*(For students admitted in 2012-13 under the 3-year degree)*

# Curriculum for BSc in Mathematics - Mathematical Sciences Option in Computer Science

### *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

| | | | | |
|---|---|---|---|---|
| | | MATH 2021 | Multivariable and Vector Calculus | 4 |
| | | MATH 2031 | Introduction to Real Analysis | 4 |
| | | MATH 2121 | Linear Algebra | 4 |
| | | MATH 3033 | Real Analysis | 4 |
| (1) | | MATH 4023 | Complex Analysis | 3 |
| | | COMP 1004** | Programming Fundamentals and Methodology | 4 |
| | | COMP 2012 | Object-Oriented Programming and Data Structures | 4 |
| | or | COMP 2012H | OOP and Data Structures (Honors Study Track)** | 4** |
| | | COMP 2611 | Computer Organization | 4 |

Elective courses

| | Elective types | | Minimum no. of courses | Minimum total credits |
|---|---|---|---|---|
| (2,5) | MATH | Mathematics Elective | 5 | 15 |
| (3) | COMP | Computer Science Elective | 5 | 15 |
| (4,5) | FREE | Free Elective | 3 | 9 |

***Remarks on course(s):*

- COMP 1004: The course was last offered in 2012-13 and was deleted subsequently.
- COMP 2012H: The course title will be changed to "Honors Object-Oriented Programming and Data Structures" starting from Fall, 2014-15.
- COMP 2012H: The credit value will be changed to 5 starting from Fall, 2014-15.

Notes:

(1) The course can be replaced by MATH 4051 or MATH 4223 provided that enrolment quota of these courses is available.

(2) MATH electives must include MATH 2343, MATH 3121, MATH 3312 and at least one MATH course of 4000-level or above.

(3) Students must select one of the following groups of study:
Group 1: COMP 3211, COMP 3711/COMP 3711H, at least one COMP course of 4000-level or above
Group 2: COMP 3311, COMP 3711/COMP 3711H, at least one COMP course of 4000-level or above
Group 3: COMP 3031, COMP 3511, COMP 3711/COMP 3711H, at least one COMP course of 4000-level or above
Subject to departmental approval, these courses may be replaced by other COMP electives.

(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 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.