Module code	SM-2303		
Module Title	History of Mathematics		
Degree/Diploma	Bachelor of Science (Mathematics)		
Type of Module	Major Option		
Modular Credits	4	**Total student Workload**	10 hours/week
		Contact hours	4 hours/week
Prerequisite	None		
Anti-requisite	None		

Aims

This module is designed to give students majoring in mathematics an appreciation of the historical background behind the subject, of the most important developments in the subject over the last 4000 years, and of the contributions to the subject made by various old-world cultures in different eras.

Learning Outcomes

On successful completion of this module, a student will be expected to be able to:

Lower order :	30%	- describe the arithmetic techniques developed in ancient Babylon and Egypt - describe the Greek contributions to geometry and number theory - describe the development of algebra in medieval Islam - describe the contributions of pre-modern China and India to mathematical theory - summarise the advances made in all branches of mathematics from the 16th to the 19th centuries
Middle order :	60%	- formulate and solve the same types of problems that early mathematicians themselves faced and solved (e.g. taking square roots, proving the irrationality of surds, enumerating the Platonic solids, constructing figures with straight edge and compass, solving algebraic equations, factorising cubic polynomials, manipulating logarithms, summing infinite series) - describe and use the axiomatic deductive method in geometry
Higher order:	10%	- extend the techniques used by early mathematicians to new classes of mathematical problems - work independently

Module Contents

- Mathematics in ancient Babylon and Egypt
- The emergence of the deductive method in ancient Greece
- Greek geometry and number theory
- Mathematical discoveries in ancient China and India
- Medieval Islamic algebra and number theory
- Mathematics in navigation and astronomy in the early modern period
- 17th-century number theory: Descartes, Fermat and Pascal
- Algebra, analysis and number theory in the 18th and 19th centuries

Assessment	Formative assessment	Tutorial and feedback.
	Summative assessment	Examination: 60%
		Coursework: 40% - 2 tests (40%)