MEHRAN UNIVERSITY
OF ENGINEERING & TECHNOLOGY
JAMSHORO, SINDH, PAKISTAN

ISO 9001 Certified

PROSPECTUS
2016-17

BACHELOR'S DEGREE PROGRAM

admissions.muet.edu.pk

prospectus

FOR UNDERGRADUATE STUDIES

IN

ENGINEERING, ARCHITECTURE AND CITY & REGIONAL PLANNING

SESSION 2016-17

MEHRAN UNIVERSITY OF ENGINEERING & TECHNOLOGY, JAMSHORO

AND

SHAHEED ZULFIQAR ALI BHUTTO (SZAB) CAMPUS, KHAIRPUR MIR'S

ISO 9001 Certified

MEHRAN UNIVERSITY OF ENGINEERING & TECHNOLOGY

Vision, Mission & Quality Policy

UKAS QUALITY MANAGEMENT 001

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

- Ranked amongst top 400 Universities of the world in QS Ranking 2010.
- Ranked 1st in Province of Sindh and 2nd amongst Public Sector Engineering Universities in Pakistan, this year by HEC.
- Celebrated Golden Jubilee (1963-2013).
- ISO Certified since 2003.
- More than One Hundred PhD faculty members.
- State-of-Art physical infrastructure.
- University Academic Calendar strictly followed.
- Produced more than 50 PhDs.
- Our more than 150 students availed Erasmus Mundus & US Fulbright funded exchange program to study for one semester in Europe or USA.
- Got credit of organizing Four International Conferences in a single calendar year in diversified Engineering disciplines.
- Organized "Asian Regional school of FPGA design for scientific applications" where more than 45 scientists and academicians from all around world participated in collaboration with Abdus Salam International Centre for Theoretical Physics (ICTP) Italy.
- Organized 1st International Workshop on Embedded Systems and its Applications (IWEMSA'15) .
- Organized Five-Day Workshop on Water Quality Monitoring and Assessment.
- MUET IEEE Student branch organized mega event IEEE DIALOGUE (Discovering Abilities and Life time Opportunities for Graduating Engineers).
- Launching of Eco-Friendly car.
- Celebrated International Women's Day and Launched Society of Women Engineers (SWE).
- MUET & WAPDA Signed MoU on Joint Venture Research in Water Sector.
- Became partner university of Erasmus Mundus INTACT (It's Time for Collaboration towards Close cooperation) scholarship Program between Regional Asia and EU.
- Launching of CTIF (Centre for Telecommunication Infrastructure) for South East Asia region at MUET (Being 6th centre after Denmark, USA, Japan, India, Italy).
- Excellent progress in Establishment of Advance water resource Management Institute under USAID program (About Rs. 2 Billion).
- USAID Mission Director Lays Foundation Stone for Water Research Center at MUET.
- 73 Fully funded USAID Scholarships for students to be awarded through Students Financial Aid Office (SFAO).
- Establishment of LabView International Academy 1st ever in any university in Sindh and 2nd in Pakistan after Air University Islamabad.

LOCATION PLAN

ISO 9001 Certified

MEHRAN UNIVERSITY OF ENGINEERING & TECHNOLOGY, JAMSHORO

ACADEMIC CALENDAR 2017

ACADEMIC AND EXAMINATION SCHEDULE FOR 13 (Arch), 14, 15, 16 & 17 BATCHES

Duration of a Semester	
Teaching (Including mid semester exam):	16 weeks
Final Examination Preparation:	02 weeks
Final Examinations Conduct:	04 weeks
Total	**22 weeks**

Two Semester Duration: 22x2 =	44 weeks
Semester Break	02 weeks
Summer Vacation:	04 weeks
Winter Vacation:	02 weeks
Total	**52 weeks**

Minimum attendance requirement to be eligible to appear in the Semester Examination is 75%
Mininmum number of Lectures during the Semester in a subject of 3 CH shall be 42.
Minimum number of contact hours for a practical of 1 CH per Semester is 42.

FALL SEMESTER

Batch & Semester	13-Batch (Arch) 9th Semester	14-Batch 7th Semester	15-Batch 5th Semester	16-Batch 3rd Semester	17-Batch 1st Semester
Date of Start of Classes	21-11-2016	21-11-2016	21-11-2016	21-11-2016	21-11-2016
Winter Vacation : 24-12-2016 to 08-01-2017					
Conduct of Mid Semester Exam	23-01-2017	23-01-2017	23-01-2017	23-01-2017	23-01-2017
Date of suspension of classes	17-03-2017	17-03-2017	17-03-2017	17-03-2017	17-03-2017
Schedule of Examination	20-03-2017	20-03-2017	20-03-2017	20-03-2017	20-03-2017
Display of Sessional Marks	24-03-2017	24-03-2017	24-03-2017	24-03-2017	24-03-2017
Examination Preparation up to	28-03-2017	28-03-2017	28-03-2017	28-03-2017	28-03-2017
Conduct of Final Semester Exam	29-03-2017	29-03-2017	29-03-2017	29-03-2017	29-03-2017
Announcement of results (Expected)	30-06-2017	30-06-2017	30-06-2017	30-06-2017	30-06-2017
Semester Break : 22-04-2017 to 30-04-2017					

SPRING SEMESTER

Batch & Semester	13-Batch (Arch) 10th Semester	14-Batch 8th Semester	15-Batch 6th Semester	16-Batch 4th Semester	17-Batch 2nd Semester
Date of Start of Classes	01-05-2017	01-05-2017	01-05-2017	01-05-2017	01-05-2017
Summer Vacation : 10-06-2017 to 09-07-2017					
Conduct of Mid Semester Exam	17-07-2017	17-07-2017	17-07-2017	17-07-2017	17-07-2017
Date of suspension of classes	08-09-2017	08-09-2017	08-09-2017	08-09-2017	08-09-2017
Schedule of Examination	11-09-2017	11-09-2017	11-09-2017	11-09-2017	11-09-2017
Display of Sessional Marks	15-09-2017	15-09-2017	15-09-2017	15-09-2017	15-09-2017
Examination Preparation up to	19-09-2017	19-09-2017	19-09-2017	19-09-2017	19-09-2017
Conduct of Final Semester Exam	20-09-2017	20-09-2017	20-09-2017	20-09-2017	20-09-2017
Announcement of results (Expected)	22-12-2017	22-12-2017	22-12-2017	22-12-2017	22-12-2017
Semester Break : 14-10-2017 to 22-10-2017					

CONTENTS

1. INTRODUCTION 7
   - 1.1 The University 7
   - 1.2 Officers of the University 8
2. FACULTY OF ARCHITECTURE AND CIVIL ENGINEERING 9
   - 2.1 Department of Architecture 10
   - 2.2 Department of Civil Engineering 12
   - 2.3 Department of City and Regional Planning 16
   - 2.4 Institute of Environmental Engineering & Management 19
3. FACULTY OF ELECTRICAL, ELECTRONICS, AND COMPUTER SYSTEM ENGINEERING 23
   - 3.1 Department of Biomedical Engineering 24
   - 3.2 Department of Computer Systems Engineering 27
   - 3.3 Department of Electrical Engineering 30
   - 3.4 Department of Electronics Engineering 33
   - 3.5 Department of Software Engineering 37
   - 3.6 Department of Telecommunication Engineering 40
4. FACULTY OF ENGINEERING 44
   - 4.1 Department of Chemical Engineering 45
   - 4.2 Department of Industrial Engineering 48
   - 4.3 Department of Mechanical & Mechatronics Engineering 51
   - 4.4 Department of Metallurgy and Materials Engineering 58
   - 4.5 Department of Mining Engineering 61
   - 4.6 Department of Petroleum and Natural Gas Engineering 64
   - 4.7 Department of Textile Engineering 67
5. FACULTY OF SCIENCE, TECHNOLOGY, AND HUMANITIES 70
   - 5.1 Department of Basic Science and Related Studies 71
   - 5.2 English Language Development Center 72
   - 5.3 Affiliated Colleges /Institute 73
6. RESEARCH AND DEVELOPMENT 74
7. CAMPUS LIFE 80
8. SZAB CAMPUS KHAIPUR MIR'S 90
9. RULES AND PROCEDURE FOR ADMISSION 103
10. REGULATIONS FOR SEMESTER SYSTEM 122
11. STUDENT CONDUCT AND DISCIPLINE REGULATIONS 131
12. PRE-ADMISSION TEST 137

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 1st March, 1977 named as Mehran University of Engineering and Technology (Mehran UET).

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 Pakistan in general and Sindh in particular. 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.

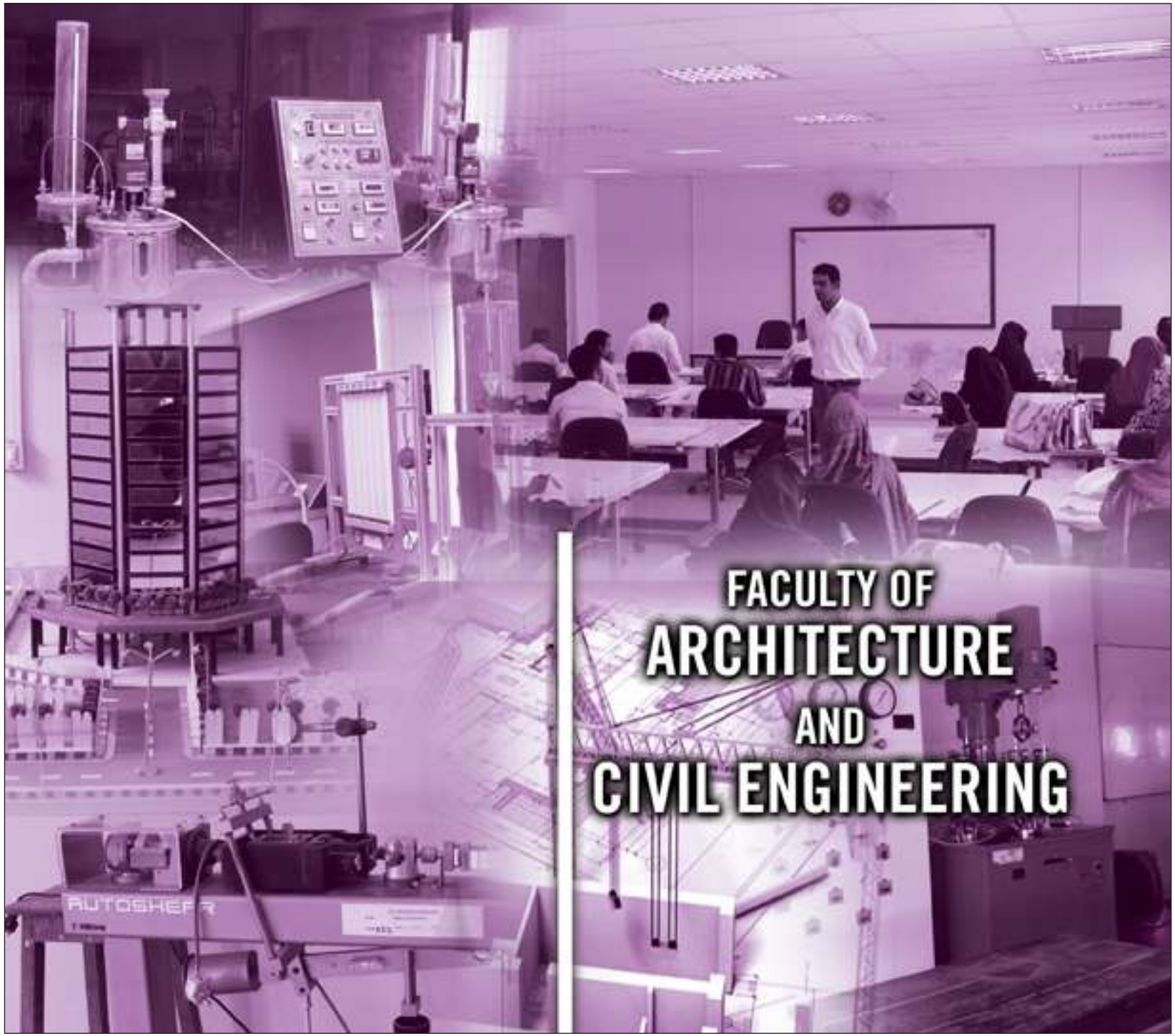
Mehran UET is becoming a role model to other universities with desire to grow and flourish through engagement. This university is achieving this by working more closely with students, communities, industries, regional employers and with government at all levels. This year is golden jubilee celebration of Mehran UET. It is a dream of every invidual 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.

Sr. No.	Post	Name	Phone
1.	Vice-Chancellor	Prof. Dr. Muhammad Aslam Uqaili	022-2771197
2.	Pro Vice-Chancellor MUET, SZAB, Khairpur Mir's Campus	Engr. Ghulam Sarwar Kandhir	0243-714005
3.	Dean, Faculty of Architecture and Civil Engineering	Prof. Dr. Ghous Bux Khaskheli	022-2771638
4.	Dean, Faculty of Electrical, Electronic & Computer Engineering	Prof. Dr. Bhawani Shankar Chowdhary	022-2771558
5.	Dean, Faculty of Engineering	Prof. Dr. Hafeez-ur-Rehman Memon	022-2771312
6.	Dean, Faculty of Science, Technology & Humanities	Prof. Dr. Pir Roshan Shah Rashdi	022-2771352
7.	Registrar	Prof. Dr. Tauha Hussain Ali	022-2771371
8.	Director Finance	Mr. Muneer A. Shaikh	022-2771442
9.	Controller of Examinations	Mr. Suhail Ahmed Khatian	022-2771631
10.	Director Admissions	Prof. Dr. Agha Faisal Habib	022-2771704
11.	Provost (Hostels)	Prof. Ghulam Abbas Mahar	022-2772299
12.	Director Planning & Development	Mr. Ashfaque Ahmed Issani	022-2771254
13.	Director Works & Services	Mr. Saghir Ahmed Memon	022-2771311
14.	Project Director / Incharge Transport Section	Mr. Qazi Riaz Hassan Quereshi	022-2109073
15.	Resident Auditor	Mr. Muhammad Ashraf Abro	022-2772285
16.	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.

2.1.2 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. Photographic Lab
5. Surveying and Environment Materials Lab

2.1.3 The Faculty

Chairman of the Department

Mr. Muhammad Hashim Jokhio
Phone: 022-2772293 Ext. 3100

Associate Professor

Mr. Naeem Irfan
B.Arch Pakistan

Assistant Professors

Mr. Abdul Rehman Halepoto
PGD. Pakistan

Mr. Muhammad Hashim Jokhio
B.Arch Pakistan

Mr. Moazam Ali Pathan
PGD. Pakistan

Mr. Muhammad Afzal Brohi
B.Arch Pakistan

Mr. Irfan Ahmed Memon
PGD. Pakistan

Ms. Raheela Leghari
M.E. Pakistan

Ms. Sabeen Qureshi (Study leave)
M.Urban Planing, Pakistan

Ms. Shahnila Ansari
M.E. Pakistan

Lecturers

Ms. Khalida Baloch
PGD. Pakistan

Ms. Fareeda Mugheri
B.Arch Pak

Mr. Abdul Waheed Memon
PGD. Pakistan

Ms. Naheed Rohail
M.E. Pakistan

Mr. Abdul Salam Talpur
PGD. Pakistan

Ms. Firdous Parveen
PGD. Pakistan

2.1.4 Courses

Course Code	SUBJECT NAME	CREDIT HOURS	
FIRST SEMESTER		Theory	Practical
SS 111	Islamic Studies/Ethics	02	00
PS 106	Pakistan Studies	02	00
AR 105	Visual Communication	02	02
AR 101	Basis Design-I	02	02
AR 107	Physical Environment	03	00
AR 151	Statics	03	00
	TOTAL	**14**	**04**

Course Code	SUBJECT NAME	CREDIT HOURS	
SECOND SEMESTER		Theory	Practical
EN 101	Functional English	03	00
AR 102	Basic Design-II	00	02
AR 110	History of Art & Architecture-I	03	00
AR 112	Building Materials	03	00
AR 154	Model Making	00	02
CE 135	Surveying	03	01
	TOTAL	**12**	**05**

Course Code	SUBJECT NAME	CREDIT HOURS	
THIRD SEMESTER		Theory	Practical
AR 203	Architectural Design-I	02	02
AR 208	Physical Environmental Studies-I	03	00
AR 209	History of Art & Architecture-II	03	00
AR 255	Sociology	02	00
AR 213	Computer Aided Design-I	02	01
CE 265	Basics of Strength of Materials-I	02	00
	TOTAL	**14**	**03**

Course Code	SUBJECT NAME	CREDIT HOURS	
FOURTH SEMESTER		Theory	Practical
AR 204	Architectural Design-II	02	02
AR 307	Physical Environmental Studies-II	03	00
AR 210	History of Art & Architecture-III	03	00
AR 212	Building Construction-I	03	00
AR 214	Computer Aided Design-II	00	02
CE 290	Basics of Theory of Structures	02	00
	TOTAL	**13**	**04**

Course Code	SUBJECT NAME	CREDIT HOURS	
FIFTH SEMESTER		Theory	Practical
AR 303	Architectural Design-III	02	02
AR 311	Building Construction-II	03	00
CE 360	Basic Structural Analysis	02	00
AR 316	Building Services-I	03	00
AR 315	Computer Aided Design-III	00	02
AR 310	Muslim Architecture	03	00
	TOTAL	**13**	**04**

Course Code	SUBJECT NAME	CREDIT HOURS	
SIXTH SEMESTER		Theory	Practical
AR 304	Architectural Design-IV	02	02
AR 317	Building Services-II	03	00
AR 358	Working Drawings & Details-I	00	02
AE 365	RCC Design	03	00
AR 362	Buildings Economics	02	00
AR 320	Theories & Criticism in Architecture	03	00
	TOTAL	**13**	**04**

Course Code	SUBJECT NAME	CREDIT HOURS	
SEVENTH SEMESTER		Theory	Practical
AR 403	Architectural Design-V	02	02
AR 417	Landscape Design	02	01
AR 457	Working Drawings & Details-II	00	02
AR 419	Urban Planning & Design-I	03	00
AR 421	Structure in Architecture-I	03	00
AR 412	Architectural Conservation	03	00
	TOTAL	**13**	**05**

Course Code	SUBJECT NAME	CREDIT HOURS	
EIGHT SEMESTER		Theory	Practical
AR 404	Architectural Design-VI	02	02
AR 464	Interior Design	02	01
AR 458	Working Drawings & Details-III	00	02
AR 420	Urban Planning & Design-II	02	01
AR 422	Structure in Architecture-II	03	00
AR 408	Energy Efficient Architecture	03	00
	TOTAL	**12**	**06**

Course Code	SUBJECT NAME	CREDIT HOURS	
NINTH SEMESTER		Theory	Practical
AR 503	Architectural Design-VII	02	02
CE 510	Quantity Surveying & Accounting	03	00
AR 509	Sustainable Architecture	03	00
AR 525	Research & Development project -I	00	05
	(Thesis Report)		
	TOTAL	**08**	**07**

Course Code	SUBJECT NAME	CREDIT HOURS	
TENTH SEMESTER		Theory	Practical
AR 524	Professional Practice & Management	03	00
AR 527	Disaster Management	02	00
AR 526	Research & Development Project-II	00	10
	(Thesis Report)		
	TOTAL	**05**	**10**

2.1.5 Career Opportunities

Our graduates can pursue their careers not only in government organizations and private sector but they can also choose to setup their own businesses.

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, factories, 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 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, and Construction Management etc.

The Department teaches many courses relevant to the various fields of Civil Engineering that is Structural Engineering, Geotechnical Engineering, Irrigation & Drainage Engineering, Transportation Engineering, Environmental Engineering, Construction Engineering & Management etc. 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 for internship. This is to expose them to practical engineering practices being actually implemented.

The Department also offers 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
- Construction Management
- Geotechnical & Highways Engineering

The department has recently upgraded the Software Laboratory with latest computers and advanced Software related to Civil Engineering. All the class rooms of the department are equipped with multimedia tools.

2.2.3 The Faculty

Chairman of the Department

Prof. Dr. Ghous Bux Khaskheli
Phone: 022-2772254-72 Ext. 7100

Co-Chairman of the Department

Prof. Dr. Aneel Kumar
Phone: 022-2772254-72 Ext. 7132

Professors

Dr. Ghous Bux Khaskheli
Ph.D. United Kingdom

Dr. Mohammad Mehboob
Ph.D. China

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. Romania

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

Associate Professors

Dr. Naeem Aziz Memon
Ph.D. United Kingdom

Dr. Fareed Ahmed Memon
Ph.D. Malaysia

Assistant Professors

Dr. Pervez Shaikh
Ph.D. Pakistan

Mr. Ghulam Hussain Mahesar
Pgd. Turkey

Mr. Jawaid Kamal Ansari
M.E. Pakistan

Dr. Ashfaque Ahmed Pathan
Ph.D. 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 (On Lien)
M.E. Pakistan

Mr.Imdad Ali Kandhar
M.Phil, Pakistan

Lecturers

Mr. Shabir Hussain Khahro (On Lien)
M.E. Malaysia

Mr. Masroor Ali Jatoi
B.E. Pakistan

Mr. Farhan Qureshi
M.E. Pakistan

Mr. Ali Murtaza Phull
B.E. Pakistan

Mr. Abdul Rakeeb Memon
PGD. Pakistan

Mr. Ali Raza Khoso
B.E. Pakistan

Mr. Fahad Ali Shaikh
B.E. Pakistan

Mr. Muhammad Abu Bakar
B.E. Pakistan

Mr. Fida Hussain Siddiqui
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. Structural Engineering 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	
FIRST SEMESTER		Theory	Practical
CE 101	Engineering Drawing	03	01
CE 105	Civil Engineering Materials	03	01
CE 110	Surveying-I	03	01
EN 111	Functional English	03	00
	TOTAL	**12**	**03**

Course Code	SUBJECT NAME	CREDIT HOURS	
SECOND SEMESTER		Theory	Practical
CE 115	Engineering Mechanics	03	01
MTH 102	Applied Calculus	03	00
PS 106	Pakistan Studies	02	00
IS111/SS104	Islamic Studies / Ethics	02	00
CE 120	Civil Engineering Drawing	02	01
CS 140	Introduction to Computer & C++ Programming	02	01
	TOTAL	**14**	**03**

Course Code	SUBJECT NAME	CREDIT HOURS	
THIRD SEMESTER		Theory	Practical
CE 201	Surveying-II	03	01
CE 205	Transportation Engineering	03	00
CE 210	Strength Materials-I	03	00
CE 215	Engineering Geology	02	01
MTH 204	Differential Equations, Fourier Series and Laplace Transforms	03	00
	TOTAL	**14**	**02**

Course Code	SUBJECT NAME	CREDIT HOURS	
FOURTH SEMESTER		Theory	Practical
CE 220	Theory of Structures	03	00
CE 225	Fluids Mechanics and Hydraulics-I	03	01
CE 230	Construction Engineering	02	00
CE 235	Plain and Reinforced Concrete	03	01
MTH 206	Complex Analysis, Statistical Methods & Probability	03	00
CE 245	Architectural and Town Planning	02	00
	TOTAL	**16**	**02**

Course Code	SUBJECT NAME	CREDIT HOURS	
FIFTH SEMESTER		Theory	Practical
CE 301	Strength of Materials-II	03	00
CE 305	Structural Analysis	03	00
CE 310	Fluid Mechanics and Hydraulics-II	03	01
CE 315	Steel Structures	03	00
MTH 303	Linear Algebra and Numerical Methods	03	00
	TOTAL	**15**	**01**

Course Code	SUBJECT NAME	CREDIT HOURS	
SIXTH SEMESTER		Theory	Practical
CE 320	Applied Hydraulics	03	01
CE 325	Soil Mechanics	03	01
CE 330	Modern Methods of Structural Analysis	03	00
CE 335	Reinforced and Pre-Stressed Concrete	03	01
CE 340	Quantity Surveying and Estimation	03	00
	TOTAL	**15**	**03**

Course Code	SUBJECT NAME	CREDIT HOURS	
SEVENTH SEMESTER		Theory	Practical
CE 401	Highway and traffic Engineering	03	01
CE 405	Structural Design and Drawing	03	00
CE 410	Geotechnical Engineering	03	01
CE 415	Irrigation Engineering	03	01
CE 420	Environmental Engineering-I	02	01
	TOTAL	**14**	**04**

Course Code	SUBJECT NAME	CREDIT HOURS	
EIGHT SEMESTER		Theory	Practical
CE 425	Foundation Engineering	03	00
CE 430	Environmental Engineering-II	03	00
CE 435	Construction Management & Planning	03	00
CE 440	Hydrology & Drainage Engineering	03	00
CE 445	Project / Thesis	00	06
	TOTAL	**12**	**06**

2.2.5 Career Opportunities

Our graduates can follow careers in many different fields and organizations related with Civil Engineering Projects and they can also choose to set up their own businesses. Typical employment sectors for civil engineers include: 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, Jamshoro provides a clear route to a professional career in Civil Engineering.

2.3 DEPARTMENT OF CITY & REGIONAL PLANNING

2.3.1 The Department

This is the second department established in any public sector university in the country. The department is devoted wholly for teaching theoretical courses and extends practical knowledge of City and Regional Planning in undergraduates for professional career in increasingly diversified fields of Planning.

In order to meet the ever-increasing demand for qualified 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.

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 the 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.

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 2013, 2014, 2015 & 2016 respectively. The department also offers the degrees of Master of Philosophy (MPhil) 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 professionals in various streams of specializations in City and Regional Planning.

2.3.2 The Faculty

Chairman of the Department

Dr. Imtiaz Ahmed Chandio
Phone: 022-2772294 Ext. 7200

Associate Professor

Dr. Imtiaz Ahmed Chandio
Ph.D. Malaysia

Assistant Professors

Dr. Mir Aftab Hussain Talpur
Ph.D. Malaysia

Mr. Muhammad Masood
M.CRP. Thialand

Ms. Saima Kalwar (On Study Leave)
M.Phil. Pakistan

Lecturers

Mr. Naveed Agro (On Study Leave)
M.CRP. Australia

Mr. Taufique Ahmed Qureshi (On Study Leave)
B.CRP. Pakistan

Mr. Irfan Ahmed Memon (On Study Leave)
M.CRP. Malaysia

Mr. Fahad Ahmed Shaikh
M.CRP. Pakistan

Mr. Noman Sahito
M.CRP. Pakistan

Mr. Muhammad Yousif Mangi
B.CRP. Pakistan

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. Audio-Visual Laboratory
2. Computer Laboratory
3. Graphic & Model Making Laboratory
4. Photographic Developing & Printing Laboratory
5. Environmental Physics & Services Laboratory
6. Surveying Laboratory
7. Drawing Studio

2.3.4 Courses

Course Code	SUBJECT NAME	CREDIT HOURS	
FIRST SEMESTER		Theory	Practical
CRP 111	Introduction to Planning	03	01
CRP 112	Technical Drawing	02	02
MATH 110	Calculus & Statistical Methods	03	00
SS 111	Islamic Studies / Ethics	02	00
PS 106	Pakistan Studies	02	00
AR 154	Model Making	00	02
	TOTAL	**12**	**05**

Course Code	SUBJECT NAME	CREDIT HOURS	
SECOND SEMESTER		Theory	Practical
CRP 121	Socio-economic Aspects of Planning	03	00
CRP 122	Architectural Design for Planners	02	02
CE 120	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	
THIRD SEMESTER		Theory	Practical
CRP 211	History of Urban Planning	03	00
CRP 212	Transportation Engineering	03	01
CRP 213	Construction Technology	03	01
CE 201	Surveying-II	03	01
CRP 214	Communication Skills & Report Writing	02	00
	TOTAL	**14**	**03**

Course Code	SUBJECT NAME	CREDIT HOURS	
FOURTH SEMESTER		Theory	Practical
CRP 221	Planning Law	03	00
CRP 222	Housing	03	00
CRP 223	Transportation Planning	03	01
CRP 224	Mapping & Remote Sensing	03	01
CRP 225	Computer Aided Design	02	01
	TOTAL	**14**	**03**

Course Code	SUBJECT NAME	CREDIT HOURS	
FIFTH SEMESTER		Theory	Practical
CRP 311	Urban Renewal	02	01
CRP 312	Planning Techniques	03	00
CRP 313	Site Planning and Urban Design	03	01
CRP 314	Environmental Engineering	03	01
CRP 315	Information & Database Management	02	01
	TOTAL	**13**	**04**

Course Code	SUBJECT NAME	CREDIT HOURS	
SIXTH 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	
SEVENTH 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
	TOTAL	**12**	**05**

Course Code	SUBJECT NAME	CREDIT HOURS	
EIGHT 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 Housing and Works, Ministry of Planning and Development, Ministry of Environment, Ministry of Local Government, Sindh Building Control Authority and nonprofit research organizations. The department of City & Regional Planning has played a vital role not only in Planning Education but also in the development of Urban Research in the Country.

2.4 INSTITUTE OF ENVIRONMENTAL ENGINEERING AND 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 the aim creating new knowledge and finding innovative 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

Prof. Dr. Khan Muhammad Brohi
Phone: 022-2772253 Ext. 7300

Professors

Dr. Khan Muhammad Brohi
Ph.D. Japan

Dr. Rasool Bux Mahar (On Lien)
Ph.D. China

Associate Professor

Dr. Abdul Razaque Sahito
Ph.D. Pakistan

Assistant Professors

Mr. Muhammad Ali Memon
M.E. Pakistan

Dr. Sheeraz Ahmed Memon
Ph.D. Korea

Lecturers

Mr. Azizullah Channa
M.E. Pakistan

Ms. Murk Komal (On Study Leave)
M.E. UK

Ms. Maryam
M.E. Pakistan

Mr. Muhammad Safar Korai (On Study Leave)
M.E. Pakistan

Mr. Zulfiqar Ali Effendi (On Study Leave)
M.E. Pakistan

2.4.3 Laboratory Facilities

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

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

2.4.4 Courses

Course Code	SUBJECT NAME	CREDIT HOURS	
FIRST SEMESTER		Theory	Practical
PS106	Pakistan Studies	02	00
SS111	Islamic Studies/Ethics	02	00
EE101	Introduction to Environmental Engineering	03	00
CS135	Computer Aided Learning	02	01
CE131	Surveying	03	01
EE101	Environmental Physics	02	00
	TOTAL	**14**	**02**

Course Code	SUBJECT NAME	CREDIT HOURS	
SECOND SEMESTER		Theory	Practical
EN101	Functional English	03	00
MTH102	Applied Calculus	03	00
EE121	Environmental Chemistry	02	01
CE115	Engineering Mechanics	03	01
CS141	Introduction to Computer Programming	03	01
	TOTAL	**14**	**03**

Course Code	SUBJECT NAME	CREDIT HOURS	
THIRD SEMESTER		Theory	Practical
EE202	Ecological Management	03	00
CE278	Engineering Drawing Practice	00	01
MTH111	Linear Algebra & Analytical Geometry	03	00
CE260	Fluid Mechanics	03	01
MT250	Engineering Materials & Environment	02	00
EE232	Environmental Microbiology	02	01
	TOTAL	**13**	**03**

Course Code	SUBJECT NAME	CREDIT HOURS	
FOURTH SEMESTER		Theory	Practical
EE242	Environmental Economics	02	00
ME277	Applied Thermodynamics	03	01
MTH202	Differential Equations & Fourier Series	03	00
CE275	Computer Aided Design	00	01
EE303	Water Supply Engineering	03	01
CRP272	GIS & Remote Sensing	03	01
	TOTAL	**14**	**04**

Course Code	SUBJECT NAME	CREDIT HOURS	
FIFTH SEMESTER		Theory	Practical
ME441	Thermal Power Plants	03	01
MTH308	Numerical Analysis and Computer Application	03	01
EL255	Electrical Technology	02	01
CE370	Engineering Hydrology	03	00
EE333	Wastewater Engineering	03	01
	TOTAL	**14**	**04**

Course Code	SUBJECT NAME	CREDIT HOURS	
SIXTH SEMESTER		Theory	Practical
ME451	Renewable and Emerging Energy Technologies	03	01
EE313	Solid Waste Management	03	01
EN301	English Communication Skills	02	00
MTH309	Statistics and Probability	03	00
EE325	Air & Noise Pollution Control	03	01
	TOTAL	**14**	**03**

Course Code	SUBJECT NAME	CREDIT HOURS	
SEVENTH SEMESTER		Theory	Practical
EE404	Water Resources & Irrigation Engineering	03	01
EE494	Natural Resources Management	02	00
EE424	Health , Safety and Environment	03	00
CE425	Applied Soil Mechanics	03	01
EE414	Modeling of Environmental Systems	03	01
EE474	Design Project-I	03	00
	TOTAL	**17**	**03**

Course Code	SUBJECT NAME	CREDIT HOURS	
EIGHT SEMESTER		Theory	Practical
EE464	Hazardous Waste Risk Assessment	02	00
EE484	Cleaner Production Techniques	03	00
EE454	Environmental Impact Assessment	03	00
CE470	Project Planning & Management	02	01
EE497	Design Project-II	06	00
	TOTAL	**16**	**01**

2.4.5 Career Opportunities

After qualifying, our graduates can serve the nation as professional Planners in the public sectors such as, Ministry of Housing and Works, Ministry of Planning and Development, Ministry of Environment, Ministry of Local Government, Sindh Building Authority and nonprofit research organizations.

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


FACULTY OF
ELECTRICAL, ELECTRONICS
AND
COMPUTER SYSTEMS ENGINEERING

3. 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. Since 2011, the Biomedical Engineering Department is housed in the newly built beautiful edifice with young, dynamic and visionary leadership.

The Bio Medical 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 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, AKUH Karachi, COMSATs Islamabad, GE Karachi, ISRA University Hospital Hyderabad and many others.

Modern hospitals, Drug makers, 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.

Biomedical Engineers apply the engineering principles and materials technology to healthcare and rehabilitation. This can include researching, designing and developing medical products, such as joint replacements or robotic surgical instruments, designing or modifying equipment for clients with special needs in a rehabilitation setting, or managing the use of clinical equipment in hospitals and the community. Technological innovation in the field of medicine and healthcare is accelerating at a rapidpace. Modern hospital is now the center of the technologically sophisticated healthcare systems; and this requires staff that is technologically aware with the sophisticated high-tech equipment. In practice, it involves everything from diagnostic and surgical equipment and patient monitoring through implants such as pacemakers, artificial joints and limbs to the computer simulation of biological functions. All these modern aids to healthcare have to be conceived, designed, tested, manufactured, installed, operated, maintained and improved by the biomedical engineers.

Keeping in view the tremendous growth of Biomedical Sector and emerging trends of telemedicine and e-health system in the country, there is great scope and a role to play for Biomedical Engineers as product designers, e-health/telemedicine experts, equipment procurement experts, and solution providers. The world market for all biomedical devices, including diagnostic and therapeutic equipment, is in the range of $100 billion/year. It is destined to grow even further, especially in areas that have aging populations. Biomedical engineers will be of increasing importance to this growth.

3.1.2 The Faculty

Chairman of the Department

Dr. Ahsan Ahmad Ursani
Phone:022-2772279 Ext. 7000

Professor

Dr. Ahsan Ahmad Ursani
Ph.D. France

Assistant Professors

Mr. N.P. Chowdhry
M.S. United Kingdom

Dr. Muhammad Arif
Ph.D. United Kingdom

Dr. Syed Amjad Ali
Ph.D. China

Dr. Abdul Qadir Ansari
Ph.D. Pakistan

Lecturers

Dr. Najma Baloch
MBBS. Pakistan

Engr. Syed Faisal Ali
B.E. Pakistan

Engr. Salman Afridi
M.E. Pakistan

Engr. Rabia Chandio
M.E. Pakistan

Engr. M. Aamir Panhwar (On Study Leave)
M.E. Pakistan

3.1.3 Laboratory Facilities

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

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

3.1.4 Courses

Course Code	SUBJECT NAME	CREDIT HOURS	
FIRST SEMESTER		Theory	Practical
ENG 101	Functional English	03	00
EL 101	Basic Electrical Engineering	02	01
BM102/MPH107	Basic Biology/ Basic Mathematics	03	00
CS 145	Introduction to Computing	03	01
BM 105	Applied Physics	03	01
BM 109	Applied Chemistry	02	01
	TOTAL	**13**	**04**

Course Code	SUBJECT NAME	CREDIT HOURS	
SECOND SEMESTER		Theory	Practical
ES 133	Basic Electronics	03	01
EL 201	Electrical Circuits and Systems	03	01
BM 155	Biophysics	03	00
MTH 102	Applied Calculus	03	00
PS 106	Pakistan Studies	02	00
IS111/SS104	Islamic Studies/Ethics	02	00
	TOTAL	**16**	**02**

Course Code	SUBJECT NAME	CREDIT HOURS	
THIRD SEMESTER		Theory	Practical
ES 261	Electronic Circuit Design	03	01
ME 221	Engineering Statics	02	00
BM 218	Bio-Chemistry	02	01
BM 221	Physiology-I	02	01
BM 224	Human Anatomy	03	00
MTH 236	Linear Algebra and Analytical Geometry	03	00
	TOTAL	**15**	**03**

Course Code	SUBJECT NAME	CREDIT HOURS	
FOURTH SEMESTER		Theory	Practical
ES 284	Electronic Instrumentation	03	01
CE 220	Strength of Materials	02	01
ME 222	Engineering Dynamics	02	00
ES 271	Digital Electronics	03	01
MTH 224	Differential Equations	03	00
BM 227	Physiology-II	02	00
	TOTAL	**15**	**03**

Course Code	SUBJECT NAME	CREDIT HOURS	
FIFTH SEMESTER		Theory	Practical
BM 330	Biomaterials and Design	03	01
BM 333	Biomedical Instrumentation	03	00
MTH 336	Numerical Analysis and Computer Applications	03	01
ES 351	Microprocessor and Data Acquisition	03	01
MTH 306	Complex Variable and Transforms	03	00
	TOTAL	**15**	**03**

Course Code	SUBJECT NAME	CREDIT HOURS	
SIXTH SEMESTER		Theory	Practical
BM 340	Signals and Systems	03	01
BM 345	Control Systems	03	01
BM 348	Bio-Medical Instrumentation II	03	00
BM 355	Bio-Photonics	03	00
MTH 315	Probability and Statistics	03	00
	TOTAL	**15**	**02**

Course Code	SUBJECT NAME	CREDIT HOURS	
SEVENTH SEMESTER		Theory	Practical
BM 465	Digital Signal and Image Processing	03	01
BM 470	Modeling Simulation	02	01
BM 475	Bio-Mechanics	02	01
ENG 401	Technical Report Writing and Presentation Skills	02	01
BM 499	BM Engineering Project (Partial)	00	04
BM 480	Economics and Healthcare Management	02	00
	TOTAL	**11**	**08**

Course Code	SUBJECT NAME	CREDIT HOURS	
EIGHT SEMESTER		Theory	Practical
BM 485	Emerging Trends in Biomedical Engineering	03	01
BM 487	Medical Imaging	03	01
BM 490	Medical and Healthcare Ethics	02	00
ES 494	Neuro Science & Neural Networks	02	01
BM 499	BM Engineering Project (Partial)	00	03
	TOTAL	**10**	**06**

3.1.5 Career Opportunities

After the graduation from MUET our graduates have vast job opportunities in diverse areas like medical equipment manufacturing commissionary and installations, orthopedic and rehabilitation engineering. They can also be absorbed in hospitals to provide valuable advice on the procurement of medical equipment. Biomedical engineers can also engage themselves in research activities by working sweetly with doctors in the field of computational mechanics and physiology. There is a huge demand for biomedical engineers in Pakistan. Biomedical engineers who monitor and maintain the databases of medical instrumentation and work with physicians to adapt instrumentation for the specific needs of the physician and hospitals are most wanted in hospitals of Pakistan. Rehabilitation engineers who develop hardware and software computer adaptations and provide cognitive aids to assist patients with memory impairment are also much required.

3.2 DEPARTMENT OF COMPUTER SYSTEMS ENGINEERING

3.2.1 The Department

Department of 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.

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

Associate Professors

Mr. Muhammad Zahid Shaikh
M.E. Pakistan

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

Dr. Sheeraz Memon
Ph.D. Australia

Dr. Sana Hoor Jokhio
Ph.D. United Kingdom

Dr. Javed Ali Baloch
Ph.D. United Kingdom

Dr. Faheem Aziz Umrani
Ph.D. United Kingdom

FACULTY OF ELECTRICAL, ELECTRONICS AND COMPUTER SYSTEM ENGINEERING

Assistant Professors

Mr. Liaquat Ali Thebo
M.E. Pakistan

Mr. Arbab Ali Samejo
M.E. Pakistan

Dr. Shahnawaz Talpur
Ph.D. China

Mr. Naveed Ahmed Jaffari
M.E. Pakistan

Ms. Zartasha Baloch
M.E. Pakistan

Mr. Rizwan Badar Baloch (On Study Leave)
M.E. Pakistan

Dr. Adnan Ashraf
Ph.D. Pakistan

Mr. Moazzam Jawaid (On Study Leave)
M.E. Pakistan

Ms.Hamna Rajput
MS Canada

Dr. Noor-u-Zaman Leghari
Ph.D. United Kingdom

Dr. M.Shaban Jokhio
Ph.D. New Zealand

Lecturers

Mr. Salman Ahmed Shaikh (On Study Leave)
M.E. Pakistan

Ms. Bushra Naz (On Study Leave)
M.E. Pakistan

Ms. Sammer Zai (On Study Leave)
M.E. Pakistan

Ms. Sanam Narejo (On Study Leave)
M.E. Pakistan

Mr. M. Ahsan Ansari (On Study Leave)
M.E. Pakistan

Mr. Irfan Ali Bhacho (On Study Leave)
M.E. Pakistan

Mr. Salahuddin Jokhio (On Study Leave)
M.E. Pakistan

Mr. Ali Asghar Manjotho
M.E. Pakistan

Mr. Fawad Ali Mangi
B.E. Pakistan

Ms. Syeda Adila Afghan
M.E. Pakistan

Ms. Maria Shaikh
M.E. Pakistan

Ms. Sajida Raz Bhutto
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.

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

3.2.4 Courses

Course Code	SUBJECT NAME	CREDIT HOURS	
FIRST SEMESTER		Theory	Practical
CS101	Computer Fundamentals	03	01
MTH 102	Applied Calculus	03	00
ENG 111	Functional English	03	00
ES 121	Electronic Engineering	03	01
EL 101	Basic Electrical Engineering	03	01
	TOTAL	**15**	**03**

Course Code	SUBJECT NAME	CREDIT HOURS	
SECOND SEMESTER		Theory	Practical
CS 120	Computer Programming	03	01
CS122	Digital Logic and Design	03	01
MTH 112	Linear Algebra and Analytical Geometry	03	00
ENG 201	Communication Skills	02	00
SS 111	Islamic Studies / Ethics	02	00
PS 106	Pakistan Studies	02	00
	TOTAL	**15**	**02**

Course Code	SUBJECT NAME	CREDIT HOURS	
THIRD SEMESTER		Theory	Practical
CS201	Computer Architecture and Design	03	00
CS 202	Object Oriented Programming	03	01
CS 203	Technical Report Writing	02	00
MTH 224	Differential Equations	03	00
EL 107	Electrical Circuits	03	01
	TOTAL	**14**	**02**

Course Code	SUBJECT NAME	CREDIT HOURS	
FOURTH SEMESTER		Theory	Practical
CS 251	Data Structure and Algorithm Analysis	03	01
CS 252	Microprocessors and Interfacing Techniques	03	01
CS 253	Modeling and Simulation	02	01
IN 101	Engineering Economics and Management	03	00
MTH 226	Fourier Series and Transforms	02	00
CS 254	Discrete Structures	02	00
	TOTAL	**15**	**03**

Course Code	SUBJECT NAME	CREDIT HOURS	
FIFTH SEMESTER		Theory	Practical
CS 301	Analogue and Digital Signal Processing	03	01
CS 302	Operating Systems Design Concepts	03	01
CS 303	Database Management Systems	03	01
CS 304	Computer Graphics	02	01
MTH 317	Statistics and Probability	03	00
	TOTAL	**14**	**04**

Course Code	SUBJECT NAME	CREDIT HOURS	
SIXTH SEMESTER		Theory	Practical
CS 351	Communication Systems	03	01
CS 352	Control Systems and Robotics	03	01
CS 370	Web Engineering	03	01
CS 354	Embedded Systems	03	01
CS 300	Professional Ethics	02	00
	TOTAL	**14**	**04**

Course Code	SUBJECT NAME	CREDIT HOURS	
SEVENTH SEMESTER		Theory	Practical
CS 401	Digital Image Processing	03	01
CS 418	Data Mining Techniques	02	01
CS 403	Computer Communication and Networks	03	01
CS 404	Software Engineering	03	01
	Computer Engineering Project	00	00
	TOTAL	**11**	**04**

Course Code	SUBJECT NAME	CREDIT HOURS	
EIGHT SEMESTER		Theory	Practical
CS 451	Mobile and Wireless Communication	03	00
CS 452	Artificial Intelligence	03	01
CS 453	Entrepreneurship and Leadership	02	00
CS 470	Mobile Application Development	02	01
CS 454	Thesis / Project	00	06
	TOTAL	**10**	**08**

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.

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, controlled distribution and utilization.

The department has 25 full-time faculty members. Several faculty members have won prestigious awards for their teaching and research work.

Our 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 services. Besides normal academic activities, the department's faculty and students are involved in research and development activities in collaboration with industries.

Our undergraduate and postgraduate students are drawn from across the country and abroad. Degrees are conferred to the undergraduate students on successful completion of four year degree program. Postgraduate students receive M.E degree after successful completion of 18-months courses and research work. Currently 523 undergraduate, 100 postgraduate and 15 PhD students are enrolled in the department.

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. Our graduate engineers are given top priority in the public and private sectors.

3.2.2 The Faculty

Chairman of the Department

Prof. Dr. Abdul Sattar Larik
Phone: 022-2771351 Ext. 2400

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

Assistant Professors

Mr. Noor Nabi Shaikh
B.E. Pakistan

Mr. Anwer Ahmed Memon (On Study Leave)
M.E. Pakistan

Mr. Anwar Ali Sahito (On Study Leave)
M.E. Pakistan

Mr. Faheemullah Shaikh (On Study Leave)
M.E. Pakistan

Mrs. Mokhi Maan Chang (On Study Leave)
M.E. Pakistan

Mr. Muhammad Rashid Memon
M.E. Pakistan

Dr. Amir Mahmood Soomro
Ph.D. China

Mr. Mansoor Ahmed Soomro
M.E. Pakistan

Mr. Shah Murad Tunio (On Lien)
M.E. Pakistan

Mr. Abdul Jabbar Memon
M.E. Pakistan

Mr. Nayar Hussain Mirjat
M.E. Pakistan

Dr. Pervez Hameed Shaikh
Ph.D. Malaysia

Lectureres

Mr. Aijaz Ahmed Rajper
B.E. Pakistan

Mr. Abdul Hakeem Memon (On Study Leave)
M.E. Pakistan

Mr. Abdul Latif Samoon (On Study Leave)
M.E. Pakistan

Mr. Mahesh Kumar Rathi (On Study Leave)
M.E. Pakistan

Mr. Shoaib Ahmed Khatri
M.E. Pakistan

Mr. Shafi Muhammad Jiskani
M.E. Pakistan

Mr. Zohaib Ahmed Leghari
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.

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

3.3.4 Courses

Course Code	SUBJECT NAME	CREDIT HOURS	
FIRST SEMESTER		Theory	Practical
EL 111	Electrical Workshop Practice	00	01
EL 112	Applied Physics	03	01
CS 104	Introduction to Computing &Programming	03	01
MTH 108	Applied Calculus	03	00
ENG 111	Functional English	03	00
	TOTAL	**12**	**03**

Course Code	SUBJECT NAME	CREDIT HOURS	
SECOND SEMESTER		Theory	Practical
EL 121	Linear Circuit Analysis	03	01
MTH 112	Linear Algebra and Analytical Geometry	03	00
PS 106	Pakistan Studies	02	00
SS 111	Islamic Studies	02	00
ENG 113	Communication Skills	02	00
CE 116	Applied Mechanics	03	01
	TOTAL	**15**	**02**

Course Code	SUBJECT NAME	CREDIT HOURS	
THIRD SEMESTER		Theory	Practical
EL 211	Electronic Devices & Circuits	03	01
EL 212	Digital Logic Design	03	01
EL 213	Electrical Network Analysis	03	01
MTH 212	Differential Equations and Fourier series	03	00
ME 271	Applied Thermodynamics	03	00
	TOTAL	**15**	**03**

Course Code	SUBJECT NAME	CREDIT HOURS	
FOURTH SEMESTER		Theory	Practical
EL 221	Theory of Electromagnetic Field	03	00
EL 222	Electrical Machines	03	01
EL 223	Applied Electronics	03	01
CS - 260	Microprocessor Systems	03	01
MTH 213	Complex Variables & Transforms	03	00
	TOTAL	**15**	**03**

Course Code	SUBJECT NAME	CREDIT HOURS	
FIFTH SEMESTER		Theory	Practical
EL 311	Advanced Electrical Machines	03	01
EL 312	Electrical Power Transmission	03	01
EL 313	Instrumentation & Measurement	03	01
MTH 311	Numerical Analysis & Computer Applications	03	01
ENG 301	Technical Writing	02	00
	TOTAL	**14**	**04**

Course Code	SUBJECT NAME	CREDIT HOURS	
SIXTH SEMESTER		Theory	Practical
EL 321	Power Generation	3	1
EL 325	Linear Control Systems	3	1
TL 380	Communication Systems	3	1
EL 324	Power Economics & Management	3	0
MTH 317	Statistics and Probability	3	0
	TOTAL	**15**	**03**

Course Code	SUBJECT NAME	CREDIT HOURS	
SEVENTH SEMESTER		Theory	Practical
EL 411	Power System Analysis	03	01
EL 412	Electrical Machines Design & Maintenance	03	01
EL 413	High Voltage Engineering	03	01
EL 414	Power Distribution & Utilization	03	01
EL 424	Senior Design Project -I	00	00
	TOTAL	**12**	**04**

Course Code	SUBJECT NAME	CREDIT HOURS	
EIGHT SEMESTER		Theory	Practical
EL 421	Power Electronics	03	01
EL 422	Power System Stability & Control	03	01
EL 423	Power System Protection	03	01
EL 424	Senior Design Project-II	00	06
	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, an amalgamation of what is now called Electrical, Electronics and communication, instrumentation; computer engineering etc. is the largest of all Engineering disciplines. Four well recognized branches of electrical engineering are power, communications, electronics and control systems. In a broader sense, this field covers a range of sub-disciplines including those that deal with power, optoelectronics, 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 in almost any industry. Following are the few companies and institutions in which the Electrical graduates can find job.

1. WAPDA and Transmission Companies
2. Fertilizer Industries
3. Chemical Industries
4. Textile Industries
5. Pharmaceutical
6. Mechanical & Automobile
7. K-Electric
8. Pakistan Atomic Energy Commission
9. Oil & Gas Companies
10. Research Institutes

3.4 DEPARTMENT OF ELECTRONICS ENGINEERING

3.4.1 The Department

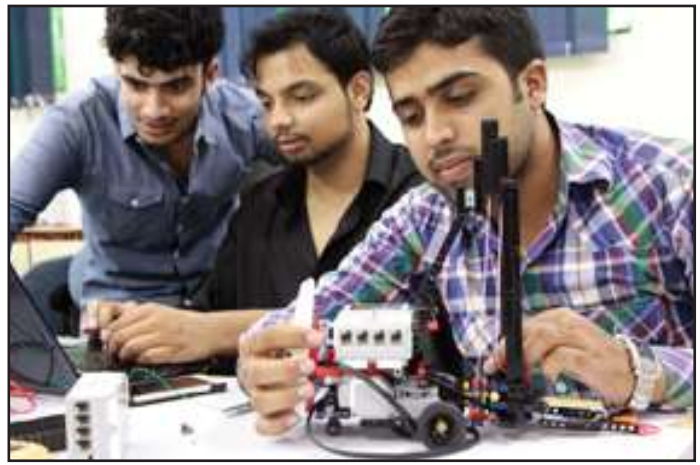
Electronic Engineering is an increasingly important engineering discipline that significantly affects the other disciplines of engineering. It is in great demand in both developed and developing nations. Continual advances in electronic engineering in the areas of materials, processes, devices, and circuits 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 exemplary 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.
- M.E. (Automation and Control) 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 & postgraduate 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.



FACULTY OF ELECTRICAL, ELECTRONICS AND COMPUTER SYSTEM 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, Wired & Wireless Communications, Signal Processing, Industrial Electronics, Integrated Electronics, Artificial Neural Networks, Instrumentation & Control, Embedded System, Telecommunication Systems & Applications, Sequential Circuit Design, Laser & Fiber Optics, Microwave Engineering, Electromagnetic Field, Computer Communication & Networking, FPGA, 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, MATLAB competition. Final year project competition held annually on and around campus. The department has centrally air-conditioned seminar library named after the late Professor M.D. Makhdoom.

The courses taught are regularly updated to keep abreast of new knowledge and development. It is also mandatory for student to undertake a project during their final year, which helps them to develop their practical skills as young design engineers. On behalf of our quality work and intention towards developing industrial interaction a "Top Quality Centralized Instrumentation Center (TQCIC)" is 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 Electronic equipments.

This department has Mentor Graphics Electronic Design Automation (EDA) Laboratory and it has become the only EDA Mentor Graphics Authorized Training Partner (ATP) in Sindh Province.

- This department has good number of faculty professionals to handle EDA tools.
- The Electronic Department has introduced the new course like "FPGA Based System Design", "Embedded System Design & VLSI Design" courses at Bachelor as well as Master level.
- Department frequently arranges the industry oriented seminars/trainings based on job market requirements.
- Department aims at Problem & Project Based Learning (PBL). In order to encourage PBL, many project competitions and exhibitions are organized on regular basis.

3.4.2 Laboratory Facilities

The department is equipped with state-of-the-art laboratories such as:

1. Basic Electronics Laboratory
2. Instrumentation & Control Laboratory
3. Advanced Electronics Laboratory
4. Digital Signal Processing Laboratory
5. Digital Electronics & Microprocessor Laboratory
6. Advanced Computer Applications Laboratory
7. Communication System Laboratory
8. Interactive Electronic Design Automation Laboratory
9. Top Quality Centralized Instrumentation Laboratory-I
10. Top Quality Centralized Instrumentation Laboratory-II
11. Project Laboratory
12. EDA Tools Laboratory
13. PC Repair Shop

3.4.3 The Faculty

Chairperson of the Department

Prof. Dr. Wajiha Shah
Phone: 022-2771334, 0-22-2772250-70 Ext. 4100

Professors

Dr. B.S Chowdhry
Ph.D. United Kingdom

Dr. Wajiha Shah
Ph.D. Austria

Associate Professors

Dr. Imtiaz Hussain Kalwar
Ph.D. United Kingdom

Dr. Tayab Din Memon
Ph.D. Australia

Dr. Wanod Kumar
Ph.D. United Kingdom

Dr. Arbab Nighat Kalhoo
Ph.D. China

Assistant Professors

Dr. Khalil-ur-Rehman Dayo
Ph.D. Pakistan

Ms. Farzana Rauf Abro
M.E. Pakistan

Mr. Tufail Ahmed Waseer
M.E. Pakistan

Ms. Farida Memon
Ph.D Pakistan

Mr. Mehboob Khuwaja (On Study Leave)
M.E. Pakistan

Ms. Attiya Baqai
Ph.D Pakistan

Mr. Irfan Ahmed Halepoto
Ph.D Pakistan

Ms. Shakila Memon
M.E. Pakistan

Ms. Kehkashan Asma (On Study Leave)
M.E. Pakistan

Mr. Kamran Kazi
M.E. Pakistan

Ms. Yasmeen Naz Panhwar
M.E. Pakistan

Ms. Saba Baloch
M.E. Pakistan

Mr. M. Zaigham Abass Shah
M.E. United Kingdom

Mr. Khuhed Memon
M.E. Pakistan

Lecturers

Mr. Qurban Ali Memon
M.E. Pakistan

Mr. Aamir Ali Patoli
M.E. Pakistan

Ms. Sara Qadeer Rajput
M.E. Pakistan

Mr. Mansoor Ali Teevno
B.E. Pakistan

3.4.4 Courses

Course Code	SUBJECT NAME	CREDIT HOURS	
FIRST SEMESTER		Theory	Practical
ENG 101	Functional English	03	00
MTH 102	Applied Calculus	03	00
CS 150	Introduction to Computing	02	01
EL 116	Applied Physics	03	01
SS 107	Professional Ethics	02	00
ES 102	Electronics Workshop	00	01
	TOTAL	**13**	**03**

Course Code	SUBJECT NAME	CREDIT HOURS	
SECOND SEMESTER		Theory	Practical
MTH 112	Linear Algebra & Analytical Geometry	03	00
CS 113	Computer Programming	02	01
ES 112	Basic Electronics	03	01
EL 107	Electrical Circuits	03	01
ENG 102	Communication Skills	02	00
IS 111/SS104	Islamic Studies/Ethics	02	00
	TOTAL	**15**	**03**

Course Code	SUBJECT NAME	CREDIT HOURS	
THIRD SEMESTER		Theory	Practical
ES 203	Electronic Circuit Design	03	01
ES 213	Digital Electronics	03	01
ES 223	Measurements & Instrumentation	02	01
MTH 201	Differential Equations & Fourier Series	03	00
INM 203	Engineering Management	02	00
CS 215	Computer Aided Engineering Design	00	01
	TOTAL	**13**	**04**

Course Code	SUBJECT NAME	CREDIT HOURS	
FOURTH SEMESTER		Theory	Practical
ES 233	Sequential Circuit Design	02	01
ES 243	Electromagnetic Fields	03	00
ES 253	Integrated Electronics	03	01
EL 202	Electrical Machines	02	01
MTH 213	Complex Variables & Transforms	03	00
PS 207	Pakistan Studies	02	00
	TOTAL	**15**	**03**

Course Code	SUBJECT NAME	CREDIT HOURS	
FIFTH SEMESTER		Theory	Practical
ES 304	Signals Processing	03	01
ES 313	Microprocessor & Microcontrollers	03	01
ES 324	Probability & Random Signals	03	00
ES 319	Power Electronics	02	01
MTH 310	Numerical Methods	03	01
	TOTAL	**14**	**04**

Course Code	SUBJECT NAME	CREDIT HOURS	
SIXTH SEMESTER		Theory	Practical
TL 351	Analog & Digital Communication	03	01
ES 353	Control Systems	03	01
ES 363	Digital Instrumentation Systems	02	01
ES 373	FPGA-Based System Design	03	01
ES 393	Laser & Fiber Optics	03	00
	TOTAL	**14**	**04**

Course Code	SUBJECT NAME	CREDIT HOURS	
SEVENTH SEMESTER		Theory	Practical
ES 413	Digital Control Systems	03	01
ES 423	Embedded Systems Design	03	01
ES 433	Digital Signal Processing	03	01
TL 411	Computer Communication & Networking	02	01
ENG 401	Technical Report Writing & Presentation Skills	02	00
ES 449	Electronic Engineering Project-1	00	00
	TOTAL	**13**	**04**

Course Code	SUBJECT NAME	CREDIT HOURS	
EIGHT SEMESTER		Theory	Practical
TL 451	Advanced Communication Systems	03	00
ES 451	Mechatronics Applications	03	00
CS 490	Artificial Intelligence	03	01
ES 499	Electronic Engineering Project -2	00	06
	TOTAL	**09**	**07**

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 programme in Software Engineering, a programme 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 interection.
- How to design large programs to make them readable, maintainable, and efficient.

3.5.2 The Faculty

Chairman of the Department

Dr. Imran Ali Jokhio
Phone: 022-2772255 Ext. 6900

Professor

Dr. Muhammad Akram Shaikh (On Lien)
Ph.D. China

Associate Professors

Prof. Tahseen Hafiz
M.E. Pakistan

Dr. Imran Ali Jokhio
Ph.D. United Kingdom

Dr. Sania Bhatti
Ph.D. United Kingdom

Assistant Professors

Dr. Nasrullah Memon (On Lien)
Ph.D. Canada

Mr. Qasim Ali Arain (On Study Leave)
M.E. Pakistan

Ms. Isma Farah Siddiqui (On Study Leave)
M.E. Pakistan

Mr. Din Muhammad Sangrasi
M.E. Pakistan

Mr. Salahuddin Sadar
M.E. Pakistan

Dr. Shahzad Ahmed Nizamani
Ph.D. United Kingdom

Dr. Mohsin Ali Memon
Ph.D. Japan

Dr. Naeem Ahmed Mahoto
Ph.D. Italy

Ms. Amirita
M.E. Pakistan

Ms. Areej Fatemah
M.E. Pakistan

Lecturers

Mr. Asif Sangrasi (On Study Leave)
M.E. Pakistan

Ms. Anza Qureshi
M.E. Pakistan

Ms. Samita Bai (On Study Leave)
M.E. Pakistan

Mr. Zubair Ahmed Sangi
B.E. Pakistan

Mr. Zahid Hussain Khaskheli
M.E. Pakistan

Mr. S. M. Shehram Shah
M.Sc. United Kingdom

Ms. Anoud Majid (On Study Leave)
M.E. Pakistan

Ms. Hira Nouman
M.E. Pakistan

Ms. Sharmeen Abid
M.E. Pakistan

Ms. Memoona Sami
M.E. Pakistan

Mr. Vijdan Khalique
M.E. Pakistan

Mr. Junaid Ahmed Baloch
M.E. Pakistan

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

3.5.4 Courses

Course Code	SUBJECT NAME	CREDIT HOURS	
FIRST SEMESTER		Theory	Practical
MTH 108	Applied Calculus	03	00
EL 101	Basic Electrical Engineering	03	01
SW 111	Computer Programming	03	01
ENG 111	Functional English	03	00
ES 121	Electronic Engineering	03	01
	TOTAL	**15**	**03**

Course Code	SUBJECT NAME	CREDIT HOURS	
SECOND SEMESTER		Theory	Practical
SW 121	Data Structures & Algorithms	03	01
SW 122	Digital Computer & Logic Design	03	01
MTH 112	Linear Algebra & Analytical Geometry	03	00
PS 106	Pakistan Studies	02	00
SS 111	Islamic Studies / Ethics	02	00
SW 125	Professional Ethics	02	00
	TOTAL	**15**	**02**

Course Code	SUBJECT NAME	CREDIT HOURS	
THIRD SEMESTER		Theory	Practical
SW 215	Software Economics & Management	02	00
SW 211	Operating Systems Concepts	03	01
SW 224	Computer Architecture & Organization	03	00
SW 214	Information Systems	03	00
MTH 212	Differential Equation & Fourier series	03	00
	TOTAL	**14**	**01**

Course Code	SUBJECT NAME	CREDIT HOURS	
FOURTH SEMESTER		Theory	Practical
SW 221	Object Oriented Programming	03	01
SW 222	Database Management & Administration	03	01
SW 223	Operations Research	03	00
SW 212	Microprocessor Technologies	03	01
MTH 217	Laplace Transforms & Discrete Mathematics	03	00
	TOTAL	**15**	**03**

Course Code	SUBJECT NAME	CREDIT HOURS	
FIFTH SEMESTER		Theory	Practical
SW 311	Theory of Automata & Formal Languages	03	00
SW 312	Digital Communication	03	01
SW 313	Human Computer Interaction	03	00
SW 314	Software Requirement Engineering	03	00
SW 315	Mobile Programming	03	01
	TOTAL	**15**	**02**

Course Code	SUBJECT NAME	CREDIT HOURS	
SIXTH SEMESTER		Theory	Practical
SW 321	Computer Networks & Management	03	01
SW 322	Software Project Management	03	01
MTH 309	Statistical Methods & Estimations	03	00
SW 323	Artificial Intelligence Concepts & Techniques	03	01
ENG 319	Technical Report Writing & Presentation Skills	02	00
	TOTAL	**14**	**03**

Course Code	SUBJECT NAME	CREDIT HOURS	
SEVENTH SEMESTER		Theory	Practical
SW 421	Interactive Multimedia Systems & Graphics	03	01
SW 412	Web Technologies	03	01
SW 413	Software Design & Architecture	03	01
SW 422	Computer Vision	03	01
SW 424	Thesis/Project	00	01
	TOTAL	**12**	**04**

Course Code	SUBJECT NAME	CREDIT HOURS	
EIGHT SEMESTER		Theory	Practical
SW 421	Data Warehousing & Mining Techniques	03	01
SW 414	Distributed Computing	03	01
SW 423	Software Testing & Quality Assurance	03	01
SW 424	Thesis/Project	00	06
	TOTAL	**09**	**09**

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 IT departments of large instituations (financial, telecommunication and public sector). Recent employers include, Software Houses, Banks, NADRA, PIA, PTCL, OGDCL, SSCG, WAPDA, SPARCO e.t.c).

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 the high quality Telecom personnel in various specialized areas such as Mobile and Wireless 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. With the emerging growth of 4G/5G mobile broadband the opportunities for Telecom engineers have been further extended.

3.6.2 The Faculty

Chairman of the Department

Dr. Faisal Karim Sheikh
Phone: 022-2772277 Ext. 6000

Meritorious Professor

Dr. Aftab Ahmed Memon (On Lien)
Ph.D. Japan

Professor

Dr. Abdul Waheed Umrani
Ph.D. Singapore

Associate Professor

Dr. Faisal Karim Shaikh
Post Doc. KSA

Assistant Professors

Dr. Abdul Latif Memon
Ph.D. China

Dr. Fahim Yar Khuhawar
Ph.D. Italy

Dr. Badar Munir
Ph.D. China

Ms. Nafeesa Zaki Bohra
M.E. Pakistan

Mr. Naeem Aijaz Yousfani
M.E. Pakistan

Mr. Zulfiqar Ali Arain
M.E. Pakistan

Mr. Imran Ali Qureshi
M.E. Pakistan

Mr. Nasrullah Pirzada (On Study Leave)
M.E. Pakistan

Mr. Syed Mohsin Ali Shah
M.E. Pakistan

Ms. Shanzah Shaikh
M.E. Pakistan

Mr. Sajjad Ali Memon (On Study Leave)
M.E. Pakistan

Mr. Zafi Sherhan Shah (On Study Leave)
M.Sc United Kingdom

Mr. Riaz Ahmed Soomro
M.E. Pakistan

Lecturers

Ms. Saima Hafeez
M.E. Pakistan

Mr. Hyder Bux Mangrio
Pgd. Pakistan

Mr. Shakeel Ahmed Laghari
M.E. Pakistan

Mr. Mehran Memon
M.E. Malaysia

Mr. Faisal Ahmed Memon (On Study Leave)
M.E. Pakistan

Mr. Saadullah Kalwar
B.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
M.E. Pakistan

Mr. Abi Waqas Memon (On Study Leave)
M.E. Pakistan

Mr. Syed Rizwan Ali Shah
B.E. Pakistan

3.6.3 Laboratory Facilities

Keeping in view the industry demands, the department of Telecommunication Engineering has established laboratories accordingly, in order to furnish students with the latest technological advancement and make them able to meet with the market requirements. List of the available laboratories;

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
7. Advanced Computer Laboratory
8. PC Laboratory-II
9. Radio Communication and Transmission Laboratory
10. Digital Signal Processing Laboratory
11. Cellular Communication Laboratory
12. Implement of things Laboratory

3.6.3 Courses

Course Code	SUBJECT NAME	CREDIT HOURS	
FIRST SEMESTER		Theory	Practical
ENG 111	Functional English	03	00
CS104	Introduction to Programing	03	01
MTH 108	Applied Calculus	03	00
EL 115	Applied Physics	03	01
SSS 111	Islamic Studies / Ethics	02	00
PS 106	Pakistan Studies	02	00
	TOTAL	**16**	**02**

Course Code	SUBJECT NAME	CREDIT HOURS	
SECOND SEMESTER		Theory	Practical
ES 112	Basic Electronics	03	01
CS 122	Object Oriented Programming	03	01
TL 111	Introduction to Simulation Tools	00	01
MTH 112	Linear Algebra & Analytical Geometry	03	00
EL 101	Circuit Analysis	03	01
	TOTAL	**12**	**04**

Course Code	SUBJECT NAME	CREDIT HOURS	
THIRD SEMESTER		Theory	Practical
ES 204	Amplifier & Oscillators	03	01
MTH 212	Differential Equation & Fourier Series	03	00
ES 214	Digital Electronics	03	01
EL 216	Electrical Ciruits	03	01
IN 202	Engineering Management	03	00
	TOTAL	**15**	**03**

Course Code	SUBJECT NAME	CREDIT HOURS	
FOURTH SEMESTER		Theory	Practical
MTH213	Complex Variables & Transforms	03	00
TL 201	Electromagnetics	03	00
ES 243	Linear Integrated Circuits & Filters	03	01
ES 254	Microcontroller & Applications	03	01
ES 224	Sequential Circuit Design	02	01
	TOTAL	**15**	**03**

Course Code	SUBJECT NAME	CREDIT HOURS	
FIFTH SEMESTER		Theory	Practical
TL 322	Analog & Digital Communication	03	01
MTH 311	Numerical Analysis & Computer Application	03	01
TL 314	Signal & Systems	03	01
ENG 320	Technical Report Writing & Presentation Skills	02	00
TL 303	Wave Propagation & Antennas	03	01
	TOTAL	**14**	**04**

Course Code	SUBJECT NAME	CREDIT HOURS	
SIXTH SEMESTER		Theory	Practical
TL 333	Computer Communication & Networks	03	01
TL 371	Digital Signal Processing	03	01
TL 363	Microwave Engineering	03	00
ENG 320	Opto-Electronics	03	01
TL 353	Probability & Stochastic Processes	03	00
	TOTAL	**15**	**03**

Course Code	SUBJECT NAME	CREDIT HOURS	
SEVENTH SEMESTER		Theory	Practical
TL 473	Fiber Optics Communications	03	01
TL 412	Satellite Communication	03	00
TL 444	Transmission & Switching Systems	03	01
TL 423	Wireless Communication	03	01
TL 498	Thesis/Project	03	00
	TOTAL	**12**	**03**

Course Code	SUBJECT NAME	CREDIT HOURS	
EIGHT SEMESTER		Theory	Practical
TL 453	Broadband Digital Networks	03	01
TL 483	Mobile Network Planning	03	00
TL 471	Multimedia Systems & Networking	03	01
TL 498	Thesis/Project	00	06
	TOTAL	**09**	**08**

3.6.5 Career Opportunities

Telecommunication engineers work within a number of industries based on: Internet and computing technologies, computer and telephone networks, radio wave transmission & 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.

- **Telecommunication Industries 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 & Gilgit Baltistan, now available throughout Pakistan)
- **WLL Companies**
  - 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.
- **Wireless Telecommunication Vendors in Pakistan**
  - Siemens
  - Huawei
  - ZTE
  - Myson Telecom
  - Combit Telecom
  - People's Logic Telecom
  - Ericsson
- **Satellite TV Channels**
  - 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 Airlines
  - Airblue
  - Air Indus
  - Shaheen Air


FACULTY OF
ENGINEERING

4.1 DEPARTMENT OF CHEMICAL ENGINEERING

4.1.1 The Department

Chemical Engineering mainly concerns with design, manufacture, operation, management and maintenance of an industrial plant or a laboratory involving chemical and biochemical processes. It is a multi-disciplinary field having a significant level of mechanical, electrical, electronic and instrumentation components in addition to process equipment. Chemical engineering has also to deal with bio-chemical, environmental and materials problems. The Bachelor's degree course has been designed accordingly to train the students in all these fields including the basic subjects such as English, Chemistry and more specialized subjects of chemical engineering. Well-equipped and relevant laboratories have been established in the Department for practical training of the students. In addition, industrial tours to chemical and biochemical industries are organized for the students in order to expose them to real plants working conditions.

The Chemical Engineering Department was established in 1970 in the Institute of Chemistry University of Sindh Jamshoro. Prof. Dr. Syed Wadal Shah was the founder of the Department. The Scheme envisaged providing teaching and training facilities at the undergraduate level in the field of Chemical Engineering. After one year, the department was shifted to "Sindh University Engineering College" Jamshoro.

We have established linkage with Brunel University U.K under BC-HEC linkage program (2007-2009). Under this program various activities were carried out that includes the faculty visit to Brunel University, conferences, seminars, workshops & training courses and research on "Waste Management". Through DelPHE research project on Urban Water Demand Management (2008-2010), an international conference on Sustainable Water Management was organized at MUET Jamshoro in September, 2010, which was participated by more than 300 delegates including 28 foreign delegated from USA, UK, Australia, Austria, Germany, The Netherlands, Nepal, India, Indonesia, Malaysia and Bangladesh. The department also organized the professional development training courses on Maintenance Management System (MMS) in 2006, introduction to HYSYS 3.2 for Process Engineers in 2011,2012, A comprehensive introduction to "Computational Fluid Dynamics(CFD)" in 2013.Training course of ANSYS FLUENT® 6.3.26 and GAMBIT® 2.2 softwares 2013.

We have also established Sustainable Development Research Cell (SDRC) in the department, which carry out national and international research program on water, energy and other natural resources. Recently, we have established Water Quality Laboratory, in which we have sophisticated equipment like HPLC and Atomic Absorption, Spectrophotometer and other facilities to conduct water quality analysis tests.

The Department has also secured few international collaboration program to enhance the standard of higher education. Currently, through Pak-US joint Academic and Research Program (2009-2012) the Chemical Engineering of MUET has developed partnership with Institute of Chemical and Environmental Engineering, University of Arizona, USA to conduct research on treatment of ground water by using Iron ore for removal of arsenic.

The first Batch of 31 students graduated in 1974, since then the Department of Chemical Engineering has been producing versatile Chemical Engineers of high caliber who are serving various national and multinational organizations in Pakistan & Overseas to the best of their talents and capabilities. At present nearly 400 students are registered in the degree program of chemical engineering with 90 student intake every year. Very good faculty including 06 Ph.d and 08 Masters is available to inculcate the basic knowledge of chemical and biochemical engineering to the students.

The Chemical Engineering Department also offers a postgraduate course leading either to a Diploma or Master of Engineering (M.E.) degree; the later also includes a dissertation based on research or some other kind of study of a problem or task of practical in nature. The department has also manpower and laboratory facilities to undertake research leading to M.Phil. and Ph.D. degrees. Currently 08 PhD and 47 ME students are enrolled in

postgraduate program & carrying out the research in areas of chemical processing, waste water treatment, bioprocess engineering, industrial pollution, polymers, energy & combustion in collaboration with reputable national & international institutions. The Department has number of research groups working in important areas of chemical engineering with national and international collaboration. These includes Waste Treatment and Management (WTM); Heat Transfer & Combustion (HTC); Water Treatment (WT); Bio Chemical Engineering (BE), and Membrane Technology (MT).

4.1.2 The Faculty

Chairman of the Department

Prof. Dr. Syed Farman Ali Shah
Phone: 022-2771642, 022-2771262 Ext. 4400

Professors

Dr. Syed Farman Ali Shah
Post Doc. USA

Dr. Khadija Qureshi
Post Doc. USA

Dr. Shaheen Aziz Shaikh
Ph.D. Pakistan

Dr. Inamullah Bhatti
Post Doc. USA

Associate Professor

Dr. Abdul Rehman Memon
Ph.D. United Kingdom

Assistant Professors

Mr. Ashfaque Hussain Pirzada
M.E. Pakistan

Dr. Zeenat M. Ali
Ph.D. Pakistan

Dr. Aziza Aftab
Ph.D. Pakistan

Mr. Manzoor Ul Haq Rajput
M.E. Pakistan

Mr. Khan M. Qureshi (On Study Leave)
M.E. Pakistan

Mr. Zulfiqar Ali Bhatti (On Study Leave)
M.E. Pakistan

Mr. Imran Nazir Unar (On Study Leave)
M.E. Pakistan

Mr. Shuaib Shaikh (On Study Leave)
M.E. Pakistan

Lecturers

Mr. Masroor Ahmed Abro (On Study Leave)
M.E. Pakistan

Mr. Zulfiqar Ali Solangi (On Study Leave)
M.E. Pakistan

Ms. Aisha Kousar Effendi
M.E. Pakistan

Mr. Sikander Mustafah Almani
M.E. Pakistan

4.1.3 Laboratory Facilities

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

1. General Chemistry Laboratory
2. Unit Operation I Laboratory
3. Unit Operation II -III Laboratory
4. Heat Transfer Laboratory
5. Fluid Mechanics Laboratory
6. Computer Laboratory
7. Quality Control Laboratory
8. Instrumentation & Control Laboratory
9. Bio Chemical Engineering Laboratory
10. Analytical Chemistry Laboratory
11. Environmental Engineering Laboratory

4.1.4 COURSES

Course Code	SUBJECT NAME	CREDIT HOURS	
FIRST SEMESTER		Theory	Practical
CH 102	Inorganic & Organic Chemistry	03	01
PS 106	Pakistan Studies	02	00
SS 111	Islamic Studies/ Ethics	02	00
MTH 108	Applied Calculus	03	00
CH 105	Basic Chemical Engineering	02	00
INM 111	Engineering Drawing & Graphics	02	01
ME 121	Workshop Practice	00	02
	TOTAL	**14**	**04**

Course Code	SUBJECT NAME	CREDIT HOURS	
SECOND SEMESTER		Theory	Practical
MTH 112	Linear Algebra & Analytical Geometry	03	00
ENG 111	Functional English	03	00
CE 115	Engineering Mechanics	03	00
EL 102	Basic Electrical Technology	03	01
CH 116	Chemical Process Technology	03	00
CH 120	Chemical Process Calculations-I	02	00
	TOTAL	**17**	**01**

Course Code	SUBJECT NAME	CREDIT HOURS	
THIRD SEMESTER		Theory	Practical
CH 202	Physical & Analytical Chemistry	03	00
CH 206	Engineering Economics	02	00
CH 211	Engineering Materials	02	00
CH 216	Chemical Process Calculations-II	03	00
CH 221	Engineering Thermodynamics	03	01
MTH 201	Differential Equations and Fourier Series	03	00
	TOTAL	**16**	**01**

Course Code	SUBJECT NAME	CREDIT HOURS	
FOURTH SEMESTER		Theory	Practical
CH226	Chemical Engineering Thermodynamics	03	00
CS 227	Introduction to Computers and C++ Programming	03	01
MTH 211	Complex Variable and Laplace Transforms	03	00
CH 240	Chemical Engineering Fluid Mechanics-I	03	00
CH 236	Particulate Technology	03	01
	TOTAL	**15**	**02**

Course Code	SUBJECT NAME	CREDIT HOURS	
FIFTH SEMESTER		Theory	Practical
CH 302	Maintenance Engineering & Risk Management	02	00
CH 306	Fuels & Energy	03	01
CH 331	Heat Transfer Operations	03	01
CH 316	Chemical Engineering Fluid Mechanics-II	03	01
CH 321	Mass Transfer	03	01
	TOTAL	**14**	**04**

Course Code	SUBJECT NAME	CREDIT HOURS	
SIXTH SEMESTER		Theory	Practical
CH 326	Chemical Engineering Plant Design	03	00
CH 341	Simultaneous Heat & Mass Transfer	03	01
MTH 301	Numerical Analysis & Computer Applications	03	01
CH 350	Chemical Engineering Kinetics	03	00
CH 335	Quality Control	02	01
	TOTAL	**14**	**03**

Course Code	SUBJECT NAME	CREDIT HOURS	
SEVENTH SEMESTER		Theory	Practical
CH 401	Biochemical Engineering	03	01
CH 406	Transport Phenomena	03	00
CH 411	Instrumentation & Process Control	03	01
CH 416	Petroleum Refinery Engineering	03	00
CH 421	Pollution Control Engineering	03	01
	TOTAL	**15**	**03**

Course Code	SUBJECT NAME	CREDIT HOURS	
EIGHT SEMESTER		Theory	Practical
CH 426	Industrial Management	03	00
CH 450	Chemical Process Design & Simulation	02	01
CH 435	Petrochemicals	03	00
CH 440	Nuclear Engineering	03	00
CH 499	Thesis/ Project	06	00
	TOTAL	**17**	**01**

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.

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 in 1987 introduced first time in Mehran University as compared to other Public/Private sector universities in Pakistan. Our graduates are already serving the reputable 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.

To prepare Industrial Engineering graduates equipped with world class professional competencies capable of conducting scientific research and rendering community services allowing for a sustainable development.

Innovation and leadership in Industrial Engineering and its applications for contributing effectively to the advancement of profession as well as to the advancement of the country.

4.2.2 The Faculty

Chairman of the Department

Prof. Dr. Hussain Bux Marri
Phone: 022-2771247 Ext. 4700

Professors

Dr. Hussain Bux Marri
Post Doc. United Kingdom

Dr. Anwaruddin Tanwari
Ph.D. United Kingdom

Dr. Murlidhar Nebhwani
Ph.D. Pakistan

Dr. Abdul Salam Soomro
Ph.D. Malaysia

Associate Professors

Mr. Aitbar Ali Abbasi
M.E. Pakistan

Dr. Ghulam Yasin Shaikh
Ph.D. Pakistan

Dr. Muhammad Saleh Jumani
Ph.D. United Kingdom

Assistant Professors

Mr. Abdul Qayoom Lakhair
Pgd. Pakistan

Mr. Mukhtiar Ali Korai
Pgd. Pakistan

Mr. Hafiz Karim Bux Indhar
M.E. Pakistan

Dr. Shakeel Ahmed Shaikh
Ph.D. United Kingdom

Lecturers

Mr. Muhammad Ali Khan
Pgd. Pakistan

Ms. Sonia Irshad Mari (On Study Leave)
M.E. Pakistan

Mr. Muhammad Saad Memon (On Study Leave)
B.E. Pakistan

Mr. Ali Arsalan Siddiqui
M.S. United Kingdom

4.2.3 Laboratory Facilities

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

1. Time and Motion Laboratory
2. Precision Laboratory
3. Operation Research Laboratory
4. Computer Aided Engineering Laboratory
5. Fluid Mechanics Laboratory (Civil Engg: Department)
6. Engg. Mechanics Laboratory (Civil Engg: Department)
7. Strength of Materials Laboratory (Civil Engg: Department)
8. Mechanical Engineering Workshop (Mechanical Engg. Department)
9. Electrical Tech: Laboratory (Electrical Engg: Department)
10. Instrumentation & Control Laboratory: (Electrical & Electronics Department)
11. Materials & Process Laboratory: (Metallurgy & Materials Engg: Department)
12. Thermodynamics Laboratory: (Mechanical Engg. Department)

4.2.4 COURSES

Course Code	SUBJECT NAME	CREDIT HOURS	
FIRST SEMESTER		Theory	Practical
MTH 102	Applied Calculus	03	00
SS111/SS104	Islamic Studies/Ethics	02	00
PS106	Pakistan Studies	02	00
INM 101	Industrial Economics and Management	03	00
INM 111	Engineering Drawing & Computer Graphics	03	01
EL 102	Electrical Technology	03	01
	TOTAL	**16**	**02**

Course Code	SUBJECT NAME	CREDIT HOURS	
SECOND SEMESTER		Theory	Practical
MTH 103	Linear Algebra Differential Equations & Analytical Geometry	03	00
INM 121	Basic Business Management	03	00
ENG 101	Functional English	03	00
CE 145	Mechanics of Materials	03	01
INM 131	Manufacturing Processes	03	02
	TOTAL	**15**	**03**

Course Code	SUBJECT NAME	CREDIT HOURS	
THIRD SEMESTER		Theory	Practical
MTIN 220	Materials & Processes	03	01
INM 201	Management Information Systems	03	00
ME 281	Mechanics of Machines	02	01
INM 211	Basic Thermodynamics	03	01
CS 218	Introduction to Com & C++ Programming	03	01
	TOTAL	**14**	**04**

Course Code	SUBJECT NAME	CREDIT HOURS	
FOURTH SEMESTER		Theory	Practical
INM 231	Production Planning and Control	03	00
INM 241	Industrial Probability and Estimations	03	01
INM 251	Managerial Accounting	03	00
INM 261	Basic Machine Design	03	01
CE 260	Fluid Mechanics	03	01
	TOTAL	**15**	**03**

Course Code	SUBJECT NAME	CREDIT HOURS	
FIFTH SEMESTER		Theory	Practical
INM 301	Entrepreneurship	03	00
MTH 336	Numerical Analysis & Com. Application (N.A.C.A)	03	01
INM 311	Basic Operations Research	03	01
INM 321	Manufacturing Strategy	03	00
ES 361	Instrumentation & Control	03	01
	TOTAL	**15**	**03**

Course Code	SUBJECT NAME	CREDIT HOURS	
SIXTH SEMESTER		Theory	Practical
INM 331	Organizational Behavior	03	00
INM 341	Work Study & Methods Engineering	03	01
INM 351	Production Systems Design	03	00
INM 361	Project Management	03	01
INM 371	Environmental Management	02	00
	TOTAL	**14**	**02**

Course Code	SUBJECT NAME	CREDIT HOURS	
SEVENTH SEMESTER		Theory	Practical
INM 401	Human Resources Management	03	00
INM 411	Human Factors Engineering	03	01
INM 421	Advanced Operations Research	03	01
INM 431	Industrial Maintenance and Safety	03	00
INM 441	Supply Chain and Logistical Management	03	00
INM 499	Thesis/Project	00	00
	TOTAL	**15**	**02**

Course Code	SUBJECT NAME	CREDIT HOURS	
EIGHT SEMESTER		Theory	Practical
INM 451	Quality and Reliability Control	03	00
INM 461	Marketing Principles and Practices	03	00
INM 471	Principles of Decision Making	03	00
INM 481	Computer Integrated Manufacturing	03	01
INM 499	Thesis/Project	00	06
	TOTAL	**12**	**07**

4.2.5 Career Opportunities

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

Industrial engineering leads to fascinating careers in industries as diverse as airline operations, automotive manufacturing, and financial services. As an Industrial Engineering graduate, you'll have maximum flexibility to pursue your goals for advancement in management as well as systems design.

Industrial engineering is an expanding profession. They look for new ways to reduce costs and raise productivity, they increasingly will turn to industrial engineers to develop more efficient processes and reduce costs, delays, and waste. This should lead to job growth for these engineers, even in manufacturing industries with slowly growing or declining employment overall. Because their work is similar to that done in management occupations, many industrial engineers leave the occupation to become managers.

Industrial Engineers solve a variety of problems:

- Determining the best location of machines in a factory, based on economic and operation considerations; designing computer-aided process planning systems that flexibly vary the sequence of operations to produce a product.
- Developing a system for controlling the inventory levels of a product in a warehouse.
- Designing automated material handling systems for the movement of parts in a factory.
- Designing computer-integrated manufacturing systems and decision support systems for integrating information and control between manufacturing systems, automated guided vehicles, automated warehouse facilities, and management personnel.
- Designing a new plan for scheduling of production orders in a factory.
- Developing reliability and quality management systems to ensure that a manufactured product is free from defects.
- Developing programs for analyzing human reliability to assess work place safety.
- Designing computer graphics systems to assist operators in the monitoring and control of industrial processes.

4.3 DEPARTMENT OF MECHANICAL ENGINEERING

4.3.1 The Department

Department of Mechanical Engineering was established in 1963. The department of Mechanical Engineering provides engineering education according to the requirements of the industry and involves the application of engineering principles for analysis, design, manufacturing, maintenance and operations of mechanical systems.

Mechanical Engineering Department offers two undergraduate programs of four years duration, leading to the degree of Bachelor of Engineering.

1- Mechanical Engineering Undergraduate Program

2- Mechatronic Engineering Undergraduate Program

4.3.1.1 Mechanical Engineering Undergraduate Program

Mechanical Engineering is one of the popular undergraduate program of Mehran University of Engineering and Technology Jamshoro. It is one of the oldest and diversified engineering fields, affecting almost all aspects of our lives. Fundamental subjects of mechanical engineering include: Engineering Mechanics, Strength of Materials, Instrumentation & control, Thermodynamics, Heat Transfer, Energy Technology, Fluid Machinery, Aerodynamics, Design of Mechanical systems, Manufacturing processes, Engineering Design, Mechatronics, Computer Aided Design and Drafting, Computer Aided Manufacturing, Mechanical Vibrations and Refrigeration/Air Conditioning.

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. Memon Mujeeb-u-ddin Sahrai (On Lein)
Ph.D. United Kingdom

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

Associate Professors

Mr. Rafique Ahmed Nizamani
B.E. Pakistan

Dr. Tanweer Hussain
Ph.D. United Kingdom

Dr. Zeeshan Ali Memon
Ph.D. United Kingdom

Assistant Professors

Mr. Shoukat Ali Memon
B.E. Pakistan

Mr. Ghulam Yasin Mughal
Pgd. 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

Mr. Abdul Ghafoor Memon
M.E. Pakistan

Mr. Imtiaz Ali Memon
M.E. Pakistan

Lecturers

Mr. Javed Rehman Larik
Pgd. Pakistan

Mr. Zain-ul-Abdin
Pgd. 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

4.3.1.4 COURSES

Course Code	SUBJECT NAME	CREDIT HOURS	
FIRST SEMESTER		Theory	Practical
SS 111	Islamic Studies/Ethics	02	00
PS 106	Pakistan Studies	02	00
MTH 108	Applied Calculus	03	00
ME 101	Engineering Drawing & Graphics	02	02
ME 111	Engineering Statistics	03	01
ME 121	Engineering Materials	03	00
	TOTAL	**15**	**03**

Course Code	SUBJECT NAME	CREDIT HOURS	
SECOND SEMESTER		Theory	Practical
EN 101	Functional English	03	00
MTH 113	Linear Algebra, Differential Equations & Analytical Geometry	03	00
ME 131	Engineering Dynamics	03	00
EL102	Electrical Technology	03	01
ME 141	Workshop Practice	00	02
	TOTAL	**12**	**03**

Course Code	SUBJECT NAME	CREDIT HOURS	
THIRD SEMESTER		Theory	Practical
MTH 213	Complex Variable & Transforms	03	00
ME 201	Strength of Material-I	03	01
ME 211	Mechanics of Machine-I	02	00
ME 221	Thermodynamics-I	03	01
ES 281	Basic Electronics	03	01
	TOTAL	**14**	**03**

Course Code	SUBJECT NAME	CREDIT HOURS	
FOURTH SEMESTER		Theory	Practical
CS 225	Introduction to Computer & C++Programming	03	01
ME 231	Strength of Material-II	03	00
ME 241	Thermodynamics-II	03	01
ME 251	Fluid Mechanics-I	03	01
ME 261	Mechanics of Machine-II	02	01
	TOTAL	**14**	**04**

Course Code	SUBJECT NAME	CREDIT HOURS	
FIFTH SEMESTER		Theory	Practical
MTH 311	Numerical Analysis & Computer Applications	03	01
ME 301	Heat and Mass Transfer	03	01
ME 311	Applied Aerodynamics	02	01
ME321	Fluid Mechanics-II	03	01
ME 331	Machine Design and CAD-I	03	00
	TOTAL	**14**	**04**

Course Code	SUBJECT NAME	CREDIT HOURS	
SIXTH SEMESTER		Theory	Practical
MTH 317	Statistics and Probability	03	00
ME 341	Instrumentation and Control	02	01
ME 351	Machine Design and CAD-II	03	01
ME 371	Heating, Ventilation and Air-conditioning.	03	01
ME 381	Mechanical Vibrations	03	01
	TOTAL	**14**	**04**

Course Code	SUBJECT NAME	CREDIT HOURS	
SEVENTH SEMESTER		Theory	Practical
ME 401	Industrial Economics and Management	02	00
ME 411	Automobile Engineering	02	01
ME 421	Mechatronics	03	01
ME 431	Manufacturing Processes-I	02	01
ME 441	Thermal Power Plants	03	01
EE 425	Health, Safety and Environment	02	00
	TOTAL	**14**	**04**

Course Code	SUBJECT NAME	CREDIT HOURS	
EIGHT SEMESTER		Theory	Practical
ME 451	Renewable and Emerging Energy Technologies	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	00	06
	TOTAL	**10**	**08**

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 rate of expansion in industrial sector, the employment potential for mechanical engineers has increased manifold.

These engineers are employed in a number of companies, organization, and industries, e.g. automobile, manufacturing process plants, renewable energy technologies, automation technologies, oil refineries, technical wings of armed forces, marine engineering departments, space research organization, electronics, etc. Professionals with rich managerial and technical experience could find job opportunities in administrative and managerial positions in public as well as private sector industries.

They can offer their expertise in teaching and innovative research institutes. In addition, these high valued human resources can be profoundly progressive in sales, marketing, and consultancy pursuits. Several government departments including telecommunication, defense, and Pakistan Works Department (PWD) employ mechanical engineers to cater their technical needs.

4.3.2.1 MECHATRONIC ENGINEERING UNDERGRADUATE PROGRAM

The Mechatronic Engineering undergraduate program is administrated 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: +92-022- 2771275,+92-22772250-70 (Ext: 2300)

A- DEDICATED FACULTY

Professor

Dr. Jawaid Daudpoto
Ph.D. United Kingdom

Associate Professor

Mr. Jameel H. Khaliqdina
M.E. Pakistan

Assistant Professor

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

Associate Professors

Dr. Tanweer Hussain
Ph.D. United Kingdom

Dr. Zeeshan Ali Memon
Ph.D. United Kingdom

Dr. Imtiaz Hussain Kalwar
Ph.D. United Kingdom

Assistant Professors

Mr. Shoukat Ali Memon
B.E. Pakistan

Mr. Ghulam Yasin Mughal
PGD. 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

Mr. Abdul Ghafoor Memon
M.E. 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. 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

4.3.2.4 Laboratory Facilities

Following lab facilities are available to students of Mechatronics Engineering.

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

4.3.2.4 COURSES

Course Code	SUBJECT NAME	CREDIT HOURS	
FIRST SEMESTER		Theory	Practical
MTH102	Applied Calculus	03	00
EN101	Functional English	03	00
EL117	Applied Physics	02	00
CS191	Computer Programming	02	02
ME106	Engineering Statics	03	01
ME116	Engineering Materials	02	00
	TOTAL	**15**	**03**

Course Code	SUBJECT NAME	CREDIT HOURS	
SECOND SEMESTER		Theory	Practical
ME126	Engineering Drawing and Computer Graphics	02	02
IS111/ SS104	Islamic Studies / Ethics	02	00
PS106	Pakistan Studies	02	00
MTH112	Linear Algebra and Analytical Geometry	03	00
EL125	Linear Circuit Analysis	02	01
ME136	Fluid Mechanics	02	01
ME146	Workshop Practice	00	01
	TOTAL	**13**	**05**

Course Code	SUBJECT NAME	CREDIT HOURS	
THIRD SEMESTER		Theory	Practical
ME206	Mechanics of Materials	02	01
MTE201	Actuating Systems	03	01
ME216	Engineering Dynamics	03	00
CS291	Data Structures & Object Oriented Programming	02	01
ES216	Digital Logic Design	02	01
MTH227	Ordinary and Partial Differential Equations	03	00
	TOTAL	**15**	**04**

Course Code	SUBJECT NAME	CREDIT HOURS	
FOURTH SEMESTER		Theory	Practical
MTH217	Laplace Transforms and Discrete Mathematics	03	00
ME226	Fundamentals of Thermal Sciences	03	01
ES246	Electronic Devices and Circuits	03	01
ME236	Mechanics of Machines	03	01
MTE211	Instrumentation and Measurements	03	01
	TOTAL	**15**	**04**

Course Code	SUBJECT NAME	CREDIT HOURS	
FIFTH SEMESTER		Theory	Practical
MTH336	Numerical Analysis and Computer Applications	03	01
ES316	Microcontroller and Embedded Systems	03	01
TL301	Signals and Systems	02	01
ME306	Mechanical Vibrations	03	01
	TOTAL	**11**	**04**

Course Code	SUBJECT NAME	CREDIT HOURS	
SIXTH SEMESTER		Theory	Practical
MTH311	Statistics and Probability	03	01
MTE301	Control Systems	03	01
ME316	Machine Design and CAD / CAM	03	01
EN113	Communication Skills	02	00
EL329	Power Electronics	03	01
	TOTAL	**14**	**04**

Course Code	SUBJECT NAME	CREDIT HOURS	
SEVENTH SEMESTER		Theory	Practical
ME406	Engineering Economics & Project Management	03	01
MTE401	Robotics	03	00
MTE411	Mechatronics System Design	02	01
CS492	Digital Signal & Image Processing	03	01
ME416	Manufacturing Processes	03	01
	TOTAL	**14**	**04**

Course Code	SUBJECT NAME	CREDIT HOURS	
EIGHT SEMESTER		Theory	Practical
CS491	Machine Intelligence	03	01
MTE421	Industrial Automation	02	01
EE425	Safety, Health and Environment	03	00
STD951	Entrepreneurship	02	00
MTE499	Project / Thesis	00	06
	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 off 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, e.t.c

4.4 INSTITUTE OF METALLURGY AND MATERIALS ENGINEERING

4.4.1 The Department

Metallurgy and Materials Engineering is an inter-disciplinary field. Virtually every component of any engineered structure is limited by the properties of the materials chosen for its fabrication. The selection, methods of production, treatment, and finishing of the materials depend on individuals trained in metallurgy and materials engineering. All fields of engineering involve metallic, ceramic, polymeric, or composite materials. Exciting challenges exist today in the development and application of new materials, which range from the new generation of superconductors and ultra-lightweight composites to new magnetic-recording media and sophisticated high-temperature alloys.

The Department of Metallurgy and Materials Engineering offers a four Year Degree Course Titled Bachelor of Engineering in Metallurgy and Materials. The subject Mineral dressing, Materials Thermodynamics, Iron Making Technology, Steel Making Technology, Physical Metallurgy, Inspection & Testing of Materials, Heat treatment and Phase Transformation, Corrosion & Protection, Foundry Engineering, Manufacturing Technology and Engineering Fracture Mechanics form the basis for degree courses. However other related subjects also include in the course to make it versatile and integrable with other fields of Engineering.

Department also offers Master of Engineering (M.E.) in Metallurgy and Materials Engineering which at present is a part time evening program and launched Ph.D. research program in the field of Metallurgy and Materials Engineering.

Sitting squarely in an Engineering Faculty, the Department of Metallurgy and Materials Engineering started focusing on devising innovative, correct solutions to hard problems, whilst ensuring that the solutions execute optimally. A student chapter Mehranian Materials Advantage Chapter (MMAC) has been established in the department to promote the student values and principles in academia as well as in industry.

4.3.2.2 The Faculty

Chairman of the Department

Prof. Dr. Muhammad Moazam Baloch
Phone: 022-2771425

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

Lecturers

Mr. Muhammad Wasim Akhtar (On Study Leave)
M.E. Pakistan

Mr. Umair Aftab
M.E. Pakistan

Mr. Shafique Ahmed
Pgd. Pakistan

4.4.3 Laboratory Facilities

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

1. Heat Treatment Lab
2. Material Testing Lab
3. Advanced Characterization Lab
4. Sand Testing Lab
5. Fabrication Lab
6. Metallography Lab
7. Electroplating Lab
8. Nano Materials Lab
9. Computer and Simulation Lab

4.4.4 COURSES

Course Code	SUBJECT NAME	CREDIT HOURS	
FIRST SEMESTER		Theory	Practical
MTH 102	Applied Calculus	03	00
IS111/SS104	Islamic studies / Ethics (For Non-Muslims)	02	00
PS 106	Pakistan studies	02	00
MT 111	Introduction to Engineering Materials	03	00
CS115	Introduction to Computing	02	01
MT 112	Applied Chemistry	02	01
	TOTAL	**14**	**02**

Course Code	SUBJECT NAME	CREDIT HOURS	
SECOND SEMESTER		Theory	Practical
EN 101	Functional English	03	00
MTH 103	Linear Algebra Differential Equation Analytical Geometry	03	00
MT 125	Engineering Drawing & Graphics	02	01
MT 123	Applied Physics	02	01
MT 124	Mineral Dressing	02	01
ME 176	Work shop & practice	00	02
	TOTAL	**12**	**05**

Course Code	SUBJECT NAME	CREDIT HOURS	
THIRD SEMESTER		Theory	Practical
EN 201	Communication Skills	02	00
MT 211	Fuel Furnaces and Energy Conservation	03	00
ES 291	Instrumentation & Control	03	01
EE 214	Industrial Safety & Environmental Engineering	02	01
MT 213	Materials Thermodynamics & Kinetics	03	00
MT 212	Mechanical Behavior of Materials	02	01
	TOTAL	**15**	**03**

Course Code	SUBJECT NAME	CREDIT HOURS	
FOURTH SEMESTER		Theory	Practical
MT214	Physical Metallurgy-I	02	01
MT215	Iron Making Technology	03	00
MT216	Vacuum Technology	02	00
MT217	Inspection and Testing of Materials	03	01
MT218	Nuclear Metallurgy & Materials	02	00
MTH238	Numerical Methods & Computation	03	01
	TOTAL	**15**	**03**

Course Code	SUBJECT NAME	CREDIT HOURS	
FIFTH SEMESTER		Theory	Practical
MT311	Physical Metallurgy-II	03	01
MT312	Non Ferrous Extractive Metallurgy	03	00
MT313	Manufacturing Technology	03	01
MT314	Engineering Ceramics & Glasses	02	01
ENG303	Business Communication & Report Writing	02	00
	TOTAL	**13**	**03**

Course Code	SUBJECT NAME	CREDIT HOURS	
SIXTH SEMESTER		Theory	Practical
MT315	Foundry Engineering -I	02	01
MT316	Corrosion & Protection	03	01
MT317	Welding & other Joining Process	03	01
MT318	Polymers and Composite Materials	03	00
MTH311	Statistics & Probability	03	00
	TOTAL	**15**	**03**

Course Code	SUBJECT NAME	CREDIT HOURS	
SEVENTH SEMESTER		Theory	Practical
MT411	Foundry Engineering -II	02	01
MT412	Steel Making Technology	03	00
MT413	Powder Metallurgy	02	00
MT414	Heat Treatment Processes	03	01
INM410	Industrial Economics, Management & Entrepreneurship	03	00
------	Project *	--	
	TOTAL	**13**	**02**

Course Code	SUBJECT NAME	CREDIT HOURS	
EIGHT SEMESTER		Theory	Practical
MT415	Fracture Mechanics and Failure Analysis	03	01
MT416	Advanced Materials	03	00
MT417	Design and Selection of Materials	02	00
MT418	Computer Application in Materials Engineering	02	01
MT499	Project	00	06
	TOTAL	**10**	**08**

4.4.5 Career Opportunities

Worldwide Metallurgy and Materials Engineering is one of emerging field. The graduate of this field have lots of opportunities in both public and private sector also they can find vast area of employment in overseas countries. Graduate can serve in all types of material industries including metal, polymer, composite, ceramic and glass industries. These engineer are employed as production, managerial or administrative personals in different industrial sectors like steel industries, Automotive industries, Traditional and Hi-Tech Ceramic Industries, Polymer and composite industries, Oil and Gas Sector as corrosion, welding and NDT engineer (OGDCL, UEP, Mari, PPL, NRL, OMV, British Petroleum etc.), Marine engineering industries, aerospace engineering, Energy and electronic concerned manufacturing firms, Defence industry (Heavy Mechanical complex, Pakistan Ordinance Factory etc.), and lots of other Manufacturing, Quality control and Quality Assurance firms.

Metallurgy and Materials engineers have a wide range of expertise in research and innovation and can serve as highly progressive researcher in different research institutes like PCSIR, KRL, SUPARCO and many other research institutes in and out of Pakistan where they can also utilize their technical and analytical skills for developing new materials and technologies for fulfilling the needs of society.

4.5 DEPARTMENT OF MINING ENGINEERING

4.5.1 The Department

"If it is not Grown, it has to Mine", Mining may well have been the second of humankind's earliest endeavors-granted that agriculture was the first. The two industries ranked together as the primary or basic industries of early civilization.

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 ores, gemstones as well as basic products such as; gravel, limestone, sandstone etc., that are essential for the construction of highways, bridges, power plants, 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 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
Phone: 022-2771391,022-2772260-73 Ext. 4600

Professor

Dr. Abdul Ghani Pathan (On Contact)
Ph.D. United Kingdom

Assistant Professors

Mr. Ahsan Ali Memon
B.E. Pakistan

Mr. Muhammad Yakoob Behan
M.E. Pakistan

Mr. Saeed Ahmed Memon
B.E. Pakistan

Mr. Fahad Irfan Siddiqui (On Study Leave)
M.Sc. Malaysia

Mr. Sikandar Ali Channa
M.E. Pakistan

Mr. Safiullah Memon
M.E. Pakistan

Lecturers

Mr. Agha Shafi Mohd Pathan
B.E. Pakistan

Mr. Munawar Ali Pinjaro (On Study Leave)
M.E. Pakistan

Mr. Muhammad Raheel Memon
M.E. Pakistan

Mr. Sultan Ahmed Khoso
B.E. Pakistan

Mr. Miraj Hyder Soomro
B.E. Pakistan

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	
FIRST SEMESTER		Theory	Practical
MTH102	Applied Calculus	03	00
PS106	Pakistan Studies	02	00
IS111	Islamic Studies / Ethics	02	00
INM111	Engineering Drawing	03	01
ME181	Workshop Practice	00	02
MN101	Mining Engineering Fundamentals	03	01
	TOTAL	**13**	**04**

Course Code	SUBJECT NAME	CREDIT HOURS	
SECOND SEMESTER		Theory	Practical
EN101	Functional English	03	00
MTH111	Linear Algebra &Analytical Geometry	03	00
MN111	Applied Chemistry	03	01
EL102	Electrical Technology	03	01
CE115	Engineering Mechanics	03	01
	TOTAL	**15**	**03**

Course Code	SUBJECT NAME	CREDIT HOURS	
THIRD SEMESTER		Theory	Practical
MTH201	Differential Equations &Fourier Series	03	00
MN211	Mine Surveying-I	03	01
MN201	General Geology	03	01
MN291	Applied Thermodynamics	02	01
CE265	Strength of Materials	03	01
	TOTAL	**14**	**04**

Course Code	SUBJECT NAME	CREDIT HOURS	
FOURTH SEMESTER		Theory	Practical
MN241	Mine Surveying-II	03	01
CE285	Fluids Mechanics	03	01
MN221	Mineralogy &Petrology	02	00
MN231	Mineral Processing-I	03	01
MN251	Coal Technology	03	01
	TOTAL	**14**	**04**

Course Code	SUBJECT NAME	CREDIT HOURS	
FIFTH SEMESTER		Theory	Practical
MTH301	Numerical Analysis &Computer Programming	03	01
MN311	Mineral Processing-II	03	01
MN301	Structural Geology	03	00
MN321	Rock Mechanics	03	01
MN331	Utilization of Industrial Minerals	03	00
	TOTAL	**15**	**03**

Course Code	SUBJECT NAME	CREDIT HOURS	
SIXTH SEMESTER		Theory	Practical
MTH317	Statistics and Probability	03	00
MN341	Principles of Explosive Engineering	03	00
MN371	Mining Laws	03	00
MN351	Mine Ventilation	03	01
MN361	Mine Management	03	00
	TOTAL	**15**	**01**

Course Code	SUBJECT NAME	CREDIT HOURS	
SEVENTH SEMESTER		Theory	Practical
MN401	Strata Control	03	00
MN441	Mineral Exploration Technique & Mine Economics	03	00
MN411	Mine Water &Dewatering Design	03	01
MN421	Planning &Design of Underground Mines	03	01
MN431	Drilling Technology	03	01
	TOTAL	**15**	**03**

Course Code	SUBJECT NAME	CREDIT HOURS	
EIGHT SEMESTER		Theory	Practical
MN451	Computer Application to Mining Industry	03	01
MN471	Mine Rescue &Safety	03	01
MN461	Surface Mine Design &Practice	03	01
MN481	Cement Technology	03	00
MN491	Project / Thesis	00	04
	TOTAL	**12**	**07**

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, Lakhra Coal Development company (LCDC); Pakistan Atomic Energy Commission (PAEC); Pakistan Mineral Development Corporation (PMDC); Oil and Gas Development Corporation Ltd (OGDCL); Quarries of Pakistan Steel mill, and various other private organizations like; coal mines, Cement Industries and other mining and mineral processing related projects.

4.6 INSTITUTE OF PETROLEUM & NATURAL GAS ENGINEERING

4.6.1 The Institute

In view of facts and figures regarding the explored resources of petroleum suggest that the province of Sindh contributes 72% gas and 58% oil in Pakistan's. Display's & important roll in the economic growth and the maintaining of life line of country's development. The exploration and production of these reserves offers broader spectrum challenges and opportunities for the graduates post graduates and PhD to utilize their expertise and skills for the progress, betterment and uplift of the country.

At the very outset the Fuel Engineering Petroleum Department was established in the province of Sindh to provide the graduates an opportunity to serve in the oil and gas industry as Petrolium Engineer. 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 and N-Gas 1996. We are now offering our BE, ME & PHD in petrolium & N-Gas Engineering. We are leading centre of Excellence in Petroleum & N-Gas 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 industry's the most emerging problems. Upon graduating students will be able to understand, frame and solve the most complex of upstream problem 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.

Technicalities and experimental studies carried out under the pioneer ship of our institute includes standards basic methods of research and exploration such like that drilling simulator and natural gas measuring technics which equally meet international standards.

The Institute has its own seminar hall at first floor having 70 persons seating capacity with lastest 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 own centrally air conditioned Seminar 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 and thesis/projects of undergraduate and postgraduates in addition to e-resourses of HEC.

4.6.2 The Faculty

Chairman of the Department

Prof. Dr. Suhail Ahmed Soomro
Phone: 022-2771241, 022-2772250-73 Ext. 4300

Meritorious Professor

Dr. Hafeez-ur-Rahman Memon
Ph.D. United Kingdom

Professor

Dr. Suhail Ahmed Soomro
Ph.D. Pakistan

Assistant Professors

Mr. Allah Dino Samoon
Pgd. Pakistan

Mr. Shahzad Ali Baladi
M.E. Pakistan

Mr. Aftab Ahmed Mahesar
M.E. Pakistan

Mr. Muhammad Khan Memon (On Study Leave)
M.E. Pakistan

Mr. Khalil Rehman Memon
M.E. Malaysia

Mr. Naveed Ahmed Ghirano
M.E. Pakistan

Lecturers

Mr. Mukhtiar Ali Talpur
B.E. Pakistan

Mr. Ubedullah Ansari
M.E. Pakistan

Abdul Qadir Shaikh (On Lein)
Pgd. Pakistan

Mr. Habib U Zaman Memon
Pgd. Pakistan

Mr. Irshad Ali Gopang
M.E. Pakistan

Mr. Faisal Najam Abro
Pgd. Pakistan

Mr. Muhammad Zubair
Pgd. Pakistan

4.6.3 Laboratory Facilities

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

1. Petroleum Refinery Engineering Laboratory
2. Gas Engineering Laboratory
3. Drilling & Reservoir Simulation Laboratory
4. Production Engineering Laboratory
5. Drilling Fluids Laboratory
6. Computer Laboratory
7. General / Oil Testing Laboratory

4.6.4 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, and short courses and to maintain the quality of undergraduate and postgraduate programs of the Institute in the line of international standard.

4.6.5 COURSES

Course Code	SUBJECT NAME	CREDIT HOURS	
FIRST SEMESTER		Theory	Practical
PG-101	Fundamentals of Petroleum Engineering	03	00
PG-111	Applied Chemistry	03	00
MTH-102	Applied Calculus	03	00
SS-111	Islamic Studies / Ethics	02	00
PS-106	Pakistan Studies	02	00
ENG-101	Functional English	03	00
	TOTAL	**16**	**00**

Course Code	SUBJECT NAME	CREDIT HOURS	
SECOND SEMESTER		Theory	Practical
PG-121	Applied Geology	03	01
PG-131	Engineering Drawing & Graphics	02	01
PG-141	Applied Physics	03	01
ENG-111	Communication Skills	02	00
MTH-111	Linear Algebra & Analytical Geometry	03	00
ME-191	Workshop Practice	00	02
	TOTAL	**13**	**05**

Course Code	SUBJECT NAME	CREDIT HOURS	
THIRD SEMESTER		Theory	Practical
PG-201	Stratigraphy & Structural Geology	02	00
CS-831	Computer Programming & Software Application	02	01
EL-215	Introduction to Electrical Engineering	02	01
MTH-223	Differential Equations & Complex Variables	03	00
CE-260	Fluid Mechanics	02	01
ENG-215	Technical Writing & Presentation Skills	02	00
	TOTAL	**13**	**03**

Course Code	SUBJECT NAME	CREDIT HOURS	
FOURTH SEMESTER		Theory	Practical
PG-211	Drilling Engineering-I	03	01
PG-221	Petroleum Geology & Geophysical Exploration	03	01
PG-231	Applied Thermodynamics	02	00
CE-280	Mechanics of Materials	02	01
MTH-224	Applied Statistics	03	00
	TOTAL	**13**	**03**

Course Code	SUBJECT NAME	CREDIT HOURS	
FIFTH SEMESTER		Theory	Practical
PG-301	Petrophysics	02	01
PG-311	Natural Gas Engineering	03	01
PG-321	Organizational Behaviour	03	00
PG-331	Properties of Reservoir Fluids	03	01
PG-341	Drilling Engineering-II	03	01
	TOTAL	**14**	**04**

Course Code	SUBJECT NAME	CREDIT HOURS	
SIXTH SEMESTER		Theory	Practical
PG-351	Well Logging	02	01
PG-361	Reservoir Engineering	03	01
PG-371	Petroleum Refinery Engineering	03	01
PG-381	Environment & Safety Management	03	00
MTH-321	Applied Numerical Methods	02	01
	TOTAL	**13**	**04**

Course Code	SUBJECT NAME	CREDIT HOURS	
SEVENTH SEMESTER		Theory	Practical
PG-401	Well Testing	03	01
PG-411	Petroleum Production Engineering-I	03	01
PG-421	Reservoir Simulation	03	01
PG-431	Instrumentation & Process Control	03	01
PG-441	Project Planning & Management	02	00
	TOTAL	**14**	**04**

Course Code	SUBJECT NAME	CREDIT HOURS	
EIGHT SEMESTER		Theory	Practical
PG-451	Principles of Enhanced Oil Recovery	03	01
PG-461	Petroleum Production Engineering-II	03	01
PG-471	Gas Reservoir Engineering	03	01
PG-481	Petroleum Economics	03	00
PG-491	Project	00	02
	TOTAL	**12**	**05**

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 in Textile Engineering). The aim of the department is to impart students with the knowledge and skills in the field of textile manufacturing and processing as per international standards, so that, after graduation, students could contribute towards the needs, 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. After WTO regulations implementation and increasing global trading competition, the textile industry needed to have highly qualified research oriented and technically skilled personnel, who could improve and optimize the quality and production of textile products. Therefore, the Master of Engineering in Textile Engineering program was also started in 2008.

The curriculum of the B.E. program covers the theory and practical core courses related to various segments of Textile Engineering supplemented with other engineering and allied courses related to natural science, social science and management. Moreover, the curriculum is based on the industry and stakeholders' needs, and is mapped to meet following broad program educational objectives. Our graduates 3-5 years after graduation should be able to:

a) Participate in professional engineering practices with appropriate, consideration for health & safety, environment, legal spacial and cultural aspects.

b) Conduct themselves as responsible professional to complete their tasks/projects.

c) Parsue professional growth through moral and continous learning attitude.

4.7.2 Laboratory Facilities

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

1. Yarn Manufacturing
2. Weaving
3. Textile Chemical Processing
4. Knitting
5. Colour Measuring and Microscopy
6. Textile Composites
7. Textile Testing and Quality Control
8. Nano-Materials
9. Garment Manufacturing

4.7.3 The Faculty

Chairman of the Department

Dr. Mazhar Hussain Peerzada
Phone: 022-2771565 Ext. 6100

Professor

Dr. Rafique Ahmed Jhatial
Ph.D. United Kingdom

Associate Professor

Dr. Mazhar Hussain Peerzada
Ph.D. England

Dr. Awais Khatri
Ph.D. Australia

Dr. Farooq Ahmed
Ph.D. Pakistan

Dr. Zeeshan khatri
Ph.D. Japan

Assistant Professors

Mr. Raj Kumar Khiani
B.S. Pakistan

Dr. Noorullah Soomro
Ph.D. Turkey

Dr. Uzma Syed
Ph.D. United Kingdom

Mr. Raja Fahad Qureshi (On Study Leave)
M.E. Pakistan

Mr. Shamshad Ali Shaikh
Ph.D. South Korea

Ms. Sanam Irum Memon (On Study Leave)
M.E. Pakistan

Mr. Iftikhar Ali Sahito (On Study Leave)
Ph.D. South Korea

Ms. Alvira Ayoub (On Study Leave)
Ph.D. South Korea

Lecturers

Ms. Sadaf Aftab Abbasi (On Study Leave)
M.E. Pakistan

Mr. Abdul Wahab Jatoi (On Study Leave)
M.E. Pakistan

Ms. Rabia Almas Arain (On Study Leave)
M.E. Pakistan

Mr. Naveed Mengal (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

Mr. Abdul Wahab Memon
M.E. Pakistan

Mr. Noor Ahmed Sanbhal (On Study Leave)
M.E. Pakistan

Ms. Anam Memon (On Study Leave)
M.E. Pakistan

4.7.4 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.

4.7.5 COURSES

Course Code	SUBJECT NAME	CREDITS	
FIRST SEMESTER		Theory	Practical
TE111	Introdution of Textile Engineering	03	00
TE112	Applied Chemistry	03	01
ME101	Engineering Drawing	00	02
EL107	Electrical Engineering	02	01
MTH108	Applied Calculas	02	00
SS111	Islamic Studies/Ethics	02	00
PS106	Pakistan Studies	02	00
	TOTAL	**14**	**04**

Course Code	SUBJECT NAME	CREDITS	
SECOND SEMESTER		Theory	Practical
TE121	Textile Raw Materials	03	00
TE122	Textile Mechanics - I	03	01
ES122	Electronics Engineering	03	01
MTH115	Differential Equations & Laplace Transform	02	00
ENG111	Functional English	03	00
ME133	Workshop Practice	00	02
	TOTAL	**14**	**04**

Course Code	SUBJECT NAME	CREDITS	
THIRD SEMESTER		Theory	Practical
TE211	Fiber Science	03	01
TE212	Yarn Manufacturing - I	03	01
TE213	Textile Mechanics - II	02	01
ME296	Applied Thermodynamics	03	01
INM271	Industrial Engineering & Management	03	00
	TOTAL	**14**	**04**

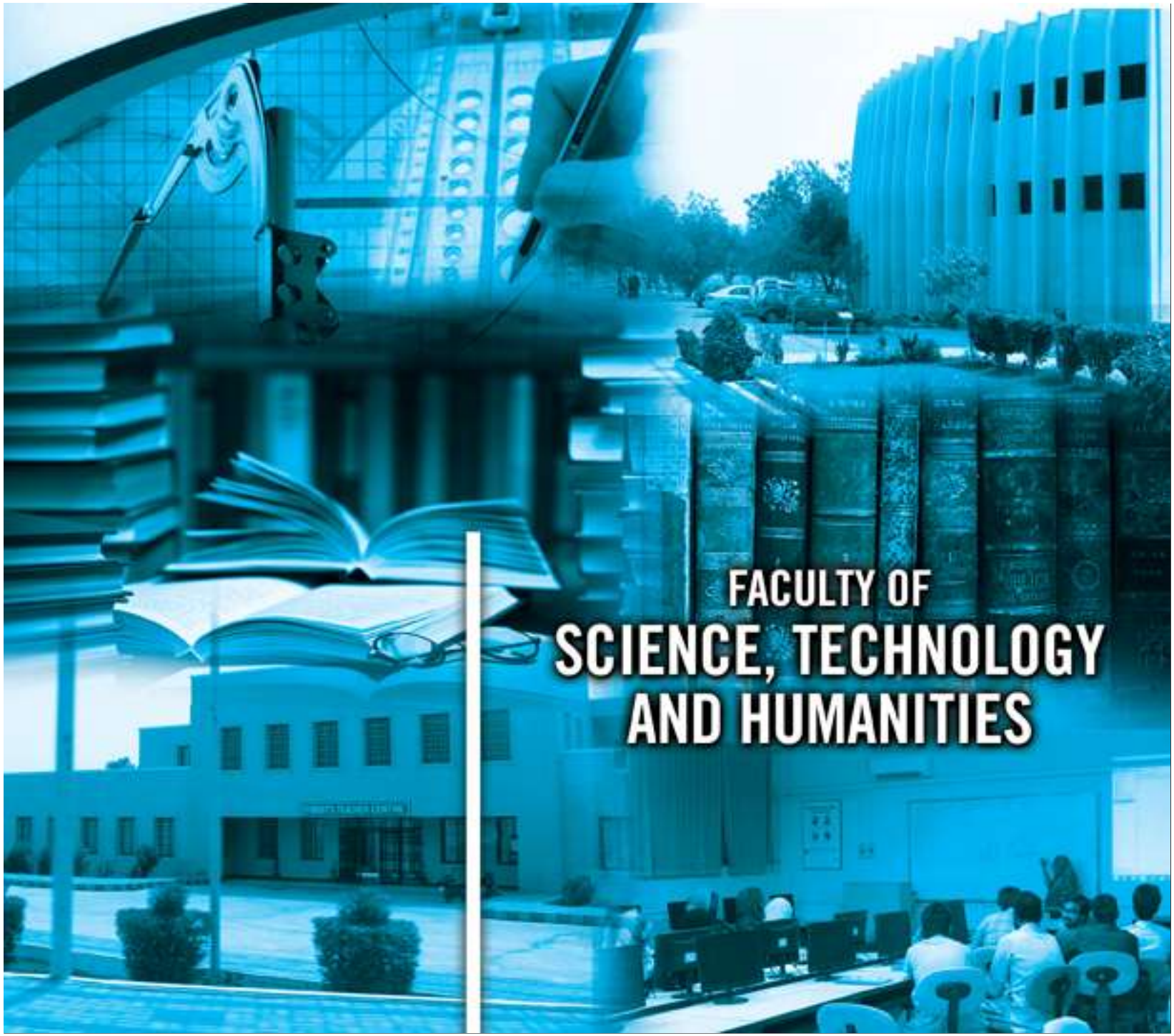
Course Code	SUBJECT NAME	CREDITS	
FOURTH SEMESTER		Theory	Practical
TE221	Synthetic Fiber Manufacturing	02	00
TE222	Yarn Manufacturing - II	03	01
TE223	Fabric Manufacturing - I	03	01
TE224	Textile Pretreatment	03	01
TE225	Textile Machine Design	02	00
MTH220	Numerical Methods	02	00
	TOTAL	**15**	**03**

Course Code	SUBJECT NAME	CREDITS	
FIFTH SEMESTER		Theory	Practical
TE311	Yarn Manufacturing - III	03	01
TE312	Fabric Manufacturing - II	03	01
TE313	Dyestuff Chemistry	03	01
TE314	Textile Dyeing	03	01
ENG317	Communication Skills	02	00
	TOTAL	**14**	**04**

Course Code	SUBJECT NAME	CREDITS	
SIXTH SEMESTER		Theory	Practical
TE321	Fabric Design and Structure	03	01
TE322	Textile Printing	03	01
TE323	Automation & Control Engineering	03	01
CS340	Introduction to Computers & C++ programming	02	01
INM487	Production Management	02	00
	TOTAL	**13**	**04**

Course Code	SUBJECT NAME	CREDITS	
SEVENTH SEMESTER		Theory	Practical
TE411	Yarn Manufacturing - IV	03	01
TE412	Fabric Manufacturing - III	03	01
TE413	Colour Physics	03	01
TE414	Textile Marketing & Merchandising	03	00
MTH401	Statistical Methods	02	00
	TOTAL	**14**	**03**

Course Code	SUBJECT NAME	CREDITS	
EIGHT SEMESTER		Theory	Practical
TE421	Textile Finishing	03	01
TE422	Textile Testing & Quality Control	02	01
TE423	Textile Engineering Utilities & Services	02	01
TE424	Textile Project Planning	02	00
TE425	Environmental Engineering	02	01
TE426	Thesis/Project	00	02
	TOTAL	**11**	**06**


FACULTY OF
SCIENCE, TECHNOLOGY
AND HUMANITIES

5. 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 22 teachers of Mathematics, 03 teachers of Islamic Studies/Ethics, 03 teachers of Pakistan Studies, 03 Teaching Assistants and 08 non-academic staff.

The extensive research work is also being carried out by qualified faculty members of this department. One PhD student has been produced in the field of Finite Element Simulation (2004) and also one Ph.D project has been approved by HEC under National Research Program entitled "Finite Element Modeling of Blood Flow" and a Post-graduate research student is registered for leading to Ph.D degree. 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. 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, four batches of M.Phil in Applied Mathematics are running which comprise of about 40 students.

5.1.2 The Faculty

Chairman of the Department

Prof. Dr. Muhammad Anwar Solangi
Phone: 022-2771565 Ext. 2200

Professors

Prof. Dr. Muhammad Anwar Solangi
Ph.D, Pakistan

Dr. Abdul Razzak Ghanghro
Ph.D Pakistan

Dr. Syed Feroz Shah
Ph.D China

Assistant Professors

Ms. Yasmin Jamali
M..A. Pakistan

Mr. Saifullah Abro
M.Sc, Pakistan

Mr. Ghulam Yaseen Bhutto
M.Sc Pakistan

Dr. Asif Ali Shaikh
Ph.D Pakistan

Mr. Ghulam Abbas Mehar
M.A Pakistan

Mr. Abdul Saleem Memon
M.Phil, Pakistan

Ms. Sania Qureshi
M.Phil, Pakistan

Ms. Zaib-un-Nisa Memon
M.Phil, Pakistan

Mr. Muhammad Urs Jhatial
M.Phil, Pakistan

Lecturers

Ms. Naseem Khalid Memon
M.Sc, Pakistan

Ms. Saima Qadri
M.Phil, Pakistan

Mr. Imran Qasim Memon
M.Sc, Pakistan

Hafiz Abdul Aziz Memon
M.A, Pakistan

Mr. Ayaz Ali Siyal
M.Sc, Pakistan

Mr. Muhammad Mujtaba Shaikh
B.S, Pakistan

Mr. Shafqat Chandio
B.S, Pakistan

Mr. Ali Asghar Sangah
M.Phil, Pakistan

Ms. Fozia Shaikh
B.S, Pakistan

Mr. Hammeer Abro
B.S, Pakistan

Ms. Sara Mahasar
B.S Pakistan

Mr. Kashif Ali Abro
M.Phil, Pakistan

Hafiz Shoaib Ahmed Kalhoro
M.A, Pakistan

Raheem Bux Khokhar (On Study Leave)
M.Sc, Pakistan

5.1.3 Laboratory Facilities

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

i. Computer Lab for Undergraduate Students

ii. Computer Lab for Postgraduate Students

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

Postgraduate lab consists of about ten PCs and mostly remained occupied by students of M.Phil., PhD and sometimes faculty members of the department. This lab plays a substantial role in order to meet research needs of Postgraduate students. Printers installed in both labs are accessed by postgraduate students and teachers to get hard copy of most needed research papers, proceedings and other official documents.

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 British Council and the University Grants Commission (Presently the Higher Education Commission of Pakistan) at Mehran University Jamshoro.

The Directorate was amongst 5 shortlisted institutions in public universities of Pakistan which were considered by English Language Teaching Reforms Project (ELTR) of HEC Pakistan for establishment of National Centre for English Language Teaching and Research.

Later the ELTR Project of the HEC of Pakistan establish the state of the art self access centre at the ELDC MUET. This is first ever SAC in province sindh in the public sector & hub of teachers' training in the province. The SAC offer training on Computer Assisted Language Learning (CALL)& Internet Base Learning (IML). In 2014, PLDC successfully started its MS / M.Phil & P.hD program in field of Applied Linguistics.

Objectives:

- To asses various department of the University in terms of teaching English as a compulsory and foundation course as required by HEC curriculum policy, Pakistan.
- To teach technical & academic writing to the student.
- To health student improve their research skills and undertake projects in the field of Applied Linguistics by offering MS leading to PHD degree program.
- To facilitate Teaching & Non-Teaching Staff of the University in coping with academic, professional & language relative challenges by providing them with the congenial training environment.
- To help them learn & practice different practice techniques for the improvement of their listening, leading, speaking& writing skills in English.
- To help them prepare for standardized Language test such as ILETS & TOEFL.

Directorate offers following courses for undergraduate student:

- Functional English/EAP
- Communication skills for Engineers/EST
- Technical Report writing
- Presentation Skills

5.2.2 The Faculty

Chairman of the Department

Dr. Habibullah Pathan
Phone: 022-2771286 Ext. 6600

Associates Professor

Dr. Habibullah Pathan
Post Doc. USA

Assistant Professors

Dr. Natasha Memon
Ph.D United Kingdom

Ms. Quratul Ain Mirza
M.Phil (ELT): Pakistan

Ms. Sahiba Thaheem
M.Phil (ELT): Pakistan

Mr. Shoukat Ali Lohar
M.Phil (ELT): Pakistan

Lecturers

Mr. Jam Khan Muhammad
M.A (Linguistic) : Pakistan

Ms. Sania Sachal Memon
M.A (Linguistic) : Pakistan

Ms. Sadia Aftab Memon
M.A (Linguistic) : 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 B.Tech. 4-year program 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 is 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. 4-year programe 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


for Theoretical Physics
IAEA
Asian Regional School on
FPGA Design for Scientific Instrumentation
Jointly Organized by
e Abdus Salam International Centre for Theoretical Physics (ICTP), Italy
&
Mehran University of Engineering and Technology, Jamshoro
7-18 December 2015 Jamshoro - Pakistan
One Day Seminar
LITERACY AND
SUSTAINABLE SOCIETIES
MUET
RESEARCH & DEVELOPMENT
AND
CAMPUS LIFE

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 is a broad based journal covering all branches of engineering, science & technology. Mehran University Research Journal of Engineering & Technology is recognized by the Higher Education Commission (HEC) under Category X.

The journal is 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 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 2013 alone, Mehran UET hosted three international conferences including international multi topic conference (IMTIC'13, 3rd in series), International Conference on Wireless Sensor Networks for Developing Countries (WSN4DC'13), and 1st International Coal Conference (ICC'13). In 2014-2015, Mehran UET hosted two international conferences, IMTIC'15 and International Conference on Energy, Environment and Sustainable Development (EESD'14).

In 2015-16 research conferences of national and international repute have been organized at Mehran University of Engineering and technology Jamshoro. Those conferences include, International Conference & Exhibition of Chemical Engineering , National Conference on Environmental Engineering & Management, and 1st International Conference on Dependable Embedded

Professor Dr. Florin POPENTIU VLĂDICESCU UNESCO Department University "Politehnica" of Bucharest is receiving keynote speaker shield from Chairman Higher Education Commission during mega International event IMTIC'15 held at MUET Auditorium

Wireless and Sensing Networks 2015. Taking the lead in engineering sector of Pakistan, Mehran UET is going to arrange 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, the highly reputed in the series was two week "Asian Regional school of FPGA design for scientific applications" where more than 45 scientists and academicians from all around world including Italy, Malasia, Indonesia, India, Pakistan and regional countries attended a two-week workshop jointly organized by the Abdus Salam International Centre for Theoretical Physics (ICTP) Italy (which works under the umbrella of Unesco/IAEA) and the Mehran University of Engineering and Technology.

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. Nanomaterial 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)

B. 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 a bridge between Academia of Mehran UET and the Industry. University is not only to produce the workers for industry, but to conduct a research based on the need of industry and public benefit and to commercialize it. The Gap of years may not be filled within days, but at least we have started our journey from 2013. ORIC helps in making research groups and research Cells within departments/directorates of University and provides awareness on society need and research trends. The ORIC communicates with the concerned organizations/industries to provide internships to the students of various Departments & Institutes of the University during summer/ winter vacations.

ORIC identifies, pursues and facilitates the organizations/industries to recruit the fresh graduates of the Mehran UET on merit. Continuing education, seminars, conferences and workshop is an essential tool to sharpen the skills. ORIC facilitates university administrative staff, academic staff, students and the professionals to build their capacity.

Getting advantage of location; nearby Kotri Industrial Area, Hyderabad Industrial Area and Noori Abad Industrial Area the ORIC signed MOU's with various industries and commercial organization to work together for mutual interests. ORIC of Mehran UET is not limited to the boundaries, but it may excel with the innovation. We encourage our faculty and students to think out of box and come up with new ideas. Building of ORIC is equipped with all modern facilities, having PC lab, conference room, class room and auditorium with audio visual systems.

Prof. Dr. Inamullah Bhatti
Director,
Office of Research Innovation and Commercialization (ORIC)
dir.oric@admin.muet.edu.pk

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 than 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 Mukhtiar Ali Unar
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.

Dr. Khanji Harijan
Director, Postgraduate Studies
Email: director.pgs@admin.muet.edu.pk
Dr. Tanweer Hussain
Co-Director, Postgraduate Studies
Email: tanweer.hussain@faculty.muet.edu.pk

6.8 INSTITUTE OF WATER RESOURCES AND MANAGEMENT (IWREM) / U.S-PAKISTAN CENTER FOR ADVANCE STUDIES IN WATER (US-PCASW)

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 water-related 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:

Prof. Dr. Khan Muhammad Brohi
Director,
Institute of Environmental Engineering & Management
Phone: Off. 022-2772250 Ext. 7300

6.10 MEHRAN UNIVERSITY INSTITUTE OF SCIENCE AND 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.

Dr. Arabella Bhutto
Co-Director
Tel: 022-2772430-31
Fax: 022-2772432
Email: co.director@admin.muet.edu.pk

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 20000sft 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
- Indoor Games
- Shops 04 Nos
- Cafeteria (for Boys & Girls)
- Kitchen
- Debating Society
- Alumni Office
- Graduate Registration
- Space for Bank
- Post Office
- Store
- Internet Café
- Indoor Games

7.2 GYMNASIUM

There were absolutely no sports facilities available in the university except for minor type indoor games which were individually available in the hostels only. Therefore, Mehran University was utilizing the sports facilities owned by Sindh University. But with the passage of time the said facilities were withdrawn by Sindh University for its own increased student population. As Such, Mehran University has developed Sports Complex (Gymnasium) of its own having facilities of the national and international standards, so that maximum number of games could be played, as well as maximum number of of students could get benefit from the facilities. The Gymnasium Hall covers all indoor games as well as general facilities. The Gymnasium Hall has been constructed over the area of 25845sft. However, the Gymnasium Hall is consisting of following facilities:

7.2.1 Ground Floor:

- Offices for Director & other Staff
- Foyer
- Kitchen
- Lounge (02 Nos)
- Play Area
- Committee Room
- Store (02 Nos)
- Computer Room
- Fitness Centre
- Lockers &Changing Rooms

7.2.2 First Floor:

- Audience Area

7.3 Library

The Mehran University of Engineering & Technology Library & Online Information Center contains more than 132000 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 22000 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:

- The MUET Library & Online Information Center offer the internet facility to students and faculty members for their research project, assignments and online lecturers work for which PCs are installed in the Online Information Center of the library.

- MUET Library & Online Information Center provides the facility of Multimedia Center, which include softcopy of books, CD/DVD Writing, Scanning and printing to students, faculty members and researchers. Multimedia 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.

- The MUET library offer the trainings program regarding awareness of HEC digital library resources e-brary, science direct and IEEE to the students of all faculties of University.

- 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.

- The Catalog of books is computerized and accessible the 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.

- The MUET Library & Online Information Center also offered Wi-Fi service in whole Library inside/outside Building.

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

7.4 Student Financial Aid Office (SFAO)

Mehran University of Engineering & Technology, Jamshoro by realizing the continuous rise in educational expenses, took the initiatives for providing financial relief to meritorious and deprived students with the financial assistance /need base scholarship programs. In this regard, the University 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. Hence, the scope of Student Financial Aid Office (SFAO) has been extended, and as per directives of Higher Education Commission (HEC) Islamabad, the Mehran University of Engineering & Technology has also established the “Student Advancement Fund Endowment (SAFE)/ Student Advancement Fund (SEF)” with the collaboration of Promotion of Education in Pakistan (PEF) Foundation, USA.

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). At the moment, SFAO deals more than 50 various scholarships donated by various national and international donors and USAID Pakistan with the collaboration of Higher Education Commission, Islamabad, has allotted 73 scholarships to the students of Mehran University of Engineering & Technology, Jamshoro. Persons to be contacted:

Prof. Dr. Tauha Hussain Ali
Focal Person SFAO

Dr. Aamir Mahmood Soomro
Deputy Focal Person (SFAO)

Mr. Saifullah Hassan
Assistant Director (SFAO)

Phone # +92 22 2772701
Fax # +92 22 2771274

Email: saifullah.memon@admin.muet.edu.pk
sfao@admin.muet.edu.pk

Links for the Scholarship forms:
- Departmental Staff Offices
- MUET Official Website
- Photocopier Shops within the Campus

List of Various Donor and Name of Scholarships

S#	DONOR	NAME OF SCHOLARSHIP
1	Mehran U.E.T, Jamshoro	Internal Merit Scholarship
		Financial Assistance
		Poverty Scholarship (Hardship)
2	Mehran University Teachers Association	MUTA-Scholarship
3	Prime Minister's National ICT R&D Fund	National ICT Scholarship
4	USAID Pakistan with the collaboration of HEC, Islamabad	USAID Pakistan Need & Merit Based Scholarship
5	All District Zakat & Ushar Committees of Sindh	Merit Scholarship
6	Education & Literacy Department Government of Sindh	Endowment Fund Scholarship
7	Pakistan Engineering Congress (PEC), Lahore.	PEC Scholarship
8	Higher Education Commission (HEC), Islamabad.	Provision of Higher Education Opportunities for Student of Baluchistan and Fata
9	Ministry of Religious Affairs	Minority Scholarship
10	Punjab Education Endowment Fund (PEEF), Lahore.	PEEF Scholarship
11	National Bank of Pakistan.	NBP Loan
12	Directorate of Collages Higher and Technical Education Balochistan, Quetta.	Balochistan Scholarship
13	Mr. Tufail and other Sindhi Engineering in America	SEAFA Scholarship
14	Sindhi Association of North America Dr. Feroz Ahmed Memorial Educational (FAME) Scholarships	SANA-FAME Scholarship
15	Institution of Engineering Pakistan, Saudi Arabian Center.	IEP-SAC Scholarship
16	Professional Educational Foundation	PEF Scholarship
17	Shah Hyder Educational Society SANN (SHESS), SANN UC, District Jamshoro	Sain G. M Sayed Need cum Merit Scholarship
18	Sui Sothern Gas Company limited	SSGC Scholarship
19	Kaneez Fatima Welfare Trust, Rawalpindi	DIYA Scholarship
20	Prof. Dr. M. Aslam Uqaili, Vice-Chancellor Mehran U.E.T, Jamshoro.	(Late) Abdul Qayoom Uqaili Need cum Merit Base Scholarship
21	Prof. Dr. Mujeeb-u-ddin Sahrai, Professor, Department of Mechanical Engineering MUET,Jamshoro.	(Late) Taj Mohammad Sahrai Need cum Merit Base Scholarship / Sardar Begum Sehrai Need cum Merit Base Scholarship
22	Mr. Munir Ahmed Shaikh, Director Finance Mehran U.E.T, Jamshoro	(Late) Ghulam Rasool Shaikh Need Cum Merit Base Scholarship / (Late) Mrs. Shafiqua Begum Shaikh Need Cum Merit Base Scholarship
23	Prof. Dr. B.S. Chowdhry, Dean FEES, Mehran U.E.T, Jamshoro.	(Late) Master Kishanchand Chowdhry Need Cum Merit Base Scholarship
24	Prof. Dr. Hafeez-ur-Rahman, Dean, Faculty of Engineering, Mehran U.E.T, Jamshoro	Haji Ahmed Ali Khalifo Memon Diplai Need Cum Merit Base Scholarship
25	Prof. Dr. Bakhshal Khan Lashari, Director, Water Resources Engineering & Management, MUET, Jamshoro	(Late) Mr & Mrs. Jhando Khan Lashari Need Cum Merit Base Scholarship
26	Dr. Dur Muhammad Pathan, Assistant Professor, Department of Mechanical Engineering, MUET, Jamshoro	(Late) Khan Muhammad Pathan Need Cum Merit Base Scholarship
27	With The Collaboration of Promotion of Education In Pakistan (PEP), USA And Higher Education Commission, Islamabad.	Student Advancement & Endowment Fund (SAEF) Scholarship
28	Dr. Ghulam Yaseen Shaikh, Industrial Engineering Department	Mr. & Mrs. Pyaro Khan Shaikh, Need Cum Merit Base Scholarship.
29	Dr. Asma Junejo, Senior Gynecologist, Hyderabad.	Dr. Asma Junejo, Need Cum Merit Scholarship for a Female Student.
30	Prof. Dr. Khadija Qureshi, Department Of Chemical Engineering.	Dr. Khadija Qureshi, Need Cum Merit Scholarship for a Female Student from a Rural Area Of Sindh.
31	Mrs. Anwar Muhammad Memon.	(Late) Mr. Anwar Mohammad Memon, Need Cum Merit Base Scholarship for Civil Engineering Department.
32	Mr. Jawed Akhtar Arbab.	(Late) Muhammad Khan Arbab, Need Cum Merit Scholarship, for Civil Engineering Department.
33	Mr. Mian Abdul Manan, Team Leader (I & C), Karachi.	Mrs. Noshaba Qabool Muhammad, Need Cum Merit Base Scholarship.
34	Mr. Mian Abdul Manan, Team Leader (I & C), Karachi.	Mrs. Sonia Abdul Manan Need Cum Merit Base Scholarship for Electronics Engineering Department.
35	Mr. Ghulam Ali Mirza, from UK.	Engr. Ghulam Ali Mirza Need Cum Merit Base Scholarship.
36	Engr. Eijaz Memon, From Usa.	Muhammad Bachal Need Cum Merit Base Scholarship
37	Prof. Dr. Agha Faisal Habib. Department of Civil Engineering	Agha Habibullah Khan, Need Cum Merit Scholarship
38	Analytical Measuring Systems (Pvt) Ltd, Karachi	Financial Assistance
39	Azad Jammu & Kashmir Council Secretariat, Sector F-5/2, Islamabad.	J & K State Financial Assistance

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
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 1,850 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 and the messing system and cleanliness of hostels supervised by male and female wardens respectively.

The University is not bound to provide hostel accommodation to every student. However, accommodation is provided to the male and female students seeking admission in undergraduate and postgraduate studies at various departments / institutes of the University subject to availability and according to the merit. The interest students can apply through a prescribed Admission form available with the office of the Provost Hostels, at the Student Teacher Center. 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. 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 television, 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 Teachers 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 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 any further information, please contact:
Prof. Ghulam Abbas Mahar
Provost (Hostels),
Telephone No. 022 2109137

Saleem Siddiqui,
Deputy Director (Hostels).
Telephone No. 022 210935

Sheeraz Ali Mangrio,
Assistant Provost Office.
Telephone No. 022 210935

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 156 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 Admin 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
CPC is facilitating each section of MUET with voice and data services. So far ICPC has contributed more than 2000 data points and more than 750 voice points in campus.

Wireless Connectivity
ICPC has deployed the wireless solutions within or outside the departments of the University. Hot Spots in some of the departments have been deployed to allow user access to the internet & intranet services from any location within the vicinity of the department.

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 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.

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 provide 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 is responsible to entertain the students of this University by arranging indoor and outdoor sports activities along with standard equipped fitness center with fully air-conditioned (Boys & Girls) separately .The University also organize and participate in Inter University Sports events in a large numbers. The newly joining students can participate in Inter Hostel, Inter Department, Sports Week.

Sports facilities (Indoor): Basketball, Badminton, Table Tennis, Volleyball, Judo & Karate, Gymnastics, Boxing, Handball, Netball, Throw ball.

Outdoor Playing fields:

Squash Court, Cricket ground, Sand Volleyball /Shooting ball Tennis, Hockey and Football, Basketball.

In addition coaching camp for the training of student players are arranged game wise, the selection of teams in purely consist on merit and performance of the players. The sports material for playing games at gymnasium and hostels for daily practice on behalf of this university will be provided by the directorate of sports. These sports are organized and managed by Directorate of Sports, which is headed by:

Engr. Najeeb-ur-Rehman Channa
Director Sports,
Phone: 0221-771530, Mobile: 0300-9373574

7.10 DIRECTORATE OF INDUSTRIAL LIAISON

A Directorate of Industrial Liaison has been established in the University to facilitate the organization of industrial/ field training for the students of the University. In addition to arranging the practical training for the undergraduate students, the Directorate of Industrial Liaison also performs the following functions.

- To collaborate with the industries for identifying their problems and attempting to solve them through efforts of experienced and qualified professors of the University.
- To arrange exchange of technical staff between the University and industry for the mutual; benefit of the both.
- To guide and supply information to the final year students regarding their possible employment in the industrial/commercial sector.
- To arrange internships during summer and winter vacations for the students.

Further information may be obtained from:
Dr. Muhammad Moazam Baloch
Director,
Industrial Liaison,
Ph: 022-2771425

7.11 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.

Prof. Dr. Khan Muhammad Brohi
Director, Institute of Environmental Engg. & Management,
Advisor Students' Affairs
Phone 0222772753

Prof. Tahseen Hafiz
Chairman, Department of Software Engg.
Deputy Advisor Students' Affairs,

Prof. Ghulam Abbas Mahar
Assistant Professor,
Department of Basic Sciences & Related Studies,
Deputy Advisor Student' Affairs

Prof. Hafiz Arshad Ali Memon
Assistant Professor,
Department of Civil Engineering
Deputy Advisor Students' Affairs

7.12 OTHER DIRECTORATES AND INSTITUTES

There are a number of other Directorates and Institutes, which are not directly involved in teaching or other aspects of the undergraduate program. Nevertheless, they perform important functions and the faculty members are usually shared between these institutes/directorates and the undergraduate programs. Therefore, they are an important linkage for the various programs of the University and are briefly described below.

7.12.1 Directorate of Postgraduate Studies

This Directorate was first established in the University in 1978, to design and organize postgraduate studies in the University. At present, postgraduate programs leading to Masters and PhD degrees in Architecture, Civil Engineering, City & Regional Planning, Chemical Engineering, Construction Management, Energy Systems Engineering, Geotechnical and Highway Engineering, Industrial Engineering & Management, Metallurgy and Materials Engineering, Manufacturing Engineering, Mechanical Engineering, Mining Engineering, Structural Engineering and Textile Engineering are offered by this directorate. A separate prospectus is published for the postgraduate studies and can be obtained from:

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

7.12.2 Institute of Water Resources Engineering 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. and Ph.D. Further information in this regard may be obtained from:

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

7.12.3 Institute of Environmental Engineering and Management

7.12.3.1 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.

7.12.3.2 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.

7.12.3.3 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.

6. For making Water potable, learning methodologies of Water Treatment Plant, water-softening techniques Osmosis techniques shall be procured.

7. 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.

8. 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.

9. 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.

10. 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:

Prof. Dr. Khan Muhammad Brohi
Director,
Institute of Environmental Engineering & Management
Phone: Off. 022-2772250 Ext. 7300

Prof. Dr. Rasool Bux Mahar
Co-Director,
Phone Off. 022-2772250 Ext: 7303

7.12.3.4 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. Abdul Qadeer Khan Rajput
Chief Editor,
Publication Section
Phone: 022-2772274-76

7.12.4 Directorate of Continuing Education

7.12.4.1 Core Objectives

- Arrange short courses to keep Engineers updated with latest developments in their respective Engineering Fields, Management science and Information Technology.
- Organize lectures/seminars/ workshops by speakers within the University and out of the University for Engineers to enhance their skills with the objective to improve their further employment opportunities.
- Offer structures programs in various disciplines for engineers who are unable to obtain formal admission in Masters Degree program but can acquire necessary credit hours by attending such evening/morning programs while in service.
- Develop linkage with different academic & industrial organizations within and outside the country where new developments are taking place.

Further information may be obtained from:
Prof. Dr. Hafeez-ur-Rahman Memon
Director,
Directorate of Continuing Engineering Education
Telephone No. 022-2772280
Fax: 022-2771653
E-mail: hafeez.memon@faculty.muet.edu.pk

7.12.5 Membership of the University with:

1. Association of Commonwealth Universities (ACU) U.K- 1998-99.
2. UNESCO International Centre for Engineering Education (UICEE), Australia-2000.
3. Federation of the Universities of Islamic World (FUIW), Rabat, Morocco -1999.
4. Commonwealth Universities Study Abroad Consortium (CUSAC), U.K 2000-2001.
5. Community of Science (COS) USA-2001.
6. Pakistan National Committee on Irrigation Drainage (PANCID), 2001
7. APQN - Asian Pacific Quality Network - 2007.

7.12 The University has signed Memorandum of Understanding with the following Foreign Universities/ Institutes during the years 2004-2015.

S#	DONOR	DATE OF AGREEMENT	PERIOD
1	University of Nottingham, U.K (Original)	28-04-2005	5 Years
	University of Nottingham, U.K (this revised agreement applies to the University of Nottingham's campuses in the United Kingdom, china & Malaysia)	30-09-2011	5 Years
2	Montan Universitaet, Leoben, Republic of Austria	07-06-2005	5 Years
3	University of Leeds, U.K.	28-06-2005	No time limit
4	Colorado State University, Fort Collins, Colorado, USA	15-08-2005	5 Years
5	Kyushu Institute of Technology, Japan	27-10-2005	5 Years
6	University of Central Florida, USA	23-08-2006	2 Years
7	Middle East Technical University Ankara, Turkey	13-09-2006	No time limit
8	Pakistan Space & Atmosphere Research Commission (SUPARCO), Karachi, Pakistan	27-02-2007	No time limit
9	University of Illinois, at Urbana, Champaign, USA	28-03-2007	3 Years
10	University of Exeter, U.K	31-02-2007	2 Years
11	Aalborg University Esbgerg, Denmark	09-06-2007	No time limit
12	Benazir Bhutto Shaheed Youth Development Program, Works & Services Department, Government of Sindh, Pakistan	28-07-2008	31-12-2008
13	University of Southampton, U.K	06-08-2008	5 Years
14	Asian Institute of Technology (AIT), Bangkok, Thailand	15-08-2008	5 Years
15	University of Bedfordshire, UK	20-11-2008	No time limit
16	Benazir Bhutto Shaheed Youth Development Program, Irrigation & Power Department, Government of Sindh, Pakistan.	12-01-2009	No time limit
17	University of Pittsburgh, Pennsylvania, USA	19-07-2009	2 Years
18	Global University, Beirut, Lebanon	26-10-2009	3 Years
19	Faculty of Engineering, University of Southern Denmark, Denmark	27-10-2009	5 Years
20	City University, London, UK (Original)	07-10-2009	One Year
	City University, London, UK (Original)	05-10-2011	One Year
21	The United States Educational Foundation in Pakistan, Islamabad	11-12-2009	No time limit
22	Charles Sturt University, Australia	18-06-2010	No time limit
23	Isra University, Hyderabad, Sindh, Pakistan	16-08-2010	No time limit
24	Alborg University, Center for Teleinfrastruktur (CTIF), Denmark	05-11-2010	5 Years
25	Pakistan Council of Scientific & Industrial Research, Islamabad	28-01-2011	3 Years
26	Brunel University, West London, UK.	31-03-2011	3 Years
27	Technische Universitat Darmstadt, Germany	20-08-2011	5 Years
28	University of Malaya, Malaysia	20-09-2011	No time limit


MUET, SHAHEED Z. A BHUTTO CAMPUS KHAIRPUR MIRS
MUET,
SHAHEED ZULFIQAR ALI BHUTTO
KHAIRPUR MIR'S CAMPUS

MEHRAN UNIVERSITY ENGINEERING ANDTECHNOLOGY, SHAHEED ZULFIQAR ALI BHUTTO KHAIRPURMIR'S CAMPUS

8.1 INTRODUCTION

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

The college has been further upgraded as Campus of MUET, Jamshoro vide Notification No. Estt(Teach:)/-30 of 2013 dated 19-02-2013 and named as MUET Shaheed Zulifqar 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 six 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 and Petroleum & Natural Gas 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

Mr. Ghulam Sarwar Kandhir
Pro-Vice Chancellor, MUET, Shaheed Z.A Bhutto Campus Khairpur

Mr. Atta Muhammad Phul
Chairman, Civil Engineering Department

Dr. Hassan Ali Khan Durrani
Chairman, Civil Engineering Department

Mr. Shakir Ali Soomro
In-charge Chairman Electrical Engineering Department

Mr. Asad Ali Memon
In-charge Chairman, P & G Engineering Department

Dr. Rafique Ahmed Memon
In-charge Chairman, Basic Sciences & Related Studies

Prof. Dr. Muhammad Yakoob Soomro
Focal Person Students' Financial Aid Office

Prof. Abdul Qadir Chang
Focal Person Industrial Liaison

Dr. Nouman Qadeer Soomro
Focal Person, Software Engineering Department

Mr. Halar Haleem Memon
Focal Person, Electronic Engineering Department

Mr. Nadeem Tunio
Focal Person Examinations

Mr. Ali Nawaz Sanjrani
Focal Person QEC/ISO

Mr. Waqas Ali Channa
Assistant Director Finance

Mr. Abdul Rasheed Phulpoto
Deputy Director ICPC

Mr. Muhammad Memon
Workshop Superintendent

Mr. Rakhiyal Bhutto
Executive Engineer

Mr. Waseem Ahmed Bhatti
Assistant Registrar (MIS)

Mr. Allah Bachayo Memon
Assistant Librarian

Mr.Shakeel Ahmed Mughal
Estate cum Security Officer

Mr. Imtiaz Ali Solangi
Assistant Registrar (Establishment)

Mr. Faiq Gul Memon
Assistant Registrar QEC/In-charge MIS

Mr. Asif Hussain Shah Jillani
Assistant Director Sports

Mr. Nadeem Ahmed Sarhandi
Assistant Registrar Camp Office

Syed Shoaib Ahmed Shah
Accounts Officer

Mr. Ayaz Ahmed 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 courses of Mathematics including Statistics, Computer Science, Pakistan Studies and Islamic Studies/Ethics. The department also participates in offering short courses on various aspects of computer oriented courses and language. The extensive research work is also carried out by the teachers of this department. This will help the student of engineering to further improve their knowledge and qualification in their related studies.

8.3.1.2 The Faculty

Incharge Chairman of the Department:

Dr.Rafique Ahmed Memon
Phone: 022-2771425 Ext. 4500

Professor

Prof. Lal Chand (On Contract)
M.Sc (Maths): Pakistan

Associate Professor

Dr. Rafique Ahmed Memon
Ph.D. (Maths): Pakistan

Assistrant Professor

Mr. Hadi Bux Chijjan
M.Sc (Islamic Studies): Pakistan

Lecturers

Mr. Ashfaque Hussain Soomro
M.A .(English): Pakistan

Mr. Jalil Ahmed Chandio
M.Sc.(Pak Studies): Pakistan

Mr. Kaleemullah Bhatti
M.Sc.(Maths): Pakistan

Mr. Nek Mohammad Katber
M.Sc .(Maths): Pakistan

Mr. Sanaullah Memon
M.Sc .(Maths): Pakistan

Mr. Abdul Majid Indhar
M.Sc.(Maths): Pakistan

Mr. Basheer Ahmed Durs
M.Sc.(Islamic Studies): Pakistan

MS. Qurat-ul-ain Talpur (On Contract)
M.Sc.(English): Pakistan

Mr. Masoom Ali Shahani
M.S. Pakistan

Mr. Nabi Bux Shar (On Contract)
M.Sc.(Maths): 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.

8.3.2.2 Laboratory Facilities

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

1. Strength of Materials & Structure Laboratory
2. Fluid Mechanics & Hydraulics
3. Surveying Laboratory
4. Computer Laboratory
5. Software Laboratory
6. Highways Laboratory
7. Soil Mechanics Laboratory
8. Environmental Engineering Laboratory

8.3.2.3 Career Opportunities

Our graduates can follow careers in many different fields and organizations related with Civil Engineering Projects and they can also choose to set up their own businesses. Typical employment sectors for civil engineers include: 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

Prof. Atta Muhammad Phull
Phone: 0243-715364

Professor

Dr. Abdul Aziz Ansari (On Contact)
Ph.D. Pakistan

Associate Professors

Prof. Atta Muhammad Phull
M.E. Pakistan

Dr. Kanya Lal Khatri
Ph.D. Australia

Assistant Professors

Mr. Syed Naveed Raza Shah (On Study Leave)
M.Sc. United Kingdom

Ms. Rabia Soomro
M.E. Pakistan

Mr. Ghulam Shabir Solangi (On Study Leave)
M.E. Pakistan

Mr. Sajjad Ali Mangi
M.E. Pakistan

Dr. Muhammad Jaffar Memon (On Contract)
Ph.D. China

Lectuers

Mr. Abdul Qayoom Memon (On Study Leave)
M.E. Pakistan

Mr. Syed Shahbaz Ali Shah (On Lein)
B.E. Pakistan

Mr. Aurangzeb Memon (On Lein)
B.E. Pakistan

Mr. Raja Oad
M.E. Pakistan

Mr. Abdul Razzaque Sandhu (On Study Leave)
B.E. Pakistan

Mr. Hemu Karira
B.E. Pakistan

Mr. Dildar Ali Mangnejo
B.E. Pakistan

Mr. Imtiaz Ahmed Memon
B.E. Pakistan

8.3.3 DEPARTMENT OF ELECTRICAL ENGINEERING

8.3.3.1 About The Department

Electrical Engineering is important discipline of engineering which deals with the study and application of Electricity, Electronics, Electromagnetism and various other electrical systems. Electrical Engineering Department of the campus had been established in 2010 and 1st intake of 47 students (10 Batch) and 2nd intake of 56 student (11 Batch) have successfully their 04 years of B.E Electrical Engineering Program which has been accredited by Pakistan Engineering Council as well.

The department offers both the undergraduate and postgraduate programs. The courses of the programs have been drawn from the curriculum guidelines of HEC/PEC and duly approved by the Academic Council of the university. There are 70 seats offered every year for admission in undergraduate program and student across the province are eligible to apply for the program. The department has 15 full time qualified faculty members with vast teaching and research experience.

From academic session July 2014, the department has also been 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 09 Labs have been established and are fully functional.

1. Basic Electrical Engineering Laboratory
2. Electrical Machines Laboratory
3. Computer Laboratory
4. Software Laboratory
5. Power Electronics Laboratory
6. Instrumentation and Control Laboratory
7. Basic/ Applied Electronic Laboratory
8. Power System Laboratory
9. High Voltage Laboratory
10. Communication System Laboratory

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, Atomic Energy Commission, Pakistan International Airlines, Pakistan Steel Mills, PEPCO, OGDCL, PPL,Engro Fertilizers, K-Electric Supply and various other industries/organization hire the 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

Incharge Chairman of the Department

Mr. Shakir Ali Soomro
Phone: 0243-715365 Ext. 7006

Professors

Prof. Agha Zafarullah Pathan (On Contract)
M.Sc. Germany

Prof. Abdul Rashid Shaikh (On Contract)
M.Phil. United Kingdom

Prof. Abdul Qadir Chang (On Contract)
M.E United Kingdom

Assistant Professors

Mr. Nayyar Hussain Mirjat (On Lein)
M.E. Pakistan

Mr. Shakir Ali Soomro
M.E. Pakistan

Mr. Mazhar Ali Lund Baloch (On Study Leave)
M.E. Pakistan

Mr. Nadeem Ahmed Tunio
M.E. Pakistan

Dr. Mohsin Ali Tunio
Ph.D. Malaysia

Lecturers

Mr. M. Rafique Naich (On Study Leave)
M.E. China

Mr. Arsalan Ansari (On Study Leave)
M.E. South Korea

Mr. Ahsanullah Memon
B.E. Pakistan

Mr. Touqeer Ahmed Jumani
B.E. Pakistan

Mr. Sajid Hussain Qazi (On Study Leave)
M.E. Malaysia

Mr. Fida Hussain Memon (On Lein)
B.E. Pakistan

Engr. Irfan Ahmed
M.E. Pakistan

Engr. Kalsoom Baghat
M.E. Pakistan

Engr. Rameez Ahmed
Pg.D. Pakistan

8.3.4 DEPARTMENT OF ELECTRONICS ENGINEERING

8.3.4.1 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 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. Electrical Machines Lab.
4. Instrumentation and Control Lab.
5. Communication System Lab.
6. Digital Electronics Lab
7. Microprocessor systems Lab
8. Power Electronics Lab.
9. Computer Lab.

8.3.4.3 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.

8.3.3.4 The Faculty

Incharge Chairman of theDepartment:

Engr. Halar Haleem Memon
Phone: 0243715365 (Ext. 7006)

Professor

Prof. Abdul Rashid Shaikh (On Contract)
M.Phil. United Kingdom

Assistant Professor

Engr. Nadeem Ahmed Tunio
M.E. Pakistan

Lecturers

Engr. Maroof Panhwar
B.E. Pakistan

Engr. Halar Haleem Memon
M.E. Pakistan

Engr. Touqeer Ahmed Jumani
B.E. Pakistan

Engr. Kalsoom Baghat
M.E. Pakistan

Engr. Rameez Ahmed
Pgd. Pakistan

8.3.5 DEPARTMENT OF MECHANICAL ENGINEERING

8.3.5.1 About The Department

Mechanical Engineering science emerged in the 19th century as a result of development in the field of physics. The field has continually evolved to incorporate advancement in technology, and mechanical engineers today are pursuing development 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 Biomedical engineering specifically with biomechanics, transport phenomena, biomechatronics 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. Mechanicals 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 list 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 life cycle management to design and analyze manufacturing plants, industrial equipment and machinery, heating and cooling systems, transport systems, aircraft, water craft, 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.

1. Engineering Statics Laboratory
2. Fluid Mechanics Laboratory
3. Material Testing Laboratory
4. Mechanics of Machine Laboratory
5. Thermodynamics Laboratory
6. Auto-Mobile Laboratory
7. CAD/CAM Laboratory
8. Wood Workshop
9. Fitting Shop
10. Welding Shop
11. CNC Laboratory
12. Machine Shop

8.3.5.3 Career Opportunities

The breadth of the Mechanical Engineering discipline allows graduate a variety of career options. Their education enable 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, & the teamwork needed to design, market, & 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 - Design, Manufactures & Maintenance of Automobiles.
- Defense Industry - Design Fabrication & Maintenance of Defense Equipment.
- Electronic 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 item, personnel hygiene goods and convenience foods.
- Marine Industry - Design Fabrication and Maintenance of Marine Systems.
- Materials and Metals Industry - Material Specimen Testing, Selection of Materials and Evaluation.
- Rail Industry - Design, Manufacturing and Maintenance of rail System components from trains and tracks to electrical power systems and train control system.

8.3.3.4 The Faculty

Chairman of the Department

Prof. Dr. Hassan Ali Khan Durrani

Professor

Dr. Hassan Ali Khan Durrani
Ph.D. Pakistan

Associate Professors

Dr. Sadiq Ali Shah
Ph.D. United Kingdom

Engr. Manzoor Ahmed Tunio
M.E. Ireland

Assistant Professors

Mr. Muhammad Ali Abro (On Study Leave)
M.E. Pakistan

Mr. Mujeeb Iqbal Soomro (On Study Leave)
M.E. Pakistan

Mr. Aqeel Ahmed Bhutto (On Study Leave)
M.E. Pakistan

Lecturers

Mr. Majid Ali Wasan
M.Sc. Malaysia

Mr. Jahanzeb Soomro
M.E. Pakistan

Mr. Bilawal Ahmed Bhayo
M.Sc . Malaysia

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. Abdul Ahad Noohani
B.E. Pakistan

Mr. Talib Hussain Ghoto
B.E. Pakistan

Mr. Zaheer Ahmed Odho
B.E. Pakistan

Mr. Muhammad Haris Khan
B.E. Pakistan

Mr. Awais Junejo
M.E. Pakistan

Mr. Qadir Nawaz Shaffique
B.E. Pakistan

Mr. Ali Nawaz Sanjrani
B.E. Pakistan

Engr. Danish Ali Memon
B.E. Pakistan

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 2010. Successfully the first batch (K-10) has been produced in 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 curriculum include courses in evaluating oil and gas reserves, design well drilling, completion, workover, 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, 2012 and that is the best forum where we can initiate the SPE activities in this part of Sindh province. The chapter has help to promote and uphold the SPE educational activities and create healthy environment for the young 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 ¤ 1,105,43.00 to the campus each year. OnePetro Subscription grant has been approved by the OnePetro grant program sponsored by the Society of Petroleum Engineers. Our Campus/university OnePetro subscription is active till july, 2016 and all the faculty members, students and researcher have an access to OnePetro free of cost in the premises of campus, one of the industry's largest online technical libraries that allowing researcher to search and download more than 90,000 technical documents from multiple professional societies.

The department also arranges internships during summer vacation to third and final year student with the coordination of oil & gas / E&P companies operating in Pakistan. The SPE/SEMINAR Library available at department where more than 150 title of petroleum text books available for students.

8.3.6.2 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 & workover simulator) and Production Engineering(IPM suits).

The following Laboratories are available at the department:

1. Oil Testing Lab
2. Drilling and Production Lab
3. Reservoir Engineering Lab
4. Gas Engineering Lab
5. Petroleum Software Lab
6. General Computer Lab
7. Core Analyst Laboratory (Under Procurement)

8.3.6.3 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 & gas sectors during the exploration phases, drilling & production.

8.3.6.4 The Faculty

Incharge Chairman of the Department

Engr. Asadullah Memon
Phone: 0243-715365 Ext. 7006

Professor

Dr. M. Yaqub Soomro (On Contract)
Ph.D. United Kingdom

Associate Professors

Engr. Asadullah Memon
M.E. Pakistan

Lecturers

Mr. Imran Ali Memon
M.E. Pakistan

Mr. Arshad Ahmed Lashari
B.E. Pakistan

Mr. Faisal Hussain Memon
M.E. Pakistan

Mr. Bilal Shams Memon (On Study Leave)
M.E. Pakistan

Mr. Adnan Aftab Nizamani (On Study Leave)
Pg.D. Pakistan

Mr. Waseem Mumtaz Kalwar
B.E. Pakistan

Mr. Sundar Sham Jeswani
B.E. Pakistan

Mr. Abdul Smaad Shiakh
B.E. Pakistan

Mr. Zaheer Hussain Zardari
B.E. Pakistan

Mr. Shoiab Ahmed Memon
Pgd. Pakistan

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 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. Digital Image Processing Lab
2. Software Development Lab.
3. Multimedia Lab
4. Basic Electrical Engineering Lab.
5. Basic/ Applied Electronic Lab.
6. Electrical Machines Lab.
7. Instrumentation and Control Lab.
8. Communication System Lab.

8.3.7.3 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. Consulting opportunities for software engineers are expected to increase because businesses need help to manage, upgrade, and customize increasingly complex computer systems.

8.3.7.4 The Faculty

Incharge Chairman of the Department

Dr. Nouman Qadeer Soomro
Phone: 0243-715365 Ext: 7006

Assisant Professor

Dr. Nouman Qadeer Soomro
Ph.D. China

Dr. Mohsin Ali Tunio
PhD. Malaysia

Lecturers

Engr. Irfanullah Memon
B.E. Pakistan

Engr. Munazza Zaib
B.E. Pakistan

Engr. Kalsoom Baghat
M.E. Pakistan

Engr. Ahsanullah Memon
B.E. Pakistan

Engr. Irfan Ahmed
M.E. Pakistan

8.4 ICPC (Information and Communication Processing Centre)

All the Sections of the campus are linked through ICPC Service which provides high-speed communications, e-mail, intercom and internet service.

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

8.7 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

The campus library has a total of approximately 19000 books for all the disciplines which adequately meet the requirement of the offered program. A new building of the Central Library has been constructed and shall be functional by next session.

8.9 Residential accommodation for students & staff has been planned which is comprising of;

The residence facility for student & staff is being provided at Residential Complex (New Land). The two (02) boys' hostels will start function in next session; however, the construction of following has been started and will be completed soon.

1. Boys Hostel -01 No.
2. Girls Hostels -02 No.
3. Teachers /Staff Houses -40 No.
4. Shopping Centre -01 No.
5. Health Centre -01 No.
6. Mosque -01 No.
7. Sports Complex including Gymnasium.

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

Construction work of Auditorium started since December 2015 and expected to be completed by May-2017 with the capacity for approximately 500 people.


RULES AND PROCEDURES
FOR ADMISSION

9. 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 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. However, if any admitted student desires to seek admission in any discipline under Self Financing Scheme, or Special Scheme, 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 Special Scheme, 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 admissions and all payments made to the University shall be forfeited in favour of the University.

9.2 Eligibility for Admission

(i) The candidates who have passed the Higher Secondary School Certificate (HSC/HSSC) Pre-Engineering Examination or equivalent with Physics, Chemistry and Mathematics in Annual Examination 2016 or earlier up to Annual Examination of 2014 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 2016 or earlier up to Annual Examination of 2014 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 2016 or earlier upto Annual Examination 2014 and have secured atleast 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 2014 shall not be eligible for admission.

(ii) Candidates who have passed three years diploma from a recognized Board of Technical Education in Pakistan in an approved discipline (Civil, Electrical, Mechanical, Electronics, Chemical, Glass & Ceramics, Petroleum and Architecture Technology) in Annual Examination 2016 or earlier up to Annual Examination 2014 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 2014 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 would 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, is advertised in the prominent regional, national newspapers as well as on website www.muet.edu.pk. The candidates are required to obtain admission forms from designated TCS centres in various cities and towns on payment of prescribed fees and are asked to deposit them with the same TCS centres within the announced due date. It is mandatory to provide all the required information through online registration system. No any admission form will be entertained without having valid registration number which can be obtained only after getting through online registration system. These admission forms are then sent to the Mehran University where they are scrutinized and the forms of not eligible candidates are rejected. After this scrutiny, all the eligible candidates are sent admit

cards for entry to the Pre-admission Test. Since the admission form is a legal document any wrong information provided there-in, over-writing or tampering in any other way is illegal and may result in rejection of the form outright. The candidates are advised to submit the attested photo-stat copies of all the required certificates as indicated in the admission form.

9.4 Pre-admission Test

In accordance with the policies adopted by the Federal as well as Provincial Government of Sindh all the eligible candidates applying under any category are now required to appear in the Pre-admission Test organized by the University.

Candidates having secured less than 40% Score in the Pre-admission Test shall not be eligible for the admission in this University.

The final merit list of the candidates for each district/category 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 (Science group) (Matriculation):	0.10
B	Higher Secondary School Certificate (Pre-Engg./ General Science /Pre-Medical 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 HSSC and 50% marks in pre-admission test; his/her CPN would be given by:

CPN = 70 X 0.1+60 X 0.3+50 X 0.6 = 7+18+30 = 55 (Percent)

*Adjusted marks means marks secured in HSSC 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 SAT, UET's, 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 will 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 is prepared for each district/category and a number of candidates are called for interview before the Admission Committee. The interviews are held at Mehran University, Jamshoro on the dates as announced in the newspapers and also on Website www.muet.edu.pk. This number of candidates called for interview is usually much higher than the seats available in a given district or category.

The candidates are also required to bring their original certificates for verification particularly the following five certificates.

(i) Marks Sheet of SSC (Matriculation)

(ii) Marks Sheet of HSC Intermediate Pre-Engg. /General Science/ Pre Medical Group (in case change of group from Pre-Medical to Pre-Engg., marks sheet 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)

Those candidates appearing for interview before the Admission Committee are short of few original documents, they must submit their original documents within three days after their interview, failing which their names will be struck off from the merit list of the concerned district/ category.

The names of those candidates, who failed to appear for interview before the admission committee on the scheduled date and time and any intimation is received from them, be kept in pending till the preparation of First list and if fails their names shall be deleted from the merit list of concerned District/Category and they shall not be considered for the admission.

9.6 Distribution of Seats

The distribution of seats for admissions are made strictly according to the rules framed for the purpose by the authorities of the University on population basis among the rural and urban areas for the Hyderabad, Mirpurkhas, Larkana and Sukkur Divisions. 24 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 Mir's will be given on quota basis for the urban and rural areas. However, the award of discipline shall be given on the basis of joint merit in the districts. 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 is 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
	Tando Muhammad Khan	3	3	3	2	2	2	3	1	1	1	1	2	1	1	2	1	2	1	32
	Tando 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	Azad Kashmir	1	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	2
D.4	FATA	-	1	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	2
D.5	UET-Lahore	1	-	-	-	-	-	-	2		-	-	-	-	-	-	-	-	-	3
D.6	UET-Taxila	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
D.7	NWFP- UET, Peshawar	1	-	1	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	1
D.8	Govt. of KPK	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	1
D.9	Govt. of Punjab	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	1
D.10	Northern Area	1	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	2
D.11	GHQ	3	2	2	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	8
D.12	Federal Capital Area	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	1
D.13	Indian Occupied Kashmir	1	2	-	-	1	-	-	-	-	-	-	-	1	-	-	-	-	-	5
	Total	80	79	80	74	78	78	77	53	50	50	51	50	55	50	60	30	35	30	1100

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

Explanation of Abbreviations

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

Table-9.6.2: Distribution of seats for various districts (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	05	41	46
	Shaheed Benazirabad	05	28	33
	Naushehro Feroze	02	31	33
	TOTAL	**25**	**145**	**170**
A.2	Larkana	09	22	31
	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	79
	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, 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)	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 atleast 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 atleast 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 atleast 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 atleast 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 the attached with the admission form	40
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 the Higher 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

Category	Districts	Seats
(D.3)	Candidates belonging to Azad Kashmir, nominated by the Azad Govt. of the State of Jammu & Kashmir, Muzafarabad.	02
(D.4)	Candidates belonging to Federally Administered Tribal Area, nominated by the State and Frontier Region Division, Government of Pakistan, Islamabad.	02
(D.5)	Candidates domiciled in Punjab Province, nominated by the UET Lahore through Education Department, Government of Punjab.	03
(D.6)	Candidate domiciled in Punjab Province, nominated by the UET Taxila through Education Department, Government of Punjab.	01
(D.7)	Candidates domiciled in Khyber Pakhtoon Khowah Province, nominated by UET Peshawar through the Education Department, Government of Khyber Pakhtoon Khowah .	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	**1100**

Table 9.6.4: Distribution of Seats for various Districts and Disciplines at Mehran University SZABCampus 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	Karachi	01	00	01	01	01	00	04
C	**MUET 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
EL Electrical Engineering
SW Software Engineering
ME Mechanical Engineering
PG Petroleum & Natural Gas Engineering
ES Electronic 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	19
	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	Karachi Division	00	00	04
C	Real Sons/Daughters/Brothers/Sisters of Employees of MUET, Khairpur Mirs Campus.	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 Benazir Abad District
- a) Nawabshah Municipality

5 NaushehroFeroze 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 Muhammad 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 areas

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 candidates are required to carefully fill up the option form online one week before their interview. If all priorities are not mentioned by the candidates in the Option Form he/she will not be considered for admission against left over seats. If any student after seeking admission in lower choice of discipline is satisfied with the same, he/she may submit an application within three days from the date of issuance of such list that he/she is satisfied with the discipline awarded to him/her, and his/her discipline may not be changed further. If such application is not received the Admission Committee may change them as per their choice and vacancies and this change shall be binding on them.

9.9 Rectification of mistakes

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

9.10 Admission of candidates who fail to deposit the admission fees within due date.

If any candidate fails to deposit admission fees within due date and his/her seat is allotted to another candidate in merit and at later stage if he/she reports for admission he/she may be considered for admission against the left over seats of his/her District/category as per his/her options before the closing date of admission.

9.11 Additional Marks

The candidates, who have a certificate of Hafiz-e-Quran on printed form from a registered Maderasah and clear the test of Hifz taken in 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 HSSC/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 the HSC/Diploma examination or equivalent, for the purpose of determination of merit in each District/Category. This deduction is applicable whether the HSSC/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 is not getting 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 Cancellation of Admission

The admission of a student admitted before the start of the classes / closing of admission, who remains absent continuously for three weeks from the date of start of classes / date of admission of First Semester of First Year, without obtaining permission from Dean Faculty concerned through the Chairman/Director of concerned Department/Institute shall stand cancelled automatically without issuing any notice thereof.

9.15 Closing of Admissions

The admissions for the session will be made up to the end of FOURTH week from the date of start of 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 admission. The seats fallen vacant will not be filled-up.

9.16 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 should give their intent in writing in the option form. The Mehran University authorities will make the final selection for this purpose.

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 University of Engineering & Technology Peshawar on reciprocal basis. They will be required to pay Rs. 38000/- as educational expenses in addition to admission and other normal user charges at the time to admission to University of Engineering & Technology, Peshawar. Similarly the nominees of University of Engineering & Technology, Peshawar on reciprocal basis will be required to pay Rs.38000/- 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 should give their intent in writing in the option form. The final selection for this purpose will be made by the Mehran University authorities.

9.17 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.

9.18 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.

9.19 Identity Card

The students, after getting admission at the university, will be issued university smart identity cards by the Chairman/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.

9.20 Change of Discipline/Technology

No student shall be allowed to change his/her discipline/technology after the specified period as mentioned in clause 9.15.

9.21 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 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 issue of re-admission letter. Such admissions may be made within four weeks from the date of start of classes of particular session. The application for re-admission shall be submitted through the chairman/chairperson/director of the concerned department/institutes to the Dean of the faculty concerned giving the cogent reasons.

9.22 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.

9.23 Fees

(i) Fees payable at the time of admission

a) Admission fee (per year)	9000.00
b) Tuition fee (per year)	13000.00
c) University caution money deposit (refundable)	2000.00
d) Subject society/PERN fee (once)	1000.00
e) Games fee (per year)	500.00
f) Developmental charges (per year)	1000.00
g) Enrolment fee (once)	1000.00
h) Marks verification fee (once)	500.00
i) Transport charges (per year)	5000.00
Total	**Rs. 33000.00**

ii) Semester Examination fees **Rs. 1500.00**

iii) Hostel fees

a) Admission fee (per year)	2000.00
b) Room deposit (refundable)	1000.00
c) Identity card fee (per year)	100.00
d) Room charges (per year)	6000.00
e) Medical charges (per year)	100.00
f) Sports charges (per year)	200.00
g) Form fee	100.00
h) Utility charges (per year)	1500.00
i) Transport charges (per year)	4000.00
Total:	**Rs. 15000.00**

Note: The foreign students will be charged Rs.36,000.00 per year as room charges. The other fees will be the same as given above.

9.24 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.

In the self financing scheme the admissions will be made on the basis of district quota as per **Table-9.24 (a) and (b)** at Mehran university of Engineering & Technology, Jamshoro and Mehran University of Engineering & Technology SZAB Campus, Khairpur Mir's 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.

9.24.1 Eligibility

The eligible candidates should have:

i. Secured at least 60% marks in the HSC (Pre-Engineering) examination for all disciplines, Intermediate (General Science Group for only four disciplines viz. Computer Systems Engineering, Software Engineering, Electronics Engineering and Telecommunication Engineering) and 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.

9.24.2 Pre-admission Test

As prescribed in Section 9.4 under Regular Scheme.

9.24.3 Interviews

As prescribed in Section 9.5 under Regular Scheme.

9.24.4 Available Seats

Under this scheme the disciplines have been distributed in three categories i-e-category-I Category-II and Category-III as below. The number of seats for each discipline is reserved on district basis and given in table 9.24(a) and 9.24(b).

Category-I

1. Civil Engineering
2. Electrical Engineering
3. Mechanical Engineering
4. Electronics Engineering
5. Civil Engineering (at Khairpur Mir's)
6. Electrical Engineering (at Khairpur Mir's)
7. Mechanical Engineering (at Khairpur Mir's)

Category-II

1. Telecommunication Engineering
2. Petroleum & Natural Gas Engineering
3. Environmental Engineering
4. Chemical Engineering
5. Computer Systems Engineering
6. Software Engineering
7. Mechatronics Engineering
8. Petroleum & Natural Gas Engineering (at Khairpur Mir's)

Category-III

1. Industrial Engineering & Management
2. Textile Engineering
3. Architecture
4. Bio-Medical Engineering

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.

9.24.5 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.800,000- (Rupees Eight hundred thousand only) + Tax* (Total Rs.840000/-) in the form of Demand Draft prepared by any branch of Bank, in favour of 'Director Finance, Mehran University of Engineering & Technology, Jamshoro'. The draft in original be submitted along with the application form.

Category-II

Admission fee of Rs.6,50,000- (Rupees Six hundred fifty thousand only) + Tax* (Total Rs.682500/-) in the form of Demand Draft prepared by any branch of Bank, in favour of 'Director Finance, Mehran University of Engineering & Technology, Jamshoro'. The draft in original be submitted along with the application form.

Category-III

Admission fee of Rs.550,000- (Rupees Five hundred fifty thousand only) + Tax* (Total Rs.577500/-) in the form of Demand Draft prepared by any branch of Bank, in favour of 'Director Finance, Mehran University of Engineering & Technology, Jamshoro'. The draft in original be submitted along with the application form.

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 hundered thousand rupees annually.

Table 9.24 (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
Hyderabad	50	4	4	4	5	5	4	1	4	4	4	4	4	1	2	3*
Jamshoro	21	2	2	2	2	2	2	1	1	1	2	1	1	1	1	-
Matiari	18	2	2	2	1	1	1	1	1	1	2	1	1	1	1	-
T.M. Khan	19	2	2	1	2	2	1	1	1	1	2	1	1	1	1	-
T.Allahyar	17	2	1	1	1	2	2	0	1	1	1	2	1	1	1	-
Thatta	20	2	2	2	3	1	1	1	1	1	2	2	1	0	1	-
Sujawal	19	2	2	2	1	2	2	0	1	1	2	1	1	1	1	-
Badin	40	4	4	4	4	4	4	1	2	2	3	3	2	1	2	-
Dadu	39	4	4	4	3	3	4	1	2	2	4	2	3	1	2	-
Umerkot	24	2	3	2	3	2	3	1	1	1	2	1	1	1	1	-
Mirpurkhas	33	3	2	3	2	2	3	1	3	3	3	2	3	1	2	3*
Tharparkar	33	2	3	2	3	3	2	1	3	3	3	2	3	1	2	-
Sanghar	50	4	4	4	4	5	4	1	4	4	5	4	4	1	2	-
Sukkur	17	1	1	1	2	1	1	0	2	2	1	1	2	1	1	2*
Larkana	19	1	2	2	1	2	2	1	1	1	2	1	1	1	1	2*
S.B. Abad	20	2	2	2	2	2	1	1	1	1	2	1	1	1	1	-
N. Feroze	20	2	2	2	2	2	2	1	1	1	1	1	1	1	1	-
Kambar/Shahdadkot	17	2	1	1	1	1	2	0	2	1	1	2	1	1	1	-
Ghotki	18	1	1	2	1	1	2	0	1	2	2	1	2	1	1	-
Khairpur	27	2	3	3	2	2	2	1	2	2	2	2	2	1	1	-
Jacobabad	17	1	1	2	1	1	2	0	2	1	1	2	1	1	1	-
Kashmore	11	1	1	0	1	1	1	0	0	1	1	1	1	1	1	-
Shikarpur	16	1	1	1	2	2	1	0	2	1	1	1	1	1	1	-
Karachi	13	1	0	1	1	1	1	0	1	2	1	1	1	1	1	-
Total	578+10	50	50	50	50	50	50	15	40	40	50	40	40	23	30	10

*Seats reserved for respective Divisions.

Table 9.24(b) Distribution of Seats for various Districts under Self Financing Scheme at Mehran University of Engineering & Technology SZAB Campus Khairpur Mir's.

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	01	00	00	01
	T.M. Khan	00	01	00	00	01
	T. Allahyar	01	00	00	00	01
	Dadu	01	01	00	01	03
	Jamshoro	00	01	00	00	01
	Thatta	01	00	01	00	02
	Sujawal	01	00	00	00	01
	Badin	02	01	00	00	03
A-4	Mirpurkhas	00	01	00	00	01
	Umerkot	01	00	00	00	01
	Tharparkar	00	01	01	00	02
	Sanghar	01	01	01	01	04
A-5	Karachi	00	00	01	00	01
	Total:	**20**	**20**	**13**	**07**	**60**

9.25 Admissions under Special Scheme

For this scheme one seat in each discipline as mentioned below has been reserved for each district. In case of saving of seats the same will be filled up on overall open merit basis of the province of Sindh. (Foreign candidates may also be considered for admission against this scheme).

Disciplines

1. Metallurgy & Materials Engineering
2. Mining Engineering
3. City & Regional Planning

The basic requirement for admission will be the same as approved for admission under regular scheme. All candidates applying under this scheme must have secured at least **40% Score** in the pre-admission test conducted by the university. Further local candidates will be required to pay admission fee Rs. 300,000/- (Rupees three hundered thousand only) + Tax (Total Rs.315000/-) in the form of Demand Draft prepared by any branch of Bank, in favour of 'Director Finance, Mehran University of Engineering & Technology, Jamshoro.' The draft in original be submitted along with the admission form.

Foreign candidates will be required to pay US $ 5000 for admission at the time of seeking admission under the scheme in addition to other normal fees etc., payable by the students under regular scheme.

9.26 Admissions under University Support Program (USP)

For this scheme 48 seats each in Civil, Electrical and Mechanical Engineering discipline 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. All candidates applying under this scheme must have secured at least **40%** score in the pre-admission test conducted by the university. For this scheme the candidates will be required to pay Rs. 12,000,00/= (Rupees one Million two hundered thousand only once) + Tax (Total Rs. 1260000/-) in the form of Demand Draft prepared by any branch of Bank, in favour 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 alongwith the admission form.

Refund of Self Financing Scheme, Special 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 bank branch. 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 their bank account number with branch name to whom amount to be refunded.

9.27 Admission of Foreign candidates under Self Financing Scheme at Mehran University of Engineering & Technology, Jamshoro.

Seats in 14 disciplines at Jamshoro as described in Section 9.24.4 (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 foreigner students will be required to pay admission fee of US $ 12000 (once only) along with the admission form. They will also be charged the usual fees as payable by other students.

9.28 Admission of Candidates from Azad Jammu & Kashmir under Self Financing Scheme at Mehran University of Engineering & Technology, Jamshoro.

Ten seats in the following discipline 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 9.24.5 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**

9.29 Other Information

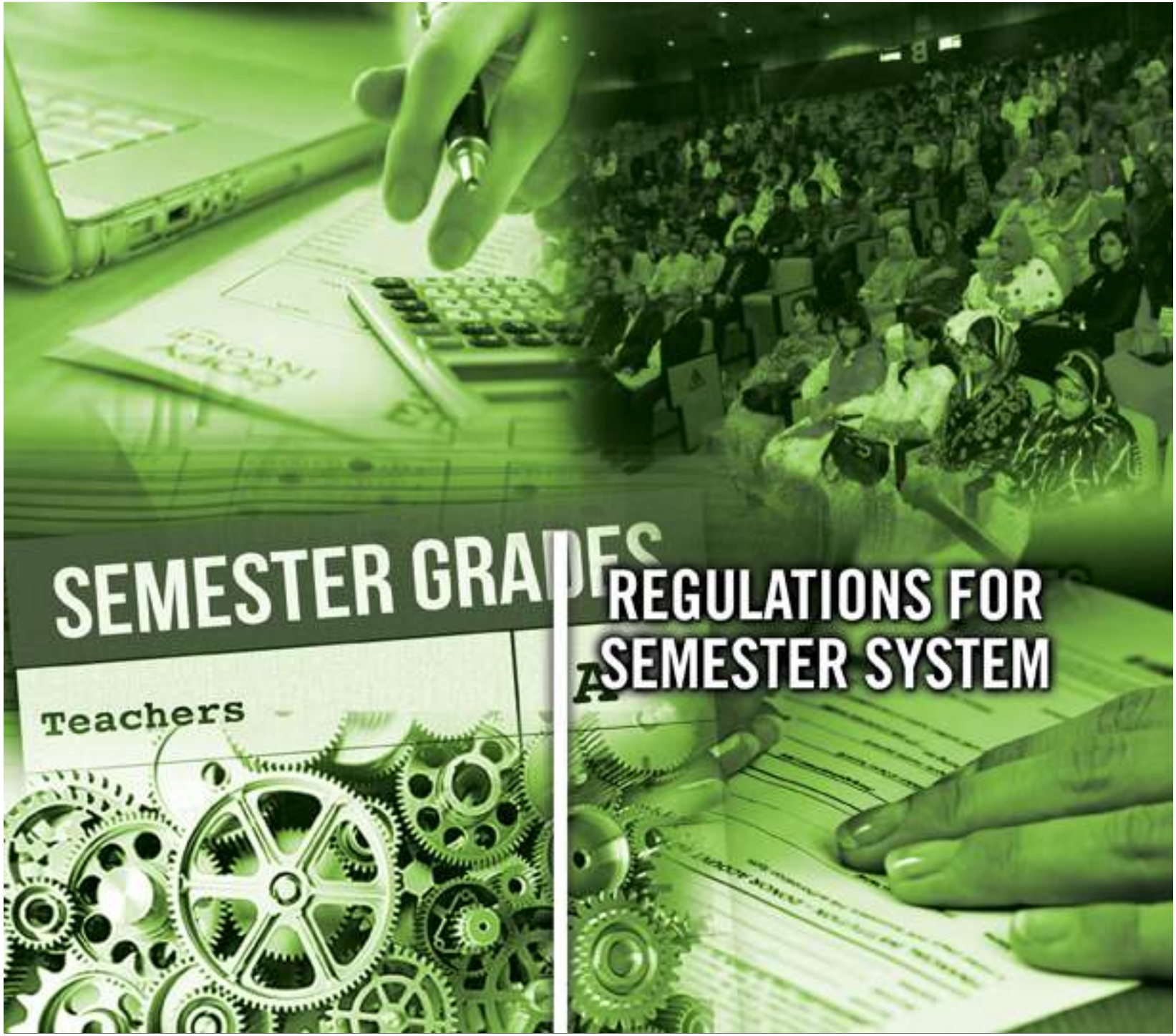
- Admission fee is payable only once in the beginning.
- Candidates once admitted under these schemes shall not be allowed to change the discipline except the seats in the desired disciplines are available.
- University follows the National level Fee Refund Policy at Higher Institutions of Pakistan which is as under :-

% of Tuition fee	Time line for semester
Full 100% fee refund	Upto 7th day of convene of classes
Half 50% fee refund	Upto 15 days 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.

9.30. Migration/Transfer

- Migration is only allowed to and from a 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 year.
- 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.840000/-) to the Mehran University; while foreigner students would be required to pay Rs. 12, 00,000/= (Rupees twelve hundred thousand only) + 5% Tax (Total Rs.1260000/-) as migration fee. The nominees will be required to submit the 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.


SEMESTER GRADES
REGULATIONS FOR
A SEMESTER SYSTEM
Teachers

10. REGULATIONS FOR SEMESTER SYSTEM

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	04 Weeks
vi.	Winter Break	02 Weeks
	TOTAL	**52 WEEKS**

Note:

i. Minimum number of contact hours for a theory subject of 3 CHs per semester is 42.

ii. Minimum number of contact hours for a practical of 1 CH per semester is 42.

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 of marks for 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	80 to 84	40 to 41	80 to 84	40 to 41
B+	3.5	75 to 79	37 to 39	75 to 79	37 to 39
B	3.0	70 to 74	35 to 36	70 to 74	35 to 36
C+	2.5	65 to 69	32 to 34	65 to 69	32 to 34
C	2.0	60 to 64	30 to 31	60 to 64	30 to 31
D+	1.5	55 to 59	27 to 29	55 to 59	27 to 29
D	1.0	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.

(iii) In case External Examiner No.1 is not available on the scheduled date(s) of the examination the Examiner No.2 shall be contacted and called for examination.

(iv) The Chairman/ Director of the Department/Institute or his/her nominee having expertise with related subject shall act as an alternate if External Examiner No. 1 and 2 are not available on the scheduled date(s), however the same alternate assignments be made in case the concerned subject Teacher /Internal Examiner is not available in exceptional case due to some serious problem.

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.

(a) Good character certificate
(b) Photostate copy of Enrolment Card
(c) Attendance Certificate to the effect that the student has achieved minimum prescribed 75% attendance
(d) 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 requirement and filled up examination form and appeared in at least one of the Heads of the Final Semester examination (First 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 of the 2nd Semester of the 1st year and has filled up the examination form and appeared in atleast one of the Heads of the Examinations (Second Semester).

Benefits of the fraction will be given to the student.

(iii) A student will be promoted to the 2nd Semester or the 2nd year (4th Semester) provided he/she has completed minimum attendance requirement or the 3rd Semester, filled up the examination form and appeared in atleast one head of the final Semester examination (Third 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 of the 4th Semester, and has filled up the examination form and appeared in atleast one of the Heads of the Examinations (Fourth Semester).

Benefits of the fraction will be given to the student.

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

(vi) A student will be promoted to the 1st semester of the 4th year (7th Semester) provided he/she has cleared all Heads of First Year secured minimum 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 of the 6th Semester and has filled up the examination form and appeared in atleast one of the Heads of the Examinations (Sixth Semester).

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

(viii) In case of Bachelor of Architecture a student will be promoted to the 1st Semester of the 5th 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 of the 8th Semester and has filled up the examination form and appeared in atleast one of the Heads of the Examinations (Eighth 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 off 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.

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:

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


Discipline
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.

(i) Any one or more of the penalties mentioned in Regulation 10 may be imposed on a student who is guilty of one or more of the above acts/charges.

(j) 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.

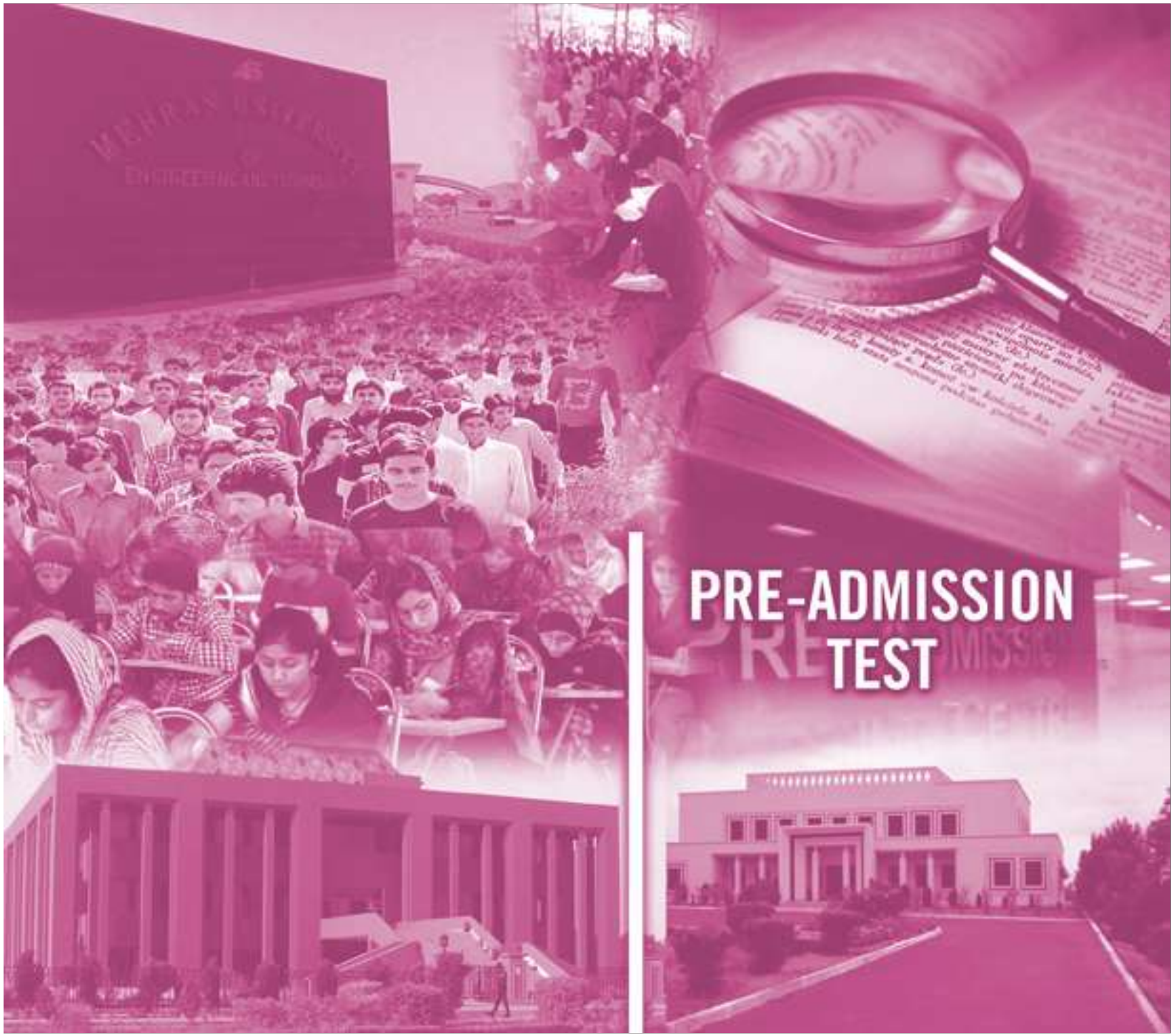
11.11 No student shall be rusticated or expelled from the University unless he/she has been allowed a reasonable chance of defending the accusation against him/her provided that if the competent authority is satisfied it may take such an action under emergency to avoid any grave consequences.

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 25, 2016.

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 answer 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 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 one's that 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, Sindh-Pakistan

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 one's that 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 one's that 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, Sindh-Pakistan

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 one's that 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) $\frac{dy}{dx} = \lim_{\delta x \to 0} \frac{f(x+\delta x) + f(x)}{\delta x}$

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 one's that 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, Sindh-Pakistan

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 one's that 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 2016 - 17

☐ 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	a	b	c	d	26	a	b	c	d	51	a	b	c	d	76	a	b	c	d
2	a	b	c	d	27	a	b	c	d	52	a	b	c	d	77	a	b	c	d
3	a	b	c	d	28	a	b	c	d	53	a	b	c	d	78	a	b	c	d
4	a	b	c	d	29	a	b	c	d	54	a	b	c	d	79	a	b	c	d
5	a	b	c	d	30	a	b	c	d	55	a	b	c	d	80	a	b	c	d
6	a	b	c	d	31	a	b	c	d	56	a	b	c	d	81	a	b	c	d
7	a	b	c	d	32	a	b	c	d	57	a	b	c	d	82	a	b	c	d
8	a	b	c	d	33	a	b	c	d	58	a	b	c	d	83	a	b	c	d
9	a	b	c	d	34	a	b	c	d	59	a	b	c	d	84	a	b	c	d
10	a	b	c	d	35	a	b	c	d	60	a	b	c	d	85	a	b	c	d
11	a	b	c	d	36	a	b	c	d	61	a	b	c	d	86	a	b	c	d
12	a	b	c	d	37	a	b	c	d	62	a	b	c	d	87	a	b	c	d
13	a	b	c	d	38	a	b	c	d	63	a	b	c	d	88	a	b	c	d
14	a	b	c	d	39	a	b	c	d	64	a	b	c	d	89	a	b	c	d
15	a	b	c	d	40	a	b	c	d	65	a	b	c	d	90	a	b	c	d
16	a	b	c	d	41	a	b	c	d	66	a	b	c	d	91	a	b	c	d
17	a	b	c	d	42	a	b	c	d	67	a	b	c	d	92	a	b	c	d
18	a	b	c	d	43	a	b	c	d	68	a	b	c	d	93	a	b	c	d
19	a	b	c	d	44	a	b	c	d	69	a	b	c	d	94	a	b	c	d
20	a	b	c	d	45	a	b	c	d	70	a	b	c	d	95	a	b	c	d
21	a	b	c	d	46	a	b	c	d	71	a	b	c	d	96	a	b	c	d
22	a	b	c	d	47	a	b	c	d	72	a	b	c	d	97	a	b	c	d
23	a	b	c	d	48	a	b	c	d	73	a	b	c	d	98	a	b	c	d
24	a	b	c	d	49	a	b	c	d	74	a	b	c	d	99	a	b	c	d
25	a	b	c	d	50	a	b	c	d	75	a	b	c	d	100	a	b	c	d

Candidate's Signature

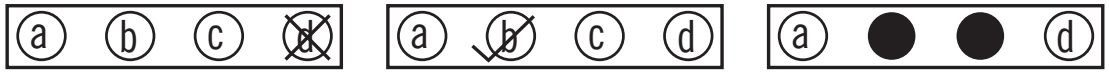
Invigilator's Signature

PRE-ADMISSION TEST SEPTEMBER 25, 2016
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.

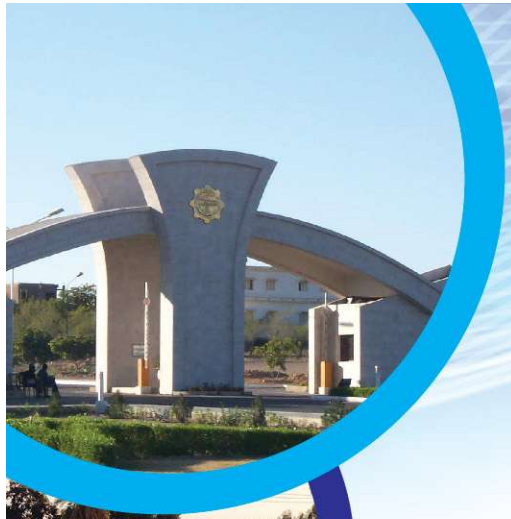
4. Do not bend or fold your answer sheet.

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.



ISO 9001 Certified

Directorate of Admissions
Mehran University of Engineering & Technology
Jamshoro 76062, Sindh - Pakistan.
Tel: 022-2771704 Fax: 022-2772196
www.muet.edu.pk

Scan this QR Code with your Smartphone to add us in your contacts.