with Physics, Chemistry and Mathematics in Annual Examination 2018or earlier up to Annual Examination of 2015 and have secured at least 60% marks (Grace marks shall not be considered) from any recognized Board of Intermediate and Secondary Education in Pakistan or from foreign countries, are eligible to apply for admission. In addition, the candidates who have passed Intermediate (General Science Group) in Annual Examination 2018 or earlier up to Annual Examination of 2015 and have secured at least 60% marks (Grace marks shall not be considered) are also eligible for their admission only in Computer Systems Engineering, Software Engineering, Electronic Engineering and Telecommunication Engineering and they will not claim their admission in any other discipline. The candidates who have passed Intermediate (Pre-Medical Group) in Annual Examination 2018 or earlier upto Annual Examination 2015 and have secured at least 60% marks (Grace marks shall not be considered) are eligible for their admission only in Bio-Medical Engineering and they will not claim their admission in any other discipline. The candidates who have passed the above examinations or equivalent examinations before Annual Examination 2015 shall not be eligible for admission.

(ii) Candidates who have passed three years diploma from any recognized Board of Technical Education in Pakistan in any approved discipline (Civil, Electrical, Mechanical, Electronics, Chemical, Glass & Ceramics, Petroleum and Architecture Technology) before last date of submission of admission form or earlier up to Annual Examination 2015, the result of Diploma must be declared at least 10 days before pre-admission test and have secured at least 60% marks (Grace marks shall not be considered) are also eligible to apply for admission under Category-B in the same discipline only under the Regular Scheme. The candidates who have passed three years Diploma before Annual Examination 2015 shall not be eligible for admission.

(iii) Those students, who were admitted to any other institutes/universities before applying for admission in Mehran University 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.

9.3 ADMISSION FORM

Call for admissions will be advertised in the prominent newspapers of national and regional repute as well as on University website **www.muet.edu.pk**. The candidates who intend to apply for admission must follow the guidelines mentioned on the Directorate of Admissions website **www.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 candidate has to upload the scanned copies of all the required documents as indicated. The Mehran University authorities after receipt of application and processing fee will email admit slips to candidates for pre-admission test only. The appearance/ passing in the pre-admission test does not mean the candidate is eligible for admission. The eligibility of candidate for admission will be decided by the admission office of the University after scrutinizing the provided documents. The eligibility criteria for admission is given in Section 9.2. The candidate has to print the admit slip and bring the same on the day of pre-admission test along with original CNIC/B-Form.

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% Scorein 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 will be prepared by calculating the 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:

	Percentage of Marks in:	Multiplying Weightage
A	Secondary School Certificate - Matriculation: (Science Group).	0.10
B	Higher Secondary School Certificate - Intermediate: (Pre-EngineeringGroup/Pre-Medical Group/ General Science Group or equivalent adjusted marks*).	0.30
C	Pre-admission Test:	0.60

For example, if a candidate has secured 70% marks in SSC, 60% marks in HSC and 50% marks in Pre-admission Test; his/her CPN would be:70*0.1+60*0.3+50*0.6 =7+18+30= 55 (Percent)

*Adjusted marks means marks secured in HSC examination plus additional marks if any, as defined in Clause 9.11, minus marks to be deducted as defined in Clause 9.12.

Note: All nominees local/foreigners should submit the result of HEC, SAT, UETs, NUST or officially approved National/International Organization or other International-Level Test 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 results of Pre-admission Test, a comprehensive merit list will be prepared for each district/category and a number of candidate's equivalent to the reserved seats of concerned category will be 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 will be held at Mehran University, Jamshoro on the dates as announced in the newspapers and also on MUET website: **www.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 - Intermediate (Pre-Engg. / General Science / Pre-Medical Group - in case of change of group from Pre-Medical to Pre-Engg., marks certificate of Pre-Medical Group).
(iii) Domicile Certificate of candidate / guardian.
(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 **www.admissions.muet.edu.pk**

Without above documents/short of any document, the candidate shall not be allowed to appear in the interview and will not be considered for admission. The admission in discipline/ technology shall be allowed on the day of interview. If admitted, the above original documents would be retained by the University for at least one entire year. The candidates are advised to keep a photocopy of all the documents with them.

It is mandatory to appear before the Admission Committee for interview with all required documents, failing which will result in disqualification from the process of admission. The candidate has to deposit the fees as mentioned in Section 9.21 at the time of interview.

9.6 DISTRIBUTION OF SEATS

The distribution of seats for admissions will be 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. 25 seats have also been reserved for the candidates of Karachi Division. The admission in various districts/categories at Mehran University of Engineering & Technology, Jamshoro and Mehran University of Engineering & Technology, SZAB Campus, Khairpur Mirs' will be 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 will be given to the rural areas of the same districts and vice-versa. The number of seats allocated to each district in various disciplines and for other categories are given in Table 9.6.1 and 9.6.4 below, while the number of seats for each district/division in Sindh Province (urban/rural areas) are shown in Table 9.6.2 and 9.6.5. In Table 9.6.3, description is provided concerning various categories of candidates seeking admission.

Table-9.6.1: Distribution of Seats discipline-wise for various Districts, Disciplines and Categories at Mehran University of Engineering and Technology, Jamshoro.

Category	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	2	2	1	1	1	28
	Ghotki	1	1	1	2	2	3	2	2	2	1	3	2	2	1	2	1	1	1	30
	Khairpur	2	2	2	3	3	4	4	3	3	3	2	3	3	3	3	1	1	1	46
	S. Benazirabad	1	1	1	3	2	3	3	2	2	2	2	2	2	2	2	1	1	1	33
	N.Feroze	1	2	1	3	2	3	3	2	2	2	2	2	1	1	3	1	1	1	33
A.2	Larkana	1	1	1	2	2	2	3	2	2	2	2	2	2	2	2	1	1	1	31
	Kamber/Shahdadkot	1	1	1	2	2	2	2	2	1	1	2	2	2	2	2	1	1	1	28
	Shikarpur	1	1	1	2	2	3	2	1	1	1	2	1	2	2	2	1	1	1	27
	Jacobabad	1	1	1	2	2	2	2	2	2	1	1	2	2	2	2	1	1	1	28
	Kashmore	-	1	1	1	1	1	2	1	1	1	1	1	1	1	1	-	1	-	16
A.3	Hyderabad	7	7	8	6	8	7	7	2	4	4	3	3	4	5	5	3	2	3	88
	Matiari	2	3	2	2	2	2	2	1	2	2	1	1	2	1	2	1	2	1	31
	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	2	1	1	2	1	29
	Dadu	5	6	7	4	5	5	6	3	3	3	3	2	2	3	4	2	2	2	67
	Jamshoro	3	3	3	3	3	3	2	1	1	1	1	2	2	2	2	1	2	1	36
	Thatta	3	3	4	2	3	2	3	2	2	1	2	1	2	1	2	1	1	1	36
	Sujawal	3	3	2	2	2	3	2	1	1	2	1	2	1	2	2	1	1	1	32
	Badin	6	6	7	4	5	5	5	3	3	3	3	3	3	3	4	2	2	2	69
A.4	Mirpurkhas	5	6	6	3	4	4	4	2	2	2	2	2	2	3	3	2	2	2	56
	Umarkot	3	3	3	3	3	3	3	2	2	2	2	2	2	2	2	1	2	1	41
	Tharparkar	5	5	5	4	4	4	4	2	2	3	3	2	2	3	3	2	2	2	57
	Sanghar	7	8	8	6	6	7	7	3	4	4	3	4	4	4	5	3	2	3	88
A.5	Karachi	-	-	-	2	2	2	2	2	3	2	2	-	1	-	2	-	1	-	21
B	Dip.Holders	2	2	2	4	-	-	-	4	-	-	-	4	1	-	-	-	-	-	19
C	MUETE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	40*
D.1	Balochistan	-	-	-	2	2	-	-	2	-	-	2	-	2	-	-	-	-	-	10
D.2	Foreigners	5	3	3	2	2	-	-	-	1	2	1	-	-	-	-	-	-	-	19
D.3	A.Kashmir	1	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	2
D.4	FATA	-	1	-	-	-	-	-	-	-	1	1	-	-	-	1	-	-	-	4
D.5	UET-Lahore	1	-	-	-	-	-	-	2		-	-	-	-	-	-	-	-	-	3
D.6	UET-Taxila	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
D.7	UET-Peshawar	1	-	1	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	3
D.8	Govt. of KPK	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	1
D.9	Govt. of Punjab	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	1
D.10	N.Area	1	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	2
D.11	GHQ	3	2	2	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	8
D.12	Federal C.Area	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-		-	1
D-13	Indian Occupied Kashmir	2	1	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	5
	Total	**81**	**79**	**81**	**74**	**78**	**77**	**77**	**53**	**50**	**50**	**52**	**50**	**54**	**50**	**61**	**30**	**35**	**30**	**1102**

* Maximum 12 admissions in any discipline shall be allowed but total admissions shall not exceed 40 seats. Explanation of Abbreviations

CE Civil Engineering
EL Electrical Engineering
ME Mechanical Engineering
ES Electronic Engineering
CS Computer Systems Engineering
EE Environmental Engineering
TL Telecommunication Engg.
SW Software Engineering
CH Chemical Engineering
IN Industrial Engg. & Management
MN Mining Engineering.
BM Biomedical Engineering
MT Metallurgy & Materials Engg.
PG Petroleum & Nat. Gas Engg.
AR Architecture
CRP City & Regional Planning
TE Textile Engineering.
MTE Mechatronics Engineering

Table-9.6.2: Distribution of seats for various districts on Urban/Rural basis in Sindh Province at Mehran University of Engineering and Technology, Jamshoro.

Category	Districts	Number of Seats		
		Urban Areas	Rural Areas	Total Seats
A.1	Sukkur	10	18	28
	Ghotki	03	27	30
	Khairpur Mirs	05	41	46
	Shaheed Benazirabad	05	28	33
	Naushehro Feroze	02	31	33
	TOTAL	**25**	**145**	**170**
A.2	Larkana	09	22	31
	Kamber/Shahdadkot	03	25	28
	Shikarpur	04	23	27
	Jacobabad	04	24	28
	Kashmore	02	14	16
	TOTAL	**22**	**108**	**130**
A.3	Hyderabad	73	15	88
	Matiari	02	29	31
	Tando Muhammad Khan	04	28	32
	Tando Allahyar	05	24	29
	Dadu	10	57	67
	Jamshoro	03	33	36
	Thatta	02	34	36
	Sujawal	00	32	32
	Badin	06	63	69
	TOTAL	**105**	**315**	**420**
A.4	Mirpurkhas	11	45	56
	Umerkot	00	41	41
	Tharparkar	00	57	57
	Sanghar	14	74	88
	TOTAL	**25**	**217**	**242**
A.5	All Districts of Karachi	00	00	21
	GRAND TOTAL			**983**

Table-9.6.3: Description of Remaining Categories of Candidates Seeking Admission.

CATEGORY	DESCRIPTION	SEATS
(B)	Candidates who have passed Diploma Examination in Civil, Mechanical and Electrical from Government Technical College/Polytechnic Institute/Govt. Habib College of Technology and are domiciled in the districts of categories-A.3 and A.4. The domicile for admission of diploma holders in Electronics, Petroleum, Chemical/Glass & Ceramics and Architecture Technology will be of categories A.1, A.2, A.3 and A.4. Diploma holders shall be considered for admission under this category only.	19
(C)	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 will be 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 will be given to real sons/daughters of employees who are not confirmed in the University service but have at least three years continuous University service at their credit. iii. Third preference will be 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 will be given to real brothers/sisters of employees who are not confirmed in the University service and have at least three years continuous University service at their credit. v. Fifth preference will be 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 will be 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 will be 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 will be 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** will be determined as per policy of the University. A copy of the appointment order, confirmation order and Affidavit regarding relationship with candidate of the employee must be attached with the admission form.	40

CATEGORY	DESCRIPTION	SEATS
D.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).	05
	ii. Candidates domiciled in Balochistan Province, nominated by theHigher Education Commission, Islamabad. (02 in Computer Systems Engineering, 01 Chemical Engineering, 01 Metallurgy & Materials Engineering and 01 Architecture).	05
D.2	Foreign students (under Pakistan Technical Assistance Program) nominated by the Ministry of Finance and Economic Affairs (Economic Affairs Division), Government of Pakistan, Islamabad.	19
D.3	Candidates belonging to Azad Kashmir, nominated by the Azad Govt. of the Azad State of Jammu & Kashsmir, Muzafarabad.	02
D.4	Candidates belonging to Federally Administered Tribal Areas, nominated by the State and Frontier Region Division, Government of Pakistan, Islamabad.	04
D.5	Candidates domiciled in Punjab Province, nominated by the UET Lahore through Education Department, Government of Punjab (on reciprocal basis).	03
D.6	Candidate domiciled in Punjab Province, nominated by the UET Taxila through Education Department, Government of Punjab (on reciprocal basis).	01
D.7	Candidates domiciled in Khyber Pakhtoon Khowah Province, nominated by UET Peshawar through the Education Department, Government of Khyber Pakhtoon Khowah(on reciprocal basis).	03
D.8	Candidate domiciled in Khyber Pakhtoon Khowah Province, nominated by the Education Department, Government of Khyber Pakhtoon Khowah.	01
D.9	Candidate domiciled in Punjab Province, nominated by the Education Department, Government of Punjab.	01
D.10	Candidates belonging to Northern Areas, nominated by the Directorate of Education, Government of Gilgit Baltistan.	02
D.11	Candidates nominated by the General Head Quarters, Rawalpindi.	08
D.12	Candidate belonging to Federal Capital Area, nominated by Ministry of Education, Government of Pakistan, Islamabad.	01
D.13	Candidates belonging to Indian Occupied Kashmir, nominated by the Ministry of Economic Affairs & Statistics (Economic Affairs Division), Government of Pakistan, Islamabad.	05
	Total seats including districts quota	**1102**

Table-9.6.4: Distribution of Seats for various Districts and Disciplines at Mehran University of Engineering and Technology, SZAB Campus, Khairpur Mir's.

Category	Description	Number of Seats & Discipline						
		CE	EL	ME	PG	SW	ES	Total
A-1	Sukkur	04	05	04	04	03	04	24
	Ghotki	05	04	05	04	04	03	25
	Khairpur	07	07	07	06	05	06	38
	S.Benazirabad	04	04	04	04	03	02	21
	Naushahro Feroze	04	04	04	04	03	02	21
A-2	Larkana	03	03	03	02	02	02	15
	Kambar/Shahdadkot	02	03	03	02	02	02	14
	Shikarpur	02	02	02	03	02	02	13
	Jacobabad	02	03	03	02	02	02	14
	Kashmore	02	02	01	01	01	02	09
A-3	Hyderabad	02	02	02	01	02	01	10
	Matiari	00	00	01	01	01	00	03
	T.M. Khan	00	01	00	01	01	00	03
	T. Allahyar	01	01	00	00	00	01	03
	Dadu	01	01	01	02	01	02	08
	Jamshoro	01	01	00	01	01	01	05
	Thatta	00	01	01	01	00	01	04
	Sujawal	01	00	00	01	00	01	03
	Badin	01	01	01	02	01	01	07
A-4	Mirpurkhas	01	01	01	01	01	01	06
	Umerkot	01	00	01	01	01	01	05
	Tharparkar	01	01	01	01	01	01	06
	Sanghar	02	01	02	02	02	01	10
A-5	All Districts of Karachi	01	00	01	01	01	00	04
C	**MUET, SZAB Campus, Khairpur Mir's**	02	02	02	02	00	01	09
	Total:	**50**	**50**	**50**	**50**	**40**	**40**	**280**

Explanation of Abbreviations

CE Civil Engineering
PG Petroleum & Natural Gas Engg.
ME Mechanical Engineering
SW Software Engineering
EL Electrical Engineering
ES Electronics Engineering

Table-9.6.5: Distribution of Seats for Urban and Rural areas of the Districts in Sindh Province, Mehran University of Engineering & Technology, SZAB Campus, Khairpur Mir's (Category-A) and (Category-C).

Category	Districts	Number of Seats		
		Urban Areas	Rural Areas	Total Seats
A.1	Sukkur	07	17	24
	Ghotki	02	23	25
	Khairpur	07	31	38
	S. Benazirabad	04	17	21
	Naushehro Feroze	01	20	21
	TOTAL	21	108	129
A.2	Larkana	05	10	15
	Kamber/Shahdadkot	01	13	14
	Shikarpur	01	12	13
	Jacobabad	03	11	14
	Kashmore	02	07	09
	TOTAL	12	53	65
A.3	Hyderabad	08	02	10
	Matiari	00	03	03
	Tando Muhammad Khan	00	03	03
	Tando Allahyar	00	03	03
	Dadu	02	06	08
	Jamshoro	00	05	05
	Thatta	00	04	04
	Sujawal	00	03	03
	Badin	00	07	07
	TOTAL	10	36	46
A.4	Mirpurkhas	02	04	06
	Umerkot	00	05	05
	Tharparkar	00	06	06
	Sanghar	01	09	10
	TOTAL	03	24	27
A.5	MUET, SZAB Campus, Khairpur Mir's	00	00	04
C	Real Sons/Daughters/Brothers/Sisters of Employees of MUET, SZAB Campus, Khairpur Mirs'.	00	00	09
	GRAND TOTAL			280

9.7 DESIGNATION OF URBAN AREAS OF SINDH PROVINCE

The Urban areas designated in each district are given below.

1 Sukkur District
- a) Sukkur Municipality
- b) Rohri Municipality

2 Ghotki District
- a) Ghotki Municipality
- b) Mirpurmathelo Municipality

3 Khairpur District
- a) Khairpur Municipality
- b) Gambat Municipality
- c) Pirjogoth Municipality

4 Shaheed Benazirabad District
- a) Nawabshah Municipality

5 Naushehro Feroze District
- a) Moro Municipality

6 Larkana District
- a) Larkana Municipality
- b) Ratodero Municipality
- c) Naudero Municipality

7 Kamber/Shahdadkot District
- a) Shahdadkot Municipality
- b) Kambar Municipality

8 Jacobabad District
- a) Jacobabad Municipality

9 Kashmore District
- a) Kandhkot Municipality

10 Shikarpur District
- a) Shikarpur Municipality

11 Hyderabad District
- a) Hyderabad Municipality
- b) Tandojam Municipality

12 Tando Allahyar District
- a) Tando Allahyar Municipality

13 Tando Muhammad Khan District
- a) Tando M. Khan Municipality

14 Matiari District
- a) Hala Municipality

15 Dadu District
- a) Dadu Municipality
- b) Mehar Municipality
- c) K.N. Shah Municipality

16 Jamshoro District
- a) Kotri Municipality

17 Thatta District
- a) Thatta Municipality

18. Sujawal District

No Urban Area

19 Badin District
- a) Badin Municipality
- b) Matli Municipality

20 Mirpurkhas District
- a) Mirpurkhas Municipality

21 Tharparkar District

No urban areas

22 Umerkot District

No urban areas

23 Sanghar District
- a) Sanghar Municipality
- b) Shahdadpur Municipality
- c) Tando Adam Municipality
- d) Sinjhoro Municipality

9.8. AWARD OF DISCIPLINE

The award of discipline/technology are 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 (Regular, Self-Finance, etc.) he/she has to select/decide on any one of them on the day of interview. On the contrary, if he/sheis 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.

9.9 RECTIFICATION OF MISTAKES

The admission merit lists announced by the University will be provisional and if any mistake is detected shall be rectified.

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 certificate of Hafiz-e-Quran on printed form from registered Madrassas 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/Diploma Examinations, the merit will be determined as described below:

One percent of the aggregate marks will be deducted for each gap of one academic year after Matriculation examination from the total marks of HSC/Diploma examination or equivalent for the purpose of determination of merit in each District/Category. This deduction is applicable whether the HSC/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** will be 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 will be given priority on merit basis in that category.

9.14 CLOSING OF ADMISSIONS PROCESS

The admissions processfor the session will be made up to the end of FOURTH week from the date of start of the classes. After this period, no new admissions will be made. However, any change of discipline on merit will be made up to 07 days after the closing date of admissions. The seats fallen vacant will not be filled-up.

9.15 TRANSFER ON RECIPROCAL BASIS

There is a provision for transfer of students admitted in Mehran University 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** will be nominated for admission to the University of Engineering & Technology, Lahore, on reciprocal basis. The candidates desiring to be considered for this nomination will be required to give their intent in writing at the time of interview. The Mehran University authorities will make the final selection for this purpose as per merit.

One candidate in Civil Engineering having the domicile of **Categories-A.1** to **A.4** will be nominated for admission to the University of Engineering & Technology, Taxila on reciprocal basis.

Similarly, the UET, Lahore is authorized to nominate three candidates and UET Taxila is authorized to nominate one candidate for admission in Mehran

University in the same branches as mentioned above.

Three candidates, one in Civil Engineering, one in Mechanical Engineering and one in Architecture having the domicile of **Categories-A.1** to **A.4** will be nominated for admission in KPK University of Engineering & Technology, Peshawar on reciprocal basis. They will be required to pay Rs. 38,000/- as educational expenses in addition to admission and other normal user charges at the time of admission to KPK University of Engineering & Technology, Peshawar. Similarly the nominees of KPK University of Engineering & Technology, Peshawar on reciprocal basis will be required to pay Rs.38,000/- as educational expenses in addition to admission and other normal user changes at the time of admission to Mehran University of Engineering and Technology, Jamshoro. The candidates desiring to be considered for this nomination will be required to give their intent in writing at the time of interview. The final selection for this purpose will be made by the Mehran University authorities as per merit.

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 will be 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 shall be 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 IDENTITY CARD

The students, after getting admission at the University, will be issued University smart identity cards by the Chairperson/Director of the concerned Department/Institute. 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

Those students who are eligible for any semester of any year and remained absent from their classes and examinations for any reason, will be 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 will be considered from the date of issuance of re-admission letter. Such admissions may be made within four weeks from the date of start of classes of particular session.

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. In case of failure, he/she will not be allowed to appear in the examination of the First Semester of the First Year.

9.21 FEES

(1) Fees payable at the time of admission:

a) Admission fee (Per Year)	10,000.00
b) University caution money deposit – Refundable (Once)	2,000.00
c) Subject society / PERN fee (Once)	1,000.00
d) Enrolment fee (Once)	1,000.00
e) Marks certificates verification fee (Once)	1,000.00
f) Smart Identity card fee (Once)	1,000.00
Total:	**Rs. 16,000.00**

(2) Fees and Charges payable at the start of each semester:

a) Tuition fee (Per Semester)	10,000.00
b) Games fee (Per Semester)	500.00

c) Development charges (Per Semester)	1,000.00
d) Examinations fee - for regular Examinations (Per Semester)	1,500.00
e) Transport charges (Per Semester)	3,000.00
Total:	**Rs. 16,000.00**

(3) Fees payable at the time of hostel allotment:

a) Admission fee (Once)	3,000.00
b) Room deposit – Refundable (Once)	1,000.00
c) Allotment form fee (Once)	100.00
Total:	**Rs. 4,100.00**

(4) Fees to be charged at the start of each semester:

a) Identity card fee (Per Semester)	100.00
b) Room charges (Per Semester)	4,000.00
c) Medical charges (Per Semester)	100.00
d) Sports charges (Per Semester)	200.00
e) Utility charges (Per Semester)	1,000.00
f) Transport charges (Per Semester)	3,000.00
Total:	**Rs. 8,400.00**

Note: The foreign students will be charged Rs. 40,000.00 per year as room charges. The other fees will be the same as given above.

9.22 ADMISSION OF CANDIDATES DOMICILED IN SINDH PROVINCE UNDER SELF-FINANCING SCHEME AT MEHRAN UNIVERSITY OF ENGINEERING & TECHNOLOGY, JAMSHORO AND MEHRAN UNIVERSITY OF ENGINEERING & TECHNOLOGY, SZAB CAMPUS, KHAIRPUR MIRS'.

Under the Self-Financing Scheme the admission will be made on the basis of district quota as per Table-9.22(a) and (b) at Mehran University of Engineering & Technology, Jamshoro and Mehran University of Engineering & Technology, SZAB Campus, Khairpur Mirs' respectively. The saving seats will be 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 prior notice.

9.22.1 Eligibility

The eligible candidates should have:

i. Secured at least 60% marks in the HSC/Intermediate (Pre-Engineering Group for all disciplines) or (General Science Group for only four disciplines viz. Computer Systems Engineering, Software Engineering, Electronics Engineering and Telecommunication Engineering) or Intermediate (Pre-Medical Group for only one discipline, i.e., Bio-Medical Engineering) or equivalent as recognized by the University and further explained in Section 9.2 under Regular Scheme.
ii. Appeared in Pre-admission Test and secured at least 40% score.
iii. Produced domicile of Sindh Province.

9.22.2 Pre-admission Test

As prescribed in Section 9.4 under Regular Scheme.

9.22.3 Interviews

As prescribed in Section 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** and **Category-III** as mentioned below:

The number of seats for each discipline is reserved on district basis and given in Table 9.22(a) and 9.22(b).

Category-I

1. Civil Engineering
2. Electrical Engineering
3. Mechanical Engineering
4. Electronics Engineering
5. Computer Systems Engineering
6. Software Engineering
7. Mechatronics Engineering

8. Civil Engineering (at Khairpur Mirs')
9. Electrical Engineering (at Khairpur Mirs')
10. Mechanical Engineering (at Khairpur Mirs')

Category-II

1. Petroleum & Natural Gas Engineering
2. Environmental Engineering
3. Chemical Engineering
4. Petroleum & Natural Gas Engineering (at Khairpur Mirs')

Category-III

1. Industrial Engineering & Management
2. Textile Engineering
3. Architecture
4. Bio-Medical Engineering
5. Telecommunication Engineering
6. Mining Engineering
7. Metallurgy & Materials Engineering
8. City & Regional Planning

In Bio-Medical Engineering, seven seats are reserved on all Pakistan basis who are otherwise eligible for admission. In case of saving of seat, the same will be filled up on overall open merit basis of the Province of Sindh.

9.22.5 Admission fee under Self-Financing Scheme

Following fees are payable to the University by the candidates applying for admission under Self-Financing Scheme:

Category-I

Admission fee of Rs. 900,000/- (Rupees Nine Hundred Thousand Only) + 5% Tax* (Total Rs. 945,000/-) in the form of Demand Draft prepared by any branch of Bank, in favor of 'Director Finance, Mehran University of Engineering & Technology, Jamshoro'. The draft in original be submitted in the office of Director Admissions, MUET, Jamshoro.

Category-II

Admission fee of Rs. 600,000/- (Rupees Six Hundred Thousand Only) + 5% Tax* (Total Rs. 630,000/-) in the form of Demand Draft prepared by any branch of Bank, in favor of 'Director Finance, Mehran University of Engineering & Technology, Jamshoro'. The draft in original be submitted in the office of Director Admissions, MUET, Jamshoro.

Category-III

Admission fee of Rs. 400,000/- (Rupees Four Hundred Thousand Only) + 5% Tax* (Total Rs. 420,000/-) in the form of Demand Draft prepared by any branch of Bank, in favor of 'Director Finance, Mehran University of Engineering & Technology, Jamshoro'. The draft in original be submitted in the office of Director Admissions, MUET, Jamshoro.

Other fees as payable under all categories of the regular scheme shall also be payable after the admission has been granted to the candidate.

---

* 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 at Mehran University of Engineering and Technology, Jamshoro.

District	No. of seats allocated to each district under Self Financing Scheme	CE	EL	ME	ES	TL	PG	EE	CS	SW	CH	TE	IN	AR	BM	MTE	MN	MT	CRP
Hyderabad	53	4	4	4	5	5	4	1	4	4	4	4	4	1	2	3*	1	1	1
Jamshoro	24	2	2	2	2	2	2	1	1	1	2	1	1	1	1	-	1	1	1
Matiari	21	2	2	2	1	1	1	1	1	1	2	1	1	1	1	-	1	1	1
T.M. Khan	22	2	2	1	2	2	1	1	1	1	2	1	1	1	1	-	1	1	1
T.Allahyar	20	2	1	1	1	2	2	0	1	1	1	2	1	1	1	-	1	1	1
Thatta	23	2	2	2	3	1	1	1	1	1	2	2	1	0	1	-	1	1	1
Sujawal	22	2	2	2	1	2	2	0	1	1	2	1	1	1	1	-	1	1	1
Badin	43	4	4	4	4	4	4	1	2	2	3	3	2	1	2	-	1	1	1
Dadu	42	4	4	4	3	3	4	1	2	2	4	2	3	1	2	-	1	1	1
Umerkot	27	2	3	2	3	2	3	1	1	1	2	1	1	1	1	-	1	1	1
Mirpurkhas	36	3	2	3	2	2	3	1	3	3	3	2	3	1	2	3*	1	1	1
Tharparkar	36	2	3	2	3	3	2	1	3	3	3	2	3	1	2	-	1	1	1
Sanghar	53	4	4	4	4	5	4	1	4	4	5	4	4	1	2	-	1	1	1
Sukkur	20	1	1	1	2	1	1	0	2	2	1	1	2	1	1	2*	1	1	1
Larkana	22	1	2	2	1	2	2	1	1	1	2	1	1	1	1	2*	1	1	1
S.B. Abad	23	2	2	2	2	2	1	1	1	1	2	1	1	1	1	-	1	1	1
N. Feroze	23	2	2	2	2	2	2	1	1	1	1	1	1	1	1	-	1	1	1
Kambar/ Shahdadkot	20	2	1	1	1	1	2	0	2	1	1	2	1	1	1	-	1	1	1
Ghotki	21	1	1	2	1	1	2	0	1	2	2	1	2	1	1	-	1	1	1
Khairpur	30	2	3	3	2	2	2	1	2	2	2	2	2	1	1	-	1	1	1
Jacobabad	20	1	1	2	1	1	2	0	2	1	1	2	1	1	1	-	1	1	1
Kashmore	14	1	1	0	1	1	1	0	0	1	1	1	1	1	1	-	1	1	1
Shikarpur	19	1	1	1	2	2	1	0	2	1	1	1	1	1	1	-	1	1	1
Karachi	16	1	0	1	1	1	1	0	1	2	1	1	1	1	1	-	1	1	1
Total	**650 + 10**	**50**	**50**	**50**	**50**	**50**	**50**	**15**	**40**	**40**	**50**	**40**	**40**	**23**	**30**	**10**	**24**	**24**	**24**

• Seats reserved for respective divisions

Table-9.22(b) Distribution of Seats for various Districts under Self-Financing Scheme at Mehran University of Engineering & Technology SZAB, Campus, Khairpur Mirs'.

Category	Districts	Number of Seats in each Discipline				Total Seats
		CE	EL	ME	PG	
A-1	Sukkur	01	01	01	01	04
	Ghotki	01	01	01	01	04
	Khairpur	02	02	01	01	06
	S.Benazirabad	01	01	01	01	04
	Naushahro Feroze	01	01	01	00	03
A-2	Larkana	01	01	01	00	03
	Kambar/Shahdadkot	01	01	00	00	02
	Shikarpur	01	01	01	00	03
	Jacobabad	01	01	00	01	03
	Kashmore	01	01	01	00	03
A-3	Hyderabad	01	01	01	00	03
	Matiari	00	00	00	00	00
	T.M. Khan	00	00	00	00	00
	T. Allahyar	00	00	00	00	00
	Dadu	01	01	00	01	03
	Jamshoro	00	00	00	00	00
	Thatta	00	00	01	00	01
	Sujawal	00	00	00	00	00
	Badin	00	01	00	00	01
A-4	Mirpurkhas	00	01	00	00	01
	Umerkot	01	00	00	00	01
	Tharparkar	00	00	01	00	01
	Sanghar	01	00	01	01	03
A-5	Karachi	00	00	01	00	01
	Total	**15**	**15**	**13**	**07**	**50**

9.23 ADMISSIONS UNDER UNIVERSITY SUPPORT PROGRAM (USP)

For this scheme 48 seats each in Civil, Electrical and Mechanical Engineering disciplines have been reserved 2 seats for each district for the candidates having the domicile of Sindh Province. The basic requirement for admission will be the same as approved for admission under Regular Scheme. For Civil Engineering the candidates will be required to pay Rs. 1,400,000/- (Rupees One Million Four Hundred Thousand Only - once) + 5% Tax (Total Rs. 1,470,000/-), whereas for Electrical and Mechanical Engineering, the candidates will be required to pay Rs. 1,200,000/- (Rupees One Million Two Hundred Thousand Only - once) + 5% Tax (Total Rs. 1,260,000/-) in the form of Demand Draft prepared by any branch bank, in favor of "Director Finance, Mehran University of Engineering & Technology, Jamshoro" for admission under this scheme in addition to other normal fees etc., payable by the students under Regular Scheme. The draft in original be submitted in the office of Director Admissions, MUET, Jamshoro.

Refund of Self-Financing Scheme and University Support Program admission fee will only be allowed through special cross cheque mentioning the name of refundee with bank account, the name of bank and branch of the respective bank. Therefore, in case of refund of the fee candidates are required to write an application and provide the name of the parent / guardian or self along with his / her bank account number with branch name to whom the amount to be refunded.

9.24 ADMISSIONS OF FOREIGN CANDIDATES UNDER SELF-FINANCING SCHEME AT MEHRAN UNIVERSITY OF ENGINEERING & TECHNOLOGY, JAMSHORO.

Seats in all disciplines at main campus as described in Section 9.23.4 (maximum 5 seats in each discipline) are reserved for foreign candidates under this scheme who are otherwise eligible for admission. The foreign candidates must apply for admission through their Embassies, via Higher Education Commission, Islamabad.

The foreign candidates will be required to pay admission for of US$ 12,000/- (Twelve Thousand US Dollars Only - once) alongwith the admission form. They will also be changed the usual fees as payable by other students.

9.25 ADMISSION FOR THE CANDIDATES OF OVERSEAS PAKISTANI UNDER SELF-FINANCING SCHEME AT MEHRAN UNIVERSITY OF ENGINEERING & TECHNOLOGY, JAMSHORO.

Five seats in each discipline are reserved for the candidates of Overseas Pakistani under this scheme who are otherwise eligible for admission. On payment of US$ 12,000/- (Twelve Thousand US Dollars Only - once) as charged from foreign candidates on Self-Financing Scheme. They will also be charged the usual fees as payable by other students.

9.26 ADMISSION OF CANDIDATES FROM AZAD JAMMU & KASHMIR UNDER SELF-FINANCING SCHEME AT MEHRAN UNIVERSITY OF ENGINEERING & TECHNOLOGY, JAMSHORO.

Ten seats in the following disciplines are reserved for the candidates domiciled in Azad Jammu and Kashmir under this scheme. They have to apply directly to the University in response to the advertisement. All the other conditions concerning eligibility and fees will be same as described in Sections 9.2 and 9.22.5 also apply:

Civil Engineering	2 seats
Electrical Engineering	1 seat
Mechanical Engineering	1 seat
Telecommunication Engineering	1 seat
Computer System Engineering	1 seat
Software Engineering	1 seat
Environmental Engineering	1 seat
Architecture	1 seat
City & Regional Planning	1 seat
Total:	**10 seats**

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 except the seats in the desired disciplines are available.

Rules and Procedures for Admission

- The University follows the National Level Fee Refund Policy at Higher Institutions of Pakistan which is as under:

% of Tuition Fee	Timeline for Semester
Full 100% fee refund	Upto 7th day of convene of classes
Half 50% fee refund	Upto 15th day of convene of classes
No Refund 0%	From 16th day of convene of classes.

- The candidates applying under these schemes will also be 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

- Migration is only allowed to and from any Public Sector University and Foreign University recognized by Higher Education Commissions (HEC).
- Migration/Transfer is not allowed to the students in the first and final years.
- Migration/Transfer is not allowed to the students admitted on reciprocal basis.
- 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.
- The students failing in previous semesters (i.e., less than 50% marks) shall not be eligible for admission on migration/transfer basis.
- The migration/transfer of the local students would be allowed on the payment of Rs. 800,000/- (Rupees Eight Hundred Thousand Only) + 5% Tax (Total Rs. 840,000/-) to Mehran University; while foreign students would be required to pay Rs. 1,200,000/- (Rupees One Million Two Hundred Thousand Only) + 5% Tax (Total Rs. 1,260,000/-) as migration fee. The nominees will be required to submit NO OBJECTION CERTIFICATE (NOC) of the nominating agency.
- Admission on migration basis will be made up to fourth week of the start of the classes of particular session.

REGULATIONS FOR SEMESTER SYSTEM

10. REGULATIONS FOR SEMESTER SYSTEM

The examination department is considered to be back bone of any educational institute. It is matter of pride to tell that the Examination Department of Mehran University of Engineering and Technology provides transparent and efficient services in regard of announcing the results as well as the issuance of the certificates. The department depends on different building blocks i.e secret section, conduct section, postgraduate section as well as automation cell. Every section works according to its given assignments approved in SOPs.

Mr. Suhail Ahmed Khatian, Controller of Examination

Regulations regarding the Courses of Studies for the Bachelors Degree Programs of the Mehran University of Engineering and Technology, under Section 47(1)(n) of the Act 1977.

10.1 Short Title:- These Regulations may be called the Mehran University of Engineering and Technology Bachelor of Degree Courses Regulations 2012 repealing such regulations framed by the University authorities (if any).

10.2 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.

10.3 Commencement:- These Regulations shall be deemed to have come into force with effect from Jan. 1st, 2013 (applicable to 13 Batch & onwards).

10.4 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. "Semester" means a Period of 22 weeks out of an academic year for teaching and evaluation and / or guidance of the students of the University.
iv. "Vice-Chancellor", "Pro Vice Chancellor", "Dean", "Director", "Chairman", "Teacher" and "Controller of Examinations" means respectively the vice- Chancellor, the Pro Vice Chancellor, the Dean of Faculty, the Director of Institute, the Chairman of Teaching Department, the Teacher and the Controller of Examinations of the University.
v. "Internal Examiner" means the teacher/person appointed by the competent authority, who has been teaching the subject to the regular class/section during the academic year for which the examination is being conducted.

10.5 THE COURSES OF STUDY

The courses of studies for the degree of Bachelor of Engineering (B.E), Bachelor of City & Regional Planning (B.CRP) and Bachelor of Architecture (B.Arch) shall be as given in the Regulations, which follow, provided that these Regulations shall be subject to change as approved by the Academic Council of the University from time to time.

10.6 DURATION OF SEMESTERS & YEARS

(a) First year, Second Year, Third Year and Fourth Year for the degree of the Bachelor of Engineering (B.E) and Bachelor of City and Regional Planning (B.CRP) will each be of one year duration (Total 4 years) each comprising of two semesters. Total Credit hours for all 4 years shall be 130-136.
(b) First Year, Second Year, Third Year, Fourth Year and Fifth Year for the degree of Bachelor of Architecture (B.Arch) will each be of one year duration (Total 5 years) & each comprising of two Semesters. Total Credit Hours for all 5 years shall be 160-170.
(c) There shall be two semesters in an academic year. The duration of teaching time in each semester shall be 16 weeks. The semester starting with the commencement of the academic year will be called the 'First Semester' and the following semester will be called the 'Second Semester'.

10.7 MARKS

Each degree program shall carry a number of approved courses and each course shall be assigned a number of Credit Hours. The Credit Hours per

semester for each discipline shall be 15-18. The details of the course, marks / grades assigned and the condition for passing examinations shall be as prescribed by the Mehran University of Engineering and Technology Bachelors Degree Regulations.

10.8 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 seek approval through the Dean and the Pro Vice Chancellor from the Vice Chancellor for rechecking the Scripts by a Subject expert (other than the Subject teacher). The final recommendations of the Departmental Committee concerning the results will be submitted through the concerned Dean and Pro Vice Chancellor to the Vice Chancellor for consideration and approval.

10.9 YEARLY ACADEMIC PROGRAM

i.	Teaching duration of 1st semester (Including Mid Semester Exam)	16 Weeks
ii.	Preparation and Conduct of final 1st Semester Exam	06 Weeks
iii.	Teaching duration of 2nd Semester (Including Mid Semester Exam)	16 Weeks
iv.	Preparation & Conduct of Final 2nd Semester Exam	06 Weeks
v.	Summer Break	06 Weeks
vi.	Winter Break	02 Weeks
	TOTAL	**52 WEEKS**

Minimum Number of Contact Hours for a Theory and Practical Subject.

	Theory/Practical	Credit Hours	Credit Hours
i.	Theory	02	28
ii.	Theory	03	42
iii.	Practical	01	42
iv.	Practical	02	84

10.10 THE MINIMUM REQUIREMENT FOR EACH SEMESTER COURSE

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

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

S#	Activity	Period
1.	Mid Semester Examination	After 8-weeks
2.	Final Semester Examination	After 16-weeks

10.11 DISTRIBUTION OF MARKS:

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

		THEORY	
		Theory of Maximum	Theory of Maximum
		100 marks	50 marks
i.	Attendance	10	05
ii.	Test(s)	05	03
iii.	Assignments	05	02
iv.	Mid Semester Exam:	20	10
v.	Final Semester Exam:	60	30
	Total	**100 marks**	**50 marks**

		PRACTICAL	
		Maximum	Maximum
		50 marks	100 marks
i.	Attendance	05	10
ii.	Lab Evaluation Work	15	30
iii.	Semester Lab Exam:	30	60
(a)	Objective type test	15	30
(b)	Conduct of Pr/Viva Voce	15	30
	Total	**50 marks**	**100 marks**

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

In case of the Project / Thesis / Design the distribution of marks shall be as follows:

(i)	Sessional work.	25% marks
(ii)	Evaluation of Project report	25% marks
(iii)	Viva-Voce Examination.	50% marks

10.12 GRADE EQUIVALENT:-

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

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

10.13 ATTENDANCE REQUIREMENT

(i) A student should have at least 75% attendance to appear in the Final Semester Examination.

(ii) In genuine cases, maximum 10% condonation in attendance shall be the discretionary powers of the Pro Vice Chancellor on the basis of an application to be scrutinized by Director/ Chairman concerned and routed through respective Dean concerned.

(iii) The eligibility attendance of Theory/ Practical for late admitted students to First Semester of First Year only shall be calculated from the date of admission.

10.14 DISTRIBUTION OF ATTENDANCE MARKS

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

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

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

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

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

The Lab's carrying marks other than 50 or 100 the distribution of attendance marks will be accordingly.

10.15 CONDUCT OF SESSIONAL WORK/MID-SEMESTER AND FINAL SEMESTER EXAMINATIONS

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

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

iii. Mid Semester Examination will be conducted by the Examination Department in collaboration with the concerned Department/ Institute.

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

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

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

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

viii. The scripts of all assignments will be returned and those of the tests and mid-semester examination will be shown to the students after

evaluation. Each blank page / gaps in the scripts will be stamped/ lines drawn, by the teacher concerned.

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

x. Final Semester Examination will be of 3-hours duration for 3 CHs course and each question paper will contain 5 questions without any choice. Similarly, Final Semester Examination will be of 2-hours duration for 2 CHs course and each question paper will contain 3 questions without any choice. Final semester examination will be conducted from the whole course.

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

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

10.16 SETTING OF QUESTION PAPER/ASSESSMENT OF SCRIPTS AND CONDUCT OF PRACTICAL EXAMINATION

(a) Setting of Question Paper:

Theory:

(i) Question Papers for Semester Examination shall be drawn by the teachers of concerned subjects as Internal Examiners, for all departments. In case of more than one subject teacher of a particular subject in the same department with assigned sections, the respective teacher will draw his own paper.

(ii) There will be no external moderation of the Question Paper by the External examiner.

(iii) Final Semester Examination will be of 3-hours duration for 3 CHs course and each question paper will contain 5 questions without any choice. Similarly, Final Semester Examination will be of 2-hours duration for 2 CHs course and each question paper will contain 3 questions without any choice.

Practical:

(i) The objective type Question Paper of Practical Examination shall be set by the Internal Examiner.

(ii) The following applicable guidelines parameters shall be included by the Examiners for setting of objective type Question Papers. Fill in the Blanks, True or False, Multiple Choice Questions (MCQs), Definition of Technical Terms, Drawing Skill Oriented Questions and Interpretation of Diagrams.

(iii) External examination system will be only for Practical Viva-voce and Project/Thesis/Design Examination.

(b) Assessment of Scripts:

The scripts of the Theory Examination will be assessed by the respective Internal Examiner. The Internal Examiner will send the award lists (in triplicate) to the Controller of Examinations.

(c) Conduct of Practical Examination:

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

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

10.17 SCANNING OF RESULTS

i. A committee comprising of the Dean of the concerned Faculty, the Chairman/Director, Co-Director of the concerned Department/Institute and the concerned teacher of the subject, who if necessary, for reasons of checking the quality and consistency of assessment of scripts, would at random re-assess atleast 15% of the scripts and in case gross discrepancy is detected, the Committee shall be empowered to take appropriate action with approval of the Vice-Chancellor.

ii. Prior to sending ledgers of the results of Regular/Supplementary Examination of B.E/B.CRP/B.Arch. to the Vice-Chancellor for his signature, the overall tabulated and checked ledgers shall be pursued and scanned by the Dean of concerned Faculty and the Chairman/Director, Co-Director of concerned Department/Institute .

10.18. APPEARANCE IN THE SEMESTER EXAMINATION

The semester examination will be open to the students who full-fills the following conditions:

i. During the semester immediately preceding the examination, he/she has been on the roll list of the concerned Department/Institute of the concerned Faculty.
ii. He/she has submitted his/her Examination Form duly filled-in completely along with the prescribed fee to the Controller of Examinations within the due date announced by the University.
iii. He/she has produced the following certificates duly signed by the Director, Co-Director/Chairman of the Institute/Department concerned.
iv. Good character certificate
v. Photostate copy of Enrolment Card
vi. Attendance Certificate to the effect that the student has achieved minimum prescribed 75% attendance
vii. He/she is not debarred from taking the examination

10.19. PASSING EXAMINATION

i. A candidate having passed all the Heads of 1st and 2nd semesters of First to Final Year B.E/B.CRP/B.Arch. with minimum 50% in Theory and 50% in practical shall be declared “PASS” or otherwise. The pass percentage for Project/Thesis and Research & Development Project in the Final Year shall be 50% (A Theory or Practical would be treated as separate heads).
ii. A candidate having passed all the Heads of Both semesters from 1st to Final Year B.E/B.CRP/B.Arch. with minimum 50% aggregate marks shall be declared “PASS”. If any student is not able to get 50% aggregate marks even after having passed all the heads, he/she shall be promoted but must improve the Heads of his/her choice to secure atleast 50% aggregate marks.
iii. A student who has secured minimum CGPA 2.00 in all the Semesters of 4 years in case of Engineering / City & Regional Planning and 5 years in case of Architecture and has passed in all the subjects will be eligible for the award of degree of Bachelor of the Engineering / City & Regional Planning/ Architecture.
iv. A student failing in any or all Heads of a semester examination shall be declared to have failed in the examination. He/she shall be allowed to re-appear in the failing Head(s) in the next examination, if otherwise eligible as per rules.

10.20 PROMOTION RULES

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

(A) Theory or Practical would be treated as separate Heads.

ii. A student will be promoted to the 1st Semester of the 2nd year (3rd Semester) provided he/she **has obtained C-Grade or higher in atleast 50% Heads (including minimum of 02 theory papers)** of 1st Semester of First year in Regular Examination and has completed minimum attendance requirement (75%) of the 2nd Semester of the 1st year and has filled up the Regular examination form and appeared in atleast one of the Heads of the Examinations (2nd Semester).
iii. A student will be promoted to the 2nd Semester of the 2nd year (4th Semester) provided he/she has completed minimum attendance requirement (75%) of the 3rd Semester, filled up the examination form

and appeared in atleast one head of the final Semester examinations (3rd Semester).

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

Benefits of the fraction will be given to the students

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

vi. A student will be promoted to the 1st semester of the 4th year (7th Semester) provide he/she has cleared all Heads of First Year secured minimum C.G.P.A of 2.00 obtained C-Grade or higher in atleast 50% Heads of Second Year (including 05 Theory papers) prior to start of classes of 7th Semester, and has completed minimum attendance requirement (75%) of the 6th Semester and has filled up the Regular examination form and appeared in atleast one of the Heads of the Examinations (6th Semester)

vii. A student will be promoted to the 2nd Semester of the 4th Year (8th Semester) provided he/she completed minimum attendance requirement (75%), filled up the examination form and appeared in atleast one of the Heads of the final Semester examination (7th Semester)

viii. In case of Bachelor of Architecture a student will be promoted to the 1st Semester of the 5th /Final year (9th Semester) provided he/she has cleared all Heads of First Year and Second year secured minimum\ C.G.P.A of 2.00 obtained C-Grade or higher in atleast 50% of third year (including 05 theory Papers) prior to start of classes of 9th Semester, and has completed minimum attendance requirement (75%) of the 8th Semester and ahs filled up the Regular examination form and appeared in atleast one of the Heads of the Examinations (8th Semester).

ix. A student will be promoted to the 2nd Semester of the 5th Year/Final (10th Semester) provided he/she completed minimum attendance requirement (75%) filled up the examination form and appeared in atleast one of the Heads of the final Semester examination (9th Semester).

Benefits of the fraction will be given to the student.

10.21. AWARD OF DEGREE

A student shall be awarded degree of Bachelor of Engineering (B.E) or Bachelor of City & Regional Planning (B.CRP) or Bachelor of Architecture (B.Arch.) only after he /she has passed the examinations and cleared all the Heads of all the Semester with minimum 2.0 CGPA in each year in the maximum period of 07 (Seven) Calendar years for B.E and B.CRP and (08) eight Calendar years of B.Arch.

Cumulative Grade Points Average (CGPA) for Award of Degree		
Grade Points	**Grade**	**Remarks**
3.76 to 4.00	A+	Pass
3.51 to 3.75	A	Pass
3.01 to 3.50	B+	Pass
2.51 to 3.00	B	Pass
2.01 to 2.50	C+	Pass
2.00	C	Pass
Below 2.00	---	Failing in CGPA

10.22. COMPREHENSIVE VIVA-VOCE/JURY EXAMINATION

The comprehensive Viva-Voce examination of the project/thesis work will be held at the completion or the last semester of the degree program. Success in the Viva-Voce will be compulsory for the degree. The (Chairman or the Department, the concerned teacher or the project together with at least one external examiner will constitute the viva-voce Committee. Student who has failed in the Viva-Voce will be given the benefit of appearing again in the subsequent Viva-Voce.

10.23. TIME FOR CHECKING SCRIPTS

The time limit for checking the answer scripts shall be 20 scripts per day plus one week, unless specified.

10. 24. FINAL AWARD

The final award once received by the office of the Controller of Examinations shall not be liable to a subsequent change, except with the permission of the Vice-Chancellor.

10.25. RETOTALLING OF MARKS

Retotalling of the marks shall be done on payment of prescribed fee per paper for a candidate who submits an application to the Controller of Examinations, through the Chairman, or Director/Co-Director of the concerned Department/Institute within two weeks from the date of announcement of result.

10.26. MEDIUM OF INSTRUCTIONS

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

10.27. MODIFICATION OF REGULATIONS

These Regulations are subject to modification by the competent University authorities as may be felt appropriate in future.

10.28 METHOD OF WORKING OUT G.P

1. Credit Hours (C.H)
One Credit hour for a particular course is generally to be considered as one hour of teaching theory per week and for practical 1 C.H be considered as 3 contact hours.

2. Quality Point (Q.P.)
For computation of the (G.P.A.) the quality point (Q.P) is first determine by the multiplying the value of the grade earned by the students with the Credit Hours of the that course, e.g. if a student obtain "A+" grade for a three credit hours course then this quality point will be calculated as follows:
(Q.P.) = 4 x 3 = 12

3. Grade Point Average (G.P.A).

Grade point Average is an expression for the average performance of a student in the course he/she has offered during a particular semester. This is calculated by adding the quality points of all the courses taken, divided by the total number of Credit hours offered:-

$$(G.P.A) = \frac{\text{Sum of Quality Points.}}{\text{Sum of the Credit Hours}}$$

4. Cumulative Grade Point Average (C.G.P.A)
The Cumulative Grade Point Average (C.G.P.A) is the expression describing the performance of a student in all semester is determined by the following way:

$$(C.G.P.A) = \frac{\text{Sum of Quality Points for all the courses appeared}}{\text{Sum of the Credit Hours for all the courses appeared}}$$

STUDENTS CONDUCT AND DISCIPLINE REGULATIONS

11. STUDENTS CONDUCT AND DISCIPLINE REGULATIONS

The Regulations regarding the conduct and discipline of students of Mehran University of Engineering and Technology, under section 47(1) of the Act, 1977, as amended on 17.9.1986 and further amended on 06.07.2006 are given below:

11.1 Short Title

These Regulations may be called the Mehran University of Engineering & Technology Students Conduct and Discipline Regulations, 1978 as amended upto 6.7.2006.

11.2 Commencement And Applications

These Regulations shall come into force with immediate effect, and shall apply to all the students of the University, Centre of Excellence and the Colleges/Institutes constituted/affiliated to the University.

11.3 DEFINITIONS

I. "University" means the Mehran University of Engineering and Technology at Jamshoro.
II. "Campus" means the Mehran University Engineering and Technology, Khairpur Mir's Campus, and all areas and 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 any other such areas, buildings or facilities created within the specified boundary of the University and likewise areas of affiliated/constituted colleges/Institutes/ Center of Excellence.
III. "Syndicate" means the Syndicate of the University.
IV. "Vice-Chancellor" means the Vice-Chancellor of the University.
V. "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.
VI. "Dean", "Director of an Institute/Chairman of the Department", "Teacher Incharge of the Class", "Workshop Superintendent", "Provost", "Deputy Provost", "Warden", "Director Sports", "Games Incharge", "Officer Incharge of Students Affairs", and "Principal"/"Director" of the Constituted/Affiliated College/Institute/Center of Excellence. respectively, means the Dean, Director of Teaching Institute/ Chairman of a Teaching Department, Teacher Incharge of the class, Workshop Superintendent, Provost, Deputy Provost, Warden, Director Sports, Games Incharge, Director Students' Affairs, Students Welfare Officer, Students Advisor appointed as such by the competent authority and mutatis-mutandis officers/ teachers in the affiliated college/Institute/Center of excellence.

11.4 Every Student Shall Observe The Following:

a) He/She must be faithful in his/her religious duties and respect the convictions of other in matters of religion and customs.
b) He/She must be loyal to his/her country and refrain from doing anything which might lower its honour 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/College.
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 specially those in distress.
h) He/She must devote himself/herself faithfully to his/her studies and obey and follow the rules, instructions, and guide lines issued by the University authorities from time to time.
i) He/She must observe thrift and protect property.

11.5 No Student Shall:

a) Smoke in his/her class room, laboratory, workshop, library, examination hall or convocation hall and during any academic functions.
b) Consume alcholic liquor or other intoxicating drugs within the University

/College 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/College, organize any club or society of students without permission of the University authorities.
d) Indulge into activities against the Islamic and Pakistan Ideology or national solidarity.
e) Indulge into activities promoting, prompting or involving violence or hatred or contempt.
f) 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/College.
g) Use pressure tactics or political or personal influence in seeking academic concessions or financial benefits or in other matters concerning academic and administrative functions of the University authorities.
h) 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 Books or influence any employee to indulge in any malpractices.
i) Bring, keep or use any kind of weapon or fire arms within the University/College.
j) Use or occupy fully or partially any room or any building of the University/ College un-authorized.
k) Organize or take part in procession or meeting within the University/College, prejudicial to the peaceful atmosphere of the University.
l) Stage, incite, or participate in or abet any walk-out, strike, or any other form of agitation against the University/College or its teachers or officers.
m) 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.
n) Bring, keep, or use mobile phone with built-in camera and digital dictionary within the Academic and Examination buildings of the University/College.
o) Snatch mobile phones, use mobile phone during examination/ class/practical or in the Library.
p) Tease the girl/boy students; demonstrate indecent or immoral gestures/attitude towards girl/boy students on the University/College.
q) Abuse/violate IT policies framed or to be framed from time to time

11.6 The teachers and officers of the University/College or committees formed under them for the purpose and others concerned with the students in the University/College 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.

11.7 The Discipline Committee shall deal with serious cases of indiscipline requiring such actions as prescribed by Regulation 10.

11.8 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 case, he/she shall inform and recommend the case to the higher authorities/bodies for necessary action as prescribed.

11.9 Any one or more of the penalties mentioned in Regulation 10 may be impose on a student who is guilty of one or more of the following acts:

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/College property or the property of a fellow student or any teacher or any employee of the University/College; 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 committed within the University/ College or otherwise) which brings bad name to the University/College. 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 above acts/charges.

i) The penalty or penalties imposed shall be appropriate and proportional to the nature and gravity of the above act or acts.

11.10 The penalties which may be imposed and the authority or authorities competent to impose each kind of penalty are specified below:

	PENALTY	AN OFFICER OR AUTHORITY COMPETENT TO IMPOSE THE PENALTY
(a)	(i) Exclusion from class room/ Laboratory/ Field work/ workshop up to four classes from his/ her own classes.	Class Teacher/Workshop Instructor
(ii)	Impose fine upto Rs. 500/-	-do-
(b)	Exclusion from the games or the field for the day.	Games Incharge
(c)	Exclusion from Instructional or sports tour or survey camp.	Teacher/Officer Incharge
(d)	(i) Exclusion from the department/Institute for a period not exceeding one week.	Chairman of the Teaching Department/Director of the Teaching Institute.
	(ii) Impose fine upto Rs. 1000/-	-do-
(e)	Exclusion from the Department/Institute for a period not exceeding two weeks.	Dean of the concerned Faculty /Principal of the College on the recommendations of the concerned Departmental Committee
(f)	Fine not exceeding Rs.500/-	Teacher Incharge, or Superintendent of Workshop
(g)	Fine not exceeding Rs.5000/-	Dean of the Faculty Concerned/Principal of the College on the recommendation of the Concerned Departmental Committee.
	(i) Fine not exceeding Rs.10,000/-	Vice-chancellor on the Recommendations of the Dean concerned and concerned Departmental Committee
	(ii) Exclusion from the department/Institute for a period not exceeding 3 weeks	-do-
	(iii) Fine upto Rs. 20,000/-	Vice-chancellor on the recommendations of the Discipline Committee.
(h)	With-holding of issue of character certificate	Chairman of the Teaching Department/Director of the Teaching Institute.
(i)	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
(j)	Cancellation of remission of fee or University Scholarship	Vice-Chancellor on the recommendations of the Dean of the Faculty concerned/Principal of the College.
(k)	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.
(l)	Suspension of admission from the University for a period specified or unspecified pending the final decision.	Dean/Principal of the concerned Faculty on the recommendations of the Departmental Committee.
(m)	Rustication/Expulsion from the University for a period not exceeding one year.	Vice-Chancellor on the recommendations of the Discipline Committee
(n)	Rustication/expulsion from the University for a period exceeding one year.	Syndicate on the recommendations of the Discipline Committee.
(o)	Cancellation of admission from the University.	Syndicate on the recommendations of the Discipline Committee.
(p)	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 inferior authorities as prescribed above.

11.11 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.

11.12 (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.

11.13 The Vice-Chancellor or any teacher or officer duly authorized by the Vice Chancellor/Principal/Director of the Constituted/ 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/College, 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 11.10 above.

PRE-ADMISSION TEST

ISO 9001 Certified

Mehran University of Engineering & Technology, Jamshoro

PRE-ADMISSION TEST,
SEPTEMBER 02, 2018

Booklet No. _____

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/on the public address system.

1. The candidate will be required to write his/her name, father's name, test booklet number and fill the seat number on answer sheet and sign the sheet.
2. All rough work must be done on the provided rough work sheet.
3. The test is divided into four parts i.e., Mathematics/Biology, Physics, Chemistry / Computer Science and English. Each part is composed of 25 questions. **Total time to solve all the questions of the four parts is 60 minutes (01 hour).**
4. The instructor will inform the candidates on public address system when to **"START"** the test and when to **"STOP"**.
5. Mark the correct answer only.
6. The candidates should carefully think about the answer before marking it on the answer sheet. Once an answer is marked on the answer sheet, the candidate is **"NOT"** permitted to change any of his/her answers in any way. All such answers will be treated as wrong.
7. In the interest of fairness, it is insisted that no one should continue to work even for a moment after the announcement has been made or the invigilator has asked that the work be stopped.
8. During the test, do not talk, whisper or turn your eyes away from your own papers.
9. **Any evidence of cheating or non-compliance with instructions will disqualify the candidate(s) from the test and his/her name will be removed from the list of the candidates for admission.**
10. There will be no negative marking on wrong answer. Each correct answer carries one mark.
11. When the announcement is made to **"STOP"**, cover your test booklet with the answer sheet.
12. Tearing pages or writing anything anywhere on the test booklet will disqualify the candidate from the test.
13. The test booklet is the property of University. The candidate will have to return the test booklet at the end of the test. If any candidate takes the booklet away for any reason, he will be treated according to the law and his/her name will be removed from the list of the candidates for admission.
14. The candidates should not mark answers on the test booklet, all answers must be written only on the answer sheet with the BLACK ball point pen provided to them.
15. **Don't leave your seats unless and until announced by public address system.**

Mehran University of Engineering & Technology Jamshoro, Sindh-Pakistan

PLEASE DO NOT WRITE ANYTHING ON THIS PAGE
ALL ANSWERS MUST BE GIVEN ON THE ANSWER SHEET
INSTRUCTIONS
FOR PART-I
PHYSICS

In this part of the test you will have **25** questions like the ones that are given below:

EXAMPLES:

1. The product of mass and velocity is called:
   a. Acceleration
   b. Moment Arm
   c. Negative Accelerations
   d. Momentum

We know that the product of mass and velocity is called momentum. Hence the correct answer is MOMENTUM. Therefore, the Circle Containing letter "d" will be marked by filling it completely on the answer sheet.

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

In the above example the correct answer is PHOTOELECTRIC EFFECT so the circle containing letter "b" on the answer sheet should be marked by filling it completely.

Mehran University of Engineering & Technology, Jamshoro

PLEASE DO NOT WRITE ANYTHING ON THIS PAGE
ALL ANSWERS MUST BE GIVEN ON THE ANSWER SHEET
INSTRUCTIONS
FOR PART-II
CHEMISTRY

In this part of the test you will have **25** questions like the ones that are given below:

EXAMPLES:

1. The Chemistry of Carbon is Called:
a. Organic Chemistry
b. Inorganic Chemistry
c. Physical Chemistry
d. Pharmaceutical Chemistry

2. How many moles of sulphur are there in 64 grams of the element?
a. 1
b. 2
c. 3
d. 4

Mehran University of Engineering & Technology Jamshoro, Sindh-Pakistan

PLEASE DO NOT WRITE ANYTHING ON THIS PAGE
ALL ANSWERS MUST BE GIVEN ON THE ANSWER SHEET
INSTRUCTIONS
FOR PART-II
COMPUTER SCIENCE

In this part of the test you will have **25** questions like the ones that are given below:

EXAMPLES:

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

Mehran University of Engineering & Technology, Jamshoro

PLEASE DO NOT WRITE ANYTHING ON THIS PAGE
ALL ANSWERS MUST BE GIVEN ON THE ANSWER SHEET
INSTRUCTIONS
FOR PART-III
MATHEMATICS

In this part of the test you will have **25** questions like the ones that are given below:

EXAMPLES:

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

Mehran University of Engineering & Technology Jamshoro, Sindh-Pakistan

PLEASE DO NOT WRITE ANYTHING ON THIS PAGE
ALL ANSWERS MUST BE GIVEN ON THE ANSWER SHEET
INSTRUCTIONS
FOR PART-III
BIOLOGY

In this part of the test you will have **25** questions like the ones that are given below:

EXAMPLES:

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

Mehran University of Engineering & Technology, Jamshoro

PLEASE DO NOT WRITE ANYTHING ON THIS PAGE
ALL ANSWERS MUST BE GIVEN ON THE ANSWER SHEET
INSTRUCTIONS
FOR PART-IV
ENGLISH

In this part of the test you will have **25** questions like the ones that are given below:

EXAMPLES:

1. Why did Kashmir not join Pakistan?

a) Because major portion of population was the Hindus
b) Because major portion of population was the Muslims
c) Because major portion of population was the Sikhs
d) Because it was treacherously made over to india

2. Encircle the response which in your opinion is the most appropriate synonym of the given word:
Genocide

a) Killing an entire race
b) Self destruction
c) Murder of a father
d) Murder of a king

Answer Sheet for Pre-Admission Test of Session 2018 - 19

☐ Rightly mark the correct option

Answer Sheet No. _____

APPLICANT'S NAME

FATHER'S NAME

SEAT NO

0	0	0	0	0
1	1	1	1	1
2	2	2	2	2
3	3	3	3	3
4	4	4	4	4
5	5	5	5	5
6	6	6	6	6
7	7	7	7	7
8	8	8	8	8
9	9	9	9	9

Group

- ◯ PRE-ENGINEERING
- ◯ GENERAL SCIENCE
- ◯ PRE-MEDICAL

Test Booklet No.

Physics					Chemistry/Computer					Mathematics/Biology					English				
Part-I					Part-II					Part-III					Part-IV				
1	ⓐ	ⓑ	ⓒ	ⓓ	26	ⓐ	ⓑ	ⓒ	ⓓ	51	ⓐ	ⓑ	ⓒ	ⓓ	76	ⓐ	ⓑ	ⓒ	ⓓ
2	ⓐ	ⓑ	ⓒ	ⓓ	27	ⓐ	ⓑ	ⓒ	ⓓ	52	ⓐ	ⓑ	ⓒ	ⓓ	77	ⓐ	ⓑ	ⓒ	ⓓ
3	ⓐ	ⓑ	ⓒ	ⓓ	28	ⓐ	ⓑ	ⓒ	ⓓ	53	ⓐ	ⓑ	ⓒ	ⓓ	78	ⓐ	ⓑ	ⓒ	ⓓ
4	ⓐ	ⓑ	ⓒ	ⓓ	29	ⓐ	ⓑ	ⓒ	ⓓ	54	ⓐ	ⓑ	ⓒ	ⓓ	79	ⓐ	ⓑ	ⓒ	ⓓ
5	ⓐ	ⓑ	ⓒ	ⓓ	30	ⓐ	ⓑ	ⓒ	ⓓ	55	ⓐ	ⓑ	ⓒ	ⓓ	80	ⓐ	ⓑ	ⓒ	ⓓ
6	ⓐ	ⓑ	ⓒ	ⓓ	31	ⓐ	ⓑ	ⓒ	ⓓ	56	ⓐ	ⓑ	ⓒ	ⓓ	81	ⓐ	ⓑ	ⓒ	ⓓ
7	ⓐ	ⓑ	ⓒ	ⓓ	32	ⓐ	ⓑ	ⓒ	ⓓ	57	ⓐ	ⓑ	ⓒ	ⓓ	82	ⓐ	ⓑ	ⓒ	ⓓ
8	ⓐ	ⓑ	ⓒ	ⓓ	33	ⓐ	ⓑ	ⓒ	ⓓ	58	ⓐ	ⓑ	ⓒ	ⓓ	83	ⓐ	ⓑ	ⓒ	ⓓ
9	ⓐ	ⓑ	ⓒ	ⓓ	34	ⓐ	ⓑ	ⓒ	ⓓ	59	ⓐ	ⓑ	ⓒ	ⓓ	84	ⓐ	ⓑ	ⓒ	ⓓ
10	ⓐ	ⓑ	ⓒ	ⓓ	35	ⓐ	ⓑ	ⓒ	ⓓ	60	ⓐ	ⓑ	ⓒ	ⓓ	85	ⓐ	ⓑ	ⓒ	ⓓ
11	ⓐ	ⓑ	ⓒ	ⓓ	36	ⓐ	ⓑ	ⓒ	ⓓ	61	ⓐ	ⓑ	ⓒ	ⓓ	86	ⓐ	ⓑ	ⓒ	ⓓ
12	ⓐ	ⓑ	ⓒ	ⓓ	37	ⓐ	ⓑ	ⓒ	ⓓ	62	ⓐ	ⓑ	ⓒ	ⓓ	87	ⓐ	ⓑ	ⓒ	ⓓ
13	ⓐ	ⓑ	ⓒ	ⓓ	38	ⓐ	ⓑ	ⓒ	ⓓ	63	ⓐ	ⓑ	ⓒ	ⓓ	88	ⓐ	ⓑ	ⓒ	ⓓ
14	ⓐ	ⓑ	ⓒ	ⓓ	39	ⓐ	ⓑ	ⓒ	ⓓ	64	ⓐ	ⓑ	ⓒ	ⓓ	89	ⓐ	ⓑ	ⓒ	ⓓ
15	ⓐ	ⓑ	ⓒ	ⓓ	40	ⓐ	ⓑ	ⓒ	ⓓ	65	ⓐ	ⓑ	ⓒ	ⓓ	90	ⓐ	ⓑ	ⓒ	ⓓ
16	ⓐ	ⓑ	ⓒ	ⓓ	41	ⓐ	ⓑ	ⓒ	ⓓ	66	ⓐ	ⓑ	ⓒ	ⓓ	91	ⓐ	ⓑ	ⓒ	ⓓ
17	ⓐ	ⓑ	ⓒ	ⓓ	42	ⓐ	ⓑ	ⓒ	ⓓ	67	ⓐ	ⓑ	ⓒ	ⓓ	92	ⓐ	ⓑ	ⓒ	ⓓ
18	ⓐ	ⓑ	ⓒ	ⓓ	43	ⓐ	ⓑ	ⓒ	ⓓ	68	ⓐ	ⓑ	ⓒ	ⓓ	93	ⓐ	ⓑ	ⓒ	ⓓ
19	ⓐ	ⓑ	ⓒ	ⓓ	44	ⓐ	ⓑ	ⓒ	ⓓ	69	ⓐ	ⓑ	ⓒ	ⓓ	94	ⓐ	ⓑ	ⓒ	ⓓ
20	ⓐ	ⓑ	ⓒ	ⓓ	45	ⓐ	ⓑ	ⓒ	ⓓ	70	ⓐ	ⓑ	ⓒ	ⓓ	95	ⓐ	ⓑ	ⓒ	ⓓ
21	ⓐ	ⓑ	ⓒ	ⓓ	46	ⓐ	ⓑ	ⓒ	ⓓ	71	ⓐ	ⓑ	ⓒ	ⓓ	96	ⓐ	ⓑ	ⓒ	ⓓ
22	ⓐ	ⓑ	ⓒ	ⓓ	47	ⓐ	ⓑ	ⓒ	ⓓ	72	ⓐ	ⓑ	ⓒ	ⓓ	97	ⓐ	ⓑ	ⓒ	ⓓ
23	ⓐ	ⓑ	ⓒ	ⓓ	48	ⓐ	ⓑ	ⓒ	ⓓ	73	ⓐ	ⓑ	ⓒ	ⓓ	98	ⓐ	ⓑ	ⓒ	ⓓ
24	ⓐ	ⓑ	ⓒ	ⓓ	49	ⓐ	ⓑ	ⓒ	ⓓ	74	ⓐ	ⓑ	ⓒ	ⓓ	99	ⓐ	ⓑ	ⓒ	ⓓ
25	ⓐ	ⓑ	ⓒ	ⓓ	50	ⓐ	ⓑ	ⓒ	ⓓ	75	ⓐ	ⓑ	ⓒ	ⓓ	100	ⓐ	ⓑ	ⓒ	ⓓ

Candidate's Signature

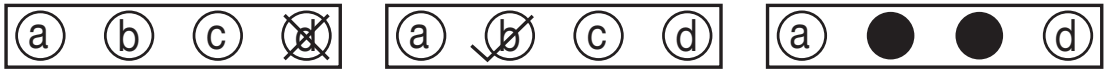
Invigilator's Signature

PRE-ADMISSION TEST SEPTEMBER 2, 2018
INSTRUCTIONS

Marking the Answer (on Answer Sheet)

1. For every question in the question paper, four choices of answer are given. Please mark your choices by filling in the appropriate circle completely, making it a dark circle as shown:

2. Some examples of improper marking are shown below



3. Do not mark more than one circle for an answer. Multiple answers for a question will be regarded as incorrect.

4. Do not bend or fold your answer sheet.

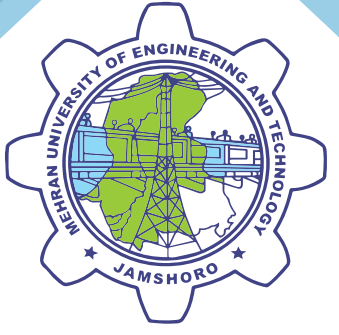
5. Use your time efficiently. Do not spend too much time on one question, otherwise you may run short of time for other questions.

6. The candidate is advised to mark the answer sheet in such a way that a good impression comes on the duplicate copy.

7. At the conclusion of the test the candidate should carefully deatch the duplicate copy so that the original copy may not be changed.

8. The candidate will return the original answer sheet and carbon paper to the invigilator, and keep duplicate copy of answer sheet with himself/herself as it is his/her property.


KEY LOCATIONS:
1. TEXTILE ENGINEERING
2. CIVIL ENGINEERING
3. INSTITUTE OF ENVIRONMENTAL ENGINEERING & MANAGEMENT.
4. CITY & REGIONAL PLANNING
5. ADMINISTRATION BLOCK
6. BIO-MEDICAL ENGINEERING
7. SOFTWARE ENGINEERING
16. ENTRY TEST GROUND
17. UNDER GRADUATE BOYS HOSTELS
18. POST GRADUATE BOYS HOSTELS
19. STUDENT CENTER
20. GYMNASIUM
Auditorium
MEHRAN UNIVERSITY INSTITUTE OF SCIENCE & TECHNOLOGY DEVELOPMENT
21. INDUSTRIAL ENGINEERING
22. MINNING ENGINEERING
23. METALLURGY & MATERIAL ENGINEERING
24. CHEMICAL ENGINEERING
25. ENGLISH LANGUAGE & DEVELOPMENT CENTER
26. PETROLIUM & NATURAL GAS ENGINEERING
27. ELECTRONICS ENGINEERING
28. COMPUTER SYSTEM ENGINEERING
29. TELECOMMUNICATION ENGINEERING
30. INSTITUTE OF INFORMATION TECHNOLOGY
31. CENTRAL LIBRARY
8. ARCHITECTURE
9. ELECTRICAL ENGINEERING
10. MECHANICAL ENGINEERING
11. BSRS DEPARTMENT
12. INFORMATION COMMUNICATION & PROCESSING HUBS



ISO 9001 Certified

Mehran University of Engineering & Technology
Jamshoro 76062, Sindh-Pakistan.
Tel: 022-2771704 Fax: 022-2772196
www.muet.edu.pk