

University of Management & Technology, Lahore

Office of the Registrar, Johar Town C-II Lahore, Ph. #: 042-35212820



Roadmap

Program Name: BS (CE)

Program Scheme of Studies

Structure of the Scheme	
Courses Credit Hours	1-3
Core Courses: (Credit Hours)	42
Foundation Courses: (Credit Hours)	26
Major Courses: (Credit Hours)	52
Technical Electives: (Credit Hours)	20
General Electives: (Credit Hours)	
Supporting Science: (Credit Hours)	
University Electives: (Credit Hours)	
Undergraduate 2.0 courses (Credit hours)	
Total Credit Hours:	138 (for non-Muslim students) 140 (for Muslim students)

Program Road Map

Applicable to Batch No. F2025132 Session F2025

1 st Year							
Fall Semester				Spring Semester			
Code	Course Title	Cr. Hrs.	Prerequisite	Code	Course Title	Cr. Hrs.	Prerequisite
POL121	Ideology and Constitution of Pakistan	2	None	CE102	Engineering Mechanics	3	None
EN104	Functional English	3	None	CE102L	Engineering Mechanics (Lab)	1	None
HM150	Islamic Studies/Ethics	2	None	CE122	Engineering Surveying	2	None
MA107	Calculus and Analytical Geometry	3	None	CE122L	Engineering Surveying (Lab)	1	None
CE111	Civil Engineering Drawing	1	None	EF132	Basic Electrical Engineering	2	None
CE111L	Civil Engineering Drawing (Lab)	2	None	EF132L	Basic Electrical Engineering (Lab)	1	None
CS143	Programming Fundamentals	2	None	MA130	Differential Equations	3	MA107
CS143L	Programming Fundamentals (Lab)	1	None	CE113	Construction Materials	2	None
HM112	Pakistan Studies	2	None	CE113L	Construction Materials (Lab)	1	None
				NS141	Engineering Geology	2	None
Semester Credit Hours		18		Semester Credit Hours		18	
2 nd Year							
Fall Semester				Spring Semester			
Code	Course Title	Cr. Hrs.	Prerequisite	Code	Course Title	Cr. Hrs.	Prerequisite
CE211	Construction Practices	2	None	MA231	Probability and Statistics for Engineers	3	MA107



CE211L	Construction Practices (Lab)	1	None	CE242	Geotechnical Engineering-I	3	CE102
CE251	Fluid Mechanics	3	CE102	CE242L	Geotechnical Engineering-I (Lab)	1	CE102
CE251L	Fluid Mechanics (Lab)	1	CE102	CE215	Geomatics	3	CE122
CE203	Mechanics of Solids	3	CE102	CE215L	Geomatics (Lab)	1	CE122
CE203L	Mechanics of Solids (Lab)	1	CE102	CE204	Structural Analysis-I	3	CE203
MA210	Linear Algebra	3	None	CE216	Computer Graphics and Building Information Modeling	1	CE211
MS221	Engineering Economics	2	None	CE216L	Computer Graphics and Building Information Modeling (Lab)	2	CE211
SD210	Civics and Community Engagement	2	None	ITC111	Understanding of Holy Quran - I	1	None
Semester Credit Hours		18		Semester Credit Hours		18	

3rd Year

Fall Semester				Spring Semester			
Code	Course Title	Cr. Hrs.	Prerequisite	Code	Course Title	Cr. Hrs.	Prerequisite
CE310	Computational Methods in Engineering	3	MA130, MA210	CE362	Plain and Reinforced Concrete	3	CE203
CE310L	Computational Methods in Engineering (Lab)	1	MA130, MA210	CE362L	Plain and Reinforced Concrete (Lab)	1	CE203
CE306	Structural Analysis-II	3	CE204	CE354	Engineering Hydrology	3	CE251
CE353	Environmental Engineering	3	CE251	CE354L	Engineering Hydrology (Lab)	1	CE251

CE353L	Environmental Engineering (Lab)	1	CE251	CE305	Advanced Mechanics of Solids	2	CE203
CE352	Advanced Fluid Mechanics	2	CE251	CE305L	Advanced Mechanics of Solids (Lab)	1	CE203
CE352L	Advanced Fluid Mechanics (Lab)	1	CE251	CE374	Highway and Traffic Engineering	3	None
CE343	Geotechnical Engineering-II	3	CE242	EN325	Technical Report Writing	3	None
CE343L	Geotechnical Engineering-II (Lab)	1	CE242	ITC122	Understanding of Holy Quran - II	1	None
Semester Credit Hours		18			Semester Credit Hours	18	
4th Year							
Fall Semester				Spring Semester			
Code	Course Title	Cr. Hrs.	Prerequisite	Code	Course Title	Cr. Hrs.	Prerequisite
CE466	Structural Steel Design	3	CE203	CE474	Pavement Engineering	3	CE343
CE445	Foundation Engineering	3	CE343	CE474L	Pavement Engineering (Lab)	1	CE343
CE455	Irrigation and Hydraulic Engineering	3	CE251	CE410	Occupational Health and Safety	2	None
CE455L	Irrigation and Hydraulic Engineering (Lab)	1	CE251	MS405	Entrepreneurship for Engineers	2	None
CE463	Reinforced Concrete Design	3	CE362	MS414	Construction Engineering Management	2	CE211
CE498	Project (Phase-I)	3	CE251, CE204, CE242	MS414L	Construction Engineering Management (Lab)	1	CE211

		MS415	Engineering Ethics	2	None
		CE499	Project (Phase-II)	3	CE498
Semester Credit Hours	16		Semester Credit Hours	16	

Total Credit Hours = 140 (For Muslim Students)

Total Credit Hours = 138 (For Non-Muslim Students)

List of Electives (Add list of electives for this program)

Compliance Certificate for UG 2.0

It is hereby certified that the General Education Courses have been incorporated into the roadmap of _____ in accordance with the Undergraduate 2.0 Policy, duly approved by Academic Council vide Meeting No. _____ dated _____.

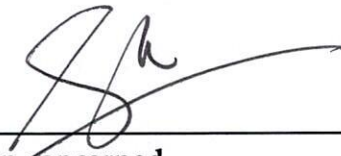
The General Education Courses are not compliant with the Undergraduate 2.0 Policy due to the requirements of the respective Accreditation Council, as detailed below:

Sr. No.	UG 2.0		Deviation		Reason
	Course Title	Cr Hrs.	Course Title	Cr Hrs.	
1	English-I	3	Functional English	3	PEC Requirement
2	English-II	3	Technical Report Writing	3	PEC Requirement
3	Pakistan: Ideology, Constitution and Society	2	Ideology and Constitution of Pakistan	2	PEC Requirement
4	Innovation and Entrepreneurship	2	Entrepreneurship for Engineers	2	PEC Requirement
5	Islamic Thought & Perspectives	2	Islamic Studies/Ethics	2	PEC Requirement

6	Understanding of Quran-I (for Muslim Students)	1	Understanding of Holy Quran-I	1	PEC Requirement
7	Understanding of Quran-II (for Muslim Students)	1	Understanding of Holy Quran-II	1	PEC Requirement
8	Everyday Science/Think AI	2	Engineering Mechanics (Theory + Lab)	(3 + 1)	PEC Requirement
9	Calculus	3	Calculus and Analytical Geometry	3	PEC Requirement
10	Quantitative Skills and Reasoning	3	Differential Equations	3	PEC Requirement
11	Computer Applications	3	Programming Fundamentals (Theory + Lab)	(2 + 1)	PEC Requirement
12	Life & Learning	2	Engineering Ethics	2	PEC Requirement
13	Economics	2	Engineering Economics	2	PEC Requirement
	Total Credit Hours =	29	Total Credit Hours =	31	



Chairperson of Department

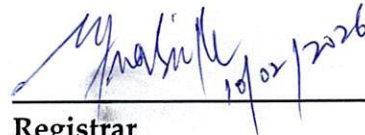


Dean-concerned



Director AAQIC

10-02-2026


10/02/2026

Registrar



UMT

DEPARTMENT OF CIVIL ENGINEERING CHAIRMAN <civil.cod@umt.edu.pk>

Fwd: Approval of exemption of PEC roadmaps, NTC roadmaps, and Robotics and Intelligent Systems roadmap from compliance with UG 2.0

SCHOOL OF ENGINEERING DEAN <sen.dean@umt.edu.pk>

Wed, Oct 2, 2024 at 5:07 PM

To: DEPARTMENT OF ELECTRICAL ENGINEERING CHAIRMAN <een.cod@umt.edu.pk>, DEPARTMENT OF CIVIL ENGINEERING CHAIRMAN <civil.cod@umt.edu.pk>, MECHANICAL ENGINEERING CHAIRMAN <mec.cod@umt.edu.pk>

Cc: SEN Coordinator <sen.cord@umt.edu.pk>

Dear Colleagues,

For your information and necessary action please.

--

Muhammad F. Kaleem, PhD
Acting Dean, School of Engineering.

----- Forwarded message -----

From: <eapproval@umt.edu.pk>

Date: Wed, 2 Oct 2024, 16:29

Subject: Approval of exemption of PEC roadmaps, NTC roadmaps, and Robotics and Intelligent Systems roadmap from compliance with UG 2.0

To: <sen.dean@umt.edu.pk>

University of Management and Technology



Request ID: 1608

Honorable Higher Authority Remarks :

Approved.

Approval of exemption of PEC roadmaps, NTC roadmaps, and Robotics and Intelligent Systems roadmap from compliance with UG 2.0

Dear Sir,

The roadmaps/curricula of all engineering programs currently being offered by SEN have been revised by PEC and communicated to all universities. At SEN, we are in the process of aligning our current roadmaps with PEC recommended roadmaps, as PEC has required the recommended roadmaps to be offered starting from Fall 2024.

Similarly, NTC has also communicated their recommended roadmaps, which is relevant for the Information Engineering Technology programs to be offered by SEN from Fall 2024.

The PEC and NTC roadmaps are compliant with the new HEC UG policy.

The roadmap of the BS Robotics and Intelligent Systems programs being offered by SEN is heavily synergized with the EE and ME roadmaps. As such, it is not possible for this roadmap to comply with UG 2.0 of UMT. **However, the roadmap of the BS Robotics and Intelligent Systems program complies with HEC UG policy.**

You are therefore requested to allow exemption of the roadmaps of SEN programs from compliance to UG 2.0.



Department Name
University of Management and Technology
C-II Johar Town Lahore
Tel.: +92 42 35212801-10
www.umat.edu.pk