

**B.Sc. Mathematics (Honours) 3 Years Course Structure**

|                                       | Semester 1                                | Semester 2                      | Semester 3                     | Semester 4              | Semester 5  | Semester 6  |
|---------------------------------------|---|---------------------------------|--------------------------------|-------------------------|---|---|
| <b>Core courses (4 credit points)</b> | Elementary Calculus                       | Ordinary Differential Equations | Complex Analysis               | Topology and Geometry   | Multivariate Statistics   | Project by students based on their choice of subject in semester 5 (22 Credits) |
|                                       | Linear Algebra                            | Real Analysis                   | Graph theory                   | Functional Analysis     | Fourier Analysis  |   |
|                                       | Elementary Number Theory                  | Discrete Mathematics            | Topology of Metric Spaces      | Vector Analysis         | Multivariate Analysis   |   |
|                                       | Algorithms & Problem Solving Techniques   | Theory of Optimization          | Partial Differential Equations | Measure Theory          | Courses of choice. Students will choose a field of learning and they will be trained in how Mathematics is used in the field with 8 credit points |   |
|                                       | Numerical Methods                         | Elementary Probability          | Abstract Algebra               | Stochastic Processes    |   |   |
| <b>Short courses (1 credit point)</b> | Research Writing and Communication Skills | History of Indian Mathematics   | History of Mathematics         | Logic of Mathematics    |   |   |
|                                       | Personal and people management            | Environmental Sciences          | Literature                     | Presentation Techniques |   |   |
| <b>Total credits</b>                  | <b>22</b>                                 | <b>22</b>                       | <b>22</b>                      | <b>22</b>               | <b>20</b>   | <b>22</b>   |