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Chancellor's Message



Chancellor
Chaudhry Mohammad Sarwar
Governor of the Punjab

It is a matter of immense pleasure for me as a Chancellor of this University to extend my felicitations and the best wishes to all Students, Faculty, Management and Administrative Staff of MNS UET, Multan.

In any society, the pursuit of education enhances and broadens the intellectual horizon of the citizenry. Institution of higher learning and professional education help advance new ideas, promote enduring knowledge, assist in inculcation of appropriate moral and ethical values among the students to become responsible citizens and sponsor academic excellence and perfection.

In today's global world, knowledge is the only source for further evaluation and progress of a Country. The challenge that Universities and institutes of higher learning would face in this scenario, is to remain committed to excellence while maintaining the high standards of education and research. Another challenge would be to engage in quality improvement by building on alliances and collaborative partnership with the stakeholders including industry and sister institutions.

It is indeed a matter of great satisfaction for me to note that significant improvement has been made in the field of engineering and technical education at the university in accordance with national and international standards, with die emphasis on research and applied disciplines relevant to the need of time. The University is certainly alive to the increasing demand of professional and progressive engineering for national development.

I am confident that efforts to excel in the field of higher education and the inculcation of technical expertise in the students of the Universities will continue in the future with great zeal.



Vice Chancellor's Message

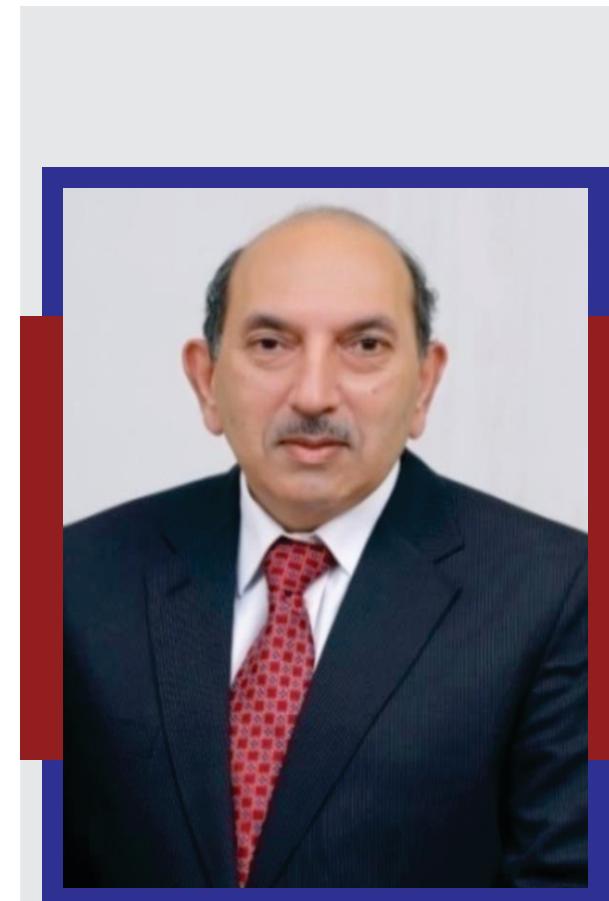
We strongly believe that every student has indeed the requisite potential and our aim is to nurture this potential, to be cultivated and raised in a professional environment, and give back to our society a talented engineer/technologist from a student. I am proud of my committed team who are always motivated to achieve this goal.

Our vision is to shape the future through strong, innovative leadership and the provision of clear strategic direction. We are looking forward to become a well ranked university of the 21st century. We will provide exceptional value to our students, guiding them to succeed through personalized, flexible and industry relevant learning opportunities. From the basic engineering programs at undergraduate level; our university will broaden its undergraduate and postgraduate programs Insha'Allah to encompass numerous disciplines which could not be originally envisioned. In the long run Doctorate and Market Oriented Industrial Research will also be our targets. Our strategic plan describes the actions we need to develop ourselves to an outstanding university, through:

- * offering tertiary education at all levels, with flexible entry and exit points, to any student who seeks tertiary education to develop his/her career.
- * undertaking high quality research and training that reflects the interests and needs of our students and staff and has significant impact on industry and community.
- * offering leading edge career-based education from pre-vocational certificates to PhDs, to help students develop themselves as employees and entrepreneurs.
- * Further increasing the impact of our applied and translational research.

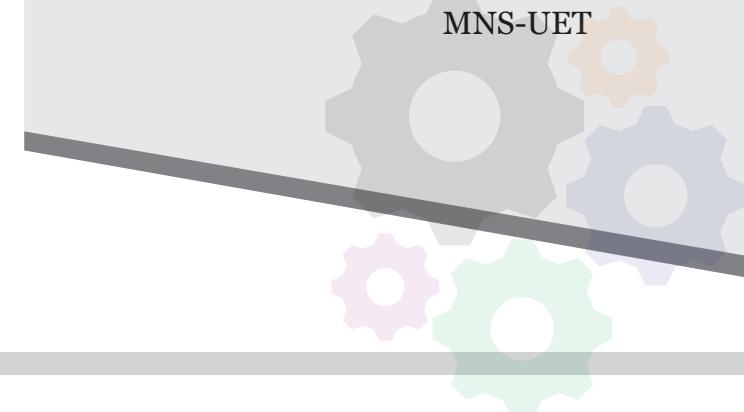
The faculty has set the quality benchmarks to achieve the milestones and key performance indicators (KPIs) for research, commercialization, entrepreneurship and better learning outcomes in all programs. The administration is aware of the challenges and difficulties to overcome and to provide best services to students and faculty and bring harmonization in activates of all departments, centers and hostels. These efforts will lead to improvement in quality of education, services as well as national and international ranking.

I would like to congratulate the students selected on merit and for their choice to join MNS UET Multan and accepted the challenge to work harder and smarter to excel in science, technology, research and management programs as well as participation in sports, professional chapter competitions, and co-curricular activities.



Vice Chancellor
Engr. Prof. Dr. Aamir Ijaz

MNS-UET



The City Multan

Being a historical city, Multan is well known as "Madinat-ul-Auleyah", the city of saints and is regarded as a center of learning, Culture and also civilization for centuries. Multan was an important city even before Islam, but it gained importance after the arrival of Islam. Hence most of the crafts and monuments of artistic value are clearly influenced by Islam. So, Multan as a traditional city which goes back to the Bronze Age, Rich in archaeology and the history, the city has a lot to offer for those in search of culture. But, more than anything, it's the monuments that give the region a glory of its own.

History of Multan

Multan is Pakistan's third largest city by area and fifth largest by population and is considered as one of the oldest alive cities of the world by the historians. "Madinat-ul-Auleyah", the city of saints (740 ft. above Sea Level) is situated almost in the center of Pakistan and is at a distance of almost 950 km from Karachi and 630 km from Islamabad, right on the main highway and about 6 kilometers from the mighty Chenab, in a bend created by the five affluent rivers. Today, Multan is a combination of the old and new Pakistani culture. In addition to its economic and cultural value for the Southern Punjab, Multan is becoming a center of quality educational institutions in the region.

Multan is full to tombs, mosques and other mausoleum of Muslim origin. Several Important historians including Masudi (915 A.D), Istakhri (951 A.D) and Ibn e Batuta (1334 A.D) visited Multan and they all wrote about the social, cultural and educational activities in this city. It is because of being a historical city that Multan's importance has always been recognized and it has always sustained its eminent and worthy position among the cities of this country.

View Sights

Qasim Bagh, Shah Shams Park, Jinnah Park, Qasim Fort, Damdama, Jheel, Historical Mosques and Tombs are important view sights. Multan fort is one of them and now it looks as a part of the city because it is now separated by a road which looks more like a bazaar and remains crowded throughout the day. Nobody knows when Multan Fort came into being but it was there and it was admired and desired by kings and emperors throughout centuries. It was considered as one of the best forts of the sub-continent from the defense as well as architectural points of view.

The language of Multan is Multani. It is one of the oldest dialects spoken in southern Punjab. It is a dialect of Punjabi, a mixture of Jhangochi of Punjabi and Sindhi. Saraiki is its new name but for centuries. It is mainly spoken in Multan District, Muzaffargarh District and adjacent areas. This entire area has almost the same traditions, customs and culture

Weather:

Multan is one of the hottest cities of the country. It features an arid climate with very hot summers and cold winters. The city witnesses some of the most extreme temperatures in the country.

Industries:

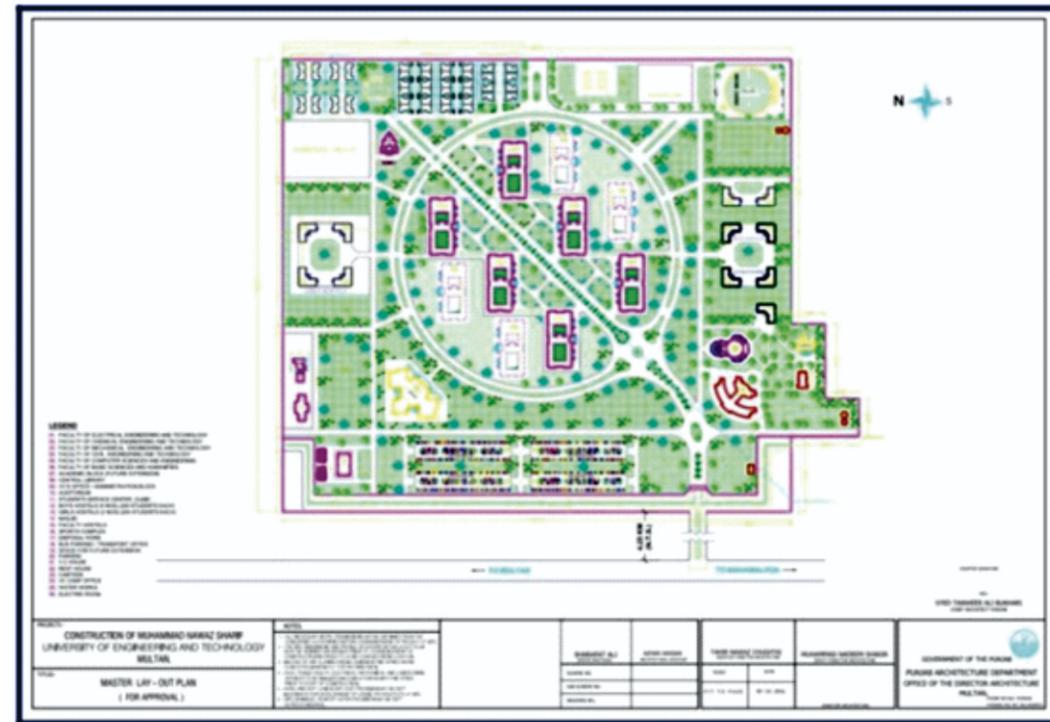
Pakistan has dynamic, vigorous and export-oriented textile industry that has an overwhelming impact on economy. Textile being largest industrial sector generates the country's highest export earnings. Other industries include fertilizer industries, rubber industries, plastic industries etc.

About University

Muhammad Nawaz Sharif University of Engineering & Technology (MNS-UET) is a higher education degree awarding institute located in Multan, Pakistan. The University was established in 2012 on the initiative of Chief Minister Punjab Mian Muhammad Shahbaz Sharif. The major objective is to provide quality professional education in the southern region of Punjab province.

Initially, the university has started its administrative operations and academic activities in the premises of Government College of Technology (GCT), Qasimpur Colony, Near BCG Chowk, Bahawalpur Road, Multan. Main Campus land has been handed over to MNSUET Multan by the Government of Punjab, while the construction work will start as soon as PC-1 is approved. Efforts are under way to construct the boundary wall of the land to avoid unwarranted encroachment. This piece of land consists of 210 acres and is situated near town Larr on the same Bahawalpur Road (4 kilometers off the main highway, and to the east, near Chak 14/Faiz), National Highway N5, 21 kilometers away from the current campus.

Proposed Master Plan of New Campus at Larr, Multan





OBJECTIVES

MNS UET Multan is a Public Sector Engineering University in Southern Punjab to produce qualified engineers for the growing industries in the region. It is the first initiative of Govt. of Punjab and this will provide high quality engineering education for the students at their doorstep. These graduates shall be available to Multan district and its surrounding Southern Punjab wherein diverse type of engineering-based industry is located.

VISION

To become a center of excellence in Engineering, Technology and Sciences for socio-economic uplift of the nation.

MISSION

MNS UET aims to serve teacher, students, society & the world by shaping a strong character of our youth in engineering, technology, basic and social sciences to bring out their fullest potential and enhance their practical, mental, intellectual, and spiritual growth with accredited skills those have international recognition and are relevant to their present and future by making a difference to their communities and humanity to become a role model of excellence.

WHY CHOOSE MNS-UET

Multan is a hub of Southern Punjab and MNS UET is main public sector university located in Multan. MNS UET as a premier institution established in 2012 has now become an icon of quality in Engineering and Technology education in Southern Punjab. During a very short period, the university has expanded in scope, services and importance and has emerged as a leading comprehensive University in the public sector. It has achieved important milestones and gained immense significance as an institution of Engineering & Technology education in Pakistan. And now it is well known as an institution of stout performance and extraordinary determination because it has continued to make excellent progress towards its goalmouths. It accomplishes the various needs of society by imparting education in almost all the major fields of Engineering. Notwithstanding the significance of undergraduate courses, there is ever-growing emphasis on postgraduate studies and research output.

The University produces professionals and researchers of very high caliber, capable of developing aboriginal technologies to meet the rising demands of the 21st century. It is intended to grow as a center of excellence for the country's Engineering and technological progress.

An outstanding feature of MNS UET is that while maintaining traditional values of excellence in teaching, research and character building, it challenges conventional practices and creates new ways of developing and delivering courses, concerning to undeveloped and cutting-edge disciplines, on most modern lines.

Programs Offered

MNS-UET is offering admissions in the following four years, two years and one-year degree programs for the session 2020-2021.

Morning Programs

- | | |
|--|---|
| <ol style="list-style-type: none"> 1. B.Sc. Electrical Engineering 2. B.Sc. Chemical Engineering 3. B.Sc. Civil Engineering* 4. B.Sc. Civil Engineering Technology** 5. B.Sc. Mechanical Engineering Technology 6. Bachelor of Science in Computer Science | <ol style="list-style-type: none"> 7. Bachelor in Business Administration (BBA) 8. Bachelor of Science in Physics (B.S. Physics) 9. Bachelor of Science in Mathematics (B.S. Mathematics) 10. Bachelor of Science in Environmental Sciences (B.S. Environmental Sciences) 11. Bachelor of Science in Chemistry (B.S Chemistry) |
|--|---|

Evening Programs

- | | |
|--|---|
| <ol style="list-style-type: none"> 1. B.Sc. Electrical Engineering Technology 2. B.Sc. Chemical Engineering Technology 3. B.Sc. Civil Engineering Technology 4. B.Sc. Mechanical Engineering Technology 5. Bachelor of Science in Computer Science (BSCS) | <ol style="list-style-type: none"> 6. M.Sc. Physics 7. M.Sc. Mathematics 8. M.Sc. Chemical Engineering 9. M.Sc. Electrical Engineering 10. PhD Chemical Engineering* |
|--|---|

Weekend Programs

1. Masters in Project Management (MPM)

What is Engineering?

“Engineering is concerned with developing, providing and maintaining infrastructure, products, processes and services for society. Engineering addresses the complete life-cycle of a product, process or service, from conception, through design and manufacture, to decommissioning and disposal, within the constraints imposed by economic, legal, social, cultural and environmental consideration.”

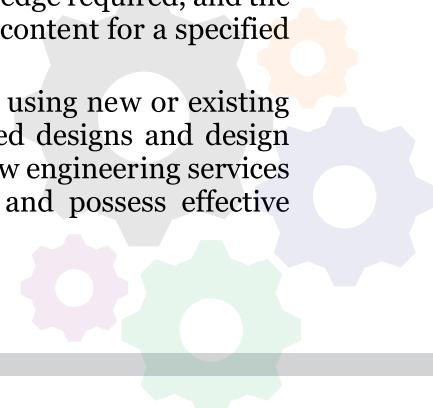
What is Engineering Technology?

“Technology is an enabling package of knowledge, devices, systems, processes and other technologies, created for a specific purpose. The word technology is used colloquially to describe a complete system, a capability, or a specific device. Engineering is the knowledge required, and the process applied, to conceive, design, make, build, operate, sustain, recycle or retire, something of significant technical content for a specified purpose; – a concept, a model, a product, a device, a process, a system, a technology”

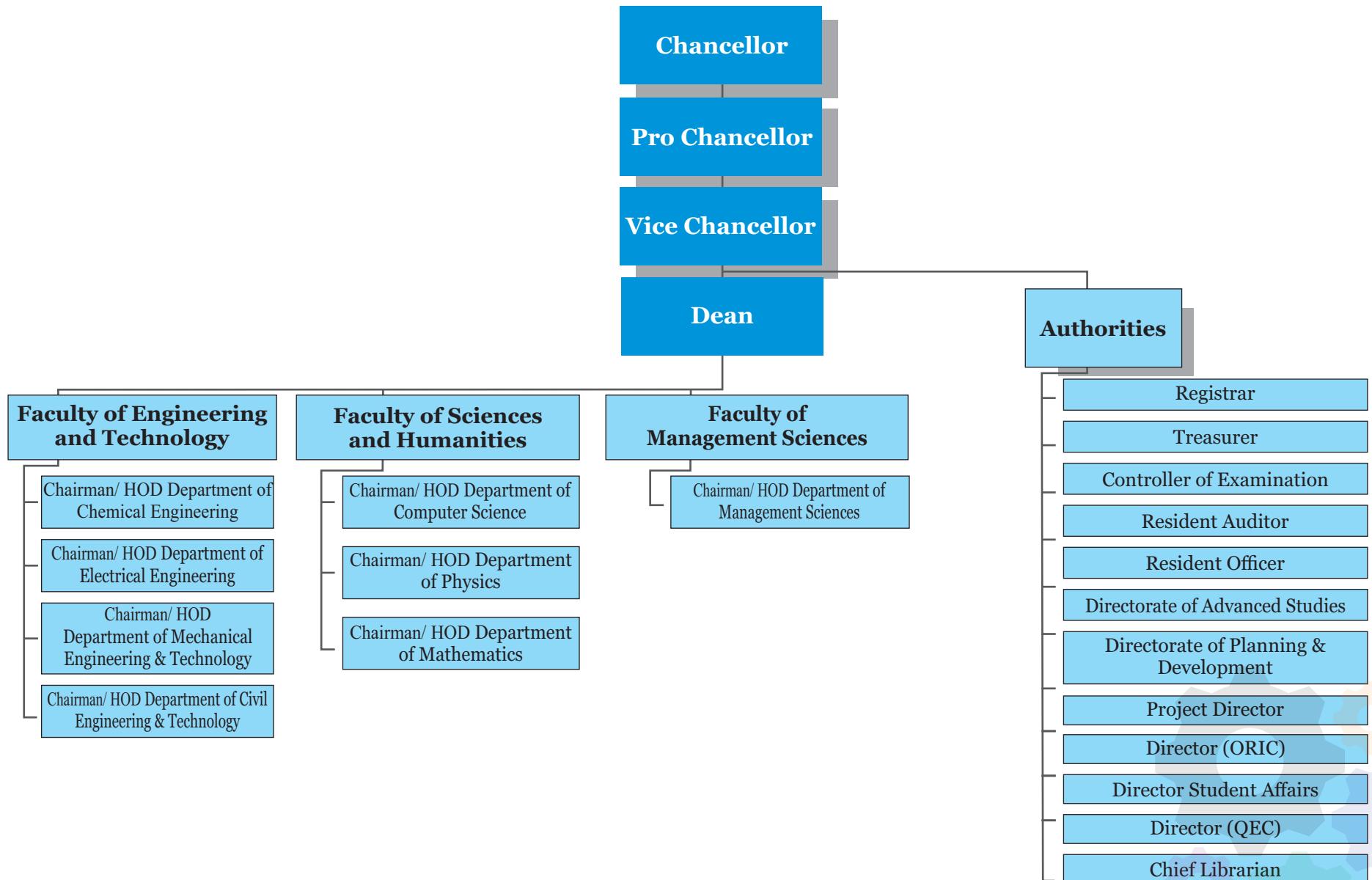
The chartered Engineers are characterized by their ability to develop appropriate solutions to engineering problems, using new or existing technologies, through innovation and creativity. They might develop and apply new technologies, promote advanced designs and design methods, introduce new and more efficient production techniques, marketing and construction concepts, or pioneer new engineering services and management methods. Chartered Engineers are variously engaged in technical and commercial leadership and possess effective interpersonal skill.

*Subject to the approval/NOC from competent authority.

**The program will be shifted to evening subject to the commencement of B.Sc. Civil Engineering program.



Organizational Chart



Academic Calendar (2020-21)

(Session 2017, 2018 & 2019)

Fall 2020

Sr. #	Steps	Marks	Date
1	Commencement of classes	—	31 st August, 2020
2	Classes Quiz 1	10	28 th Sept, 2020 -2 nd Oct ,2020
3	Mid Term Exam	30	26 th Oct,2020 - 30 th Oct,2020
4	Classes Quiz 2	10	26 th Nov,2020 – 30 th Nov, 2020
5	Assignments / Presentations	10	24 th Dec, 2020
6	Final Term Exam	40	28 th Dec 2020 – 08 th Jan, 2021

Semester Break: 11th Jan. 2021 to 17th Jan. 2021

Spring 2021

Sr. #	Steps	Marks	Date
1	Commencement of classes	—	18 th January, 2021
2	Classes Quiz 1	10	15 th Feb 2021 - 19 th Feb. 2021
3	Mid Term Exam	30	15 th Mar 2021 - 19 th Mar.2021
4	Classes Quiz 2	10	19 th April. 2021 - 23 rd April.2021
5	Assignments / Presentations	10	14 th May, 2021
6	Final Term Exam	40	24 th May, 2021 – 04 th June, 2021

Summer semester: 07th June, 2021 – 06th August, 2021

Academic Calendar (2020-21)

(Session 2020)

Fall 2020

Sr. #	Steps	Marks	Date
1	Commencement of classes	—	19 th Oct. 2020
2	Classes Quiz 1	10	16 th Nov, 2020 - 20 th Nov, 2020
3	Mid Term Exam	30	14 th Dec. 2020 - 18 th Dec,2020
4	Classes Quiz 2	10	11 th Jan. 2021 – 16 th Jan, 2021
5	Assignments / Presentations	10	12 th Feb, 2021
6	Final Term Exam	40	15 th Feb 2021 – 19 th Feb, 2021

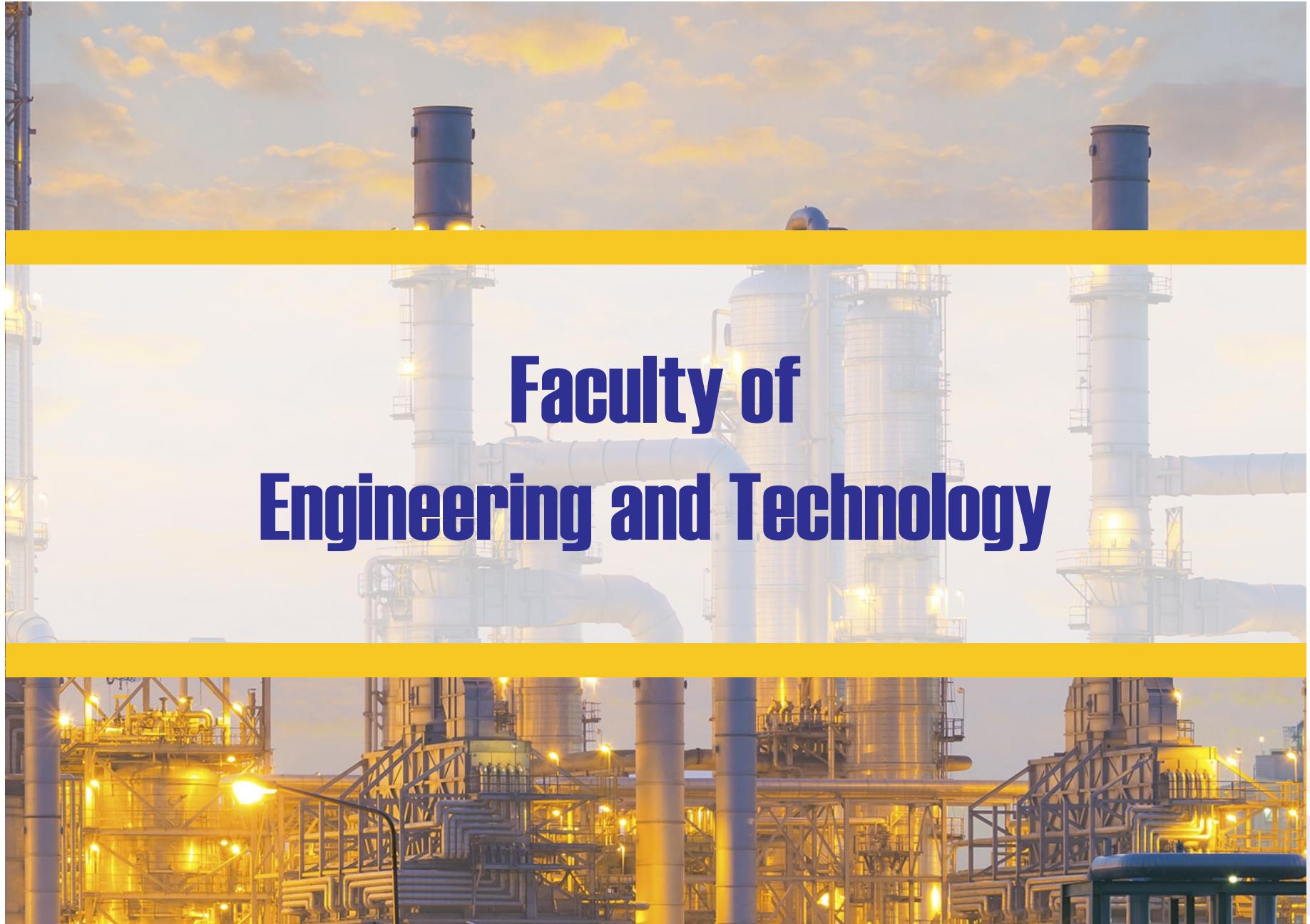
Spring 2021

Sr. #	Steps	Marks	Date
1	Commencement of classes	—	22 nd Feb. 2021
2	Classes Quiz 1	10	22 nd March,2021-26 th March,2021
3	Mid Term Exam	30	19 th April 2021 - 23 April,2021
4	Classes Quiz 2	10	24 th May 2021 – 28 th May, 2021
5	Final Term Exam	40	21 st June 2021 – 25 th June, 2021

Seat Allocation Chart

Category / Degree	F. Sc. / A level		(D.A.E)		(Baluchistan)		Minorities Quota (5%)		Total	
	M	E	M	E	M	E	M	E	M	E
PhD Chemical Engineering	0	15	0	0	0	0	0	0	0	15
M.Sc. Chemical Engineering	0	40	0	0	0	0	0	0	0	40
M.Sc. Electrical Engineering	0	40	0	0	0	0	0	0	0	40
B.Sc. Civil Engineering	39	0	01	0	0	0	0	0	40	0
B.Sc. Electrical Engineering	39	0	01	0	0	0	0	0	40	0
B.Sc. Chemical Engineering	39	0	01	0	0	0	0	0	40	0
B.Sc. Mechanical Engineering Technology	17	17	20	20	01	01	2	2	40	40
B.Sc. Civil Engineering Technology	17	17	20	20	01	01	2	2	40	40
B.Sc. Chemical Engineering Technology	0	17	0	20	0	01	0	2	0	40
B.Sc. Electrical Engineering Technology	0	17	0	20	0	01	0	2	0	40
B.S. Environmental Sciences	38	0	0	0	0	0	2	0	40	0
BS Computer Science	38+38	38	0	0	0	0	4	2	80	40
B.S. Mathematics	38	0	0	0	0	0	2	0	40	0
B.S. Chemistry	38	0	0	0	0	0	2	0	40	0
B.S. Physics	38	0	0	0	0	0	2	0	40	0
BBA	38	0	0	0	0	0	2	0	40	0
M.Sc. Physics	0	40	0	0	0	0	0	0	0	40
M.Sc. Mathematics	0	40	0	0	0	0	0	0	0	40
M.C. S	0	40	0	0	0	0	0	0	0	40
Master in Project Management	0	40 (W)	0	0	0	0	0	0	0	40
Total	417	361	43	80	02	04	16	10	480	455

M=Morning, E=Evening, W= Weekend



Degree Program**❖ B.Sc. Chemical Engineering****Eligibility Criteria**

Candidate should have obtained at least 60% marks in F.Sc /B.Sc. (Double Math, Phy.) DAE / B.Tech. (Pass) Examination excluding Hafiz-e-Quran marks. ECAT (Conducted by UET Lahore) test is compulsory for admission in all B.Sc. Engineering programs.

- Entry test 30% (ECAT)
- Intermediate/A-Level/DAE/Equivalent 70%

Degree Program**❖ B.Sc. Chemical Engineering Technology****Eligibility Criteria**

F.Sc. (Pre-Engineering)/D.A.E or Equivalent with a minimum of 50% marks followed by entry test of students. The basis for open merit determination of students are:

- Entry test 30% (ECAT or MNS UET Admission Test)
- Intermediate/A-Level/DAE/Equivalent 70%

Degree Program**❖ M.Sc. Chemical Engineering****Eligibility Criteria**

B.Sc. Chemical Engineering/B.Sc. Chemical Engineering with specialization in Petroleum & Gas Technology from HEC recognized and PEC accredited Institutions with minimum CGPA: 2/4

Degree Program**❖ PhD Chemical Engineering*****Eligibility Criteria**

Eighteen years of education in Chemical Engineering discipline with minimum CGPA of 3.0/4.0 with valid NTS-GAT-Subject with 60% marks or MNS UET admission test.

* Subject to the approval/ NOC from HEC

Department of Chemical Engineering and Technology

Introduction

Department of Chemical Engineering was established in 2012 along with the inauguration of the University by the Provincial Government of the Punjab, Pakistan. Chemical Engineering Department is currently offering two bachelor programs; B.Sc. Chemical Engineering and B.Sc. Chemical Engineering Technology and one postgraduate program (M.Sc. in Chemical Engineering). The department aims to start Ph.D. degree program in near future. The department has well-qualified and hard-working teaching faculty committed to groom students. The department has established laboratories to provide learning experience to its undergraduate students. These labs would also contribute an excellent opportunity to promote research activities in this region of Punjab province.

Objective

MNS-UET Multan, A Public Sector Engineering University in Southern Punjab to produce qualified engineers for the growing demands of Chemical, Petrochemical, Fertilizer and Process industries in the region. It is the first initiative of Govt. of Punjab and this will provide high quality engineering education for the students at their doorstep.

Mission

Department is committed to impart theoretical and practical knowledge in all fields of Chemical Engineering for economic and social stability of the society. Department is striving to enhance Innovative Research, Industrial Collaboration and Entrepreneurship to meet National and International Standards.



Scheme of Studies

B.Sc. Chemical Engineering (Semester-1)

Course No.	Course Title	Weekly Contact Hrs.		Credit Hrs.	
		Th.	Pr.	Th.	Pr.
CH-101	Applied Chemistry-I	3	3	3	1
MA-103	Applied Mathematics-I	4	-	4	-
ME-115	Engineering Drawing	-	3	-	1
Ch. E-101	Particle Technology	3	3	3	1
Ch. E-102	Computers & Computation	2	3	2	1
HU-120	Communication Skills-I	-	3	-	1
Total		12	15	12	5
G. Total		27		17	

B.Sc. Chemical Engineering (Semester-2)

Course No.	Course Title	Weekly Contact Hrs.		Credit Hrs.	
		Th.	Pr.	Th.	Pr.
MA-102	Applied Mechanics	-	3	-	1
Ch. E-103	Industrial Stoichiometry-I	3	-	4	-
PHY-101	Applied Physics	3	3	3	1
ME-105	Mechanical Technology	-	3	-	1
Ch. E-104	Engineering Materials	2	-	2	-
Ch. E-105	Chemical Process Industries	3	3	3	1
IS/HU-101	Islamic and Pakistan Studies-I (Compulsory for Muslim students Ethics and Pakistan studies-I (for non-Muslim Students)	3	-	3	-
Total		14	12	14	4
G. Total		26		18	

B.Sc. Chemical Engineering (Semester-3)

Course No.	Course Title	Weekly Contact Hrs.		Credit Hrs.	
		Th.	Pr.	Th.	Pr.
CH-202	Applied Chemistry-II	3	3	3	1
Ch. E-201	Chemical Engineering Thermodynamics-I	3	-	4	-
E.E-201	Electrical Technology	3	3	3	1
Ch.E. 202	Fluid Mechanics	-	3	-	1
HU-220	Communication Skills-II	-	3	-	1
IS/HU-201	Islamic and Pakistan Studies-II (Compulsory for Muslim students Ethics and Pakistan studies-II (for non-Muslim Students)	3	-	3	-
Total		15	09	15	3
G. Total		24		18	

B.Sc. Chemical Engineering (Semester-4)

Course No.	Course Title	Weekly Contact Hrs.		Credit Hrs.	
		Th.	Pr.	Th.	Pr.
Ch. E-203	Industrial Stoichiometry-II	3	-	3	-
MA-203	Applied Mathematics-II	4	-	4	-
Ch. E-204	Energy Engineering	3	3	3	1
Ch. E-205	Unit Processes	3	3	3	1
Ch. E-206	Fluid Dynamics	3	3	3	1
Total		16	09	16	3
G. Total		25		19	

B.Sc. Chemical Engineering (Semester-5)

Course No.	Course Title	Weekly Contact Hrs.		Credit Hrs.	
		Th.	Pr.	Th.	Pr.
MA-320	Computer Science and Numerical	3	3	3	1

Ch. E-301	Heat Transfer Fundamentals	4	-	3	-
Ch. E-302	Mass Transfer Fundamentals	3	-	3	-
Ch. E-303	Chemical Reaction Engineering	3	3	3	1
Ch. E-304	Chemical Engineering Economic	3	-	3	-
Total		15	06	15	2
G. Total		21		17	

B.Sc. Chemical Engineering (Semester-6)

Course No.	Course Title	Weekly contact Hrs.		Credit Hrs.	
		Th.	Pr.	Th.	Pr.
Ch. E-305	Chemical Engineering Mathematics	3	3	3	-
Ch. E-306	Chemical Reactor Design	2	-	2	-
Ch. E-307	Chemical Engineering Thermodynamics-II	3	3	3	1
Ch. E-308	Process Heat Transfer	3	3	3	1
Ch. E-309	Separation Processes	3	3	3	1
Total		14	09	14	3
G. Total		23		17	

B.Sc. Chemical Engineering (Semester-7)

Course No.	Course Title	Weekly contact Hrs.		Credit Hrs.	
		Th.	Pr.	Th.	Pr.
Ch. E-401	Industrial Instrumentation	2	-	2	-
Ch. E-402	Simultaneous Heat and Mass transfer	3	-	3	-
Ch. E-403	Chemical Engineering Plant Design	3	-	3	-
Ch. E-404	Maintenance Engineering	3	-	3	-
Ch. E-405	Engineering Management	3	-	3	1
Ch. E-406	Plant Design Project	-	6	-	2
Total		14	06	14	2
G. Total		23		17	

B.Sc. Chemical Engineering (Semester-8)

Course No.	Course Title	Weekly contact Hrs.		Credit Hrs.	
		Th.	Pr.	Th.	Pr.
Ch. E-407	Transport Phenomena	3	-	3	-
Ch. E-408	Process Modelling and Simulation	1	2	1	1
Ch. E-409	Environmental Engineering	3	3	3	1
Ch. E-410	Optional 1. Gas Engineering 2. Biochemical Engineering 3. Nanotechnology in Chemical Engineering 4. Nuclear Engineering 5. Computer Aided Design 6. Process Analysis and Optimization	3	-	3	-
Ch. E-406	Plant Design Project	-	6	-	2
Ch. E-411	Process Dynamics and Control	3	3	3	1
Total		13	14	13	5
G. Total		27		18	

B.Sc. Chemical Engineering Technology (Semester-1)

Course No.	Course Title	Credit Hrs.	
		Th.	Pr.
MTH-331	Applied Mathematics-I	3	0
CHM-337	Applied Chemistry	3	1
PHY-335	Applied Physics	3	1
CSC-341	Computer Fundamentals	3	1
PST-311	Pakistan Studies	0	1
Total		16	

*Tutorial=2hr/Week

B.Sc. Chemical Engineering Technology (Semester-2)

Course No.	Course Title	Credit Hrs.	
		Th.	Pr.
MTH-332	Applied Mathematics-II	3	0
EED-352	Electrical Technology	3	1
MEE-352	Technical Drawing	2	1
MEE-354	Workshop Practice	0	2
ENG-314	Communication Skills-I	3	0
Total		15	

*Tutorial=2hr/Week

B.Sc. Chemical Engineering Technology (Semester-3)

Course No.	Course Title	Credit Hrs.	
		Th.	Pr.
CHT-451	Basic Thermodynamics	3	1
CHT-461	Chemical Process Industries-I	2	0
CHT-453	Chemical Process Calculation	3	1
CHM-436	Organic Chemistry	3	1
MTH-434	Mechanics of Materials	2	1
Total		17	

*Tutorial=2hr/Week

B.Sc. Chemical Engineering Technology (Semester-4)

Course No.	Course Title	Credit Hrs.	
		Th.	Pr.
CHT-472	Fluid Flow Operations	3	1
CHT-474	Heat Transfer Operations	3	1

CHT-462	Chemical Process Industries-II	3	1
ISL-412	Islamic Studies	3	0
ENG-316	Communication Skills-II	0	1
Total			16

*Tutorial=2hr/Week

B.Sc. Chemical Engineering Technology (Semester-5)

Course No.	Course Title	Credit Hrs.	
		Th.	Pr.
CHT-571	Mass Transfer Operations	3	1
CHT-561	Particle Technology	3	1
CHT-563	Industrial Materials	2	0
CHT-565	Industrial power Generation Technology	3	0
CHT-567	Petroleum & Petrochemical Technology	3	1
Total			17

*Tutorial=2hr/Week

B.Sc. Chemical Engineering Technology (Semester-6)

Course No.	Course Title	Credit Hrs.	
		Th.	Pr.
CHT-552	Chemical Reactor Technology	3	1
CHT-562	Process Instrumentation	3	1
CHT-564	Fertilizer Technology	2	0
CHT-566	Waste Water Treatment Technology	3	0
CHT-568	Process Plant Utilities	3	0
CHT-582	Safety, Health & Environment	2	1
Total			19

*Tutorial=2hr/Week

B.Sc. Chemical Engineering Technology (Semester-7)

Course No.	Course Title	Credit Hrs.	
		Th.	Pr.
CHT-651	Industrial Calculations	3	0
CHT-671	Mechanical Separation Operations	3	0
CHT-673	Chemical Process Thermodynamics	3	1
MNG-622	Chemical Process Economics	3	0
MNG-621	Operation Management	3	0
Total		16	

*Tutorial=2hr/Week

B.Sc. Chemical Engineering Technology (Semester-8)

Course No.	Course Title	Credit Hrs.	
		Th.	Pr.
CHT-692	Industrial Training/Projects	0	16
Total Credit hours		132	

*4-6 Weeks industrial internship mandatory



BS Environmental Sciences

Eligibility Criterion

Intermediate with Pre-Engineering/pre-medical, securing at least 50% marks in aggregate. Or any other examination of a Foreign University/Institution/examining Body, equivalent to Intermediate with Biology/Chemistry/Physics/Mathematics. Equivalence and percentage of marks will be determined by IBCC.

Program Objectives

1. To produce outstanding environmentalists able to compete at national and international standards
2. To develop scientific and technical expertise in graduates to solve environmental problems
3. To equip the graduates with an ability to understand the linkages between various bio-physical and socio-economic components of environment
4. To promote green sustainable solutions in industry and society

Program Details

Degree: B.Sc. Environmental Science

Duration: 4 years

Minimum semesters: 8

Total no. of Credit Hours: 130

Total courses: 44

Timings of the classes: Monday to Friday (Morning)

Sr. No.	Categories	No. of courses	Credit Hours
1	Compulsory courses	9	25
2	General Courses (to be selected from other departments)	7	21
3	Discipline specific foundation courses	10	30
4	Major courses (including Final Year Project)	14	42
5	Electives	4	12

Scheme of Studies

BS Environmental Sciences (Semester-1)		
Course Code.	Course Title	Credit Hours.
ENV-101	Introduction to Environmental Sciences	3
CH-101	Applied Chemistry-I	3(2-1)
BIO-103	Biology-I	3(2-1)
MA-102	Mathematics-I (Algebra)	3
ENG-111	English-I (Functional English)	3
PST-111	Pakistan Studies	2
Total		17

BS Environmental Sciences (Semester-2)		
Course Code.	Course Title	Credit Hours.
ENV-102	Introduction to Earth Sciences	3(2-1)
PHY-101	Applied Physics	3(2-1)
SCO-113	Sociology	3
MA-103	Mathematics II (Calculus)	3
ENG-112	English-II (Communication Skills)	3
ISE-111	Islamic Studies	2
Total		17

BS Environmental Sciences (Semester-3)		
Course Code.	Course Title	Credit Hours.
ENV-211	Fundamentals of Ecology Climatology	3
PHY-203	Environmental Physics	3(2-1)
CH-202	Applied Chemistry-II	3
PSY-204	Introduction to Psychology	3
COM-100	Introduction to computer	3(2-1)

BS Environmental Sciences (Semester-4)		
Course Code.	Course Title	Credit Hours.
ENV-307	Climatology	3
ENV-306	Environmental microbiology	3 (2-1)
ENV-305	Environmental pollution	3
CH-403	Environmental Chemistry	3
ENV-404	Introduction to Bio-Chemistry	3

ENG-211	English-III (Writing and Presentation Skills)	3
Total	18	

ENG-212	English IV (English for practical aims)	3
Total	18	

BS Environmental Sciences (Semester-5)

Course Code.	Course Title	Credit Hours.
ENV-312	Environmental profile of Pakistan	3
ENV-405	Applied Ecology	3
ENV-406	Environmental toxicology	3(2-1)
ENV-407	Environmental Management Systems	3
ENV-408	Analytical techniques in Environmental Science	3 (2-1)
	Elective-I	3
Total		18

BS Environmental Sciences (Semester-6)

Course Code.	Course Title	Credit Hours.
ENV-300	Research Methods in Environmental science	3
ENV-410	GIS and remote sensing	3(2-1)
ENV-411	Environmental monitoring	3(2-1)
ENV-412	Climate Change	3
ENV-413	Environmental Impact Assessment	3
	Elective-II	3
Total		18

BS Environmental Sciences (Semester-7)

Course Code.	Course Title	Credit Hours.
ENV-409	Natural Resource management	3
ENV-414	Environmental Economics	3
ENV-420	Final year Project (Seminar)	3
	Elective III	3

BS Environmental Sciences (Semester-8)

Course Code.	Course Title	Credit Hours.
ENV-415	Pollution Control Technologies	3
ENV-416	Public Health and Environment	3
ENV-421	Final Year Project (Report writing and Viva)	3
	Elective IV	3

		Total	12
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		Total	12
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List of Electives

Course Code.	Course Title	Credit Hours.
ENV-501	Agro-ecology	3
ENV-503	Disaster Risk Management	3
ENV-505	Energy and Environment	3
ENV-507	Environmental Bio-technology	3
ENV-509	Alternative energy resources	
ENV-511	Environmental application of nano-materials	3

Course Code.	Course Title	Credit Hours.
ENV-502	Occupational Health and safety	3
ENV-504	Air and Noise Pollution	3
ENV-506	Soil and Environment	3
ENV-508	Water Resource Management	3
ENV-510	Treatment and management of water water	3
ENV-512	Polymers and Environment	3

B.S. Chemistry

Program Objectives:

- To develop chemical knowledge and laboratory skills required for a professional chemist
- To produce outstanding graduates able to contribute towards the socio-economic growth of country
- To equip the graduates with an ability to explore and implement green sustainable solutions in industry and society.

Program Details:

Degree: BS (Chemistry)

Duration: 4 years

Minimum semesters: 8

Total no. of Credit Hours: 136

Total courses: 43

Timings of the classes: Monday to Friday (Morning)



Sr.	Categories	No. of courses	Credit Hours
1	Compulsory courses	9	25
2	General Courses (to be selected from other departments)	8	24
3	Discipline specific foundation courses	7	23
4	Major courses (including Final Year Project)	17	58
5	Electives (other than field of specialization)	2	6
	Total	43	136

Eligibility Criterion (BS Chemistry)

Intermediate with pre-medical/pre-engineering, securing at least 50% marks in aggregate. Or any other examination of a Foreign University/Institution/examining Body, equivalent to Intermediate with Chemistry/Physics. Equivalence and percentage of marks will be determined by IBCC

Scheme of Studies

BS Chemistry (Semester-1)		
ENG-100	English-I (Functional English)	3
MAT-100	Mathematics-I (Algebra)	3
PHY-1107	Pakistan Studies	2
CHM-161	Organic Chemistry	4(3-1)
PHY-1101	Mechanics-I	3
PHY-1105	Introduction to Statistics	3
Total		18

BS Chemistry (Semester-2)		
ENG-112	English-II (Communication Skills)	3
PHY-1204	Mathematics II (Analytical Geometry and Vectors)	3
PHY1207	Islamic Studies	2
CHM-151	Inorganic Chemistry	4(3-1)
PHY-1202	Heat and thermodynamics	3
PSY-204	Introduction to Psychology	3
Total		18

BS Chemistry (Semester-3)

ENG-211	English-III (Writing and Presentation Skills)	3
COM-100	Introduction to computer	3(2-1)
CHM-171	Physical Chemistry	4(3-1)
CHM-141	Environmental Chemistry	3
PHY-1301	Electricity and magnetism	3
SCO-113	Sociology	3
	Total	19

BS Chemistry (Semester-4)

ENG-212	English IV (English for practical aims)	3
CHM-111	Analytical Chemistry	3 (2-1)
CHM-121	Applied Chemistry	2
CHM-131	Bio-chemistry	3(2-1)
PHY-1404	Mathematics-IV (Calculus)	3
PHY-1405	Waves and Oscillations	3
	Total	17

BS Chemistry (Semester-5)

CHM-251	Inorganic Chemistry-I	4(3-1)
CHM-261	Organic Chemistry-I	4(3-1)
CHM-271	Physical Chemistry-I	4(3-1)
CHM-211	Analytical Chemistry	4(3-1)
	Total	16

BS Chemistry (Semester-6)

CHM-351	Inorganic Chemistry-II	4(3-1)
CHM-361	Organic Chemistry-II	4(3-1)
CHM-371	Physical Chemistry-II	4(3-1)
CHM-221	Fuel Chemistry/Applied Chemistry	4(3-1)
	Total	16

BS Chemistry (Semester-7)**Specialization (Physical/Organic/Inorganic/Analytical/Applied Chemistry)**

Paper I	3		Paper IV	3
Paper II	3		Paper V	3
Paper III	3		Paper VI	3
Elective I	3		Elective II	3

	Research thesis/Advance lab/Literature survey/Seminar	3		Research thesis/Advance lab/Write up/Viva/Seminar	3
	Chemistry Lab-III (Physical/Organic/ Inorganic/Analytical/App-lied Chemistry)	2			
Total	17			Total	15

List of Electives/Papers: (Physical Chemistry)

CHM-401	Polymer Chemistry	3	CHM-402	Colloid and Surface Chemistry	3
CHM-403	Electrochemistry	3	CHM-404	Solid State Chemistry	3
CHM-405	Molecular Spectroscopy	3	CHM-406	Thermodynamics	3
CHM-407	Quantum Chemistry	3	CHM-408	Statistical Chemistry	3
CHM-409	Radiation and Photochemistry		CHM-410	Solution Chemistry	3
CHM-411	Chemical Kinetics	3	CHM-412	Numerical Methods and Computational Chemistry	3
CHM-471	Physical Chemistry Lab-III	2	CHM-492	Research thesis/Advance lab/Write up/Viva/Seminar	3
CHM-491	Research thesis/Advance lab/Literature survey/Seminar	3			

List of Electives/Papers (Organic Chemistry)

CHM-413	Chemistry of Heterocycles	3	CHM-414	Stereochemistry	3
CHM-415	Spectroscopic Methods in Organic Chemistry I	3	CHM-416	Spectroscopic Methods in Organic Chemistry II	3
CHM-417	Reaction Mechanism I	3	CHM-418	Reaction Mechanism II	3
CHM-419	Chemistry of Natural Products	3	CHM-420	Organic synthesis	3
CHM-421	Medicinal Chemistry	3	CHM-422	Biochemistry	3
CHM-423	Organic Polymer Chemistry	3	CHM-424	Name reactions	3
CHM-472	Organic Chemistry Lab-III	2	CHM-494	Research thesis/Advance lab/Write up/Viva/Seminar	3
CHM-493	Research thesis/Advance lab/Literature survey/Seminar	3			

List of Electives/Papers (Inorganic/Analytical Chemistry)

CHM-425	Chemical Process Industries	3	CHM-426	Crystallography	3
CHM-427	Atomic Spectroscopy	3	CHM-428	Nanomaterials in Chemistry	3
CHM-429	Organometallic Chemistry	3	CHM-430	Inorganic Polymers	3
CHM-431	Inorganic Reaction Mechanism	3	CHM-432	Crystallography	3
CHM-433	Coordination Chemistry	3	CHM-434	Group theory	3
CHM-435	Electroanalytical Techniques	3	CHM-436	Advanced Separation techniques	3
CHM-437	Food and Drug Analysis	3	CHM-438	Luminescence Spectroscopy and Thermal Analysis	3
CHM-473	Inorganic Chemistry Lab III	2	CHM-474	Analytical Chemistry Lab III	2
CHM-495	Research thesis/Advance lab/Literature survey/Seminar (Inorganic)	3	CHM-496	Research thesis/Advance lab/Write up/Viva/Seminar (Inorganic)	3
CHM-497	Research thesis/Advance lab/Literature survey/Seminar (Analytical)	3	CHM-498	Research thesis/Advance lab/Write up/Viva/Seminar (Analytical)	3

List of Electives/Papers (Applied Chemistry)

CHM-439	Common Industries I	3	CHM-440	Common Industries II	3
CHM-441	Agro-based Industries and pollution control	3	CHM-442	Metallurgy and explosives	3
CHM-443	Petroleum and Petrochemicals	3	CHM-444	Alternative Energy resources	3
CHM-475	Applied Chemistry Lab III	2	CHM-486	Research thesis/Advance lab/Write up/Viva/Seminar	3
CHM-485	Research thesis/Advance lab/Literature survey/Seminar	3			

M.Sc. Chemical Engineering Program

Eligibility Criteria

B.Sc. Chemical Engineering/B.Sc. Chemical Engineering with specialization in Petroleum & Gas Technology from HEC recognized and PEC accredited institutions with minimum CGPA: 2/4

Scheme of Studies (Masters in Chemical Engineering)

(In line with HEC guidelines)

List of Subjects			
Sr. No.	Subjects	Course Code	Credit Hours
MS Core Courses			
1.	Advanced Transport Phenomena	CHE-111	3
2.	Mathematical methods in Chemical Engineering	CHE-112	3
3.	Separation Processes	CHE-113	3
4.	Optimization & Process Design	CHE-114	3
5.	Thesis	CHE-421	6
Additional Course			
6.	Research Methodology	RM-115	2
MS Elective Courses			
7.	Molecular Nanotechnology	CHE-121	3
8.	Advanced Process Economics	CHE-122	3
9.	Materials technology	CHE-123	3
10.	Nano Catalysis	CHE-124	3
11.	Numerical methods in CHE	CHE-125	3
12.	Green Process Engineering	CHE-126	3
13.	Polymer Engineering	CHE-127	3
14.	Waste water treatment & Design	CHE-128	3
15.	Computation Fluid Dynamics (CFD)	CHE-129	3
16.	Advance Analytical Techniques	CHE-130	3
17.	Project Engineering	CHE-131	3
18.	Process Dynamics and Control	CHE-132	3
19.	Chemical Kinetics and Rector Design	CHE-133	3

20.	Process Modeling and Simulation	CHE-134	3
21.	Planning and Environmental Impact Assessment of Chemical Projects and Legislation	CHE-135	3
22.	Physio-Chemical Treatment of Industrial Wastes	CHE-136	3
23.	Advanced Biochemical Engineering	CHE-137	3
24.	Design and Analysis of Biochemical Reactors	CHE-138	3
25.	Biochemical Treatment of Industrial Wastes	CHE-139	3
26.	Computer Aided Process Plant Design	CHE-140	3
27.	Process Synthesis, Analysis and Design	CHE-141	3
28.	Coal Preparation and Beneficiation	CHE-142	3
29.	Coal Gasification	CHE-143	3
30.	Combustion Engineering	CHE-144	3
31.	Advanced Coal Power Systems	CHE-145	3
32.	Renewable Energy Engineering	CHE-146	3
33.	Industrial Air Pollution	CHE-147	3

Duration of the program and semester-wise break-up of workload/ credit hours

Sr No.	Course Title	Credit hours
Semester 1		
1	Separation Processes	3
2	Optimization & Process Design	3
3	Elective	3
Semester 2		
4	Advance Transport Phenomena	3
5	Mathematical methods in Chemical Engineering	3
6	Elective	3
Semester 3		
7	Elective	3
8	Elective	3
Semester 4		
9	Thesis	6

Scheme of Studies

(PhD in Chemical Engineering)

List of Subjects			
Sr. No.	Subjects	Course Code	Credit Hours
1	Advanced Transport Phenomena	CHE-111	3
2	Mathematical methods in Chemical Engineering	CHE-112	3
3	Separation Processes	CHE-113	3
4	Optimization & Process Design	CHE-114	3
5	Thesis	CHE-421	6
6	Research Methodology	RM-115	2
7	Molecular Nanotechnology	CHE-121	3
8	Advanced Process Economics	CHE-122	3
9	Materials technology	CHE-123	3
10	Nano Catalysis	CHE-124	3
11	Numerical methods in CHE	CHE-125	3
12	Green Process Engineering	CHE-126	3
13	Polymer Engineering	CHE-127	3
14	Waste water treatment & Design	CHE-128	3
15	Computation Fluid Dynamics (CFD)	CHE-129	3
16	Advance Analytical Techniques	CHE-130	3
17	Project Engineering	CHE-131	3
18	Process Dynamics and Control	CHE-132	3
19	Chemical Kinetics and Rector Design	CHE-133	3
20	Process Modeling and Simulation	CHE-134	3
21	Planning and Environmental Impact Assessment of Chemical Projects and Legislation	CHE-135	3
22	Physio-Chemical Treatment of Industrial Wastes	CHE-136	3
23	Advanced Biochemical Engineering	CHE-137	3
24	Design and Analysis of Biochemical Reactors	CHE-138	3
25	Biochemical Treatment of Industrial Wastes	CHE-139	3

26	Computer Aided Process Plant Design	CHE-140	3
27	Process Synthesis, Analysis and Design	CHE-141	3
28	Coal Preparation and Beneficiation	CHE-142	3
29	Coal Gasification	CHE-143	3
30	Combustion Engineering	CHE-144	3
31	Advanced Coal Power Systems	CHE-145	3
32	Renewable Energy Engineering	CHE-146	3
33	Industrial Air Pollution	CHE-147	3

Duration of The Program and Semester-Wise Break-Up of Workload/ Credit Hours

Sr. No.	Course Title	Credit hours
Semester 1		
1	Elective	3
2	Elective	3
3	Elective	3
Semester 2		
4	Elective	3
5	Elective	3
6	Elective	3
Comprehensive Test		
Synopsis Defense		
7	Thesis	40





Exact Title of The Program That Will Appear on Relevant Degree

PhD in CHEMICAL ENGINEERING*

Eligibility Criteria

Eighteen years of education in Chemical Engineering discipline with minimum CGPA of 3.0/4.0 with valid NTS-GAT-Subject with 60% marks or MNS UET admission test.

* Subject to the approval/ NOC from competent authority

Brief Introduction of Programs and Date of Commencement

The postgraduate program is launched to broaden the Area of research in the field of Chemical Engineering. It will apply advanced & traditional techniques of Chemical Engineering to solve Academic and Industrial problems. The PhD in Chemical engineering program will offer novel experimental labs and advance computing techniques to understand various aspects of Chemical engineering. The program is aimed at improving opportunities for chemical engineers in the chemical, petrochemical, fertilizer and process industries. The University aims to start the program in September, 2020 .

Objective of program

The objective of PhD in chemical engineering is to achieve the excellence in research, innovation and academics. University aims to educate the students to the highest of engineering & technical knowledge and meet the global standards.

Scope Regarding Market, Social and Employment Perspective of Program

University is committed to offer the academic & research knowledge in the fields of engineering, engineering technology & applied sciences. University aims to meet the international standards in above fields for the betterment and progress of individuals in Southern Punjab. This area of Punjab owes many industries that need highly qualified and skilled engineers to meet their excellence. University will provide such individuals to industries. Socially southern Punjab students will be facilitated.



Chemical Engineering Faculty

**Engr. Dr. Asim Umer**

HoD/Associate Professor, HEC approved supervisor
PhD Chemical Engineering (UET, Lahore)
Research Interest: Nano-Fluids, Heat Transfer
Email: asimumer@uet.edu.pk

**Engr. Dr. Ayyaz Ahmad**

Assistant Professor, HEC approved supervisor
PhD Chemical Engineering (ECUST, Shanghai, China)
Research Interest: Nano-catalyst, Advance Oxidation Processes, Water Treatment Email:

**Engr. Dr. Sabih Qamar**

Lecturer
PhD Chemical Engineering (UET, Lahore)
Research Interest: Colloid and interface Engineering, Materials Synthesis and their Characterizations, Magnetic Nanoferrites.

**Engr. Mahboob Ahmad Aadil**

Lecturer
M.Sc. Chemical Engineering (UET, Lahore)

**Engr. Meesam Ali***

Lecturer (on study leave)
M.Sc. Chemical Engineering (UET, Lahore)

**Engr. Ali Hassan***

Lecturer (on study leave)
M.Sc. Chemical Engineering (UET, Lahore)

**Engr. Usman Saeed**

Lecturer
M.Sc. Chemical Engineering (UET, Lahore)

**Engr. Ali Sarosh Khawaja**

Lecturer
M.Sc. Chemical Engineering (NUST, Islamabad)

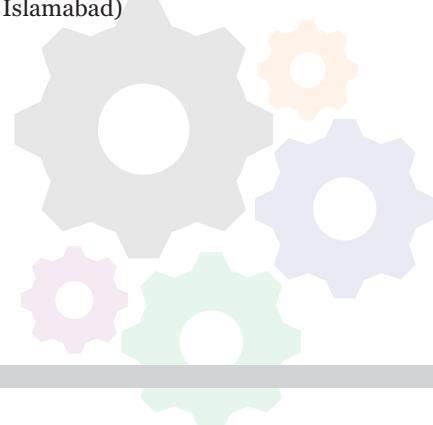
**Engr. Hina Muryam**

Lecturer
M.Sc. Chemical Engineering (UET, Lahore)

**Engr. Mina Arshad**

Lecturer
M.Sc. Chemical Engineering (NUST, Islamabad)

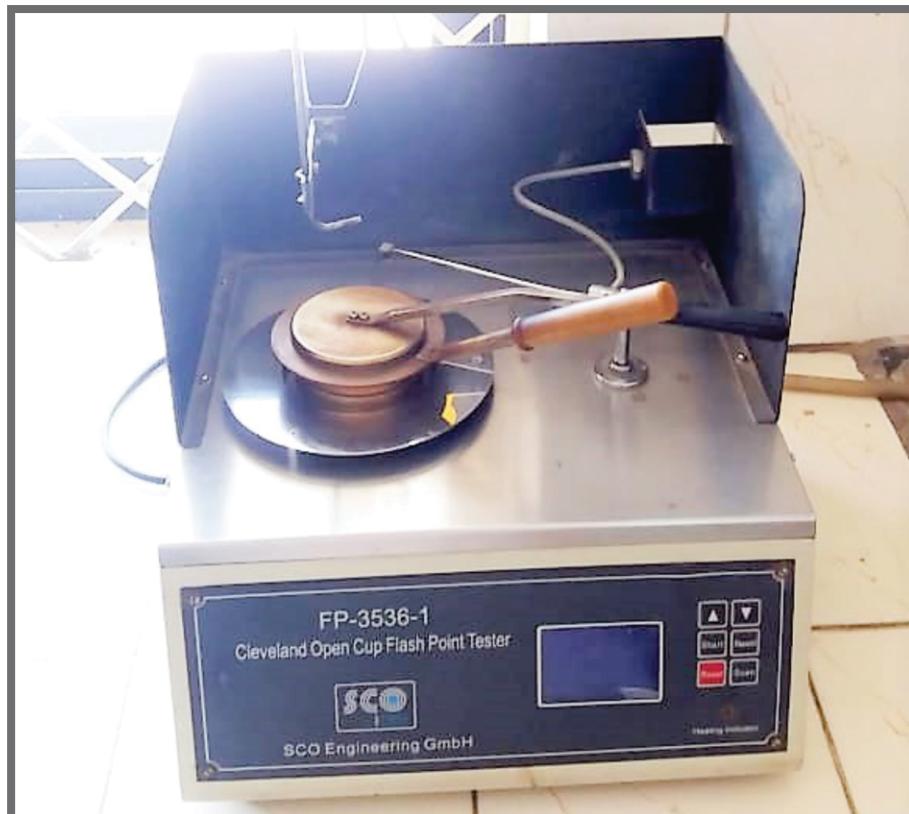
* On higher studies abroad

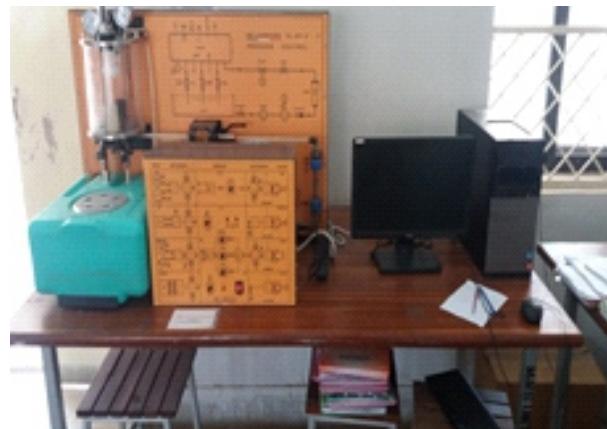
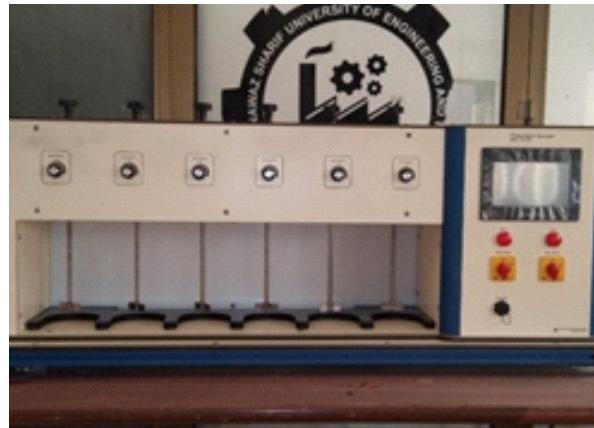


Lab Facilities

Following lab facilities have been furnished for the Chemical Engineering students

- 1) Fluid Mechanics Lab
- 2) Heat Transfer Lab
- 3) Chemical Process Industries Lab
- 4) Energy Engineering Lab
- 5) Process Instrumentation and Control Lab
- 6) Basic Chemistry Lab
- 7) Thermodynamics Lab
- 8) Environmental Engineering Lab
- 9) Process Lab
- 10) Chemical Reaction Engineering Lab
- 11) Simulation Lab





Degree Program

- ❖ B.Sc. Civil Engineering (Morning)*

Eligibility Criteria

F.Sc. (Pre-Engineering)/ D.A.E or equivalent with a minimum of **60%** marks followed by entry test of students. The basis for open merit determination of students are:

- Entry test 30% (ECAT)
- HSSC/DAE/A-Level/Equivalent 70%

Degree Program

- ❖ B.Sc. Civil Engineering Technology (M)**
- ❖ B.Sc. Civil Engineering Technology (E)

Eligibility Criteria

F.Sc. (Pre-Engineering)/ D.A.E or equivalent with a minimum of **50%** marks followed by entry test of students. The basis for open merit determination of students are:

- Entry test 30% (ECAT or MNS UET admission test)
- HSSC/DAE/A-Level/Equivalent 70%

*Subject to the approval/NOC form the competent authority.

**The program will be shifted to evening subject to the commencement of B.Sc. Civil Engineering program

Labs in Civil Engineering Department

- Fluid Mechanics Lab
- Survey Lab
- Environmental Management Lab
- Water supply and waste management Lab
- Concrete Lab
- Soil Mechanics Lab
- Drawing Lab
- Computer Lab

Department of Civil Engineering and Technology

Introduction:

Department of Civil Engineering and Technology was established in 2012 along with the creation of the University by the provincial government of the Punjab, Pakistan. First program offered by the department is a four-year bachelor degree program; B.Sc. Civil Engineering Technology.

The department has well-qualified and hard-working teaching faculty committed to groom students of Civil Engineering and Technology to their best.

The department is in the process of establishing state-of-art laboratories to provide hands on learning experience to its undergraduate students. These labs would also provide an excellent opportunity to promote research activities in this region of Punjab province. B.Sc. Civil Engineering program will be commenced very soon subject to the approval from the competent authority. Moreover, the department aims to start new degree program “M.Sc. Civil Engineering Technology” and other related programs in near future.

Mission

To impart high quality civil engineering and technology education through modern teaching and research for the national and international socio-economic development.

Scope

The graduates of Civil Engineering and Technology Department (CETD) of MNS-UET Multan would be an excellent addition to industry at national and international level. Construction industries of Pakistan would be greatly benefited by the contributions of our graduates. The engineering and technology services and maintenance sectors are focused as well during training of our graduates.

Scheme of Studies

B.Sc. Civil Engineering (Semester-1)

Course No.	Course Title	Credit Hrs.	
		Theory	Practical
HU-101	English Communication Skill	0	1
MA-111	Mathematics-1	3	0
HU-102	Islamic and Pakistan Study	3	0
CS-121	Computer Programming	3	1
CE-151	Engineering Mechanics	3	1
Total		Total Credit Hour 12+3=15	

B.Sc. Civil Engineering (Semester-2)

Course No.	Course Title	Credit Hrs.	
		Theory	Practical
MA-112	Mathematics-2	3	0
CE-152	Civil Engineering Drawing	1	2
CE-153	Surveying-1	3	2
CE-154	Construction Material	3	1
CE-161	Applied Electricity & Thermodynamics	1	1
Total		Total Credit Hour 11+6=17	

B.Sc. Civil Engineering (Semester-3)

Course N	Course Title	Credit Hrs.	
		Theory	Practical
CE-261	Advance Surveying	3	2
CE-255	Mechanics of Solids-1	3	1
CE-256	Fluid Mechanics-1	3	1
	Mathematics-3	3	0
CE-257	Civil Engineering Construction	& graphics	1
Total		Total Credit Hour= 14+5=19	

B.Sc. Civil Engineering (Semester-4)

Course No.	Course Title	Credit Hrs.	
		Theory	Practical
ME-231	Engineering Geology	2	0
CE-258	Geotechnical Engineering-1	3	1
CE-259	Theory of Structure-1	3	0
	Numerical Analysis	2	0
CE-250	Project & Contract Management	3	1
Total		Total Credit Hour =13+2=15	

B.Sc. Civil Engineering (Semester-5)

Course N	Course Title	Credit Hrs.	
		Theory	Practical
CE-351	Engineering Hydrology	3	1
CE-371	Geotechnical Engineering-2	3	1
CE-361	Theory of Structure-2	3	1
CE-362	Plain and Reinforced Concrete-1	3	1
CE-360	Construction Management	2	1
Total		Total Credit Hour =14+5=19	

B.Sc. Civil Engineering (Semester-6)

Course N	Course Title	Credit Hrs.	
		Theory	Practical
CE-363	Fluid Mechanics-2	3	1
CE-372	Steel Structure	3	1
CE-364	Environmental Engineering-1	2	1
CE-373	Mechanics of Solids 2	3	1
CE-365	Technical Report writing	0	1
Total		Total Credit Hour=11+5=16	

B.Sc. Civil Engineering (Semester-7)

Course N	Course Title	Credit Hrs.	
		Theory	Practical
CE-471	Environmental Engineering-2	3	1
CE-472	Plain and Reinforced Concrete-2	3	1
CE-473	Transportation Engineering	3	1
CE-474	Hydraulics Engineering	3	1
CE-481	Project	0	3
Total		Total Credit Hour = 12+7=19	

B.Sc. Civil Engineering Technology (Semester-1)

Course	Course Title	Credit Hrs.	
		Theory	Practical
PST-311	Pakistan Studies	2	0
ENG-313	English Language skills	2	2
MTH-331	Applied Mathematics-I	3	0
CSC-341	Computer Applications	2	2
CIT-351	Applied Mechanics	2	2
Total		17	

B.Sc. Civil Engineering Technology (Semester-3)

Course	Course Title	Credit Hrs.	
		Theory	Practical
MTH-432	Applied Mathematics-II	3	0
CIT-453	Quantity Surveying and Contract Documents	1	2
CIT-455	Concrete Technology	2	2
CIT-461	Soil Mechanics	2	2
CIT-463	Mechanics of Solids	2	2
Total		18	

B.Sc. Civil Engineering (Semester-8)

Course N	Course Title	Credit Hrs.	
		Theory	Practical
CE-475	Structural Engineering	3	1
CE-475	Irrigation Engineering	3	1
CE-476	Design of Structure	3	1
CE-477	Pavement and Foundation	2	1
CE-482	Engineering	0	3
Total		Total Credit Hour= 11+7=18	

Grand Total of Credit Hours=15+17+19+15+19+16+19+18=138

B.Sc. Civil Engineering Technology (Semester-1)**B.Sc. Civil Engineering Technology (Semester-2)**

Course	Course Title	Credit Hrs.	
		Theory	Practical
ENG-314	Technical Communication	2	0
CIT-352	Surveying	2	2
CIT-354	Civil Engineering Drawing	1	3
CIT-356	Materials and Methods of Construction	2	2
CIT-360	Fluid Mechanics	2	2
Total		18	

B.Sc. Civil Engineering Technology (Semester-4)

Course N	Course Title	Credit Hrs.	
		Theo	Practical
ISL-412	Islamic Studies	2	0
MNG-420	Occupational Health and Safety Management	1	0
CIT-462	Transportation Engineering	2	2
CIT-464	Water Supply and Waste Water Management	2	2
CIT-466	Reinforced Concrete Structures	2	2
CIT-470	Theory of Structures	2	1
Total		18	

B.Sc. Civil Engineering Technology (Semester-5)

Course N	Course Title	Credit Hrs.	
		Theo	Practical
MNG-521	Environmental Management	2	2
CIT-565	Hydrology	2	2
CIT-571	Construction and Hydraulic Machinery	2	1
CIT-573	Computer Aided Building Modelling and Design	1	3
CIT-575	Foundations Engineering	2	1
Total		18	

B.Sc. Civil Engineering Technology (Semester-6)

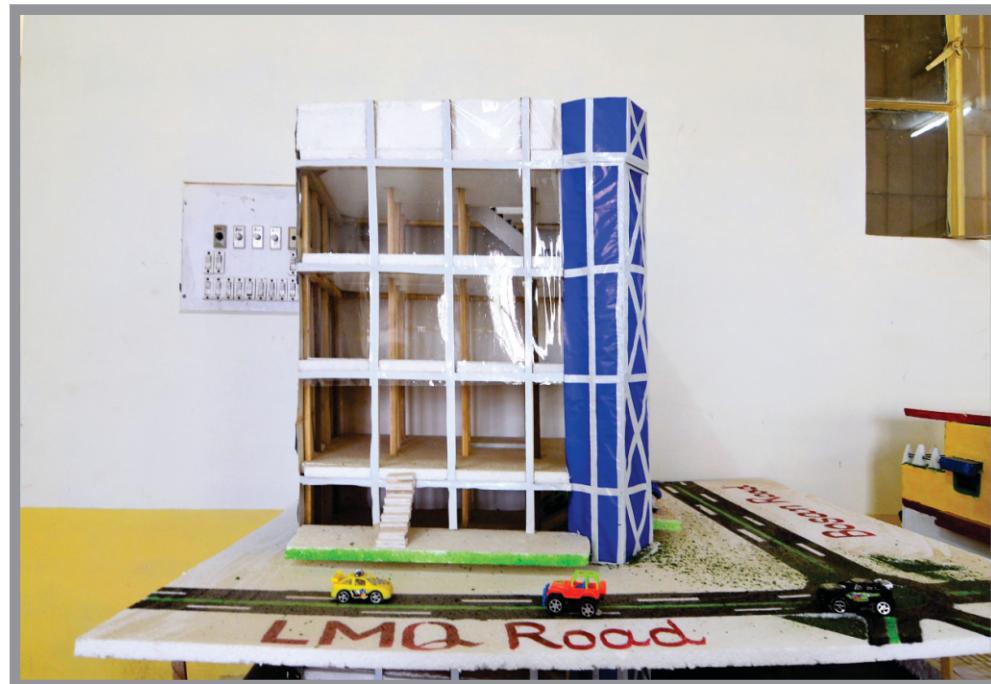
Course N	Course Title	Credit Hrs.	
		Theo	Practical
MNG-522	Project Management	2	1
CIT-572	Pre-stressed & Precast concrete	2	1
CIT-574	Geology & Earthquake Engineering	2	1
CIT-576	Irrigation and Hydraulic Structures	2	1
CIT-578	Steel Structures	2	1
CIT-592	Project	0	3
Total		18	

B.Sc. Civil Engineering Technology (Semester-7)

Course N	Course Title	Credit Hrs.	
		Theory	Practical
CIT-691	Professional Supervised Field Training.	0	14
Total		14	

B.Sc. Civil Engineering Technology (Semester-8)

Course N	Course Title	Credit Hrs.	
		Theory	Practical
CIT-692	Professional Supervised Field Training.	0	14
Total		14	





Faculty Civil Engineering and Technology



Engr. Dr. M. Aboubakar Farooq

In-Charge Department
Assistant Professor
PhD in Civil Engineering (Structural Engineering)
Hokkaido University, Japan



Dr. Abdul Hafeez Buller

Assistant Professor Department of Civil Engineering
PhD (Structural Materials) from Quaid-e-Awam
University of Engineering, Science & Technology
(QUEST) Nawabshah in 2019.



Engr. Fatima Mehwish

Lecturer
M.Sc. Structural Engineering (UET Lahore)
enqr.fatimamehwish2011@gmail.com



Engr. Zaheer Abbas

Lecturer
M.Sc. City Regional and Town Planning (UET Lahore)



Engr. Umar Farooq

Lecturer
M.Sc. Structural Engineering (UET Lahore)



Engr. Tariq Mahmood

Lecturer
M.Sc. Hydraulics& Irrigation Engineering (BZU Multan)



Engr. Asad Ali

Lecturer
M.Sc. Structural Engineering (UET Lahore)
(on study leave)



Engr. Hafsa Khurshid

Lecturer
M.Sc. Hydraulics& Irrigation Engineering (UET Lahore)
(on study leave)



Engr. Riaz Ahmad

Lecturer
M.Sc. Structural Engineering (UET Lahore)
(on study leave)



Engr Kashif Zahoor

Lab Engineer
B.Sc. Civil Engineering (UET Taxila)



Engr. Hafiz Muhammad

Usman Azeem
Lab engineer
B.Sc. Civil engineering (UET Taxila)



Degree Programs

❖ B.Sc. Electrical Engineering

Eligibility Criteria

He/She should have obtained at least 60% marks in F.Sc / ICS/ DAE/B.Sc. / B.Tech. (Pass) Examination excluding Sports and Hafiz-e-Quran marks. ECAT test (Conducted by UET Lahore) is compulsory for admission in all B.Sc. engineering programs.

Degree Programs

❖ B.Sc. Electrical Engineering Technology

❖ Eligibility Criteria

F.Sc. (Pre-Engineering)/ D.A.E or equivalent with a minimum of 50% marks followed by entry test of students. The basis for open merit determination of students are:

- Entry test 30%
- HSSC/DAE/A-Level/Equivalent 70%

Degree Programs

❖ M.Sc. Electrical Engineering

Eligibility Criteria

B.Sc. Engineering (Electrical, Electronics) from any HEC recognize /PEC accredited institute with minimum CGPA ; 2/4 with valid GAT-General with 50% marks or MNS UET admission test.

Department of Electrical Engineering and Technology

Introduction: The Department of Electrical Engineering has designed and updated curriculum and offers high quality courses aimed at individuals who can amicably meet current challenges. The program of studies enables them to join the team of future talented young engineers and to realize their innovative ideas. The Department provides high quality education, and basis for life-long learning of the engineering and scientific knowledge required for analysis, design, improvement and evaluation of integrated system of engineering. The Department also provides the students with the opportunity to learn how research carried out by the faculty members is transformed into education. It offers four-year B.Sc. degree program in Electrical Engineering with following specializations:

- Electronics
- Communication Engineering
- Power Engineering

Department is going to start 2-year M.S. degree program in Electrical Engineering with following specializations:

- Electronics
- Control
- Power Engineering

The Department of Electrical Engineering is dedicated to continued innovation through its high-quality academic programs and competitive research. The program covers a wide spectrum of fields while keeping up with their fast pace of technological advancement.

Mission

To nurture well-rounded Electrical Engineering professionals through excellence in teaching, research and promoting a culture of entrepreneurship, keeping in mind the ethical, environmental and societal concerns.

Program Educational Objectives (PEOs)

Few years after graduation, our students will be able to:

1. Apply knowledge and skills to identify and address the solution of a broad range of Electrical Engineering related problems in industry or academia.
2. Demonstrate high moral and ethical values, life-long learning attitude and societal responsibilities.
3. Contribute as effective team members and managers in their organizations or self-initiated business activity.

Scheme of Studies

B.Sc. Electrical Engineering (Semester-1)

Course No.	Course Title	Credit Hrs.	
		Theory	Lab
MT-101	Calculus and Analytical Geometry	3	0
PH-101	Applied Physics	3	1
CH-101	Applied Chemistry	2	0
CS-131	Introduction to Computing	2	1
EE-121	Linear Circuits Analysis	3	1
EE-122	Electrical Workshop	0	1
Total		13	4

B.Sc. Electrical Engineering (Semester-2)

Course No.	Course Title	Credit Hrs.	
		Theory	Lab
HU-111	Islamic Studies / Ethics /	2	0
MT-102	Differential Equation	3	0
CS-132	Programming Fundamentals	3	1
EE-123	Network Analysis	3	1
ME-101	Engineering Drawing	0	1
EE-124	Electronic Devices & Circuits	3	1
Total		14	4

B.Sc. Electrical Engineering (Semester-3)

Course No.	Course Title	Credit Hrs.	
		Theory	Lab
ME-202	Applied Thermodynamics	3	0
HU-212	Communication Skills	2	0
EE-227	Analog and Digital Electronics	3	1
MT-203	Linear Algebra	3	0
EE-225	Digital Logic Design	3	1
EE-226	Electrical Instrumentation and Measurement	2	1
Total		16	3

B.Sc. Electrical Engineering (Semester-4)

Course No.	Course Title	Credit Hrs.	
		Theory	Lab
HU-214	Technical Writing and Presentation Skills	3	0
MT-204	Numerical Analysis with MATLAB	3	1
CS-233	Data Structures	2	1
HU-213	Pakistan Studies	2	0
EE-228	Signal and Systems	3	0
EE-241	Electrical Machines	3	1
Total		16	3

B.Sc. Electrical Engineering (Semester-5)

Course No.	Course Title	Credit Hrs.	
		Theory	Lab
EE-342	Microprocessor Systems	3	1
MT-305	Probability and Random Variables/ Statics	3	0
EE-329	Electromagnetic Theory	3	0
EE-343	Electrical Power Generation and Transmission	3	1
EE-343	Control Systems	3	1
Total		15	3

B.Sc. Electrical Engineering (Semester-6)

Course No.	Course Title	Credit Hrs.	
		Theory	Lab
MNG-315	Engineering Economics and Management	3	0
EE-351	Power Electronics	3	1
EE-345	Power Distribution and Utilization	3	0
EE-344	Communication System	3	1
EE-3XX	Elective -1	3	1
Total		15	3

Elective-1

EE-352 Power system analysis and Design	EE-371 Integrated Electronics	EE-372 Embedded System
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B.Sc. Electrical Engineering (Semester-7)

Course No.	Course Title	Credit Hrs.	
		Theory	Lab
EE-4XX	Elective -2	3	1
EE-4XX	Elective -3	3	1
EE-473	Industrial Control System	3	1
EE-499a	Project (Phase-I)	0	3
Total		9	6

List of Electives

Power	Electronics / Communication
EE-461 Power system Protection	EE-481 Antenna and Wave Propagation
EE-462 High Voltage Engineering	EE-474 Digital Signal Processing
EE-454 Introduction to Smart Grid	EE-482 Computer Networks
EE-453 Renewable Energy	EE-475 VLSI System Design
	EE-476 Introduction to Robotics

B.Sc. Electrical Engineering (Semester-8)

Course No.	Course Title	Credit Hrs.	
		Theory	Lab
MNG-416	Entrepreneurship & Business Management	3	0
EE-4XX	Elective -4	3	1
EE-4XX	Elective -5	3	1
EE-499b	Project (Phase-II)	0	3
Total		9	5

List of Electives

Power	Electronics / Communication
EE-455 Power system Quality	EE-483 Microwave Engineering
EE-468 Power System Operation and Control	EE-484 Digital Image Processing
EE-469 Electrical Machine Design	EE-485 Digital Communication System
EE-467 Power Plant Engineering	EE-477 Computer Architecture Organization
	EE-478 Optical Circuits

Total Credit Hours: 138(107Th + 31Pr) Engineering Courses Credit hours=101, Non-Engineering Courses Credit Hours=37, Engineering Credit Hours percentage=73.2%, Non-Engineering Credit Hours per=26.8%

B.Sc. Electrical Engineering Technology (Semester-1)

Course No.	Course Title	T	P	Credit Hours
MTH-331	Applied Mathematics-I	3	0	3
PHY-332	Applied Physics	2	1	3
CSC-341	Computer Applications	1	2	3
EET-351	Engineering Drawing	1	2	3
EET-361	Linear Circuits Analysis	2	2	4
Total		9	7	16

B.Sc. Electrical Engineering Technology (Semester-2)

Course No.	Course Title	T	P	Credit Hours
PST-311	Pak-Studies	1	0	1
CHM-333	Applied Chemistry	2	1	3
EET-352	Power Generation Systems	2	0	2
EET-362	Electronics	2	2	4
EET-364	DC Machines & Transformers	2	2	4
Total		11	6	17

B.Sc. Electrical Engineering Technology (Semester-3)

Course No.	Course Title	T	P	Credit Hours
ENG-411	Communication Skills	2	0	2
MTH-431	Applied Mathematics-II	3	0	3
EET-461	Electrical Instruments and Measurements	2	2	4
EET-463	Digital Electronics	2	2	4
EET-471	AC Circuits Analysis	2	2	4
Total		11	6	17

B.Sc. Electrical Engineering Technology (Semester-4)

Course No.	Course Title	T	P	Credit Hours
ISL-412	Islamiyat	1	0	1
EET-470	AC Machines	2	2	4
EET-472	Electro-Magnetic Fields	2	0	2
EET-474	Electrical Power Transmission	2	1	3
EET-476	Electrical Power Distribution and Utilization	2	1	3
Total		11	6	17

B.Sc. Electrical Engineering Technology (Semester-5)

Course No.	Course Title	T	P	Credit Hours
MNG-521	Total Quality Management	2	0	2
EET-571	Micro-Processor Theory and Interfacing	2	1	3
EET-573	Switch Gear & Protective Devices	2	1	3
EET-575	Communication Technology	2	2	4
EET-577	Control Technology	2	1	3
Total		10	5	15

B.Sc. Electrical Engineering Technology (Semester-6)

Course No.	Course Title	T	P	Credit Hours
ENG-512	Technical Report Writing	2	0	2
EET-572	Power System Analysis	3	0	3
EET-574	Data & Computer Communication	2	2	4
EET-576	High Voltage Technology	2	1	3
EET-578	Industrial Drives and PLC	2	2	4
Total		11	5	16

B.Sc. Electrical Engineering Technology (Semester-7)

Course No.	Course Title	T	P	Credit Hours
EET692a	Supervised Industrial Training (Continued)	0	15	15
EET699a	Project (Continued)	0	3	3
Total		0	18	18

B.Sc. Electrical Engineering Technology (Semester-8)

Course No.	Course Title	T	P	Credit Hours
EET692b	Supervised Industrial Training	0	15	15
EET699b	Project	0	3	3
Total		0	18	18

Total Credit Hours **134 (63 Th. + 71Pr.)**

Ratio of Non-Engineering to Engineering Subjects 30:70

Ratio of Theory to Practical 30:70

M.Sc. Electrical Engineering Program

The Curriculum of MSC Electrical Engineering with following specialization is given below

Code No.	Course Title	Power	Control	Electronics
EE-501	Linear System Theory	✓	✓	✓
EE-502	Optimization Theory	✓	✓	✓
EE-503	Modelling & Simulation Technique	✓	✓	✓
EE-504	Random Variable & Stochastic Processes	✓	✓	✓
EE-505	Advance Statistics in Engineering	✓	✓	✓
EE-506	Advance Power Electronics	✓	✓	✓
EE-507	Advance Electric Machine Design	✓	-	-
EE-508	Control of Electric Machine Drive	✓	✓	-
EE-509	Advance Power System	✓	-	-
EE-510	Advance Power System Protection	✓	-	-
EE-511	Advance High Voltage Engineering	✓	-	-
EE-512	Power System Quality	✓	-	-
EE-513	Power System Planning	✓	-	-
EE-514	Renewable Electric Energy System	✓	-	-
EE-515	Advance Control System	-	✓	-
EE-516	Digital Control System	-	✓	-
EE-517	Nonlinear Control System	-	✓	-
EE-518	Adaptive Control System	-	✓	-
EE-519	Robotics and Intelligent System	-	✓	✓
EE-520	Advance Solid State Electronics	-	-	✓
EE-521	Photonics Devices	-	-	✓
EE-522	Advance Digital Electronics Design	-	-	✓
EE-523	Network Security	-	-	✓
EE-524	Advance System and Signal Processing	-	-	✓

M.Sc. Electrical Engineering (Semester-1)

Course No.	Course Title	Credit Hours
EE-501	Core Compulsory-1	3
EE-5XX	Core Specialization	3
EE-5XX	Elective -1	3
EE-5XX	Elective -2	3
Total		12

M.Sc. Electrical Engineering (Semester-2)

Course No.	Course Title	Credit Hours
EE-502	Core Compulsory-2	3
EE-5XX	Elective -3	3
EE-5XX	Elective -4	3
Total		9

M.Sc. Electrical Engineering (Semester-3)

Course No.	Course Title	Credit Hours
EE-5XX	Elective -5	3
-	Thesis-I	3
Total		6

M.Sc. Electrical Engineering (Semester-4)

Course No.	Course Title	Credit Hours
-	Thesis-II	3
Total		3

- Each student has to complete 30 credit hours to obtain degree [24 credit hours Subjects which includes 2 core compulsory, one core specialization and five electives+6 credit hour for Thesis].
- Degree will be awarded upon acquiring Minimum CGPA of 2.5 out of 4.

List of Core Compulsory

Sr. No.	Subject Name
1	EE-501 Linear System Theory
2	EE-502 Optimization Theory

List of Core Specialization

Sr. No.	Subject Name	Specialization
1	EE-509 Advance Power System	Power
2	EE-515 Advance Control System	Control
3	EE-520 Advance Solid-State Electronics	Electronics

List of Core Specialization

Power	Electronics	Control System
EE-507 Advance Electric Machine Design	EE-522 Advance Digital Electronics Design	EE-516 Digital Control System
EE-511 Advance High voltage Engineering	EE-521 Photonics Devices	EE-517 Nonlinear Control System
EE-510 Advance Power System Protection	EE-524 Advance System and signal Processing	EE-508 Control of Electric Machine Drive
EE-508 Control of Electric Machine Drive	EE-523 Network Security	EE-519 Robotics and Intelligent System
EE-513 Power System Planning	EE-504 Random Variable and Stochastic Process	EE-506 Advance Power Electronics
EE-514 Renewable Electric Energy System	EE-519 Robotics and Intelligent System	EE-524 Advance System and signal Processing
EE-506 Advance Power Electronics	EE-503 Modelling & Simulation Technique	EE-503 Modelling & Simulation Technique
EE-512 Power System Quality	EE-506 Advance Power Electronics	EE-518 Adaptive Control System



Faculty of Electrical Engineering and Technology

**Engr. Touqeer Ahmad Raza**

In-charge Department
M.Sc. Electrical Engineering (Power)
Area of Interest: Renewable energy system, Power Electronics

**Engr. Humza Khan**

Lecturer
M.Sc. Electrical Engineering
Area of Interest: Digital image processing

**Engr. Dr. Zeeshan Najam Khan**

Associate Professor
PhD Electrical Engineering
Area of Interest: Solid State Electronics, Digital Electronics

**Engr. Muhammad Bilal**

Lecturer
M.Sc. Electrical Engineering
Area of Interest: Machine and Power System

**Engr. Dr. Muhammad Shahzad**

Assistant Professor
PhD Electrical Engineering (Power)
Area of Interest: Power Systems (Analysis and Protection)

**Engr. Sikandar Saleem**

Lab Engineer
M.Sc. Electrical Engineering
Area of Interest: Machine and Power Electronics

**Engr. Ayesha Khalid**

Lecturer
M.Sc. Electrical Engineering
Area of Interest: Antenna and Microwave, Communication System, Optical Circuit

**Engr. Kashif Iqbal Mayo**

Lecturer
M.Sc. Electrical Engineering (Power)
Area of Interest: Design of Electrical Machine, Control of Electric Machine Drive



Lab Facilities

The following lab facilities have been furnished for the electrical engineering students

Computer simulation lab

Electric Workshop Lab

Basic Electronics Lab

Electric Machine Lab

Digital Logic Design Lab

Control System Lab

Power Electronics Lab

Industrial Control System Lab

Power System Protection Lab

Embedded System Design Lab

Applied Physics Lab



Degree Programs

- ❖ **B.Sc. Mechanical Engineering Technology**
 - ❖ (Morning and Evening)

Eligibility Criteria

F.Sc. (Pre-Engineering)/ D.A.E or equivalent with a minimum of 50% marks followed by entry test of students. The basis for open merit determination of students are:

- Entry test 30%
- HSSC/DAE/A-Level/Equivalent 70%

Department of Mechanical Engineering and Technology

Introduction:

Department of Mechanical Engineering and Technology was established in 2012 immediately after the creation of the University by the provincial government of the Punjab, Pakistan. First program offered by the Mechanical Department is a four-year bachelor degree program; B.Sc. Mechanical Engineering Technology.

The department has well-qualified and hard-working teaching faculty which is fully committed to groom the students of Mechanical Engineering and Technology to their best.

The department is in the process of establishing state-of-art laboratories to provide hands on learning experience to its undergraduate students. These labs would also provide an excellent opportunity to promote research activities in this region of Punjab province. The department aims to start new degree programs like B.Sc. Mechanical Engineering, B.Sc. Industrial & Manufacturing Engineering Technology and M.Sc. Mechanical Engineering Technology and other related programs in near future. Masters in TQM and Masters in HSE are also in consideration.

Mission:

Our mission is to have fully developed and functional labs and to get all the accreditations required for graduate and post-graduate degree programs of Mechanical Engineering and Technology within 5 years.

Scope:

The graduates of Mechanical Engineering and Technology Department (METD) of MNS-UET Multan would be an excellent addition to industrial and socio-economic developments of the country. Manufacturing, automotive, the oil and gas, process, engineering, procurement and construction industries of Pakistan would be greatly benefited by the contributions of the graduates of the department. The engineering and technology services and maintenance sectors are focused as well during training of our graduates.

Scheme of Studies

B.Sc. Mechanical Engineering Technology (Semester-1)

Course No.	Course Title	Credit Hrs.	
		Theory	Practical
PHY-104	Applied Physics	2	1
MTH-101	Applied Mathematics-I	3	0
CST-101	Computer Fundamentals and Applications	2	2
MET-101	Machine Drawing	2	2
PST-104	Pakistan Studies	2	0
ENG-101	Communication Skills	0	2
Total		11	7

B.Sc. Mechanical Engineering Technology (Semester-2)

Course No.	Course Title	Credit Hrs.	
		Theory	Practical
MTH-102	Applied Mathematics-II	3	0
EET-101	Basic Electrical and Electronics	2	1
CHY-104	Applied Chemistry	2	1
MET-102	Workshop Practice	0	2
MET-103	Statics	3	1
IST-104 / HUM-104	Islamic Studies / Ethics	2	0
Total		12	5

B.Sc. Mechanical Engineering Technology (Semester-3)

Course No.	Course Title	Credit Hrs.	
		Theory	Practical
MET-231	Materials Technology	2	1
MET-232	CAD-I	0	1
MET-233	Mechanics of Materials	2	1
MET-234	Thermodynamics for Technologists	3	1

MET-235	Dynamics	2	1
HUM-204	Technical Writing and Communication	1	1
	Total	10	6

B.Sc. Mechanical Engineering Technology (Semester-4)

Course No.	Course Title	Credit Hrs.	
		Theory	Practical
MET-241	Fluid Flow Processes	2	1
MET-242	Basic Mechanics of Machines	2	1
MET-243	Machine Design and CAD-II	2	1
MET-244	Manufacturing Technology	2	1
MTH-204	Statistics and Probability	2	0
MET-245	Hydraulics and Pneumatics	2	1
	Total	12	5

B.Sc. Mechanical Engineering Technology (Semester-5)

Course No.	Course Title	Credit Hrs.	
		Theory	Practical
MET-351	Hydraulic Machinery	2	1
MET-352	HVAC Technology	2	1
MET-353	Instrumentation Technology	2	1
MET-354	Machining Technology	2	1
MET-355	Metrology and Quality Control	2	1
MET-356	Automotive Technology and Engines	3	1
	Total	13	7

B.Sc. Mechanical Engineering Technology (Semester-6)

Course No.	Course Title	Credit Hrs.	
		Theory	Practical
MET-361	Heat and Mass Transfer	3	1
MET-362	Condition Monitoring and Maintenance	2	1
MET-363	Energy Resources and Management	3	1
MET-364	Power Plants and Thermal Utilities	3	1



MET-365	Health, Safety and Environment	2	0
HUM-304	Management and Entrepreneurship	2	0
	Total	15	5

B.Sc. Mechanical Engineering Technology (Semester-7)

Course No.	Course Title	Credit Hrs.	
		Theory	Practical
MET-471	Supervised Industrial Training	0	16
	Total	0	16

B.Sc. Mechanical Engineering Technology (Semester-8)

Course No.	Course Title	Credit Hrs.	
		Theory	Practical
MET-482	Supervised Industrial Training	0	16
	Total	0	16



Faculty of Mechanical Engineering Technology



Engr. Muhammad Umar Khalidooon

Lecturer/In-Charge Department
PGD Mechatronics Engineering
B.Sc. (Hons) Mechanical Engineering (UET Lahore)
umar.khalidooon@mnsuet.edu.pk



Engr. Arbab Shahid

Lecturer
M.Sc. Design and Manufacturing Engineering (NUST)
BE Mechatronics Engineering (NUST)



Engr. Shahzad Ahmad

Lecturer
MS Total Quality Management (IQT M, PU Lahore)
B.Sc. Industrial & Manufacturing Engineering (UET Lahore)
(on study leave abroad)



Engr. Muhammad Arslan Qasim

Lab Engineer
B.Sc. Mechanical Engineering (GIKI)
M.Sc. Mechanical Engineering (UET Taxila)



Engr. Muhammad Aon Ali

Lecturer
M.Sc. Thermal Engineering (UET Taxila)
B.Sc. (Hons) Mechanical Engineering (UET Taxila)
(on study leave abroad)



Engr. Sania Azam

Lecturer
M.Sc. Mechanical Design Engineering (UET Lahore)
B.Sc. Mechanical Engineering (UCET, BZU Multan)



Engr. Misbah Niamat

Lecturer
M.Sc. Industrial Engineering (UET Taxila)
B.Sc. Industrial and Manufacturing Engineering (UET Lahore)



Engr. Tasmyia Kousar

Lecturer
M.Sc. Mechanical Design Engineering (UET Lahore)
B.Sc. Mechanical Engineering (BZU Multan)

Lab Facilities

Following lab facilities have been furnished for the mechanical engineering technology students

- 1) Engineering Drawing
- 2) Workshops
- 3) Mechanics Lab
- 4) Strength of Materials
- 5) Thermodynamics Lab
- 6) Fluid Mechanics Lab
- 7) Heat and Mass Transfer Labs
- 8) Electrical and Electronics Lab
- 9) Computer Lab
- 10) Physics Lab
- 11) Chemistry Lab







Faculty of **Sciences and Humanities**

Degree Program

- ❖ BS Mathematics (4 Years) (M)

Eligibility Criteria

Intermediate with Mathematics, securing at least 50% marks in aggregate.

Degree Program

- ❖ M.Sc. Mathematics (2 Years) (Eve.)

Eligibility Criteria

B.Sc. (Mathematics), with minimum 45% Marks

Faculty of Sciences and Humanities

Introduction:

Muhammad Nawaz Sharif University of Engineering and Technology Multan started its journey to deliver the Engineering education a few years ago since 2012. It is committed towards training professionals and engineers who have good communication skills and are well informed about ethical and social issues.

The department of Basic Sciences and Humanities was also established in the same time as a part of the Muhammad Nawaz Sharif University of Engineering, Multan and is as old as the university itself. The faculty has been inducted with all the departments of Basic Sciences and Humanities i.e. Mathematics, Chemistry, Physics, Computer Science, Islamic Studies, Pakistan Studies etc.

This faculty provides the students a broad perception and incorporate them the idea of integrated nature of engineering and social aspects of professional life. The faculty is fulfilling the needs of engineering disciplines in Applied Sciences and Humanities. The faculty offers courses in Mathematics, Physics, Computer Science, Chemistry, English, Islamic Studies, Pakistan Studies. The essential practical work in relevant subjects is carried out as a support to the immense forthcoming engineering practical work. The contents of the courses are regularly revised so as to keep abreast of the fast progress occurring in the various engineering departments.

Keeping in view the importance of inter-disciplinary research, Engineers-Scientists effective collaboration, and better utilization of research potential, the Faculty of Sciences and Humanities has started following programs:

1. BS Mathematics (4-years)
2. BS Physics (4-years)
3. BS Computer Science (4-years)
4. M.Sc. (Applied Physics)
5. M.Sc. (Mathematics)
6. Master in Computer Science. (M.C.S)

The faculty has well-qualified and hard-working teaching faculty committed to groom students of the University to their best.

Department of Mathematics

It is globally admitted that Mathematics is the engine behind Science in the present world. It possesses inherent logic as well as beauty while providing the foundation and structure from which engineers, physicists, chemists, biologists, medics, economists and social scientists build an understanding of the world around us. The understanding may also lead to the development of tools which improve the quality of our lives. The mission of the department of Mathematics, Muhammad Nawaz Sharif University of Engineering and Technology, is to enhance the standard of mathematics teaching and quality of research, bringing its credibility at par with the international standards. Further, the department aims to contribute to the development of students as mathematical thinkers, enabling them to grow in their chosen professions, and to act as dynamic citizens.

Currently, the department is offering following degree programs in the evening classes:

1. BS-Mathematics (4-Years)
2. M.Sc. Mathematics (2-Years)

Scheme of Studies

BS (Mathematics (Semester-1))		
Code	Course Name	Cr. Hrs.
ISE-111	Islamiyat / Ethics	2
ENG-111	English-I (Language in Use)	3
COMP-111	Computer (Introduction and Applications)	3
MATH-101	Mathematics A-I [Calculus (I)]	4
MATH-102	Mathematics B-I [Vectors & Mechanics (I)]	4
PHY-111	Physics-I	3
PHY -112	Physics Lab-I	1
Total		20
BS (Mathematics (Semester-2))		
Code	Course Name	Cr. Hrs.
PST-111	Pakistan Studies	2
ENG-112	English-II (Academic Reading and Writing)	3
PHY -113	Physics –II	3
PHY -114	Physics Lab-II	1
MATH-103	Mathematics A-II [Plane Curves & Analytic Geometry]	4
MATH-104	Mathematics B-II [Mechanics (II)]	4
MATH-105	Discrete Mathematics	2
Total		19
BS (Mathematics (Semester-3))		
Code	Course Name	Cr. Hrs.
ENG-211	English-III (Communication Skills)	3

PHY -211	Physics –III	3
PHY -212	Physics Lab-III	1
MATH-201	Mathematics A-III [Linear Algebra]	4
MATH-202	Mathematics B-III [Calculus (II)]	4
MATH-205	Graph Theory	2
Total		17
BS (Mathematics (Semester-4))		
Code	Course Name	Cr. Hrs.
ENG-212	English-IV (English for Practical Aims)	3
PHY -213	Physics –IV	3
PHY -214	Physics Lab-IV	1
MATH-203	Mathematics A-IV [Ordinary Differential Equations]	4
MATH-204	Mathematics B-IV [Metric Spaces & Group Theory]	4
SOC-211	Introduction to Sociology	3
MATH-206	Elementary Number Theory	2
Total		20
BS (Mathematics (Semester-5))		
Code	Course Name	Cr. Hrs.
MATH-301	Real Analysis –I	3
MATH-302	Group Theory-I	3
MATH-303	Complex Analysis-I	3
MATH-304	Vector and Tensor Analysis	3
MATH-305	Topology	3
MATH-306	Differential Geometry	3
Total		18

BS (Mathematics (Semester-6))

Code	Course Name	Cr. Hrs.
MATH-307	Real Analysis –II	3
MATH-308	Rings and Vector Spaces	3
MATH-309	Complex Analysis – II	3
MATH-310	Mechanics	3
MATH-311	Functional Analysis-I	3
MATH-312	Ordinary Differential Equations	3
Total		18

BS (Mathematics (Semester-7))

Code	Course Name	Cr. Hrs.
MATH-401	Set Theory	3
MATH-402	Partial Differential Equations	3
MATH-403	Numerical Analysis-I	3
<i>Any Two of the following:</i>		
MATH-404	Mathematical Statistics-I	3
MATH-405	Fortran Programming	3
MATH-406	Group Theory-II	3
MATH-407	Ring Theory	3
MATH-408	Number Theory-I	3
MATH-409	Quantum Mechanics-I	3
MATH-410	Analytical Dynamics	3
MATH-411	Electromagnetic Theory-I	3
MATH-412	Operations Research-I	3
MATH-413	Theory of Approximation and	3
	Splines-I	
MATH-414	Functional Analysis- II	3
Total		15

BS (Mathematics (Semester-8))

Code	Course Name	Cr. Hrs.
MATH-416	Measure Theory and Lebesgue	3
	Integration	
MATH-417	Methods of Mathematical	3
<i>Any Two of the following:</i>		
MATH-419	Mathematical Statistics-II	3
MATH-420	Computer Applications	3
MATH-421	Group Theory-III	3
MATH-422	Theory of Modules	3
MATH-423	Number Theory-II	3
MATH-424	Quantum Mechanics-II	3
MATH-425	Special Theory of Relativity	3
MATH-426	Electromagnetic Theory-II	3
MATH-427	Operations Research-II	3
MATH-428	Theory of Approximation and	3
	Splines-II	
MATH-429	Functional Analysis- III	3
MATH-430	Fluid Mechanics-II	3
Total		15



M.Sc. (Mathematics (Semester-1))

Code	Course Name	Cr. Hrs.
MATH-511	Ordinary Differential Equations	3
MATH-512	Linear Algebra	3
MATH-513	Introduction to Computing	3
MATH-514	Introduction to Programming	2+2
MATH-515	Complex Analysis	3
Total		15

M.Sc. (Mathematics (Semester-2))

Code	Course Name	Cr. Hrs.
MATH-521	Real Analysis I	3
MATH-522	Vectors and Classical Mechanics	3
MATH-523	Algebra-I	3
MATH-524	Advanced Calculus	3
MATH-525	Functional Analysis	3
MATH-526	Numerical Analysis-I	3
Total		18

M.Sc. (Mathematics (Semester-3))

Code	Course Name	Cr. Hrs.
MATH-631	Real Analysis II	3
MATH-632	Algebra-II	3
MATH-633	Topology	3
MATH-634	Numerical Analysis-II	3
MATH-xxx	Elective-I	3
MATH-xxx	Elective-II	3
Total		18

M.Sc. (Mathematics (Semester-4))

Code	Course Name	Cr. Hrs.
MATH-641	Partial Differential Equations	3
MATH-642	Differential Geometry	3
MATH-643	Introduction to MATLAB	(2+2)
MATH-xxx	Elective-III	3
MATH-xxx	Elective-IV	3
Total		16



Degree Program

❖ M.Sc. Physics

Eligibility Criteria

Bachelor's degree with Physics and Mathematics or an equivalent from HEC recognized university, securing at least 45% marks in aggregate.

Note: B.Sc. with Physics and Mathematics A and B (200 marks each) or Physics with any other subject (200 marks) with elective Math in F.Sc. will be eligible for admission in MSc Physics and provided that applicant has obtained at least 45% marks in BSc.

Duration of the Program

The minimum period for completion of M.Sc. Physics program is 02 academic years whereas maximum period will be 03 academic years.

❖ BS Physics

(Bachelor of Science in Physics) (4 Years, Morning)

Eligibility Criteria

Intermediate with Physics and Mathematics, securing at least 50% marks in aggregate. Or any other examination of a Foreign University/Institution/examining Body, equivalent to Intermediate with Physics and Mathematics. Equivalence and percentage of marks will be determined by IBCC.

Note: The students with pre-medical background will be allowed to get admission in BS Physics with the additional non-credit Mathematics course of "Basic Mathematics" during the first semester of BS Physics.

Degree Completion Requirements

For award of BS degree, candidates must complete 134 credit hours of course work. Minimum CGPA for award of BS degree must be 2.5 CGPA out of 4.

Department of Physics

Introduction

MNS University of Engineering and Technology is honored to have highly qualified faculty in the Department of Physics. Currently, One PhD and two MS faculty members with international and national qualification are pursuing the Physics courses in related departments. Faculty has extended research output in the field of nanomaterials and nanotechnology and condensed matter physics. The department has plan to induct more faculty members in the field of plasma physics, thin films, Nanoscience, theoretical physics and optical physics etc. Different projects in the said fields have been accepted by various funding agencies. The projects are carried out by faculty members and the collaborators at national and international levels. The department has advanced learning facilities, technology equipped laboratories, well class rooms and lecture theatres.

Department of Physics constitutes an integrated series of basic and advanced physics topics in various fields of physics. Students are encouraged and motivated to take part in co-curricular and extracurricular activities like seminars, science exhibitions, industrial tours, sports gala etc. Graduates from the university will be able to contribute in the science and technology as intellectual leaders, teachers and leading researchers.

Mission

To provide high quality education through rigorous course work, interdisciplinary and multidisciplinary research and collaboration with industry.

The Department aspires to provide the best scientific methods in teaching the basic principles of physics, both experimental and theoretical, and puts most of time to keep the level of education, scientific research and community service.

Labs Facilities/Infrastructure

- Applied Physics Lab
- Electronics Lab
- Thermodynamics Lab
- Nano synthesis Lab
- Mechanics Lab
- Digital Electronics Lab

The basic equipment that already present in the laboratory are as follows,

- Muffle Furnace
- Centrifuge Machine
- Magnetic Stirrer
- Heating Oven

Scheme of Studies

M.Sc. Physics (Semester-1)

Code	Course Name	Cr. Hrs.
Phy-511	Solid State Physics	3
Phy-512	Mathematical Methods-I	3
Phy-513	Electronics-I	3
Phy-514	Atomic & Molecular Physics	3
Phy-515	Electronics Lab-I	3
Phy-516	Applied Physics Lab-V	2
Phy-517	Classical Mechanics	1
Phy-518	Scientific Computing	N.C
Total		18

M.Sc. Physics (Semester-2)

Code	Course Name	Cr. Hrs.
Phy-521	Thermal & Statistical Physics	3
Phy-522	Mathematical Methods-II	3
Phy-523	Electronics-II	3
Phy-524	Computational Physics	3
Phy-525	Computational Physics Lab	1
Phy-526	Applied Physics Lab-VI	2
Phy-527	Electronics Lab-II	1
Total		16

M.Sc. Physics (Semester-3)

Code	Course Name	Cr. Hrs.
Phy-531	Nuclear Physics -I	3
Phy-532	Electrodynamics-I	3
Phy-533	Quantum Mechanics-I	3
Phy-534	Physics Lab-VII	2

Phy-535 Seminar (about Project) 1

Phy-536-8 Advance Elective-I 3

Total **15**

M.Sc. Physics (Semester-4)

Code	Course Name	Cr. Hrs.
Phy-541	Nuclear Physics -II	3
Phy-542	Electrodynamics-II	3
Phy-543	Quantum Mechanics-II	3
Phy-544	Project (Report + V.V.)	3
Phy-545-8	Advance Elective-II	3
Total		15

Advanced Electives-I

Code	Course Name	Cr. Hrs.
Phy-536	Digital Electronics-I	2+1
Phy-537	Advance Solid-State Physics	3
Phy-538	Lasers	3

NC is the non-credit course

Advanced Electives-II

Code	Course Name	Cr. Hrs.
Phy-545	Digital Electronics-II	2+1
Phy-546	Plasma Physics	3
Phy-547	Medical Physics	3
Phy-548	Materials Physics	3

NC is the non-credit course

B.S. Physics (Semester-1)		
Code	Course Name	Cr. Hrs.
Phy-1101	Mechanics-I	3
Phy-1102	Introduction to Chemistry	3
Phy-1103	Physics Lab.-I	1
Phy-1104	Mathematics-I(Algebra)	3
Phy-1105	Introduction to Statistics	3
Phy-1106	English-I (Functional English)	3
Phy-1107	Pakistan Studies	2
Total		18
B.S. Physics (Semester-2)		
Code	Course Name	Cr. Hrs.
Phy-1201	Mechanics-II	3
Phy-1202	Heat & Thermodynamics	3
Phy-1203	Physics Lab.-II	1
Phy-1204	Mathematics-II (Analytical Geometry and Vectors)	3
Phy-1205	Scientific Computing+ Lab.	2+1
Phy-1206	English-II (Communication Skills)	3
Phy-1207	Islamic Studies	2
Total		18
B.S. Physics (Semester-3)		
Code	Course Name	Cr. Hrs.
Phy-1301	Electricity & Magnetism-I	3
Phy-1302	Electronics & Mod. Physics	3
Phy-1303	Physics Lab.-III	1
Phy-1304	Mathematics-III (Advance Algebra)	3
Phy-1305	Environmental Science	3

Phy-1306	English-III (Writing and Presentation Skills)	3
Phy-1307	Constitution & Legal System of Pakistan	2
Total		18
B.S. Physics (Semester-4)		
Code	Course Name	Cr. Hrs.
Phy-1401	Electricity & Magnetism-II	3
Phy-1402	Modern Physics	3
Phy-1403	Physics Lab.-IV	1
Phy-1404	Mathematics-IV(Calculus)	3
Phy-1405	Waves and Oscillations	3
Phy-1406	Introduction to Psychology	3
Total		16
B.S. Physics (Semester-5)		
Code	Course Name	Cr. Hrs.
Phy-1501	Mathematical Methods – I	3
Phy-1502	Solid State Physics	3
Phy-1503	Classical Mechanics	3
Phy-1504	Atomic & Molecular Physics	3
Phy-1505	Physics Lab.-V	2
Phy-1506	Electronics – I	3+1
Total		18
B.S. Physics (Semester-6)		
Code	Course Name	Cr. Hrs.
Phy-1601	Mathematical Methods – II	3
Phy-1602	Thermal & Statistical Physics	3
Phy-1603	Introduction to Computational Physics	3+1
Phy-1604	Physics Lab.-VI	2

Phy-1605	Electronics – II	3+1
	Total	16
B.S. Physics (Semester-7)		
Code	Course Name	Cr. Hrs.
Phy-1701	Nuclear Physics – I	3
Phy-1702	Electrodynamics –I	3
Phy-1703	Quantum Mechanics – I	3
Phy-1704	Physics Lab. –VII	2
Phy-170*	Advance Elective – I	3
Phy-1711	Seminar (About Project)	1
	Total	15
B.S. Physics (Semester-8)		
Code	Course Name	Cr. Hrs.
Phy-1801	Nuclear Physics – II	3
Phy-1802	Electrodynamics - II	3
Phy-1803	Quantum Mechanics - II	3
Phy-180*	Advance Elective – II	3
Phy-1812	Project (report + v.v.)	3
	Total	15

Advance Electives-I

Code	Course Name	Cr. Hrs.
Phy-1706	Digital Electronics-I	2+1
Phy-1708	Advance Solid State Physics	3
Phy-1709	Lasers	2+1
Phy-1710	Introduction to Nanoscience and Nanotechnology	3

NC is the non-credit course**Advance Electives-II**

Code	Course Name	Cr. Hrs.
Phy-1806	Digital Electronics-II	2+1
Phy-1808	Plasma Physics	3
Phy-1809	Medical Physics	3
Phy-1810	Materials Physics	3

NC is the non-credit course

Degree Program

❖ BSCS

(Bachelor of Science in Computer Sciences)
(Morning & Evening)

Eligibility Criteria

Intermediate or equivalent with minimum 50% marks.

MISSION

Department is committed to offer theoretical and practical knowledge in existing and innovative fields of computer sciences in order to cope with challenging advancement in the given fields for the betterment of people, particularly of Southern Punjab.

Degree Program

❖ Master of Computer Science (MCS)

Eligibility Criteria

A candidate:

1. should have obtained at least 45% marks in B.Sc.
2. should have obtained B.Sc. degree with Mathematics or Statistics or Computer Science subjects.

3. who have not studied any one of the required above-mentioned subjects in their graduation are eligible for MCS admission provided they firstly qualify four courses namely Introduction to Computing, Business Mathematics & Statistics, Calculus and Analytical Geometry, and English Comprehension by taking a Deficiency Semester.

Note: Candidate holding PGD (Computer & Information Technology OR Business Administration) dually issued by the recognized Institute / University are also eligible for admission towards MCS Program

Department of Computer Science

Introduction

Department of Computer Science has been launched recently keeping in view the demand of the ever-growing needs of computer and information technology in the current scenario of the country. Our objective is to train the students to meet up the demands of the forth coming industrial era viz fourth industrial revolution (4IR) in which Computer Science, Information Technology and Artificial Intelligence are key players. We have successfully launched four-year bachelor's degree program; BS Computer Science in Morning and Evening. The vision of the department is to groom and equip students enough to deal with the computer industry needs. The department also has plans to expand its laboratories to provide an excellent learning experience to its students. These labs would also contribute in promoting research activities in the southern Punjab region. The department also aims at starting new degree programs in near future.

Degree programs offered

1. Bachelor of Science in Computer Sciences (BSCS)
2. Masters in Computer Science (MCS)

Scheme of Studies

BSCS (Semester-1)

Code	Course Name	Cr. Hrs.
CS-311	Introduction to ICT	3-0
CS-312	Programming Fundamentals	3+1
ENG-313	English Composition and Comprehension	3-0
MTH-314	Calculus and Analytical Geometry	3-0
UME-315	CS Elective-1	3+1
Total		17

BSCS (Semester-3)

Code	Course Name	Cr. Hrs.
CS-431	Computer Organization and Assembly Language	3+1
CS-432	Data Structures and Algorithms	3+1
CS-433	Discrete Structures	3-0
UME-434	CS Supporting-2	3-0
MTH-435	Probability and Statistics	3-0
Total		17

BSCS (Semester-2)

Code	Course Name	Cr. Hrs.
UME-321	CS Supporting-1	3-0
CS-322	Object Oriented Programming	3+1
ENG-323	Communication & Presentation Skills	3-0
PHY-324	Applied Physics	2-1
UME-325	CSElective-2	3-1
Total		17

BSCS (Semester-4)

Code	Course Name	Cr. Hrs.
CS-441	Design and analysis of Algorithms	3-0
CS-442	Theory of Automata	3-0
CS-443	Database systems	3-1
CS-444	Digital Logic Design	3+1
UME-445	University Elective-1	3-0
Total		17

BSCS (Semester-5)

Code	Course Name	Cr. Hrs.
CS-551	Compiler Construction	3-0
UME-552	CS Supporting-3	3-0
CS-553	Operating Systems	3+1
CS-554	Software engineering	3-0
UME-555	CS Supporting-4	3-0
Total		16

BSCS (Semester-6)

Code	Course Name	Cr. Hrs.
CS-561	Artificial Intelligence	3-1
CS-562	Computer Networks	3+1
CS-563	CS Elective-3	3-1
CS-564	CS Elective-4	3-0
ENG-565	Technical & business writing	3-0
Total		18

BSCS (Semester-7)

Code	Course Name	Cr. Hrs.
CS-671	University Elective-2	3-0
CS-672	University Elective-3	3-0
CS-673a	Final Year Project-I	0-3
CS-674	Parallel& Distributed Computing	3-0
PST-675	Pakistan Studies	2-0
Total		14

BSCS (Semester-8)

Code	Course Name	Cr. Hrs.
ENG-681	Professional Practices	3-0
CS-682	University elective-4	3-0
CS-673b	Final Year Project-II	0-3
CS-683	Information Security	3-0
ISL-684	Islamic Studies/Ethics	2-0
Total		14

List of Electives

List of Electives Geometric Modeling (3)

Digital Image Processing (3)

Computer Graphics (3)

Digital Signal Processing (3)

Computer Vision (3)

Distributed Computing (3)

Data and Network Security (3)

Wireless Networks (3)

Social Computing (3)

Mobile Application and Development (3)

Web Design and Development (3)

Data Warehousing (3)

Expert Systems (3)

Artificial Neural Network (3)

Fundamentals of Data Mining (3)

Computational Intelligence (3)

Multi Agent Systems (3)

Natural Language Processing (3)

Game Development (3)

Logical Paradigms of Computing (3)

Formal Methods for Software Engineering (3)

CS Supporting Courses

Differential Equations (3)

Multivariate Calculus (3)

Numerical Computing (3)

Linear Algebra (3)

University Elective Courses

Foreign Language (2)

Social Service (1)

Management Related (3)

Scheme of Studies

MCS (Semester-1)

Course Code	Course Name	Cr.H
CS-511	Introduction to Programming	3-0
CS-512	Theory of Automata	3-0
CS-513	Data Communication	3-0
ENG-514	Business and Technical English Writing	3-0
MTH-515	Discrete Mathematics	3-0
STAT-516	Statistics and Probability	3-0
Total Credit Hours		18

MCS (Semester-3)

Course Code	Course Name	Cr.H
CS-521	Data Structures	3-0
CS-522	Digital Logic Design	3-0
CS-523	Object Oriented Programming	3-0
CS-524	Computer Architecture and Assembly Language Programming	3-0
CS-525	Database Management Systems	3-0
MTH-526	Numerical Analysis	3-0
Total Credit Hours		18

MCS (Semester-2)

Course Code	Course Name	Cr.H
CS-611	Final Project - CS619	3-0
CS-612	Advance Computer Architecture	3-0
CS-613	Fundamentals of Algorithms	3-0
CS-614	Software Engineering - I	3-0
CS-615	Computer Network	3-0
CS-616	Data Warehousing	3-0
Total Credit Hours		18

MCS (Semester-4)

Course Code	Course Name	Cr.H
CS-621	Final Project	3-0
CS-622	Web Design and Development	3-0
CS-623	Operating Systems	3-0
CS-624	Software Engineering II	3-0
CS-625	Artificial Intelligence	3-0
CS-626	System Programming	3-0
Total Credit Hours		18

Faculty of Sciences and Humanities


Dr. Shabana Afzal

In Charge Department/Assistant Professor
PhD Chemistry (Monash University Australia)
Research Interests: Photo catalysis, nanomaterials.
shabana.afzal@mnsuet.edu


Dr. Majid Niaz Akhtar

Assistant Professor
PhD Applied Physics, (Universiti Teknologi PETRONAS, UTP) Malaysia. Post Doc (Universiti Kebangsaan Malaysia, UKM), Malaysia Research Interests: Nanomaterials and Nanotechnology


Dr. Kashif Ali

Assistant Professor
PhD Mathematics (BZU Multan)
Research Interests: Numerical Solution of Non-Linear Problems


Dr. Ammar Ahmad Malik

Assistant Professor (Department of Management Sciences) HEC (Pakistan) Approved Ph.D. Supervisor, Ph.D. Management Sciences Northern University of Malaysia, Malaysia
Research Interest: HRM, Organizational Behavior, Consumer Marketing, Innovation, Entrepreneurship, and CSR.


Dr. Farooq Khurum Shehzad

Assistant Professor
PhD in chemistry from Beijing University of Chemical Technology, P.R. China.


Muhammad Amir Khan

Lecturer (English)
M. Phil English Linguistics
The Islamia University of Bahawalpur
Research Interest: General & Applied Linguistics


Hafiza Kiran Saba

Lecturer (Islamic Studies)
M. Phil Islamic Studies (BZU Multan)
Research Interest: Islamic Legislation & Inter Faith Ethical Harmony


Engr. Kashan Basit

Lecturer
M.Sc. Computer System Engineering
NUST Islamabad


Ms. Sehrish Saleem

Lecturer
M.Phil Computer Sciences
NCBA&E Lahore
Research areas:
Artificial intelligence, software engineering





Degree Programs

- ❖ Bachelor in Business Administration (M)

Eligibility Criteria

Minimum F.Sc. / F.A./ I.C.S or equivalent.



Bachelors in Business Administration (BBA)

Mission

In the modern global perspective, we consider in emerging the ambitious leaders and entrepreneurs who accomplish and generate dominant organizations in the emerging corporate landscape. MNS UET Multan aims at creating highly intellect business mind set, encourage best business practices and inventive techniques to get desired organization goal and contribute to nation's economy at large. We offer students with a wide-ranging business education to make them fit for opening a career and assuming responsibility in the fast fluctuating environment of global administration tasks.

Our Values

- **Courage** - to challenge and change
- **Integrity** - to act without fear or favor, to be fair and true
- **Quality** - what we do, we do well
- **Loyalty** - to our values
- **Collaboration** - to realize potential
- **Passion** - about doing well by our clients
- **Accountability** - each of us accountable for making the difference that matters

Scheme of Studies

BBA (Semester-1)		
Course No.	Course Title	Credit Hrs.
ENG-301	Freshman English	3
CSC-321	Fundamentals of Computing	3
ISL-302	Islamic Studies	3
PST-303	Pak Studies	3
BA-311	Contemporary World	3
MTH-304	Business Mathematics	3
Total		18

BBA (Semester-2)		
Course No.	Course Title	Credit Hrs.
ENG-305	Communication Skills	3
BA-322	Micro Economics	3
STA-306	Business Statistics	3
BA-323	Financial Accounting, I	3
BA-312	Human Psychology	3
BA-341	Introduction to Management	3
Total		18

BBA (Semester-3)		
Course No.	Course Title	Credit Hrs.
BA-424	Macro Economics	3
BA-407	Oral Communication & Presentation Skills	3
BA-431	Financial Accounting II	3
BA-425	Introduction to HRM	3
BA-413	Foreign Language (International Language)	3
BA-414	Logical & Critical Thinking	3
Total		18

BBA (Semester-4)		
Course No.	Course Title	Credit Hrs.
BA-408	Business Communication	3
BA-426	Principles of Marketing	3
BA-415	Sociology	3
BA-416	Pakistan Economics	3
EN-417	Environmental Sciences	3
BA-427	Business Finance	3
Total		18

BBA (Semester-5)		
Course No.	Course Title	Credit Hrs.
BA-542	Managerial Accounting	3
BA-532	Marketing Management	3
BA-528	Corporate Governance	3
BA-542	Supply Chain Management	3
BA-543	Organizational Behaviour	3
BA-***	Elective – 1	3
Total		18

BBA (Semester-6)		
Course No.	Course Title	Credit Hrs.
BA-533	Financial Management	3
BA-544	Consumer Behavior	3
BA-534	Management Information System	3
BA-545	Business Ethics	3
BA-***	Elective - 2	3
Total		18

BBA (Semester-7)		
Course No.	Course Title	Credit Hrs.
BA-629	Business Research & Report Writing	3

BA-635	Production & Operations Management	3
BA-646	Money & Banking	3
BA-647	Project Management	3
BA-***	Elective – 3	3
Total		15

BBA (Semester-8)

Course No.	Course Title	Credit Hrs.
BA-636	Total Quality Management	3
BA-648	International Business	3
BA-637	Strategic Business Management	3
BA-649	Entrepreneurship	3
BA-***	Elective – 4	3
Total		15

Specialization Areas Offered

Following is the list of courses offered in specialization areas of Finance, Marketing, Management, and Human Resource Management.

Finance

- 1. Analysis of Financial Statements
- 2. International Finance
- 3. Investment & Portfolio Management
- 4. Financial Institutions
- 5. Credit Management
- 6. Seminar in Finance
- 7. Insurance Management
- 8. Risk Management
- 9. Treasury Management
- 10. Islamic Banking & Finance
- 11. Auditing
- 12. Corporate Finance
- 13. Corporate Governance
- 14. Dissertation

Marketing

- 1. Retailing
- 2. Distribution Management
- 3. Industrial Marketing
- 4. Brand Management
- 5. Global/International Marketing
- 6. Export Marketing



- 7. Sales Management
- 9. Service Marketing
- 11. Personal Selling
- 13. Marketing of IT Products
- 15. Dissertation

- 8. Marketing Research
- 10. Integrated Marketing Communications (IMC)
- 12. Cyber/Internet Marketing
- 14. Seminar in Marketing

Master in Project Management

- 1. NGO Management
- 3. International Management
- 5. Knowledge Management
- 7. Project Management
- 9. Organizational Theory
- 11. Logistics Management
- 13. Health care Services Management
- 15. Hospital Management
- 17. Dissertation
- 2. Hotel Management
- 4. Seminar in Management
- 6. Change Management
- 8. Organizational Development
- 10. Crisis Management
- 12. Comparative Management
- 14. Environmental Management
- 16. Micro, Small & Medium Enterprises Management

Human Resource Management

- 1. Strategic Human Resource Management
- 3. Training Interventions and Job Skills
- 5. Incentives & Compensation Management
- 7. Leadership and Team Management
- 9. Dissertation
- 2. Cross-Cultural Resource Management
- 4. Labour Laws in Pakistan
- 6. Recruitment and Selection
- 8. Micro Organizational Dynamics



Degree Program

❖ Masters in Project Management

(MPM) 1 year degree program equivalent to 17 years of education (weekend program)

Eligibility Criteria

- Applicant with a minimum of sixteen 16 years of education in any field/4 year Bachelors / MBBS / BDS / Master's degree from any HEC recognized educational institution with minimum 55% marks / CGPA 2.20 are eligible for MPM program.
- MNS Admission test or a valid NTS/GAT result of 50% marks.



Masters in Project Management

MPM Mission Statement

MPM provides graduates/students with universally accepted and practiced tools and techniques to manage projects of different nature from all walks of life for enhancing their project management capabilities thus contribute towards project success.

Program Details

MPM provides students with the tools and techniques to manage day-to-day activities of projects of different nature. The course is designed for people from all walks of life. For practicing project managers, it is a guide to enhance their capabilities and to solve typical problems that may arise from time to time. The concepts, principles and techniques taught in this course are based on, but not limited to, the Project Management Institute (PMI) framework, which is universally accepted practiced. The program takes about a calendar year.

To obtain the MPM degree, 9 courses and 2 projects must be completed. Each taught course comprises 16 classes of 3 hours each. Computer software and related material along with technical assistance is provided to students to assist in preparing their projects after training. Classroom seminars, project management related games, visits to project sites, and guest lectures from national and international speakers are part of this program.

Classes will take place on weekends/weekday evenings depending on the chosen mode of study.



Scheme of Studies

(MPM) (Semester-1)

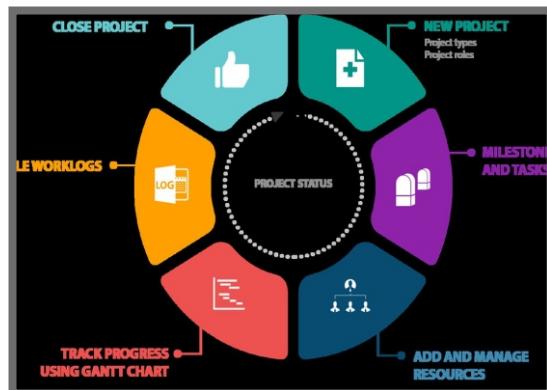
Course No.	Course Title	Credit Hrs.
MPM-501	Fundamental of Project Management	3
MPM-502	Project Cost and Financial Management	3
MPM-503	Project Human Resource & communication Management	3
Total		9

(MPM) (Semester-2)

Course No.	Course Title	Credit Hrs.
MPM-504	Project Procurement Management	3
MPM-505	Project Risk Management	3
MPM-506	Project Planning, Scheduling and Time Management	3
Total		9

(MPM) (Semester-3)

Course No.	Course Title	Credit Hrs.
MPM-508	Project Quality Management	3
MPM-509	Project Monitoring, Evaluation and control Management	3
MPM-xxx	Elective-I	3
MPM-522	Project-II	3
Total		12



FACILITIES FOR STUDENTS

Research & Innovation:

“Journal of Advances in Engineering and Applied Sciences (JAEAS)”

Scope and aims of the Journal

Journal of advances in engineering and applied sciences is a multidisciplinary peer-reviewed academic journal for delivering and discussing original and current research results concerning engineering and applied sciences within and outside the region. The journal is meant for researchers, students and readers interested in current issues and developments. Editorial board of the journal also welcome reviews on recent regional relevant books, news, announcements, presentations of current research, institutions and significant projects. The journal will be published electronically 1-2 times a year. We publish original research from all areas of the engineering, physical, natural and clinical sciences.

Invited Opinion papers

Opinion papers are invited by the Management Board of **JAEAS** and are published as open access papers. They are short papers, which aim to inform scientists, industry, the public and policy makers about cutting-edge issues in research or the impact of research. The papers reflect the opinion of their authors who bear full responsibility of the published paper.

Calls for papers

Throughout the year, we hold calls for papers in specific topic areas. Participating in a call for papers is a great opportunity to be published.

Library

A library is the back bone of any institute for better academic atmosphere. MNS UET also provides this facility. All the students are granted with library membership for the duration of their



programs and they get course books free of cost. The library is fully computerized and provides excellent services and facilities to fulfill the information needs of faculty members as well as students. It has a collection of thousands of books. It also provides a wide range of services that include issuance of books on loan, online Information searching, reference services, access to virtual collections and digital resources like CD-ROM's and up-to-date collection of online IEEE research papers. The library is maintained by qualified, experienced and very co-operative staff.

Hostel

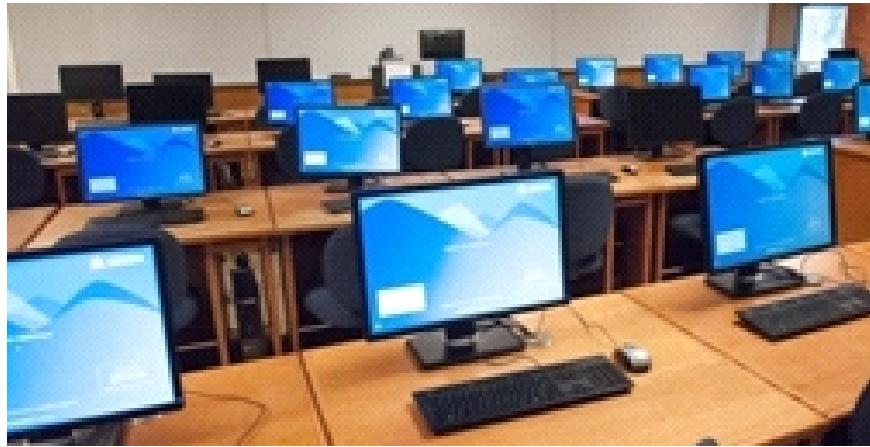
University provides the facility of hostel for male students that are situated very near to the campus. Well-furnished rooms are available on “first come, first served” basis. Keeping in view, the growing demand of accommodation, for the students coming from far-flung areas, construction of more hostels is planned in the new campus in near future. After completion of the construction of these hostels, the capacity of many students will be available. Understanding this need of the students belonging to rural areas, university has planned the project of an up-to-date hostel for the girls also. In this way we will be able to accommodate maximum of our girl students coming from far flung areas to quench their thirst of knowledge.

Internet

MNS UET fully realizes the importance of providing round-the-clock internet access to its students and faculty members in order to facilitate them in their academic and research pursuits. Many connections are available to provide fast and reliable internet bandwidth.

WiFi Internet connectivity is available to all students and faculty at the offices, hostels and residences and at the entire premises of the University. MNS UET provides 24/7 internet access. Pakistan Education & Research Network is the only national research and education network of Pakistan with the purpose to provide communication infrastructure to the universities, institutions and research organizations to meet their networking and internet requirements. The network is in plan to present valuable services, like high-speed internet, audio/video conferencing, access

to digital library resources with the bandwidth of 48 MB from this PERN project.



Transportation

MNS-UET has an excellent pick and drop bus service. Students receive a low-cost bus pass that grants them full access to Campus routes. Everyday students and staff are picked from their nearby stops by our busses and are taken to institute safe and sound in time. And we are covering the whole city of Multan including outskirts and suburbs.

There is specific space for parking. Students are allowed to



park their bikes, cars without any charges in the campus

parking lots.

Information Technology Services

IT services are available to all students and staff. A computer centre with High-speed computers has also been set up to keep pace with modern trends and research in the engineering field. Students are provided with internet facilities at the computer centre, campus area, the library and the residence.

The software LMS is designed to promote paperless university administration. It is unique and comprehensive software. In its features, it allows users to maintain academic history of students with complete transparency in records and provides a medium for students, teachers, staff and administration to work in harmony.

The students can see their results, attendance other assignments given by the teachers through LMS and UAMS.

Sports

As it is believed that an active body and high spirit helps to enhance the cognition and ability to learn. So in order to make the better learning of students, the University provides numerous sports facilities to the students.

It includes Indoor Sports Complex, for boys and girls; out-door lush green grounds, table tennis, badminton courts, and cricket, football, basketball, volleyball and hockey grounds. To sharpen the edges of mind we need to play mind-games and MNS UET offers an entire facility to play many mind games to raise the spirit and boost up the energy of players.



Co-Curricular activities Platform

The co and extra curriculum activities e.g. Quiz Programs, Receptions and Farewell Programs, Sports week, Study and Recreational Trips as well as programs of performing arts are being organized by the various groups of the students of the university.

The University also arranges some co-curricular and extra-curricular activities for the students to sharpen their abilities and performances. The students are encouraged to go for study tours of historical places/Institutions as part of their co-curricular studies for their degree programs



Security

As terrorism is common in Pakistan, so the University provides fool proof facility of security to the students, staff and faculty. There are some armed guards which are hired from a security company and some are self-recruited armed security guards to provide security to the campus.

The primary function of the security staff is maintaining law and order in the university campus. Security staff also ensures safety of university property. The security guards also assist Directorate of Student Affairs in dealing with the issues arising out of the violation of university code of conduct. It is all due to the untiring efforts of the Security In charge and his staff that university is successfully maintaining discipline.

Different security measures like raising of the boundary walls, construction of OPs, Appointment of retired army personnel's as security guards, purchase of new weapons, installation of barriers and electronic walk through gates have been adopted. All the faculty members, students and administrative staff are issued university ID cards that is mandatory for them to display in the university premises.

Canteen

“Health is wealth” and healthy food plays a vital role in the secret of good health. Inexpensive hygienic food such as breakfast and lunch are available in canteen. The food quality is monitored by the authorities. Besides, utility shop has been set up on the campus to fulfill students' day-to-day needs. All kinds of stationary are available on the canteen to facilitate the students in time.

Health Facility

The University Health Care Service is available for students and staff. Medical staff is available round-the-clock and in case of emergency, all specialists are on call. Moreover, lectures on health-related issues are regularly delivered to students by qualified physicians.

Financial Assistance, Scholarships and Career Counseling Services

The University awards scholarships on the basis of the academic merit of the students. Scholarships are also available to the students on competitive basis from the Government of the Punjab, the Government of Pakistan and Private Trusts and Agencies. Interest-free loans are also made available by the Pakistan Government and the Banking Council. Some of the major awards and scholarships are described in the end of this prospectus. University has established career counseling section to facilitate student by organizing seminars related to their future careers.



Jamia Masjid

There is a Mosque to pray for the students and the staff of this University and while offering prayers there is no distinction between teachers and student.



Alumni Directory

An updated database of alumni is maintained by the generalbody. Calls are made regularly to the alumni members to send their updated data to the association. The information gathered during reunion registration is also used to append/update the database.

Management Workshops & Activities



Rules & Regulations

Definitions

- “University” means Muhammad Nawaz Sharif University of Engineering and Technology, Multan
- “Faculty” means the concerned faculty of the University
- “Vice-Chancellor” means the Vice-Chancellor of the University
- “Pro Vice-Chancellor” means the Pro Vice-Chancellor of the University
- “Dean” means the Dean of the concerned faculty
- “Chairman” means the Chairman of the concerned department of the University/College
- “Controller” means the Controller of Examinations of the University
- “Student” means a bona-fide student of a degree program of the University who does not maintain admission simultaneously in any other degree/diploma program of the University or in any other Institution
- “Candidate” means a student who intends to appear in an examination
- “Board of Studies” means the Board of Studies of the concerned discipline of the University/College

Explanations

The pronoun “he” and its derivatives are used for both male and female persons.
Depending upon the context, the words imparting the singular number include the plural number as well.

Online MNS UET Admissions Policy - 2020

Eligibility requirements for B.Sc. Engineering Programs

An applicant for admission in B.Sc. Engineering Program must fulfill the following requirements:

1. He should have earned at least 60% marks in Intermediate/ DAE or equivalent foreign qualification examination excluding sports and Hafiz-e-Quran marks.
2. He should have earned a minimum of "C" grade in the subjects of Physics, Mathematics/ Biology and Chemistry/ CS in "A" level examination.

Aggregate marks will be computed according to the following formula:

1. In case of Intermediate stream:

- a) Entry Test (ET) Percentage Marks: 30% weight in merit aggregate.
- b) Matric Percentage Marks: 25% weight in merit aggregate.
- c) First Year Percentage Marks: 45% weight in merit aggregate.
- 2. In case of diploma holders:
- a) ET Percentage Marks: 30% weight in merit aggregate.
- b) Matric Percentage Marks: 25% weight in merit aggregate.
- c) Sum of First- and Second-years Percentage Marks: 45% weight in merit aggregate.
- 3. In case of foreign qualification:
- a) ET Percentage Marks: 30% weight in merit aggregate.
- b) Marks earned in "O" level or equivalent: 25% weight in merit aggregate.
- c) Marks earned in "A" level or equivalent: 45% weight in merit aggregate.

Note:

1. In case the candidate has already completed his/her intermediate or equivalent qualification, their Part-II result would be used in computation of Aggregate.
2. In case of foreign qualification, letter grade will be converted to marks by IBCC formula. IBCC equivalent certificate is required to be submitted after admission.
3. All candidates, with the exception of DAE qualified candidates, who have appeared in a particular subject combination in the Entry test will only be considered for



- admission in the prescribed disciplines relevant to the subject combination.
- 4. In case the Entry Test (ET) is not conducted, 10% weightage will be added to the Matric Percentage and the remaining 20% will be added to the Intermediate or Diploma Percentage.**

Eligibility Requirements for B.Sc. Engineering Technology Programs

An applicant for admission must fulfill the following requirements:

1. He should have earned at least 50% marks in Intermediate/ DAE or equivalent foreign qualification examination excluding sports and Hafiz-e-Quran marks.
2. He should have earned a minimum of "C" grade in the subjects of Physics, Mathematics/ Biology and Chemistry/ CS in "A" level examination.

Aggregate marks are computed according to the following formula:

1. In case of Intermediate stream:
 - a) Entry Test (ET) Percentage Marks: 30% weight in merit aggregate.
 - b) Matric Percentage Marks: 25% weight in merit aggregate.
 - c) First Year Percentage Marks: 45% weight in merit aggregate.
2. In case of diploma holders:
 - a) ET Percentage Marks: 30% weight in merit aggregate.
 - b) Matric Percentage Marks: 25% weight in merit aggregate.
 - c) Sum of First- and Second-years Percentage Marks: 45% weight in merit aggregate.
3. In case of foreign qualification:
 - a) ET Percentage Marks: 30% weight in merit aggregate.

- b) Marks earned in "O" level or equivalent: 25% weight in merit aggregate.
- c) Marks earned in "A" level or equivalent: 45% weight in merit aggregate.

Note:

1. In case the candidate has already completed his/her intermediate or equivalent qualification, their final result would be used in computation of Aggregate.
2. In case of foreign qualification, letter grade will be converted to marks by IBCC formula. IBCC equivalent certificate is required to be submitted after admission.
3. **In case the Entry Test (ET) is not conducted, 10% weightage will be added to the Matric Percentage and the remaining 20% will be added to the Intermediate or Diploma Percentage.**

Eligibility Requirements for BS (BBA, CS, Math, Physics, Environment Sciences, Chemistry)

An applicant for admission must fulfill the following requirements:

He should have earned at least **50%** marks in Intermediate/ DAE or equivalent foreign qualification examination excluding sports and Hafiz-e-Quran marks.

Aggregate marks are computed according to the following formula:

1. In case of Intermediate stream:
 - a) Matric Percentage Marks: 40% weight in merit aggregate.
 - b) First Year Percentage Marks: 60% weight in merit aggregate.
2. In case of foreign qualification:
 - a) Marks earned in "O" level or equivalent: 40% weight in merit aggregate.
 - b) Marks earned in "A" level or equivalent: 60% weight in merit aggregate.

Note:

1. In case the candidate has already completed his/her intermediate or equivalent qualification, their Part-II result would be used in computation of Aggregate.
2. In case of foreign qualification, letter grade will be converted to marks by IBCC formula. IBCC equivalent certificate is required to be submitted after admission.

Eligibility Requirements for M.Sc. (Math, Physics)

An applicant for admission must fulfill the following requirements:

He should have earned at least **45%** marks in Bachelors (14 years) or equivalent foreign qualification examination excluding sports and Hafiz-e-Quran marks.

Aggregate marks are computed according to the following formula:

- a) Matric (or Equivalent) Percentage Marks: 20% weight in merit aggregate.
- b) F.Sc. (or Equivalent) Percentage Marks: 20% weight in merit aggregate.
- c) B.Sc. (or Equivalent) Percentage Marks: 60% weight in merit aggregate.

Notes: In case of foreign qualification, letter grade will be converted to marks by IBCC formula. IBCC equivalent certificate is required to be submitted after admission.

**Online Examinations Policy Spring 2020
(Session 2016, 2017 and 2018)**

The following Online Examination Policy-SPRING 2020 has been approved by the Academic Council held on May19, 2020.

Online Examination Policy (Session 2016,2017 And 2018)

The quiz no. 01 (10 marks) and midterm examination (30 marks) of session 2016, 2017 and 2018 have already been conducted before the start of Covid-19 pandemic (March 02, 2020 week).

The online classes of session 2016 were started from March 30, 2020 to May 06, 2020. There was a Ramzan break for students. The online classes will resume on June 01, 2020. There will be a teaching of two weeks up to June 12, 2020 completing the 8 weeks of online teaching. The online classes of session 2017 and 2018 will start on June 01, 2020.

The Examination policy for remaining portion of the theoretical / practical subject is as follows

Sr. No.	Exam Name	Marks	Time
1	MCQs Type Quiz-1 (OBE based, where applicable) (Time allowed: 10 min) (Compulsory) Quiz-2 (OBE based, where applicable) (Time allowed: 10 min) (optional) Open book exam may be conducted as per requirements of subject	20	After 4 weeks of teaching
	Quiz-3 (OBE based, where applicable) (Time allowed: 10 min) (optional) Open book exam may be conducted as per requirements of subject		
	Online quiz/s will be conducted using university LMS software. All tests will be time bound. Suitable number of sets of question paper may be created by shuffling of questions.		
2	Sessional Marks An online assignment / presentation will be given to individual student and the assignment will be checked by online assessment / oral viva by the teacher.	10+10	At end of course work
3	Performance Marks Performance marks will be given to each student as per given criteria <ul style="list-style-type: none"> Online attendance Term / Project report (as per subject requirements) Class participation 	20	At the time of final evaluation

All practical courses will be taught using video tutorials, lab manual book and online counseling of students. A comprehensive viva will be conducted at the end of semester by an external examiner and the teacher in charge.

For MPM weekend program (2019 session), whose final exam was in progress before lockdown and only one paper was conducted. The remaining two papers will be conducted as per aforementioned online examination policy.

In the Current Scenario (COVID-19 Situation)

The aforementioned examination pattern will be followed. However, the examination will be conducted online through MS-Teams.

- a) In department, the HOD will formulate a technical support team in the supervision of a technically sound person to resolve any technical issue during the exam and online classes.
- b) As usual the exam schedule will be sent to the students through WhatsApp / MS Teams at least one weeks before the exams.
- c) On the day of the exam, the students will join the virtual classroom on MS-Teams (where the students will be taking their online classes), at least 30 minutes before the exam.
- d) In case of any connectivity issue, the technical support team of the department will be available for troubleshooting.
- e) Exam will be supervised by the teacher concerned and at least two invigilators / TAs.
- f) During the exam, the students will keep their video ON so that they may be seen (online) by the teachers/ invigilators. In case any student switches off his video, strict disciplinary action (which may include some percentage deduction in his/her obtained marks or even disqualification from the exam) may be taken.

However, in case of genuine technical problem, the technical support team of the department will evaluate the problem, and will give the opinion to the teacher concerned. Based on the opinion, an appropriate decision will be made in consultant with the concerned HOD.

- g) The students will be informed about the online learning and exam system, before the classes. Details of exam system will be reinforced when they will be sent the date sheet.

Online Examination Policy (Session 2019)

The Examination policy to evaluate completely (100 marks) the theoretical / practical subject is as follows

Sr. No.	Exam Name	Marks	Time
1.	Quiz-1 (OBE based, where applicable) (Time allowed: 10 min)	20	At the end of every month (4 weeks teaching)
2.	Quiz-2 (OBE based, where applicable) (Time allowed: 10 min)	20	
3.	Quiz-3 (OBE based, where applicable) (Time allowed: 10 min)	20	
Online Quiz/s will be conducted using University LMS software. All tests will be time bound. Suitable number of sets of question paper may be created by shuffling of questions. The quiz will be MCQ type and or short questions.			
4.	Sessional Marks An online assignment will be given to individual student and the assignment will be checked through online assessment by the teacher.	20	At the end of semester
5.	Subject Viva An online presentation will be given to individual student and it will be assessed by oral viva by the teacher.	20	At the end of semester

All practical courses will be taught using video tutorials, lab manual book and online counseling of students. A comprehensive viva will be conducted at the end of semester by an external examiner and the teacher in charge.

In the Current Scenario (COVID-19 Situation)

The same examination pattern will be followed. However, the examination will be conducted online through MS-Teams.

- a) In department the HOD will formulate a technical support team in the supervision of a technically sound person to resolve any technical issue during the exam and online classes.
- b) As usual the date sheets will be sent to the students through WhatsApp / MS Teams at least two weeks before the exams.
- c) On the day of the exam, the students will join the virtual classroom on MS-Teams (where the students will be taking their online classes), at least 30 minutes before the exam.
- d) In case of any connectivity issue, the technical support team of the department will be available for troubleshooting.
- e) Exam will be supervised by the teacher concerned and at least two invigilators / TAs.
- f) During the exam, the students will keep their video ON so that they may be seen (online) by the teachers/ invigilators. In case any student switches off his video, strict disciplinary action (which may include some percentage deduction in his/her obtained marks or even disqualification from the exam) may be taken. However, in case of genuine technical problem, the technical support team of the department will evaluate the

problem, and will give the opinion to the teacher concerned. Based on the opinion, an appropriate decision will be made in consultant with the concerned HOD.

- g) The students will be informed about the online learning and exam system, before the classes. Details of exam system will be reinforced when they will be sent the date sheet.

Diploma Certificates Relevant to The Branch of Engineering

B.Sc. Electrical Engineering

Diploma in Electrical Technology
 Diploma in Telecommunication Technology
 Diploma in Electronics Technology
 Diploma in Avionics Technology
 Diploma in Instrumentation Technology
 Diploma in Information Technology
 Diploma in Precision Mechanical & Instrument Technology

B.Sc. Mechanical Engineering Technology

Diploma in Mechanical Technology
 Diploma in Mechanical (Power) Technology
 Diploma in Mechanical (Production) Technology
 Diploma in Precision Mechanical & Instruments Technology
 Diploma in Auto & Diesel Technology
 Diploma in Bio-Medical Technology
 Diploma in Dies & Mould Technology
 Diploma in Automation Technology
 Diploma in Refrigeration & Air Conditioning Technology
 Diploma in Mechanical Technology Power
 (Auto Farm & Machinery Technology)

B.Sc. Chemical Engineering

Diploma in Chemical Technology
 Diploma in Chemical Processing Technology
 Diploma in Chemical Technology (specialization in Sugar Technology)

Diploma in Petroleum Technology
Diploma in Petro Chemical Technology

B.Sc. Civil Engineering Technology

Diploma in Civil Technology
Diploma in Land & Mine Surveying Technology
Diploma in Architecture

Determination of Merit

1. Examinations Considered for Merit Purpose

For admission to all the Bachelor's Degree Engineering Courses and determination of merit the following examinations are considered:

- a) Intermediate Pre-Engineering or equivalent; OR Bachelor of Science (B.Sc.)
- b) For reserved seats only: Diploma of Associate Engineer or Bachelor of Technology (Pass/Hon).
- c) Entry Test held by UET Lahore (ECAT 2019) for Engineering Programs.

2. Merit Determination

The comparative merit of applicants will be determined on the basis of overall adjusted admission marks obtained by them in these examinations:

- a) For applicant with Intermediate (Pre-Engineering) as the highest qualification:

70% weight - Intermediate (Pre-Engg.) or equivalent including Hafiz-e-Quran marks.

30% weight - Entry test marks.

- b) For applicants with B.Sc. or B.A. Sc. as the highest qualification:

70% weight - B.Sc. or B.A.Sc. including Hafiz-e-Quran marks or H.S.S.C. (Pre-Engg.) or equivalent including Hafiz-e-Quran marks, in whichever a

student has the highest %age.
30% weight - Entry test marks.

- c) For applicants having Diploma of Associate Engineer as the highest qualification (for reserved seats only)

70% weight - Diploma of Associate Engineer including Hafiz-e-Quran marks.
30% weight - Entry test marks.

- d) For applicants having B. Tech (Pass) as the highest qualification (for fixed seats only):

70% weight - B.Tech. (Pass) including Hafiz-e-Quran marks or Diploma of Associate Engineer including Hafiz-e-Quran marks in whichever an applicant has the highest percentage.
30% weight - Entry test marks.

3. Merit of Intermediate (Pre-Medical) With Mathematics

In determining the merit of an applicant having Intermediate (Pre-Medical) with Mathematics as an additional subject, the marks obtained in the subject of Biology are replaced by those obtained in Mathematics.

4. Credit for Hafiz-E-Quran

Zero to 20 marks will be added to the academic marks in HSSC or equivalent examination of an applicant who is Hafiz-e-Quran. He will get the benefit only if he has:

- a) Filled in the necessary check box provided in the online application form.
- b) Appeared before the "verification committee" appointed by the Vice Chancellor for oral test carrying zero to twenty marks and the Committee has awarded marks according to the degree of his proficiency.

The "Verification Committee" will hold oral test at 08:30 A.M. in MNS UET Multan. The final schedule will be notified on MNS UET web: www.mnsuet.edu.pk. It may be noted that no separate call letters will be issued to the concerned applicants in this connection.

5. Determination of Merit in Case of Equal Percentage of Admission Marks

If two or more applicants have equal percentage of admission marks (up to three places of decimal after truncation), they shall be treated as per given rule for the purpose of admission.

Explanation

In case there is a tie for the last seat in a particular discipline/category, and all candidates have secured equal percentage of admission marks (up to three places of decimal) then preference will be given to the candidate who has highest marks in basic degree unless the actual number of candidates already admitted falls below the number of allocated seats for that discipline/category.

6. Merit Determined Category Wise

Seats for admission to the Bachelor's Degree courses at the University are distributed over various categories. The details of the distribution of seats are available in the Seats Allocation Chart. The applicants for each category are grouped separately. Then on the basis of the percentage admission marks, comparative merit of the applicants comprising the group is prepared. The applicants belonging to a category thus compete for admission among themselves for the seats allocated to it.

7. Transfer on The Basis of Given Preferences and Merit

In case a seat in any discipline/category of applicant's higher preference falls vacant and he is eligible for transfer to that discipline/category on the basis of his merit, he shall be automatically transferred to the discipline/category.

8. Un-Utilized Quota Seats

If some seats allocated to any category remain un-utilized for lack of adequate applicants, then the un-utilized seats are transferred by authorities to other category and are filled under the same terms and conditions as applicable to the former. For information about these categories please see the chart of seat allocation.

Procedure for The Selected Candidates

1. Notification of Selection

A list of selected candidates will be put up on the University notice boards (MNS UET, Multan) and on the University website <http://mnsuet.edu.pk> as

well. Kindly note that no written offer letter would be dispatched to selected candidates. It is responsibility of the candidate to remain abreast with the status of admissions as available on the website and on the notice boards.

Important: Consideration in the Next Merit lists

Admissions are granted on merit and according to preferences given by the applicants. An applicant who secures admission in a discipline of his lower preference and he desires to be considered in next merit lists, **MUST submit all the dues and documents**. If he fails to do so, his name would be excluded from any future merit lists and his admission would be cancelled.

2. Depositing of Dues and Documents

Within the prescribed time, a selected candidate is required to pay the University dues and submit the following documents in a manner prescribed on the notice board and to the Admin In charge Office, Students Section:

- a) Paid Original Bank Challan as proof of payment of dues. Candidate must keep photocopies of this challan for his/her own record and for submission to the department.
- b) Original Domicile Certificate.
- c) Original applicable certificates and degree, like Matriculation /"O"-Level, F.Sc./ "A"-Level, B.Sc., Diploma of Associate Engineer (DAE), B. Tech (Pass) or any equivalent qualifications.
- d) Six sets of photocopies of the above-mentioned documents.
- e) Two attested copies of CNIC/ "B" Form.
- f) Six copies of the most recent passport size photograph
- g) Bio-data card Form-IX duly completed in all respects.
- h) Medical Certificate Form-Duly signed and stamped by Medical Practitioner registered with PMDC.
- i) Duly attested Current Income certificate of the parent/ guardian.
- j) Undertaking (Sample Form -XI) on a Rs. 100/- judicial paper duly completed.

3. Relaxation in Time Limit

If a selected candidate is prevented by unavoidable circumstances from timely fulfillment of the requirements laid down in the above clause, then he should intimate the Convener Admission Committee about it within the prescribed time limit along with relevant documentary proof. The Convener, Admission Committee may, at his discretion, grant relaxation in the time limit.

4. Forfeiture of Right of Admission

A selected candidate who fails to fulfill the requirements laid down in the above clause within the prescribed time-limit shall forfeit his right of admission.

5. Provisional Admission

On fulfillment of the obligations mentioned in the above clause a selected candidate will be admitted to the University. This admission shall however, be provisional until all the original degrees or certificates submitted by him have been checked for their veracity. In case any document proves to be false, fake, or fabricated at a later stage, a provisionally admitted student shall be liable to expulsion from the University and to any other disciplinary or legal action the University may deem fit. Moreover, all the fees and charges deposited by him shall stand forfeited in favor of the University.

6. WARNING

IF AT ANY STAGE, A STUDENT IS FOUND INDULGING IN POLITICS, HIS ADMISSION WILL BE CANCELLED AS REFERRED TO INUNDERTAKING FORM F-XI (available on website of MNS UET).

7. Deadline for Admission

Admission shall be closed after the expiry of thirty days from the commencement or registration of the first-year class, whichever is later.

Note:

Applicable to all the candidates who apply for admission on "merit" as well as under "reserved" seats. All admissions will be granted provisionally subject to verification of the certificates from the relevant board/institution. The admission made as a result of an error, omission or mistake shall not confer any right on an applicant

8. Modification of Rules and Regulations

The rule and regulations governing various aspects of students' life at the University (such as discipline, admissions, examination, migration, fees and charges, etc.) are given in this prospectus as they stood at the time of its publication. There is no guarantee that these rules and regulations will remain unchanged throughout a student's stay at the University, nor does it in any way restrict or curtail the inherent powers for the University authorities

to modify them whenever in their judgment any modifications are called for, and to implement the modified rules and regulations from a date which they deem appropriate.

9. Special Provisions

- a) In all cases where the regulations are silent, the decision of the Vice Chancellor shall be final.
- b) Interpretation of these rules and regulations by authorized officers of the University shall be final.
- c) The University authorities reserve the right to make any changes in the existing regulations, rules, fee structure and courses of study that may be considered necessary at any time without prior notice.
- d) No student is allowed to maintain simultaneous enrollment in any other program of studies in the university or any other educational institution within or outside Pakistan, unless permitted by the competent authority as an Exchange Student.
- e) In case a student enrolled in this University is found to be a regular student of some other university/institution whether local or foreign, his admission in this university shall be canceled.
- f) Students are required to know the rules and regulations mentioned in the prospectus and notified time to time. Ignorance of rules and regulations does not absolve them of their responsibilities and shall not be treated as an excuse.

10. Liability for Injury, Damage and Loss

The University teaching programs include training in its workshops and laboratories, places of engineering and architectural interest, industrial concern, and construction jobs. The University or other concerns shall not be responsible in the event of an injury, damage or loss to a student resulting from any cause whatsoever during the course of such training.

16	Fine upto Rs. 5000/-	Chairman of Teaching Department/Professor / Senior Warden / Director Students Affairs
17	Fine without limit	Dean of the Faculty
18	Rustication from the University for a period not exceeding six Months	Committee of Discipline on the recommendation of Associate Professor
19	Rustication from the University for a period not exceeding one year.	Committee of Discipline on the recommendation of Chairman of a Teaching Department / Professor
20	Rustication for any period	Committee of Discipline on the recommendation of Dean of Faculty
21	Expulsion from the University	Committee of Discipline

Fee Structure

Fee Structure B.Sc. Engineering and B.Sc. Engineering Technology, BSCS, BBA (Morning)

SR. NO	PARTICULARS	Amount (1 st Sem.)	Amount (2 nd - 8 th) Sem.
1.	Admission Fee	Rs.1500/-	-
2.	University Registration	Rs.1000/-	-
3.	University Security	Rs.1000/-	-
4.	Library Security	Rs.1500/-	-
5.	Degree verification	Rs.2000/-	-
6.	Email Registration fee	Rs.100/-	-
7.	Tuition Fee	Rs.30000/-	Rs.30000/-
8.	Transport Fee	Rs.3300/-	Rs.3300/-
9.	Sports Fee	Rs.900/-	Rs.900/-
10.	Lab. Fee	Rs.1200/-	Rs.1200/-
11.	Tutorial Fee	Rs.25/-	Rs.25/-
12.	Inter-Uni. Tournament Fee	Rs.50/-	Rs.50/-
13.	Magazine Fee	Rs.50/-	Rs.50/-
14.	Medical Fee	Rs.125/-	Rs.125/-
15.	Examination Fee	Rs.1000/-	Rs.1000/-
16.	Internet Charges	Rs.1200/-	Rs.1200/-
Total fee		Rs.44950/-	Rs.37850/-

Fee Structure B.Sc. Engineering & Technology, B.Sc. Environmental Sciences BSCS' BBA (Evening Programs)

SR. NO	PARTICULARS	Amount (1st Sem.)	Amount (2nd – 8th) Sem.
1.	Admission Fee	Rs.1500/-	-
2.	University Registration	Rs.1000/-	-
3.	University Security	Rs.1000/-	-
4.	Library Security	Rs.1500/-	-
5.	Degree verification	Rs.2000/-	-
6.	Email Registration fee	Rs.100/-	-
7.	Tuition Fee	Rs.35000/-	Rs.35000/-
8.	Transport Fee	Rs.3300/-	Rs.3300/-
9.	Sports Fee	Rs.900/-	Rs.900/-
10.	Lab. Fee	Rs.1200/-	Rs.1200/-
11.	Tutorial Fee	Rs.25/-	Rs.25/-
12.	Inter-Uni. Tournament Fee	Rs.50/-	Rs.50/-
13.	Magazine Fee	Rs.50/-	Rs.50/-
14.	Medical Fee	Rs.125/-	Rs.125/-
15.	Examination Fee	Rs.1000/-	Rs.1000/-
16.	Internet Charges	Rs.1200/-	Rs.1200/-
Total fee		Rs.49950/-	Rs.42850/-

Fee Structure for M.Sc. (Physics, Mathematics, Public Administration) and BS (Mathematics and Physics,) Evening Program

Sr. No	PARTICULARS	1st Semester	2nd -- 8th Semester
1	Registration Fee*	1000/-	
2	Admission Fee*	1500/-	
3	Tuition Fee	25,000/-	25,000
4	Medical Fee	125/-	125
5	Sports Fee	900/-	900
6	University Security *	1000/-	
7	Tutorial Fee	25/-	25

8	Transport Charges	3300/-	3300
9	Email Registration*	100/-	
10	Degree Verification Fee *	2000/-	
11	Lab Fee	1200/-	1200
12	Examination Fee	1000/-	1000
13	Internet Charges	1200/-	1200
14	Library Security Fee (Refundable)	1500/-	
15	Inter University Tournament Fee	50/-	50
16	Magazine Fee	50/-	50
Total Fee		Rs: 39950/-	Rs: 32850/-

*Once at the time of admission

Fee Structure Master in Project Management (MPM) & Masters in Hospital Management (MHM), 1-Year Degree Programs (Weekend)

SR. NO	PARTICULARS	AMOUNT (1 st Sem.)	AMOUNT (2 nd & 3 rd Sem.)
1	Admission Fee (Once)	Rs.5000/-	-
2	University Registration Fee (Once)	Rs.1000	-
3	Tuition Fee (Per Sem)	Rs.40000/-	Rs.40000/-
4	University Security (Once)	Rs.1000/-	-
5	Library Security (Once)	Rs.1000/-	-
6	Verification fee	Rs.2000/-	-
7	Email Charges	Rs.275/-	Rs.275/-
8	Tutorial Fee (Per Sem.)	Rs.25/-	Rs.25/-
9	Inter University Fee (per Sem.)	Rs.50/-	Rs.50/-
10	Magazine Fee (Per Sem.)	Rs.50/-	Rs.50/-
11	Medical Fee (Per Sem.)	Rs.125/-	Rs.125/-
12	Lab Fee (per Sem.)	Rs.900/-	Rs.900/-
13	Sports Fee (Per Sem.)	Rs.900/-	Rs.900/-
14	Inter Net Charges (per Sem.)	Rs.900/-	Rs.900/-
15	Examination Fee (per sem.)		Rs.1000/-
	Total	Rs.53225/-	Rs. 44225/-

Fee Structure M.Sc. Chemical Engineering & M.Sc. Electrical Engineering

Sr. No.	PARTICULARS	AMOUNT 1 st Sem.	AMOUNT (2 nd - 4 th) Sem.
1	Tuition Fee	Rs.40000/-	Rs.40000/-
2	Admission Fee	Rs.5000/-	-
3	University Registration	Rs.4000/-	-
4	University Security	Rs.1000/-	-
5	Library Security	Rs.1000/-	-
6	Degree verification	Rs.1500/-	-
7	Email Registration fee	Rs.100/-	-
8	University Tournament Fee	Rs.25/-	Rs.25/-
9	Magazine Fee	Rs.25/-	Rs.38/-
10	Medical Fee	Rs.150/-	Rs.150/-
11	Internet Charges	Rs.900/-	Rs.900/-
12	Sports Fee	Rs.300/-	Rs.300/-
13	Examination Fee/semester	Rs.1000/-	Rs.1000/-
Total		Rs.55000/-	Rs.42413/-

Note:

Research fee @ Rs: 5000/- per semester will be charged in 4th and above semesters.

Acknowledgments

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Worthy vice Chancellor MNS UET Multan

Prof. Engr. Dr. Aamir Ijaz

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