

**RANI CHANNAMMA**  **UNIVERSITY, BELAGAVI**

**Department of Mathematics**

**Syllabus**

**for**

**Master of Science in Mathematics**

**III & IV Semester**

**(with effect from 2014 – 15)**

**Mathematics**  
**Choice based credit system (CBCS)**  
**Course structure**

S. No.	Paper & Title	Credit	No of Hrs/week Theory/Prctical	Duration of exam in Hrs Theory/Prctical	IA Marks Theory/Prctical	Marks at the Exams	Total Marks
<b>III Semester</b>							
3.1	Measure Theory and Integration	4	4	3 Hrs	20	80	100
3.2	Discrete Mathematical Structures	4	4	3 Hrs	20	80	100
3.3	Differentiable Geometry	4	4	3 Hrs	20	80	100
3.4	Numerical Analysis	4	4	3 Hrs	20	80	100
3.5	Algebraic Topology	4	4	3 Hrs	20	80	100
3.6	Open Elective Course – II a. Statistics & Quantitative Techniques b. Optimization Techniques	4	4	3 Hrs	20	80	100
<b>IV Semester</b>							
4.1	Functional Analysis	4	4	3 Hrs	20	80	100
4.2	Probability Theory	4	4	3 Hrs	20	80	100
4.3	Differential Manifolds	4	4	3 Hrs	20	80	100
4.4	Optional / Specialization I. Fluid Mechanics II. Number Theory and Cryptology III. Commutative Algebra IV. Mathematical Physics V. Galois Theory VI. Computational Complexity Theory	4	4	3 Hrs	20	80	100

4.5	Optional / Specialization I. Mathematical Finance II. Operations Research III. Graph Theory IV. Fourier Analysis V. Banach Algebra VI. Mathematical Modeling	4	4	3 Hrs	20	80	100
4.6	Project	4	The candidate shall submit a dissertation carrying 80 marks and appear for viva-voce carrying 20 marks				100
	Total	96					2400