

COURSES DETAILS - FALL 2026
BS Mathematics Batch 17 (2026) From 07-09-2026 to 10-01-2027
Semester – I

S.#	Courses	CHs	Instructor	Pre-Requisite
1	CH-101 Applied Chemistry	2+1	Dr. Ghulam Hussain	NIL
2	MATH-111 Calculus-I	3+0	Dr. Meraj Mustafa Hashmi	NIL
3	MATH-272 Discrete Mathematics and Applications	3+0	Dr. Mubasher Jamil	NIL
4	HU-127 Ideology and Constitution of Pakistan	2+0	Dr. Adeela Ghaznfar	NIL
5	FL-105 Foreign Language (Chinese)	2+0	Ms. Nawal Fatima	NIL
6	CS-108 Applications of Information & Communication Technologies	2+1	Dr. Muhammad Sohaib Younis	NIL
7	HU-131 Understanding of Quran-I	0+1	Dr. Muhammad Nawaz	NIL

BS Mathematics Semester – III (Batch-16, 2025)
07-09-2026 to 10-01-2027

S.#	Courses	CHs	Instructor	Pre-Requisite
1	MATH-213 Calculus-III	3+0	Dr. M. Asif Farooq	MATH-111 Calculus-I
2	MATH-264 Introduction to Statistics	3+0	Dr. Shams ul Arfeen	MATH-263 Probability Theory
3	MATH-251 Ordinary Differential Equations-I	3+0	Dr. Tooba Feroze	
4	MATH-222 Linear Algebra	3+0	Dr. Muhammad Ishaq	
5	DS-221 Introduction to Data Science and Artificial Intelligence	2+0	Shared Faculty	
6	HU-141 Introduction to Expository Writing	3+0	Dr. Muhammad Ilyas Chishti	

BS Mathematics Semester – V (Batch-15, 2024)
07-09-2026 to 10-01-2027

S.#	Courses	CHs	Instructor	Pre-Requisite
1	CS-250 Data Structures & Algorithms	3+1	TVF	CS-110 Fundamental Of Computer Programming
2	DS-301 Introduction to Data Science	2+0	Shared Faculty	
3	MATH-312 Mathematical Methods	3+0	Dr. Rizwan ul Haq	MATH-252 Ordinary Differential Equations
4	MATH-342 Real Analysis-II	3+0	Dr. Matloob Anwar	MATH-242 Real Analysis-I
5	MATH-343 Complex Analysis	3+0	Dr. Tooba Feroze	
6	MATH-345 Topology-I	3+0	Dr. Rashid Farooq	

BS Mathematics Semester – VII (Batch-14, 2023)
07-09-2026 to 10-01-2027

S.#	Courses	CHs	Instructor	Pre-Requisite
1	MATH-498 Final Year Project-I	3+0	Dr. Matloob Anwar (Coordinator)	
2	MATH-423 Rings and Fields	3+0	Dr. Hafiz M. Fahad	MATH-325 Group Theory-I
3	MATH-491 Fluid Mechanics	3+0	Dr. Meraj Mustafa Hashmi	

Elective Courses

Elective Courses (Data Science)

1	DS-406 Data Mining	3+0	Shared Faculty	
2	DS-402 Machine Learning for Data Analysis	3+1	Dr. Hayat Ali Shah	

Mathematics Stream

1	MATH-434 Numerical Linear Algebra	3+0	Dr. M. Asif Farooq	MATH-221 Linear Algebra
2	MATH-456 Discrete Dynamical Systems	3+0	Dr. Ahmed Javid	MATH-325 Group Theory-I

BS Physics Batch 13 (2026) From 07-09-2026 to 10-01-2027

Semester – I

S.#	Courses	CHs	Instructor	Pre-Requisite
1	HU-110 English-I	3+0	TVF / Shared	
2	HU-107 Pakistan Studies	2+0	Dr. Gul I Ayesha Bhatti	
3	PHY-115 Introductory Mechanics	2+1	Dr. Saadi Ishaq	
4	MATH-111 Calculus-I	3+0	Dr. Ahmad Javid	
5	CS-114 Fundamentals of Programming	2+1	Mr. Zeeshan Ali (TVF)	
6	HU-131 Understanding of Quran-I	0+1	Dr. Muhammad Nawaz	
7	MCG-111 Graphics & Design	2+0	TVF / Shared	

BS Physics Semester – III (Batch-12, 2025)

07-09-2026 to 10-01-2027

S.#	Courses	CHs	Instructor	Pre-Requisite
1	HU-127 Ideology and Constitution of Pakistan	2+0	Dr. Gul I Ayesha Bhatti	
2	MATH-213 Calculus-III	3+0	Dr. Shams ul Arfeen	MATH-111 Calculus-I
3	MATH-222 Linear Algebra	3+0	Dr. Fahad Azad	
4	MATH-251 Ordinary Differential Equations-I	3+0	Dr. Tajammal Hussain	
5	MATH-264 Introduction to Statistics	3+0	Dr. Firdos Khan	MATH-263 Probability Theory
6	PHY-206 Modern Physics	3+0	Dr. Shahid Iqbal	

BS Physics Semester – V (Batch-11, 2024)

07-09-2026 to 10-01-2027

S.#	Courses	CHs	Instructor	Pre-Requisite
1	PHY-204 Electrodynamics-I	3+0	Mr. Bilal Islam (TVF)	PHY-107 Electricity & Magnetism
2	PHY-302 Quantum Mechanics-I	3+0	Dr. Shahid Iqbal	PHY-313 MMP-II
3	PHY-362 Thermodynamics	3+0	Dr. Fahad Azad	
4	PHY-381 Computational Physics	2+1	Mr. Huzaifa Bilal (TVF)	
5	PHY-391 Laboratory-I	0+2	TVF	

Elective Courses

S.#	Courses	CHs	Instructor
Nanotechnology / Experimental Physics			
1	PHY-481 Introduction to Nanomaterials	3+0	Dr. Faheem Amin
OR			
Mainstream Physics			
1	PHY-468 Astrobiology	3+0	Dr. Noraiz Tahir
OR			
	DS-301 Introduction to Data Science	2+0	With Maths Dept.
OR			
Mathematics Stream			
1	MATH-345 Topology-I	3+0	Dr. Rashid Farooq

BS Physics Semester – VII (Batch-10, 2023)

07-09-2026 to 10-01-2027

S.#	Courses	CHs	Instructor	Pre-Requisite
1	PHY-472 Atomic and Molecular Physics	3+0	Dr. M. Ali Paracha	
2	PHY-423 Solid State Physics II	3+0	Dr. Kubra Sattar (TVF)	PHY-413 Solid State Physics I
3	PHY-361 Special Relativity	3+0	Dr. Noraiz Tahir	
4	PHY-498 FYP-I	3+0		

Elective Courses

S.#	Courses	CHs	Instructor
Data Science			
1	DS-406 Data Mining	3+0	TVF / Shared
Physics Main Stream			
1	PHY-441 Particle Physics-I	3+0	Dr. Faisal Munir Bhutta
OR			
Nanotechnology			
1	PHY-481 Introduction to Nanomaterials	3+0	Dr. Faheem Amin
OR			
Mathematical Physics			
1	MATH-491 Fluid Mechanics (MATH)	3+0	Dr. Meraj Mustafa Hashmi

BS Chemistry From 07-09-2026 to 10-01-2027				
Semester – I (Batch-9, 2026)				
Section A				
S.#	Courses	CHs	Instructor	Pre-Requisite
1	CH-115 Fundamentals of Chemistry	2+1	Dr. Siraj Sultan	
2	CH-116 Principles of Biochemistry	2+1	Ms. Zarish Fatima (TVF)	
3	QR-100 Quantitative Reasoning-I	3+0	Dr. Salma Sherbaz	
4	PHY-102 Applied Physics	2+1	Dr. Faisal Munir	
5	HU-108 Communication and Interpersonal Skills	3+0	Dr. M. Ilyas Chishti	
6	HU-131 Understanding of Quran-I	0+1	Dr. Muhammad Nawaz	
7	HU-107 Pakistan Studies	2+0	Dr. Adeela Ghaznfar	
Semester – I (Batch-9, 2026) 07-09-2026 to 10-01-2027				
Section B				
S.#	Courses	CHs	Instructor	Pre-Requisite
1	CH-115 Fundamentals of Chemistry	2+1	Dr. Siraj Sultan	
2	CH-116 Principles of Biochemistry	2+1	Ms. Zarish Fatima (TVF)	
3	QR-100 Quantitative Reasoning-I	3+0	TVF Shared faculty (Mathematics)	
4	PHY-102 Applied Physics	2+1	Dr. Kubra Sattar (TVF)	
5	HU-108 Communication and Interpersonal Skills	3+0	Dr. M. Ilyas Chishti	
	HU-131 Understanding of Quran-I	0+1	Dr. Muhammad Nawaz	
	HU-107 Pakistan Studies	2+0	Dr. Adeela Ghaznfar	
BS Chemistry Semester – III (Batch-8, 2025) 07-09-2026 to 10-01-2027				
Section A				
S.#	Courses	CHs	Instructor	Pre-Requisite
1	HU-101 Islamic Studies	2+0	Dr. Ayesha Jadoon	
2	HU-127 Ideology and Constitution of Pakistan	2+0	Dr. Gul I Ayesha Bhatti	
3	CS-108 Application of Information & Communication Technologies	2+1	Dr. Hamza Asif Nizami	
4	CH-221 Soil Chemistry	2+1	Dr. Maria Mukhtar	
5	CH-222 Principles of Analytical Chemistry	2+1	Dr. Waqas Ali Shah	
6	CH-223 Introduction to Nano-Chemistry	2+1	Dr. Fayaz Ali	
7	HU-222 Professional Ethics	2+0	Dr. Aqab Mehmood Malik	
BS Chemistry Semester – III (Batch-8, 2025) Section B 07-09-2026 to 10-01-2027				
Section B				
S.#	Courses	CHs	Instructor	Pre-Requisite
1	HU-101 Islamic Studies	2+0	Dr. Ayesha Jadoon	
2	HU-127 Ideology and Constitution of Pakistan	2+0	Dr. Gul I Ayesha Bhatti	
3	CS-108 Application of Information & Communication Technologies	2+1	Ms. Tabassum Gul (TVF)	
4	CH-221 Soil Chemistry	2+1	Dr. Maria Mukhtar (TVF)	
5	CH-222 Principles of Analytical Chemistry	2+1	Dr. Waqas Ali Shah	
6	CH-223 Introduction to Nano-Chemistry	2+1	Dr. Fayaz Ali	
7	HU-222 Professional Ethics	2+0	Dr. Aqab Mehmood Malik	

BS Chemistry
Semester – V (Batch-7, 2024) Section A
07-09-2026 to 10-01-2027

S.#	Courses	CHs	Instructor	Pre-Requisite
1	CH-351 Inorganic Chemistry-II	3+1	Dr. Muhammad Arslan	
2	CH-311 Analytical Chemistry-II	3+1	Dr. Shoaib Ahmad Shah	
3	CH-370 Organic Chemistry-I	3+1	Dr. Mudassir Iqbal	
4	MTD-452 Introduction to Forensics	3+0	Ms. Tayyaba Hussain (TVF)	

BS Chemistry
Semester – V (Batch-7, 2024) Section B
07-09-2026 to 10-01-2027

S.#	Courses	CHs	Instructor	Pre-Requisite
1	CH-351 Inorganic Chemistry II	3+1	Dr. Muhammad Arslan	
2	CH-311 Analytical Chemistry-II	3+1	Dr. Shoaib Ahmad Shah	
3	CH-370 Organic Chemistry-I	3+1	TVF	
4	MTD-452 Introduction to Forensics	3+0	Ms. Tayyaba Hussain (TVF)	

BS Chemistry
Semester – VII (Batch-6, 2023) Section A
07-09-2026 to 10-01-2027

S.#	Courses	CHs	Instructor	Pre-Requisite
1	CH-498 Final Year Project-I	0+3		
	IDC-III ME-464 Renewable Energy Technologies (TWO SECTIONS) A & B	3+0	Dr. Niloufar Dorosti (Foreign Faculty)	

Elective Courses

Organic Chemistry Stream

S.#	Courses	CHs	Instructor	Pre-Requisite
1	Elective-I: CH-470 Heterocyclic and Organometallic Compounds	3+0	Dr. Shahid Ali Khan	
2	Elective-II: CH-472 Organic Spectroscopy-I	3+0	Dr. Muhammad Arfan	
3	Elective-III: CH-421 Organic Synthesis-I	3+0	Dr. Mudassir Iqbal	

Inorganic/Analytical Chemistry Stream

S.#	Courses	CHs	Instructor	Pre-Requisite
1	Elective-I: CH-455 Coordination Chemistry	3+0	Dr. Waqas Ali Shah	
2	Elective-II: CH-453 Inorganic Polymers	3+0	Dr. Muhammad Adil Mansoor	
3	Elective-III: CH-454 Group Theory in Chemistry	3+0	Dr. Manzar Sohail	

Physical Chemistry Stream

S.#	Courses	CHs	Instructor	Pre-Requisite
1	Elective-I: CH-427-Electrochemistry	3+0	Dr. Ghulam Hussain	
2	Elective-II: CH-485 Colloid and Surface Chemistry	3+0	Dr. Kashif Majeed	
3	Elective-III: CH-484 Advanced Chemical Kinetics	3+0	Dr. Musammir Khan	