B.Sc. Honours in Mathematics

After successful completion of Three Year Degree Programme in Mathematics a student should be able to;	
Programme Outcome	• Have the versatility to work effectively in a broad range of analytic, scientific, government, financial, health, technical and other positions.
	• Have a broad background in Mathematics an appreciation of how its various sub-disciplines are related, the ability to use techniques from different areas, and an in depth knowledge about topics chosen from those offered through the department.
	• By mathematically, numerically literate. In particular, graduates will recognize the importance and value of mathematical thinking, training, and approach to problem solving, on a diverse variety of disciplines.
	• Be familiar with a variety of examples where mathematics helps accurately explain abstract or physical phenomena.
	• Be able to independently read the mathematical literature of various types, including survey articles, scholarly books, and online sources.
	• Recognize and appreciate the connections between theory and applications.
	• Be life-long learners who are able to independently expand their mathematical expertise when needed, or for interest's sake.

B.Sc. Honours in Mathematics

Course code	Course Name	Course Outcome
MTMHCC01	Calculus, Geometry & Differential Equation	This course deals with the applications of derivatives, integration and analytical geometry. It also helps to improve the skill of sketching curves.
MTMHCC02	Algebra	This course deals with the basic knowledge of complex numbers, inequalities, theory of equation and set theory. It also helps to improve the knowledge of matrices and linear transformation.
MTMHCC03	Real Analysis	Understanding the properties of real numbers, sequence of real numbers and infinite series are the main goals of this course.
MTMHCC04	Differential Equations & Vector Calculus	Students can solve differential equations of second order and systems of linear differential equations with the help of this course. In addition, it provides the basic knowledge of vector algebra and power series solution of a differential equation.
MTMHCC05	Theory of Real Functions& Introduction to Metric Space	Developing the concept of metric space, continuity of a function, differentiability of a function and the application of mean value theorem are the main goals of this course.
MTMHCC06	Group Theory 1	This course helps to develop the basic concept on group theory.
MTMHCC07	Numerical Methods	Students can solve the transcendental and polynomial equations, system of linear algebraic equations, ordinary differential equations with the help of numerical methods. In addition, this course helps to generate the ideas of numerical differentiation and integration.
MTMHCC08	Riemann Integration and Series of Functions	Generating the concept of Riemann Integration, Sequence of Functions, Fourier series and Power series are the ultimate aims of this course.
MTMHCC09	Multivariate Calculus	This course targets to encompass the portions of solving double and triple integral and developing the concept of Multivariate Calculus.
MTMHCC10	Ring Theory and Linear Algebra I	This course deals with the Ring, Field, Vector Spaces and Linear Transformation.
MTMHCC11	Partial Differential Equations & Applications	With the help of this course, students can solve Partial Differential Equations of first and second order specially heat equation, wave equation and Laplace equation with different.
MTMHCC12	Group Theory II	This course deals with the advanced knowledge of group theory.
MTMHCC13	Metric Spaces and Complex Analysis	This course enlightens the advanced knowledge of Metric Space and Complex Numbers.
MTMHCC14	Ring Theory and Linear Algebra II	This course covers with the advanced knowledge of ring theory, dual space, linear operator and Inner product space.
MTMHGE01	Calculus, Geometry & Differential Equation	This course discusses the application of derivatives and integration and analytical geometry. It also helps to improve the skill of sketching curves.
MTMHGE02	Algebra	This course deals with the basic knowledge of complex numbers, inequalities, theory of equation and set theory. It also helps to improve the knowledge of matrices and linear transformation.

B.Sc. Honours in Mathematics

MTMHGE03	Differential Equation & Vector Calculus	Students can solve differential equations of second order and systems of linear differential equations with the help of this course. In addition, it provides the basic knowledge of vector algebra and power series solution of a differential equation.
MTMHGE04	Numerical Methods	By studying the course, students can learn to solve the transcendental and polynomial equations, system of linear algebraic equations, ordinary differential equations with the help of numerical methods. In addition, this course helps to generate the ideas of numerical differentiation and integration.
MTMHSE01	Logic & Sets	This course provides the basic concept of logic and sets.
MTMHSE02	Graph Theory	This course helps to generate the idea of Graph Theory.
MTMHDS01	Linear Programming	Students can solve Linear Programming Problem specially transportation problem and assignment problem by different methods with the help of this course.
MTMHDS02	Probability & Statistics	Developing the deeper concept on probability and statistic are the ultimate aim of this course.
MTMHDS03	Number Theory	Developing the deeper concept on numbers specially prime number is the aim of this course.
MTMHDS04	Mathematics Modeling	This course provides the basic ideas of mathematical modelling.