

## Structure of the B.Sc. (Hons.) in Mathematics Programme

Semester	Discipline Specific Courses - Core	Minor	Inter-disciplinary courses	Ability Enhancement courses (language)	Skill Enhancement courses /Internship/Dissertation	Common Value- Added Courses	Total Credits
I	(100 level)  Real Analysis-I  Calculus	(100 Level)  Linear Programming Problem	Course from the Other Department	(1 course)  Communicative English	Computer Algebra Systems and Related Software's (CAS)	(1 or 2 courses)  To be offered commonly across UG Programmes	20
II	(100 level)  Abstract Algebra-I  Linear Algebra	(100 Level)  Discrete Mathematics	(1 course)  Course from the Other Department	(1 course)  Environmental Studies	(1 course)  Latex and HTML	(1 or 2 courses)  Hindi Language and Literature Urdu Language and Literature	20
<p><b><i>Students exiting the programme after securing 40 credits will be awarded UG Certificate in the relevant Discipline /Subject provided they secure 4 credits in work based vocational courses offered during summer term or internship / Apprenticeship in addition to 6 credits from skill-based courses earned during first and second semester.</i></b></p>							40
III	(200 level)	(200 & above)	(1 course)	(1 course)	(1 course)	Innovation and Entrepreneurship	20

	Ordinary Differential Equations	Multivariable Calculus	Introduction to Language Culture and Society		IT and ApplicationsI/Introduction to Data Science-I/ Operating System: Linux/ Programming in python		
	Mathematical Statistics						
IV	(200 level)	(200 & above)	-	(1 course)	-		20
	Partial Differential Equations	Abstract Algebra-II					
	Numerical Analysis						
<b><i>Students exiting the programme after securing 80 credits will be awarded UG Diploma in the relevant Discipline /Subject provided they secure additional 4 credit in skill based vocational courses offered during first year or second year summer term.</i></b>							80
V	(300 Level)	(200 & above)	-	-	(Internship)	-	20
	Complex Analysis	Graph Theory					
	Operational Research						
VI	(300 Level)	(200 & above)	-	-	-	-	20

	Mathematical Methods Mechanics	Metric Spaces					
<b><i>Students who want to undertake 3-year UG programme will be awarded UG Degree in the relevant Discipline /Subject upon securing 120 credits</i></b>							120
VII	(400 Level) Mathematical Finance 1. Dissertation (Minor)	(300 & above) Differential Geometry	-		-	-	20
VIII	(400 Level) Advanced Mathematical methods or Field Theory  Or Fluid Dynamics  or  Calculus of Variations	(300 & above) Mathematical Modelling  Or  Optimization Techniques  Or  Cryptography and Network Security	-		(Research Project/ Dissertation)		20
<b><i>Students will be awarded UG Degree (Honours) with Research in the relevant Discipline /Subject provided they secure 160 credits</i></b>							160