(For students admitted in 2010-11 under the 3-year degree)

Curriculum for BSc in Mathematics (Mathematics and IT Education)

Two sequences of courses are offered for this program: Sequence A (the COMP 1002 and COMP 1003 series) for students who may not have much computer background, and Sequence B (the COMP 1004 series) for ambitious and capable students who have good programming experience to pursue. Students who desire to go for Sequence B must obtain approval from the MATH Undergraduate Coordinator.

General Requirements

Students are required to complete the following general requirements for graduation in addition to program specific requirements:

Required Courses in English Communication
Common Core Requirements
Required Course in Physical Education

For details please refer to the section "General Requirements" on this website.

Program Specific Requirements

			Credit(s)
Required courses			
(1)	MATH 1702	Information Technology Practical Training	0
	MATH 2021	Multivariable and Vector Calculus	4
	MATH 2031	Introduction to Real Analysis	4
	MATH 2121	Linear Algebra	4
	MATH 2352	Differential Equations	4
	MATH 2411	Applied Statistics	4
	MATH 2421	Probability	4
	MATH 3033	Real Analysis	4
	MATH 3121	Algebra I	3
	MATH 4023	Complex Analysis	3
	SCED 3130	Foundations and Processes of Learning	3
	SCED 3140	Managing Diversity in the Classroom	3
	SCED 4110	Philosophical and Sociological Perspectives in Education	3
	SCED 4140	Curriculum and Assessment	3
	SCED 4150	Teacher Leadership and Professionalism in Changing Content	3
	SCED 4570	Learning Theories and Curriculum in Mathematics	3
	SCED 4580	Learning and Teaching of Selected Topics in Mathematics	3
	SCED 4590	Problem-Solving and Assessment in Mathematics	3
	SCED 4600	Curriculum and Teaching Methods of Information Technology	3
	SCED 4610	Learning and Teaching of Selected Topics in IT	3

SCED 4620	Supporting Information Technology in Schools	3
SCED 4630	Field Experience for Teaching Mathematics and IT (I)	2
SCED 4640	Field Experience for Teaching Mathematics and IT (II)	6
COMP 2012	Object-Oriented Programming and Data Structures	4
For Sequence A		
COMP 1002	Computer and Programming Fundamentals I	3
COMP 1003	Computer and Programming Fundamentals II	2
For Sequence B		
COMP 1004**	Programming Fundamentals and Methodology	4

Elective courses

	Elective types		Minimum no. of courses	Minimum total credits
(2,5)	MATH	Mathematics Elective	4	12
(3)	COMP	Computer Science Elective	2	6
(4,5)	FREE	Free Elective	2	6

***Remarks on course(s):*
- COMP 1004: The course was last offered in 2012-13 and was deleted subsequently.

Notes:

(1) This course will be offered once every two years. Students will take this course either during first year Winter or second year Winter, depending on the year when the course will be offered.

(2) MATH electives must be chosen from the following courses: MATH 2343, MATH 2721, MATH 2731 and MATH courses at 3000-level or above taken in 2011-12 and after, or at 300-level or above taken prior to 2011-12. Students in the COMP 1002 and COMP 1003 series are recommended to take MATH 2343 in the first term of their first year of study and those in the COMP 1004 (prior to 2013-14) series in the fall term of their fourth year study.

(3) COMP electives must be of 3000-level or above (for courses taken in 2011-12 and after), or of 200-level or above (for courses taken prior to 2011-12).

(4) ISOM 2500 cannot be used to satisfy any FREE elective requirement.

(5) Unless otherwise approved by the Department, mathematics courses coded from 1000 to 1600 taken in 2011-12 and after, or 000-level mathematics courses taken prior to 2011-12 cannot be used to fulfill any MATH or FREE elective requirements.

For graduation, students are required to complete both the general requirements and requirements specified for the program, and to earn a minimum of 90 credits.