

BS 04 Years & Associate Degree in Mathematics

Course Title	Course Code	Course Type	Credit Hour
Semester 1			
Functional English	GENG-101	General	<u>3</u>
Single Variable Calculus	MATH-101	Major	<u>3</u>
Fehm-e-Quran	HQ-001N	Compulsory	<u>0</u>
Quantitative Reasoning (I)	GQR-101	General	<u>3</u>
Ideology and Constitution of Pakistan	GICP-101	General	<u>2</u>
Fundamentals of Philosophy (AH)	AHPH-100	General	<u>2</u>
Introduction to Economics (SS)	SS-101	General	<u>2</u>
			Total Credit Hours 15
Semester 2			
Civics and Community Engagement	GCCE-101	General	<u>2</u>
Islamic Studies / Ethics (for Non-Muslims)	GISL-101 / GETH-101	General	<u>2</u>
Entrepreneurship	GENT-101	General	<u>2</u>
Introduction to Graph Theory	MATH-103	Major	<u>3</u>
Plane Curves & Analytic Geometry	MATH-102	Major	<u>3</u>
Fehm-e-Quran	HQ-002N	Compulsory	<u>1</u>
Discrete Mathematics	MATH-104	Major	<u>3</u>
			Total Credit Hours 16
Semester 3			
Expository Writing	GENG-201	General	<u>3</u>
Number Theory	MATH-203	Major	<u>3</u>
Ordinary Differential Equations	MATH-202	Major	<u>3</u>
Multivariable Calculus	MATH-201	Major	<u>3</u>
Tarjuma-e-Quran	HQ-003	Compulsory	<u>0</u>
Pakistan Studies.	GPST-201	General	<u>2</u>
Introduction to Physics(NS)	NPHY-120	General	<u>3</u>
			Total Credit Hours 17
Semester 4			
Applications of Information and Communication Technologies	GICT-201	General	<u>3</u>
Quantitative Reasoning (II)	GQR-201	General	<u>3</u>
Group Theory	MATH-206	Major	<u>3</u>
Fundamentals of Mechanics	MATH-205	Major	<u>3</u>
Real Analysis	MATH-204	Major	<u>3</u>
Tarjuma-e-Quran	HQ-004	Compulsory	<u>1</u>
			Total Credit Hours 16
Semester 5			
Topology	MATH-306	Major	<u>3</u>
Computational Tools	MATH-305	Major	<u>3</u>
Partial Differential Equations	MATH-304	Major	<u>3</u>
Linear Algebra	MATH-303	Major	<u>3</u>
Classical Mechanics	MATH-302	Major	<u>3</u>
Tarjuma-e-Quran	HQ-005	Compulsory	<u>0</u>
Complex Analysis	MATH-301	Major	<u>3</u>
			Total Credit Hours 18
Semester 6			
Mathematical Computing with Python	MATH-311	Major	<u>3</u>
Methods of Mathematical Physics	MATH-310	Major	<u>3</u>
Rings and Modules	MATH-309	Major	<u>3</u>
Tensor Analysis	MATH-308	Major	<u>3</u>
Advanced Analysis	MATH-307	Major	<u>3</u>
Tarjuma-e-Quran	HQ-006	Compulsory	<u>1</u>
			Total Credit Hours 16
Semester 7			
Fieldwork / Internship	INTE-401	Major	<u>3</u>
Numerical Analysis	MATH-403	Major	<u>3</u>
Differential Geometry	MATH-402	Major	<u>3</u>
Interdisciplinary	XXX-XXX	Interdisciplinary	<u>3</u>
Interdisciplinary	XXX-XXX	Interdisciplinary	<u>3</u>
Tarjuma-e-Quran	HQ-007	Compulsory	<u>0</u>
Functional Analysis	MATH-401	Major	<u>3</u>
			Total Credit Hours 18
Semester 8			
Capstone Project	CAPP-401	Major	<u>3</u>
Numerical Methods with Computer Programming	MATH-406	Major	<u>3</u>
Analytical Dynamics	MATH-405	Major	<u>3</u>
Interdisciplinary	XXX-XXX	Interdisciplinary	<u>3</u>
Interdisciplinary	XXX-XXX	Interdisciplinary	<u>3</u>
Tarjuma-e-Quran	HQ-008	Compulsory	<u>1</u>
Operations Research	MATH-404	Major	<u>3</u>
			Total Credit Hours 19

