

Courses for Spring 2025
UG Mathematics Batch 15 (2024)
Semester – II (27-01-2025 to 01-06-2025)

S.#	Courses	CHs	Instructor	Pre-Requisite
1	MATH-112 Calculus-II	3-0	Dr. Rizwan Ul Haq	None
2	QR-101 Quantitative Reasoning-II	3+0	TVF (Bakhtawar Shaukat)	None
3	HU-142 Cross-Cultural Communication and Translation Skills	3-0	Dr. Muhammad Ilyas Chishti	None
4	HU-208 International Relations	3-0	TVF / Shared	None
5	FL-100 Foreign Language (Chinese-I)	3-0	Ms. Tiantian Jiao (TVF)	None
6	CH-101 Applied Chemistry	2-1	Dr. Azhar Mahmood	None

BS Mathematics Semester – IV (Batch-14, 2023) (27-01-2025 to 01-06-2025)

S.#	Courses	CHs	Instructor	Pre-Requisite
	MATH-242 Real Analysis-I	3-0	Prof. Matloob Anwar	MATH-111 Calculus-I
	MATH-264 Introduction to Statistics	3-0	Prof. Tahir Mahmood	MATH-263 Probability Theory
	CCE-401 Civic and Community Engagement	1-1	TVF/Shared Faculty	
	MGT-271 Entrepreneurship	2-0	TVF/Shared Faculty (NBS)	
	MATH-252 Ordinary Differential Equations	3-0	Dr. Ahmad Javid	
	MATH-274 Elementary Number Theory	3-0	TVF(Dr. Bakhtawar Shaukat)	

BS Mathematics Semester – VI (Batch-13, 2022) (27-01-2025 to 01-06-2025)

S.#	Courses	CHs	Instructor	Pre-Requisite
1	MATH-325 Group Theory-I	3-0	Dr. Hafiz Muhammad Fahad	None
2	MATH-332 Numerical Analysis-I	3-0	Dr. Ahmad Javid	None
3	MATH-353 Partial Differential Equations	3-0	Prof. Meraj Mustafa Hashmi	MATH-251 Ordinary Differential Equations
4	MATH-354 Calculus of Variations	3-0	Prof. Tooba Feroze	None
5	MATH-382 Differential Geometry	3-0	Prof. Mubasher Jamil	None
6	MGT-271 Entrepreneurship	2-0	TVF / Shared Fac	None

BS Mathematics Semester – VIII (Batch-12, 2021) (27-01-2025 to 01-06-2025)

S.#	Courses	CHs	Instructor	Pre-Requisite
1	MATH-446 Functional Analysis	3-0	TVF / Shared Fac (Mr. Aafaq)	None
2	MATH-455 Integral Equations	3-0	Dr. Muhammad Asif Farooq	None
3	MATH-457 Mathematical Modelling	3-0	TVF / Shared Fac (Dr. Adnan Aslam)	MATH-251 Ordinary Differential Equations-I

Elective Courses

Elective Courses (Data Science)

1	DS-403 Data Mining for Big Data	2-1	Prof. Tahir Mahmood	None
2	DS-404 Information Visualization	2-1	Dr. Firdos Khan	None

Elective Courses / FYP in Mathematics
(Elective Course Mathematics Stream)

	MATH-499 Final Year Project-II	3-0	Prof. Matloob Anwar (Coordinator)	
	MATH-421 Group Theory-II	3-0	Prof. Muhammad Ishaq	

BS Phy Batch 11 (2024) Semester – II (27-01-2025 to 01-06-2025)				
S.#	Courses	CHs	Instructor	Pre-Requisite
1	BIO-110 Introductory Biology	2+1	TVF / Shared	
2	CCE-401 Civic and Community Engagement	1+1	TVF / Shared	TVF
3	PHY-107 Electricity and Magnetism	3+1	Dr. M. Ali Paracha	
4	CS-114 Fundamentals of Programming	2+1	TVF / Shared	
5	MATH-121 Linear Algebra & ODEs	3+0	Dr. Saadi Ishaq	
6	PSY-101 Introduction to Psychology	3+0	TVF / Shared	TVF
BS Physics Semester – IV (Batch-10, 2023) (27-01-2025 to 01-06-2025)				
S.#	Courses	CHs	Instructor	Pre-Requisite
1	PHY-203 Classical Mechanics I	3+0	Dr. Saadi Ishaq	PHY-106 Mechanics
2	PHY-201 Modern Physics	3+0	Dr. Attia Batool	
3	HU-141 Introduction to Expository Writing	3+0	Shared Faculty/TVF	
4	PHY-312 Mathematical Methods for Physicists II	3+0	Dr. Noraiz Tahir	PHY-212 Mathematical Methods for Physicists I
5	MGT-271 Entrepreneurship	2+0	Shared / (TVF)	
6	MATH-264 Introduction to Statistics	3+0	Shared Faculty/TVF (Dr. Firdos Khan)	
BS Physics Semester – VI (Batch-9, 2022) (27-01-2025 to 01-06-2025)				
S.#	Courses	CHs	Instructor	Pre-Requisite
1	PHY-303 Statistical Mechanics I	3+0	Dr. Fahad Azad	
2	PHY-301 Electrodynamics II	3+0	Dr. Faheem Amin	PHY-204
3	PHY-392 Lab-II	0+2	Dr. Rabia Tahir (TVF)	
4	PHY-381 Computational Physics	2+1	Dr. Aamir Shafique	CS-110
	PHY-304 Quantum Mechanics-II	3+0	Dr Faisal Munir	PHY-302 Quantum Mechanics I
Elective Courses				
S.#	Courses	CHs	Instructor	Pre-Requisite
Main Physics Stream				
1	PHY-433 Quantum Information	3+0	Dr. Shahid Iqbal	
Mathematical Physics Minor				
1	MATH-382 Differential Geometry	3+0	Dr. Mubasher Jamil	
Data Science Stream				
1	DS-403 Data Mining for Big Data	2-1		
Experimental Physics & NanoTecnology				
1	MSE-343 Composite Materials	3+0	Dr. Rizwan Hussain	
BS Physics Semester – VIII (Batch-8 2021) (27-01-2025 to 01-06-2025)				
S.#	Courses	CHs	Instructor	Pre-Requisite
1	PHY-499 Project-II	0+3		
2	ECO-101 Principles of Microeconomics	3+0	Shared Faculty / TVF	
3	MCG-223 Graphics & Design	3+0	Shared Faculty / TVF	
Elective Courses				
Main Physics Stream				
1	PHY-462 General Relativity	3+0	Dr. M. Ali Paracha	
2	PHY-451 Introduction to Plasma Physics	3+0	Dr. Tajammal Hussain	
Mathematical Physics Minor				
1	MATH-382 Differential Geometry	3+0		
2	MATH-457 Mathematical Modeling	3+0		
Experimental Physics & NanoTecnology				
1	MSE-343 Composite Materials	3+0	Dr. Rizwan Hussain	
2	CHE-360 Fundamentals of Polymers Engineering	3+0	Dr. Rabia Tahir (TVF)	

BS Chemistry Semester – II (Batch-7, 2024) (27-01-2025 to 01-06-2025)				
(Section A)				
S.#	Courses	CHs	Instructor	Pre-Requisite
1	CCE-401 Civic and Community Engagement	1+1		
2	CH-111 Fundamentals of Analytical Chemistry	3+1	Dr. Shoaib Ahmad Shah	
3	PHY-102 Applied Physics	2+1	Dr. Attia Batool	
4	MCG-223 Graphics & Design	3+0	Ms Nida Naeem	
5	HU-141 Introduction to Expository Writing	3+0	Dr. M. Ilyas Chishti	
6	HU-208 International Relations	3+0	Dr. Ammara Shabir	
BS Chemistry Semester – II (Batch-7, 2024) (27-01-2025 to 01-06-2025)				
(Section B)				
S.#	Courses	CHs	Instructor	Pre-Requisite
1	CCE-401 Civic and Community Engagement	1+1		
2	CH-111 Fundamentals of Analytical Chemistry	3+1	Dr. Shoaib Ahmad Shah	
3	PHY-102 Applied Physics	2+1	Dr. Attia Batool	
4	MCG-223 Graphics & Design	3+0	Ms Nida Naeem	
5	HU-141 Introduction to Expository Writing	3+0	Dr. M. Ilyas Chishti	
6	HU-208 International Relations	3+0	Dr. Ammara Shabir	
BS Chemistry Semester – IV (Batch-6, 2023) (27-01-2025 to 01-06-2025)				
Section - "A"				
S.#	Courses	CHs	Instructor	Pre-Requisite
1	QR-101-Quantitative Reasoning-II	3+0	TVF / shared from other school	
2	MGT 271 Entrepreneurship	2+0	TVF / shared from other school	
3	CH-210 Analytical Chemistry I	3+1	Dr. Aiman Sadaf	
4	CH-380 Physical Chemistry-I	3+1	New faculty	
5	CH-340 Industrial Chemistry	3+0	Dr. Ansar Yaseen	
BS Chemistry Semester – IV (Batch-6, 2023) (27-01-2025 to 01-06-2025)				
Section - "B"				
S.#	Courses	CHs	Instructor	Pre-Requisite
1	QR-101-Quantitative Reasoning-II	3+0	TVF / shared from other school	
2	MGT 271 Entrepreneurship	2+0	TVF / shared from other school	
3	CH-210 Analytical Chemistry I	3+1	Dr. Aiman Sadaf	
4	CH-380 Physical Chemistry-I	3+1	New faculty	
5	CH-340 Industrial Chemistry	3+0	TVF / shared from other school	
BS Chemistry Semester – VI (Batch-5, 2022) (27-01-2025 to 01-06-2025)				
S.#	Courses	CHs	Instructor	Pre-Requisite
1	CH-382 Physical Chemistry-II	3+1	Dr. Rotaba Ansar (TVF)	
2	CH-351 Inorganic Chemistry-II	3+1	Dr. Fatima Naseem (TVF)	
3	CH-371 Organic Chemistry-II	3+1	Dr. M. Arfan	
4	CH-340 Industrial Chemistry	3+0	Ms. Shanza Khan	
5	CH-360 Nanochemistry-I	2+0	Dr. Habib Nasir	
BS Chemistry Semester – VIII (Batch-4, 2021) (27-01-2025 to 01-06-2025)				
S.#	Courses	CHs	Instructor	Pre-Requisite
1	Research Thesis / Project / Advanced Lab	0+3	Respective Advisor	
2	MGT-271 Entrepreneurship	2+0	TVF / shared from other school	
Organic Stream (Elective)				
1	Elective-V CH-476 Organic Synthesis II	3+0	Dr. Aiman Sadaf	
Inorganic				
4	Elective-V CH-451 Chemical Crystallography	3+0	Dr. Fatima Naseem	
5	Elective-VI CH-410 Analytical Techniques-I	3+0	Dr. Muhammad Adil Mansoor	
6	*Elective-VII CH-412 Electrochemical Techniques	3+0	Dr. Ghulam Hussain	
Physical				
	Elective-V CH-480 Solid State Chemistry	3+0	Dr. Khadija Munawar	
	Elective-VI CH-483 Polymer Chemistry	3+0	Dr. Ghulam Hussain	
	*Elective-VII CH-485 Colloid and Surface Chemistry	3+0	Dr. Kashif Majeed	

* Theses can be opted as Elective -VIII for other chemistry specializations.