

Chancellor's Message

It is a matter of immense pleasure for me as a Chancellor of this university to extend my facilitation 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 national and international standards, with the emphasis on research and applied disciplines demand of relevant to the need of time. The University is certainly alive to the increase. professional and progressive engineering for national development. I am confident that efforts to excel in the field of higher education and the inculcation technical expertise in the students of the Universities will continue in the future with great zeal.

Vice Chancellor 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 is 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 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 activities 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.

The City of Multan

Being a historical city, Multan is well known as "Madinat-ul-Auliyah", 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-Auliyah", 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 county.

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 finest 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 large industrial sector generates the country's highest export earnings. Other industries include fertilizer industries, rubber industries, plastic industries etc.

About University

Muhammad Nawaz Shariff University of Engineering & Technology (MNS- UET) is a high education degree awarding institute located 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 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 21 kilometers away from the current campus.

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

Focus on excellence in academia by reinforcing high quality education in engineering, technology, basic and social sciences, business management and humanities to achieve the vision by integration of skill, innovation, research and development, management and entrepreneurship by enhancing potential of its graduates for continual growth in competitive world.

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

MS-UET is offering admissions in the following four years, two years and one-year degree programs for the session 2019-2020.

Morning Programs

1. B.Sc. Electrical Engineering
2. B.Sc. Chemical Engineering
3. B.Sc. Mechanical Engineering Technology
4. B.Sc. Civil Engineering Technology
5. Bachelor of Science in Computer Science (BSCS)
6. Bachelor of Science in Physics (B.S. Physics)
7. Bachelor in Business Administration (BBA)
8. Bachelor of Science in Mathematics (BS Mathematics)

Evening Programs

1. B.Sc. Electrical Engineering Technology
2. B.Sc. Chemical Engineering Technology
3. B.Sc. Mechanical Engineering Technology
4. Bachelor of Science in Computer Science (BSCS)
5. B.Sc. Civil Engineering Technology
6. M.Sc. Health, Safety and Environment
7. M.Sc. Mathematics
8. M.Sc. Physics
9. M.Sc. Chemical Engineering
10. M.Sc. Quality & Performance Management
11. M.S. Electrical Engineering*
12. 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 management methods. Chartered Engineers are variously engaged in technical and commercial leadership and possess effective interpersonal skill.

Sr. No.	Duties/Designations	Name
1.	Vice Chancellor	Engr. Prof. Dr. Aamir Ijaz
2.	Registrar	Engr. Dr. Asim Umer
3.	Treasurer	Mr. Abdul Hakeem Noon
4.	Controller of Examinations	Engr. Dr. Zeeshan Najam Khan
5.	In-charge Electrical Engg. Dept.	Engr. Tauqeer Ahmad Raza
6.	In-charge Chemical Engg. Dept.	Engr. Dr. Asim Umer
7.	In-charge Civil Engg. Tech. Dept.	Engr. Fatima Mehvish
8.	In-charge Mechanical Engg. Tech. Dept.	Engr. Muhammad Umar Khallidoon
9.	In-charge Computer Science/ Mathematics Department	Dr. Kashif Ali
10.	In-charge Basic Sciences & Humanities Department	Dr. Shabana Afzal
11.	In-charge Quality Enhancement Cell (QEC)	Engr. Dr. Ayyaz Ahmad
12.	In-charge ORIC	Dr. Kashif Ali
13.	In-charge Library	Engr. Tasmyia Kausar
14.	Convener Purchase Committee	Dr. Majid Niaz Akhtar
15.	In-charge Career Counselling	Dr. Shabana Afzal
16.	In-Charge Public Relation Office	Mr. Muhammad Amir Khan
17.	In-charge Security	Engr. Tariq Mahmood
18.	In-charge Academics	Engr. Touqeer Ahmad Raza
19.	In-charge Student Affairs	Engr. Zaheer Abbas
20.	Resident Tutor (GCT hostel)	Engr. Sabih Qamar
21.	In-charge Transport	Engr. Ali Sarosh Khawaja
22.	In-Charge Sports	Engr. Arbab Shahid
23.	pso to VC	Engr. Raees Muhammad Asif

University Administration and Authorities

Admission Schedule

Event	Date and Day	
Availability of Prospectus	August 2019	Thursday
Last date of Submission of Admission Forms	27th Sept. 2019	Friday
Hafiz-e-Quran Test (Reporting Time 8:30 A.M.)	27th Sept. 2019	Friday
Announcement of 1st Merit List	30th Sept. 2019	Monday
Last Date of Depositing Dues and Documents for 1st Merit List	4th Oct. 2019	Friday
Announcement of 2nd Merit List	4th Oct. 2019	Friday

Last Date of Depositing Dues and Documents for 2nd Merit List	9th Oct. 2019	Wednesday
Announcement of 3rd Merit List	9th Oct. 2019	Wednesday
Last Date of Depositing Dues and Documents for 3rd Merit List	11th Oct. 2019	Friday
Announcement of 4th Merit List	11th Oct. 2019	Friday
Last Date of Depositing Dues and Documents for 4th Merit List	14th Oct. 2019	Monday

Seat Allocation Chart

Category/Degree	F.Sc./A level/ B.Sc.		(D.A.E)		(Baluchistan)		Minorities Quota (5%)		Total	
	M	E	M	E	M	E	M	E	M	E
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. Computer Science	38+38	38	0	0	0	0	4	2	80	40
B.S. Mathematics	38	0	0	0	0	0	2	0	0	40
B.S. Physics	38	0	0	0	0	0	2	0	0	40
BBA	38	0	0	0	0	0	2	0	40	0
M.Sc. Chemical Engineering	0	40	0	0	0	0	0	0	0	40
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
Master in Project Management	40 (W)	0	0	0	0	0	0	0	40	0
M.Sc. Quality and Performance Management	0	40	0	0	0	0	0	0	0	40
M.Sc. Health, Safety & Environment	0	40	0	0	0	0	0	0	0	40
Total	342	306	42	80	02	04	14	10	320	480

Procedure for The Selected Candidates

1. Notification of Selection

A list of selected candidates be put up on the University notice boards (MNS-UET, Multan) and on the University website as well. Kindly note that no offer letter would be dispatched to selected candidates. It is responsibility 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 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 1" O"-Level, F.Sc./ "A"-Level, B.Sc., Diploma of Associate Engineering (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-Dully 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 and 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. Forfeit 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 in undertaking 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.

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.

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 (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 60% 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

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.

Scheme of Studies

B.Sc. Chemical Engineering Technology (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		
Ch. E-101	Particle Technology	3	3	3	1
Ch. E-102	Computers & Computation		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		
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.
CI 1-202	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
IU-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	-
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	-	3	-

	3. Nanotechnology in Chemical Engineering 4. Nuclear Engineering 5. Computer Aided Design 6. Process Analysis and Optimization				
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	

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	

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	

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	

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	

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	

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	

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

M.Sc Chemical Engineering Program

M.Sc. Chemical Engineering in line with HEC guidelines		
Course No.	Course Title	Credit Hrs.
CHE-111	Advanced Transport Phenomena	3
CHE-112	Mathematical methods in Chemical Engineering	3
CHE-113	Separation Processes	3
CHE-114	Optimization & Process Design	3
CHE-421	Thesis	6
Additional Course		
RM-115	Research Methodology	2
MS Elective Courses		
CHE-121	Courses	3
CHE-122	Molecular Nanotechnology	3
CHE-123	Advanced Process Economics	3
CHE-124	Materials technology	3
CHE-125	Nano Catalysis	3
CHE-126	Numerical methods in CHE	3
CHE-127	Green Process Engineering	3
CHE-128	Polymer Engineering	3
CHE-129	Waste water treatment & Design	3
CHE-130	Computation Fluid Dynamics (CFD)	3
CHE-131	Advance Analytical Techniques	3
CHE-132	Project Engineering	3
CHE-133	Process Dynamics and Control	3

CHE-134	Chemical Kinetics and Reactor Design	3
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Duration of the program and semester-wise break-up of workload/ credit hours.		
First Semester		
Sr. No.	Subjects	Credit Hours
1	Separation Processes	3
2	Optimization & Process Design	3
3	Elective	3
Second Semester		
4	Advance Transport Phenomena	3
5	Mathematical methods in Chemical Engineering	3
6	Elective	3
Third Semester		
7	Elective	3
8	Elective	3
Fourth Semester		
9	Thesis	6

Curriculum of the Program (PhD in Chemical Engineering) in line with HEC guidelines

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-	3
23	Industrial Air Pollution Control	CHE-	3
24	Hazardous Waste Management	CHE-	3
25	Applied Microbiology & Biological Processes	CHE-	3
26	Advanced Biochemical Engineering	CHE-	3
27	Design and Analysis of Biochemical Reactors	CHE-	3
28	Biochemical Treatment of Industrial Wastes	CHE-	3
29	Computer Aided Process Plant Design	CHE-	3
30	Project Management Information Systems	CHE-	3
31	Process Synthesis, Analysis and Design	CHE-	3
32	Coal Preparation and Beneficiation	CHE-	3
33	Coal Gasification	CHE-	3
34	Combustion Engineering	CHE-	3
35	Advanced Coal Power Systems	CHE-	3
36	Bio Refinery Engineering	CHE-	3
37	Renewable Energy Engineering	CHE-	3

Exact Title of the program that will appear on relevant degree

PhD in CHEMICAL ENGINEERING (Specialization in Process Engineering)

Brief Introduction of Programs and Date of Commencement

The post graduate program is launched to broaden the Area of research in the field of Chemical Engineering. It will apply traditional techniques of Chemical Engineering to solve Academic and Industrial problems. The PhD in Chemical engineering offer novel experimental labs and advance computing techniques to understand various aspects of Chemical engineering. The aimed at improving opportunities for chemical engineers in the chemical, petrochemical, fertilizer and process industries. The aims to start the programs in September, 2019.

Objectives of program

The objective of PhD in chemical engineering is to achieve the excellence in research, innovation and academics. University aims to ensure 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 science. University aims to meet the international standards in above fields for the betterment and progress of individuals in southern Punjab area of Punjab owes many industries that are in need of highly qualified and skilled engineers to meet their excellence. University will such individuals to industries. Socially southern Punjab students will be facilitated.

Sr. No.	Subjects	Credit Hours
First Semester		
1	Elective	3
2	Elective	3
3	Elective	3
Second Semester		
4	Elective	3
5	Elective	3
6	Elective	3
Comprehensive Test		
Synopsis Defense		
7	Thesis	6

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@mnsuet.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

Engr. Dr. Waqas Aleem

Assistant Professor

PhD Chemical Engineering (UTP, Malaysia)

Research Interest: Mathematical modeling

Engr. Mahboob Ahmad Aadil

Lecturer

M.Sc. Chemical Engineering (UET, Lahore)

Engr. Sabih Qamar

Lecturer

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)

Department of Civil Engineering and technology

Degree program

B.Sc. Civil Engineering
Technology
(Morning & Evening)

Eligibility Criteria

F. Sc. (Pre-
Engineering)/D.A.E or
Equivalent
with a minimum of 60%
marks followed by
entry test of students. basis for
open merit
determination of students are:
• Entry test (ECAT or MNS
UET
Admission Test)
• Intermediate/A-
Level/DAE/Equivalent

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

70%

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

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. Civil Engineering and 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 Technology (Semester-1)			
Course No.	Course Title	Credit Hrs. Theory	Credit Hrs. Practical
B.Sc. Civil Engineering Technology (Semester-1) PST-311	Pakistan Studies	Theory	Practical
ENG-313	English Language skills	2	0
MTH-331	Applied Mathematics-I	2	2
CSC-341	Computer Applications	3	0
CIT-351	Applied Mechanics	2	2
		2	2
	Tatol	17	
B.Sc. Civil Engineering Technology (Semester-2)			
Course No.	Course Title	Credit Hrs. Theory	Credit Hrs. Practical

ENG-314	Technical Communication	2	0
CIT-352	Surveying	2	2
CIT-354	Civil Engineering Drawing	1	2
CIT-356	Materials and Methods of Construction	2	3
CIT-360	Fluid Mechanics	2	2
	Total	18	
B.Sc. Civil Engineering Technology (Semester-3)			
Course No.	Course Title	Credit Hrs. Theory	Credit Hrs. Practical
MTH-432	Applied Mathematics-II		
crr-453	Quantity Surveying and Contract Documents	3	0
CIT-455	Concrete Technolow	1	2
CIT-461	Soil Mechanics	2	2
CIT-463	Mechanics of Solids	2	2
		2	2
	Total		18
BSc. Civil Engineering Technology (Semester-4)			
Course NO.	Course Title	Credit Hrs. Theory	Credit Hrs. 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	
BSc. Civil Engineering Technology (Semester-5)			

Course No.	Course Title	Credit Hrs. Theory	Credit Hrs. 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	
BSc. Civil Engineering Technology (Semester-6)			
Course No.	Course Title	Credit Hrs. Theory	Credit Hrs. 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-598	Project	0	3
	Total	18	
B.Sc. Civil Engineering (Semester-7)			
Course No.	Course Title	Credit Hrs. Theory	Credit Hrs. Practical
CIT-691	professional Supervised Field Training,	0	14
	Total		14
B.Sc. Civil Engineering Technology (Semester-8)			
Course No.	Course Title	Credit Hrs. Theory	Credit Hrs. Practical
CIT-692	professional Supervised Field Training,	0	14
	Total		14

Faculty Civil Engineering

Engr. Fatima Mehvish

In-Charge Department

M Sc- Structural Engineering (UET Lahore)

engr.fatimamehush2011@gmail.com

Engr. Asad Ali

Lecturer

M -Sc. Structural Engineering (UET Lahore)

(on study leave)

Engr. Riaz Ahmad

Lecturer

M.Sc. Structural Engineering (UET Lahore)

Engr. Zaheer Abbas

Lecturer

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

Engr. Munawar Hussain

Lecturer

MSc. Structural Engineering (CET Lahore)

Engr. Hafsa Khurshid

Lecturer

M.Sc. Hydraulics& Irrigation Engineering (UET' Lahore)

Engr. Umar Farooq

Lecturer

M Sc. Structural Engineering (CET Lahore)

Engr. Tariq Mahmood

Lecturer

M.Sc. Hydraulics& Irrigation Engineering (BZU)

Engr. Ahmed Husnain Khuram

Lab. Engineer

B.Sc. Civil Engineering (UET Taxila)

B.SC. Electrical Engineering

Degree program

- **B.Sc. Electrical Engineering**

Eligibility Criteria

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

Candidate should have obtained at least 60% marks in FS [B.Sc. (Double Math, Phy.) DAE / B Tech. (Pass) Examination excluding Hafiz-e-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. Electrical Engineering Technology**

Eligibility Criteria

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

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

Degree program

- **M.S. Electrical Engineering**

Eligibility Criteria

BSc. Engineering (Electrical, Electronics) from any HEC recognized/PEC Accredited Institute with minimum CGPA: 2/4 with valid GAT-General with 50% marks or MNS UET admission test.

- Subject to approval / NOC from HEC

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 . Power

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

- Electronics
- Control
- Power

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.	Credit hrs.

		Theory	Lab
MT-101	Calculus and Analytical Geometry	3	0
PH-101	Applied Physics	3	1
CH-131	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	Credit hrs. 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
EE124	Electronic Devices & Circuits	3	1
	Total	14	4
B.Sc. Electrical Engineering (Semester-3)			
Course No.	Course Title	Credit Hrs. Theory	Credit hrs. 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	Credit hrs. Lab

HU-214	Technical Writing and presentation skill	3	0
MT-204	Numerical analysis with MATLAB	3	1
CS-233	Data structure	2	1
HU-213	Pakistan study	2	0
EE-228	Signal and System	3	0
EE-241	Electrical Machines	3	1
	Total	16	3
B.Sc. Electrical Engineering (Semester-5)			
Course No.	Course Title	Credit Hrs. Theory	Credit hrs. Lab
EE-342	Microprocessor system	3	1
MT-305	Probability and Random variables	3	0
EE-329	Electromagnetic theory	3	0
EE-343	Electrical power Generation and Transmission	3	1
EE-343	Control System	3	1
	Total	15	3
B.Sc. Electrical Engineering (Semester-6)			
Course No.	Course Title	Credit Hrs. Theory	Credit hrs. 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
B.Sc. Electrical Engineering (Semester-7)			
Course No.	Course Title	Credit Hrs. Theory	Credit hrs. 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	Electronic / Communication		
EE-461 Power system Protection	EE-481 Antennas and wave Propagation		

EE-462 High voltage Engineering	EE-474 Digital Signal Processing		
EE-454 Introduction to smart Grid	EE-482 computer network		
EE-453 Renewable Energy	EE-475 VLSI system Design		

B.Sc. Electrical Engineering (Semester-8)

Course No.	Course Title	Credit Hrs. Theory	Credit hrs. Lab
MNG -416	Entrepreneurship & Business Management	3	0
EE-4XX	Elective -2	3	1
EE-4XX	Elective -3	3	1
EE499b	Project (phase -2)	0	3
	Total	9	5

List of Electives

Power	Electronic /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		

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

Course No.	Course Title	Credit Hrs. Theory	Credit hrs. Practical
MTH-331	Applied Mathematics-1	3	0
PHY-332	Applied Physics	2	1
CSC-341	Computer Applications	1	2
EET-351	Engineering Drawing	1	2
EET-361	Linear Circuits Analysis	2	2
	Total	16	

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

Course No.	Course Title	Credit Hrs. Theory	Credit hrs. Practical
PST-311	Pak-Studies	1	0
CHM-333	Applied Chemistry	2	1

EET-352	Power Generations	2	0
EET-362	Electronics	2	2
EET-364	DC Machines &Transformers	2	2
	Total	17	

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

Course No.	Course Title	Credit Hrs. Theory	Credit hrs. Practical
ENG-411	Communication Skills	2	0
MTH- 431	Applied Mathematics-II	3	0
EET- 461	Electrical Instruments and Measurements	2	2
EET- 463	Digital Electronics	2	2
EET-471	AC Circuits Analysis	2	2
	Total	17	

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

Course No.	Course Title	Credit Hrs. Theory	Credit hrs. Practical
ISL-412	Islamiyat	1	0
EET-470	AC Machines	2	2
EET-472	Electro-Magnetic Fields	2	0
EET-474	Electrical Power Transmission	2	1
EET-476	Electrical Power Distribution and Utilization	2	1
	Total	17	

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

Course No.	Course Title	Credit Hrs. Theory	Credit hrs. Practical
MNG-521	Total Quality Management	2	0
EET-571	Micro-Processor Theory and Interfacing	2	1
EET-573	Switch Gear Protective Devices	2	1

EET-575	Communication Technology	2	2
EET-577	Control Technology	2	1
	Total	15	
B.Sc. Electrical Engineering Technology (Semester-6)			
Course No.	Course Title	Credit Hrs. Theory	Credit hrs. Practical
ENG-512	Technical Report Writing	2	0
EET-572	Power Sstem Analvsis	3	0
EET- 574	Data & Com uter Communication	2	2
EET-576	High Voltage Technology	2	1
EET-578	Industrial Drives and PLC	2	2
	Total	16	
B.Sc. Electrical Engineering Technology (Semester-7)			
Course No.	Course Title	Credit Hrs. Theory	Credit hrs. Practical
EET692a	Supervised Industrial Training Continued	0	15
EET699a	Project Continued	0	3
	Total		18
B.Sc. Electrical Engineering Technology (Semester-8)			
Course No.	Course Title	Credit Hrs. Theory	Credit hrs. Practical
EET692b	Supervised Industrial Training	0	15
EET699b	Project	0	3
	Total		18

M.S. Electrical Engineering Program

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 Electric Machine Design	✓	✓	✓
EE.507	Control of Electric Machine Drive	✓	--	--
EE.508	Advance Power System	✓	✓	--
EE.509	Advance Power System protection Advance High Voltage Engineering	✓	--	--
EE.510	Power System Quality	✓	--	--
EE.511	Power System planning	✓	--	--
EE.512	Renewable Electric Energy System	✓	--	--
EE.513	Advance Control System	✓	--	--
EE.514	Digital Control System	✓	--	--
EE.515	Nonlinear Control System	--	✓	--
EE.516	Adaptive Control system	--	✓	--
EE.517	Robotics and Intelligent System	--	✓	--
EE.518	Advance Solid-State Electronics	--	✓	--
EE.519	Photonics Devices	--	✓	--
EE.520	Advance Digital Electronics Design	--	--	✓
EE.521	Network Security	--	--	✓
EE.522	Advance system and signal processing	--	--	✓

M.S. Electrical Engineering (Semester-1)		
Course No.	Course Title	Credit Hrs.
EE-501	Core Compulsory-I	3
EE-5XX	Core Specialization	3

EE-5XX	Elective -1	3
EE-5XX	Elective -2	3
	Total	12
M.S. Electrical Engineering (Semester-2)		
Course No.	Course Title	Credit Hrs.
EE-502	Core Compulsory-2	3
EE-5XX	Elective-3	3
EE-5XX	Elective-4	3
	Total	9
M.S. Electrical Engineering (Semester-3)		
Course No.	Course Title	Credit Hrs.
EE-5XX	Elective-5	3
	Thesis-1	3
	Total	6
M.S. Electrical Engineering (Semester-4)		
Course No.	Course Title	Credit Hrs.
--	Thesis-2	3
	Total	3

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-52t 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	EE-506 Advance Power Electronics
EE-514 Renewable Electric Energy System	EE-519 Robotics and Intelligent System	EE-524 Advance System and signal Processing

Faculty of Electrical Engineering

Engr. Touqeer Ahmad Ram

MSc. Electrical Engineering (Power)

Area of Interest: Renewable energy system, Electronics

Engr. Dr. Zeeshan Najam Khan

Associate Professor

Electrical Engineering

Area of Interest: State Electronics, Digital Electronics

Engr. Dr. Muhammad Shahzad

Assistant Professor

Electrical Engineering

Area of Interest: Posset Systems (operation & control)

Engr. Ayesha Khalid

lecture

M Sc. Electrical Engineering

Area of Interest: Antenna and Microwave, Communication

System, Optical Circuit

Engr. Rehan Azmat

Lecturer

MSc. Electrical Engineering

Area of Interest: Integrated Electronics, Systems

Engr. Kashif Iqbal Mayo

Lecturer

electrical Engineering (Power)

Area of Interest: Design Machine,

Control of Machine Drive

Engr. Humera Munir

Lecturer

MSc. Electrical Engineering

Area of Interest: AC& DC circuit Analysis,

Engr. Humza Khan

Lecturer

M.Sc. Electrical Engineering

Area of interest: Digital image processing

Engr. Muhammad Bilal

Lab Engineer

M.Sc. Electrical Engineering

Area of interest: Machine and Power System

Engr. Sikandar Saleem

Lab Engineer

M.Sc. Electrical Engineering

Area of interest: Machine and Power Electronics

Lab facilities

The following lab facilities have been furnished for the engineering students

- Computer simulation Lab
- Electric Workshop lab
- Digital Logic Design lab
- Industrial Control System Lab
- Applied Physics Lab
- Electric Machine Lab
- Power Electronics Lab
- Embedded System Design Lab
- Basic Electronics Lab
- Control System Lab
- Power System Protection Lab

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 the department has also started two new programs Masters in QPM and Masters in HSE.

Mission

The prime focus of Mechanical Engineering department is to impart quality education by providing basic knowledge, technical skills and professional ethics to cope with industrial challenges.

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.

Degree Program

- **B.Sc. Mechanical Engineering**

Technology

(Morning and Evening)

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

Scheme of Studies

B.Sc. Mechanical 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	17

B.Sc. Mechanical Engineering Technology (Semester-2)			
Course No.	Course Title	Credit Hrs. Theory	Credit Hrs. Practical
MTH-102	Applied Mathematics-II	3	0

EET-101	Basic Electrical and Electronics	2	1
CHY-104	Applied Chemistry	2	1
MET-103	Workshop Practice	0	2
IST-104	Statics	3	1
HUM-104	Islamic Studies / Ethics	2	0
	Total	12	5

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

Course No.	Course Title	Credit Hrs. Theory	Credit Hrs. 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	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	Credit Hrs. Practical
MET-241	Fluid Flow Processes	2	1
MET-242	Basic Mechanics of Machines	2	1
MET-243	Machine Design and CAD)-I I	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	Credit Hrs. Practical
MET-351	Hydraulic Machinery	2	1
MET-352	1 IVAC	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	2	1
MET-357	Technical Project (Part-I)	3	1
	Total	13	7

B.Sc. Mechanical Engineering Technology (Semester-6)			
Course No.	Course Title	Credit Hrs. Theory	Credit Hrs. 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
MET-367	Technical Project (part-II)	0	1
	Total	15	5

B.Sc. Mechanical Engineering Technology (Semester-7)			
Course No.	Course Title	Credit Hrs. Theory	Credit Hrs. 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	Credit Hrs. Practical
MET-472	Supervised Industrial Training	0	16
	Total	0	16

M.Sc. Quality & Performance Management (QPM) (Regular Program)

This is a degree program equivalent to 16 years of education. Regular classes: Monday to Friday (8am to 9pm).

Program Objectives

- To groom B.Sc. Graduates for supporting production and service organizations
- in their quest for quality assurance and performance excellence.
- To produce competitive professionals well equipped with the integrated
- knowledge and techniques on quality and performance management.

- To promote quality & performance management practices country wide — a
- national necessity.

Program Details

Quality and Performance Management (QPM) is an emerging field for quantifying, monitoring and improving the quality and performance of organizations. QPM programs enable individuals to understand processes, tools, techniques and technologies necessary for the proficient management of quality and performance to make the organization more competitive and profitable.

1. Duration of Program

- A. Semester: 04 (2 years Program)
- B. Total Credit Hours :66
- C. Timings of the classes: Evening (4pm to 9pm)
- B.

Degree Program

M.Sc. Quality and Performance Management (Evening)

Eligibility Criteria

B.Sc. or Equivalent Science Graduate,
B-Tech Graduates. B. COM,
Graduation in any field of engineering,
Technology or sciences
Minimum: 50% Marks or CGPA: 2.0,
2nd Division

Additional Marks: Hafiz-e-Qur'an

20 Marks

other eligibility requirements would be the
same as per admission regulations of
university)

3. Fee Structure

Available on the website

wuumnsuet.edu.pk

Scheme of Studies

M.SC. Quality and Performance management (Semester-1)			
Course No.	Course Title	Credit Theory	Credit practical
QPM-101	Total Quali Management	03	
QPM-102	Quali Tools & Techniques—I	03	
QPM-103	Business and Professional Ethics	03	
QPM-104	International Quali S stems & Standards—I	03	
QPM-105	Computer Applications in Quali Management	02	01
QPM-106	Mana in Organizational Quali	03	
	Total	17	01

M.SC. Quality and Performance management (Semester-2)			
Course No.	Course Title	Credit Theory	Credit practical
QPM-201	Quality Costing	2	
QPM-202	Quality Tools & Techniques —II	3	1
QPM-203	Quality in Supply Chain	3	
QPM-204	Human Resource & Quality	3	
QPM-205	International Quality Systems & Standards—II	3	
QPM-206	Operations Management	3	
	Total	17	1

M.SC. Quality and Performance management (Semester-3)			
Course No.	Course Title	Credit Theory	Credit practical
QPM-311	Management Information System	3	
QPM-312	Process & Product Measurement	2	01
QPM-313	Performance Management-I	3	
QPM-314	Maintenance Management	3	
QPM-315	Safety Management	3	
	Total	14	01

M.SC. Quality and Performance management (Semester-4)			
Course No.	Course Title	Credit Theory	Credit practical
QPM-411	Total Quality Marketing	3	
QPM-412	project Management	3	01
QPM-413	Performance Management -2	3	
QPM-414	Thesis	5	
	Total	14	01

M.SC.- Health Safety t Environment

This is a degree program equivalent to 16 years of education. Regular classes:

Monday to Friday (4pm to 9pm).

The objectives of this program are:

- 1) An ability to select and apply the knowledge, techniques and modern tools of the discipline to fields broadly-defined as fire protection, health, environment and safety engineering and technology
- 2) Demonstrate a mastery of Health safety and environment knowledge and safety management skills, to reach higher levels in their profession
- 3) Effectively communicate on Health safety and environment, facilitating collaboration with experts across various disciplines so as to create and execute 7, safe methodology in complex engineering environment
- 4) Demonstrate professional expertise to the industrial and societal needs at national and global level subject to legal requirements

Degree Program

M.Sc. Health Safety Environment

(Evening)

B.Sc. or Equivalent Science Graduate, B-Teach

Graduates. Graduation in any field of

Engineering, or science«

Minimum: 50%, Marks or CG PA: 2.0

Scheme of Studies

M.Sc. Health, Safety & Environment (Semester-1)			
Course No.	Course Title	Credit Theory	Credit practical
HSE-101	Environmental Engineering & Management	3	0
HSE-102	HSE Rules & Regulations	3	0
HSE-103	Occupational Health & Safety Management	3	0
HSE-104	Behavioral Based Safety Management	3	0
HSE-105	Electrical Safety	3	0
HSE-106	Health, Safety & Environment Lab	0	1
	Total	15	01

M.Sc. Health, Safety & Environment (Semester-2)			
Course No.	Course Title	Credit Theory	Credit practical
HSE-201	Safety in Industrial Operations & Design	3	0
HSE-202	Fire Risk and Control	3	0
HSE-203	Hazards Safety Measures in Process Industry	3	0
HSE-204	Fundamentals of Sustainable Development	3	0
HSE-205	Safety in Construction	3	1
HSE-206	Computer Applications in HSE	0	1
	Total	15	02

M.Sc. Health, Safety & Environment (Semester-3)			
Course No.	Course Title	Credit Theory	Credit practical
HSE-301	TPM and TQM	3	0
HSE-302	Safe in Engineering Industry	3	0
HSE-303	Ergonomics and Workplace Management	3	1
HSE-304	Hazard Identification, Risk Analysis and Management	3	0
HSE-305	Summer Internship (6 Weeks)	0	NC
HSE-306	Seminar I	0	1
HSE-307	Case Study	0	2
HSE-308	Project proposal	0	NC
	Total	12	04

M.Sc. Health, Safety & Environment (Semester-4)			
Course No.	Course Title	Credit Theory	Credit practical
HSE-401	University Elective I	3	0
HSE-402	University Elective II	3	0
HSE-403	University Elective III	3	0
HSE-404	Safety and Security Equipment Lab	0	1
HSE-405	Seminar II	0	1
HSE-406	Project/Thesis	0	6
	Total	09	08

M.Sc. Health, Safety & Environment (Elective Courses)			
Course No.	Course Title	Credit Theory	Credit practical
HSE-407	HAZOP & HAZAN Techniques	3	0
HSE-408	Safe in Drilling	3	0
HSE-409	Concept of Fire Safe in Buildings, Structures & Installations	3	0

HSE-410	Safe in Electrical Desi	3	0
HSE-411	Fire Fighting Appliances and operations	3	0
HSE-412	Green Fuels & Their Environmental Im act	3	0
HSE-413	Global Disaster Scenario and es of Natural Disaster	3	0
HSE414	Water Su I Refugee (IDP) Health and Sanitation in Emergency	3	0
HSE-415	Terrorism Risk Management	3	0
HSE-416	Public Health and Environment	3	0
HSE-417	Emergency Response Services	3	0
HSE-418	Professional and Business Ethics	3	0
HSE-419	HSE Codes and Standards	3	0
HSE-420	Community Health and Waste Management	3	0
HSE-421	es of Ene Production and Environmental Im act	3	0
HSE-422	Natural Disaster Management	3	0

Faculty of Mechanical Engineering Technology

Engr. Muhammad Umar Khallidooon

Lecturer /In-Charge Department

PGD Mechatronics Engineering

B.Sc. (Hons) Mechanical Engineering (UET Lahore)

Umar.khalidooon@mnsuet.edu.pk

Engr. Shahzad Ahmadi

Lecturer

MS Total Quality Wyre)

B Industrial & Manufacturing (UET-Lahore)

Engr. Muhammad Aon Ali

Lecturer

MS. Thermal Engineering (UET Taxila)

B.Sc. (Hons) Mechanical Engineering (UET Taxila)

Engr. Sania

Lecturer

M.Sc. Mechanical Design Engineering

B.Sc. Mechanical Engineering (UET, BZU Multan)

Engr, Misbah Niamat

Lecturer

M.Sc. Industrial Engineering (UET Taxila)

Industrial and Manufacturing Engineering (UET Lahore)

Engr. Tasmyia Kousar

Lecturer

M.Sc. Mechanical Engineering (UET Lahore)

Mechanical Engineering (BZU Multan)

Engr. Arbab Shahid

Lecturer

M sc. Design Manufacturing Engineering

BE Mechatronics Engineering (NVST)

Engr. Muham mad Arslan Qasim

Lab Engineering

B.Sc. Mechanical Engineering (GIKI)

MSc. Mechanical Engineering (UET Taxila)

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 Lab
- 8) Electrical and Electronics Lab
- 9) Computer Lab
- 10) Physics Lab
- 11) Chemistry Lab

study leave)

Faculty of Sciences and

Humanities Introduction

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, 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. Faculty of Sciences and Humanities includes the following Departments.

Department of Mathematics

Department of Physics

Department of Computer Science

Department of

Mathematics

Introduction

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.

Degree Program

B.S. Mathematics (4 Years) (Morning)

Eligibility Criteria

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

Degree Program

M.Sc. Mathematics (2 Years) (Evening)

Eligibility Criteria

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

Scheme of study

BS Mathematics Semester 1		
CODE	Course name	Cr Hrs.
ISE-111	ISLAMIAT/ETHICS	2
ENG-111	English-I (Language in Use)	3
COMP-111	Computer (Introduction and Applications)	3
MATH-101	Mathematics A-1 [Calculus (1)]	4
MATH-102	Mathematics B-1 [Vectors & Mechanics (1)]	4
PHY-111	Physics-1	3
PHY-112	Physics Lab-1	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-11	3
PHY-114	Physics Lab-11	1

MATH-103	Mathematics A-1 Plane Cuíves & Analytic Geometiy]	4
MATH-104	Mathematics B-H Mechanics (11)	4
MATH-105	Discíete Mathematics	2
TOTAL		19

BS Mathematics Semester 2		
CODE	COURSE NAME	CR HRS.
ING-211	English-III (Communication Skills)	3
PIIY-211	Physics-III	3
PHY-212	Physics Lab-III	1
MAI'H-201	Mathematics A-III (Lineaí Algebíal	4
MAI'H-202	Mathematics B-III (Calculus (II)]	4
MAI'H-405	Gíaph I'heoíy	2
TOTAL		17

B.S. Mathematics (Semesteí-4)		
Code	Couíse Name	Cí. Hís.
ENG-212	English-IV (English foí Píactical Aims)	3
PHY-213	Physics-IV	3
PHY-214	Physics Lab-IV	1
MAI'H-203	Mathematics A-IV [Oídinaíy Diffeíential Equations]	4
MAI'H-204	Mathematics B-IV (Metíic Spaces & & Gíoup I'heoíy]	4
SOC-211	Intíoduction to Sociology	3
MAI'H-206	Elementaíy Numbeí I'heoíy	2
TOTAL		20

B.S. Mathematics (Semesteí-5)		
Code	Couíse Name	Cí. Hís.
MAI'H-301	Real Analysis –1	3

MATH-302	Group Theory-1	3
MATH-303	Complex Analysis-1	3
MATH-304	Vectors and Tensor Analysis	3
MATH-305	Topology	3
MATH-306	Differential Geometry	3
TOTAL		18

B.S. 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-11	3
MATH -310	Mechanics	3
MATH-311	Functional Analysis-I	3
MATH-312	Differential Equations	3
Total		18

B.S. Mathematics (Semester-7)		
Code	Course Name	CR HRS.
MATH-401	Set Theory	3
MATH-402	Partial Differential Equations	3
MATH-403	Numerical Analysis-1	3
ANY TWO OF THE FOLLOWING		
MATH-404	Mathematical Statistics-1	3
MATH-405	Fortran Programming	3
MATH-406	Group Theory-11	3
MATH-407	Ring Theory	3
MATH -408	Number Theory-1	3
MATH-409	Quantum Mechanics-1	3
MATH-410	Analytical Dynamics	3
MATH-411	Electromagnetic Theory-1	3
MATH-412	Operations Research-I	3
MATH-413	Theory of Approximation and Splines-1	3
MATH -414	Functional Analysis-II	3
MATH-415	Fluid Mechanics-I	3

TOTAL	15
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B.S. Mathematics (Semester-8)		
Code	Course Name	Cí. HRS.
MATH-416	Measure Theory and Lebesgue Integration	3
MATH-417	Methods of Mathematical Physics	3
MATH-418	Numerical Analysis-II	3
ANY TWO OF THE FOLLOWING		
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 Splines-II	3
MATH-429	Functional Analysis- III	3
MATH-430	Fluid Mechanics-II	3
TOTAL		18

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 Nam	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

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
- UV-VIS Spectro Photometer

Degree Program

M.Sc. Physics (Evening)

Eligibility Criteria

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

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 (Morning)

(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.

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.

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	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
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Phy-533	Quantum Mechanics-I	3
Phy-534	Physics Lab-VII	2
Phy-535	Seminaí (about Píobject)	1
Phy-536-8	Advance Elective-I	3
TOTAL		15

M.Sc Physics (Semester-4)		
Code	Course Name	Cí Hís.
Phy-541	Nuclear Physics -II	3
Phy-542	Electrodynamics-II	3
Phy-543	Quantum Mechanics-II	3
Phy-544	Píobject (Repoít + V.V.)	3
Phy-545-8	Advance Elective-II	3
TOTAL		15

Advanced Electives-I		
Code	Course Name	Cí. Hís
Phy-536	Digital Electronics-I	2+1
Phy-537	Advance Solid-State Physics	3
Phy-538	Laseís	3
NC is the non-credit course		

Advanced Electives-II		
Code	Course Name	Cí. Hís.
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)	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

Advanced Electives-II

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	Non-Credit Course	

Advanced 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	Non-Credit Course	–

Department of Computer Science

Introduction

Department of Computer Sciences 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 Sciences, Information Technology and Artificial Intelligence are key players. We intend to start the first program offered by the department as a four-year bachelor degree program; B.Sc. Computer Sciences. 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 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

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-I	3-1

Total		17
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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-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-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-)

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
UME-563	CS Elective-3	3-1
UME-564	CS Elective-4	3-0
ENG-565	Technical & Business Writing	3-0
Total		18

BSCS (Semester-7)

Code	Course Name	Cr. Hrs.
UME-671	University Elective-2	3-0
UME-672	University Elective-3	3-0
CS-6738	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.
CS-681	Professional Practices	3-0
UME-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

Category	Elective Course	Credits
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

Bacheloís 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 of 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

Degree Program

Bachelor in Business Administration (BBA)

(Morning)Eligibility Criteria

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

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
EN-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		**15**

BBA (Semester 7)		
Course No.	Course Title	Credit Hrs.
BA-629	Business Research & Report Writing	3
BA-635	Production and operation Management	3
BA-646	Money and 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-639	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 2

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

8. Marketing Research
9. Service Marketing
10. Integrated Marketing Communications (IMC)
11. Personal Selling
12. Cyber/Internet Marketing
13. Marketing of IT Products
14. Seminar in Marketing
15. Dissertation

Management

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

Human Resource Management

1. Strategic Human Resource Management
2. Cross-Cultural Resource Management

3. Training Interventions and Job Skills
4. Labour Laws in Pakistan
5. Incentives & Compensation Management
6. Recruitment and Selection
7. Leadership and Team Management
8. Micro Organizational Dynamics
9. Dissertation

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 contributing 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 and 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 are 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.

Degree Program

Masters in Project Management (MPM)

One 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 the MPM program.

MNS Admission test or a valid NTS/GAT result of 50% marks.

Interview conducted at MNS UET Multan.

Scheme of Studies

MPM (Semester-1)		
Course No.	Course Title	Credit Hrs.
MPM-501	Fundamentals of Project Management	3
MPM-502	Project Cost and Financial Management	3
MPM-503	Project Human Resource and 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
MPM-521	Project-I	3
Total		**12**

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	3
MPM-522	Project-II	3
Total		**12**

Facilities For Students

Library

A library is the backbone 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-ROMs and up-to-date collection of online resources like IEEE research papers. The library is maintained by qualified, experienced, and very cooperative staff.

Hostel

The university provides the facility of hostels for male students that are situated very near to the campus. Well-furnished rooms are available on a "first come, first served" basis. Keeping in view the growing

demand for accommodation for the students coming from far-flung areas, construction of more hostels is planned in the new campus in the near future. After completion of the construction of these hostels, the capacity of many students will be available. Understanding the needs of the students belonging to rural areas, the university has planned the project of an up-to-date hostel for the girls also. In this way, we will be able to accommodate the maximum number of our girl students coming from far-flung areas to quench their thirst for 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, and access to digital library resources with a 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 buses and are taken to the institute safe and sound in time. 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 and cars without any charges in the campus parking lots.

Information Technology Services

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

The software LMS is designed to promote paperless university administration. It is unique and comprehensive software with its features, allowing users to maintain academic history of students with complete transparency in records and providing a medium for students, teachers, staff, and administration to work in harmony. The students can see their results, attendance, and 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 better learning of students, the university provides numerous sports facilities to the students.

It includes Indoor Sports Complex, for boys and girls; outdoor lush green grounds; table tennis, badminton courts, and cricket, football, basketball, volleyball, and hockey grounds. To sharpen the edges of the 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.

Security

University provides fool-proof facility of security to the students, staff, and faculty. There are some armed guards who are hired from a security company, and there 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. Security staff also assists Directorate of Student Affairs in dealing with the issues arising out of the violations of university code of conduct. It is due to the untiring efforts of the Security in charge that the university is successfully meeting the challenges.

Different security measures include installation of boundary walls, construction of OPs, appointment of retired army personnel's as security guards, purchase of new weapons and installation of barriers and electronic walk through gates have been arranged.

All the faculty members, students and administrative staff are issued their respective university ID cards that is mandatory for them to display in the university premises

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 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 Mosque

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 students.

Alumni Directory

An updated database of alumni is maintained by the alumni directorate. 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.

****Activities & Workshops**