



SNU
SISTER NIVEDITA
UNIVERSITY

2020

SYLLABUS

School of Natural Sciences

M.Sc. in Applied
Mathematics
under UGC – CBCS



SISTER NIVEDITA UNIVERSITY
DEPARTMENT OF MATHEMATICS

M.Sc. Applied Mathematics Course Structure

Category definition with credit breakup

Semester	Credit					
	CC	DSE	GE	SEC	USC	Total/Sem
First	20	4	4	1	2	31
Second	18	4	0	1	2	27
Third	20			1	2	23
Fourth	12			1	2	15
Total Credit/	74	8	4	4	8	96
Total						98

CC: Core Courses; GE: General Elective; SEC: Skill Enhancement Courses;

DSE: Discipline Specific Elective; USC: University specified course

First Year

Category	Course name	Credit	Teaching Scheme		
			L	T	P
Semester – I					
CC – 1	Abstract algebra and Theory of Partial Differential Equation	4	3	1	0
CC – 2	Real Analysis	4	3	1	0
CC – 3	Mathematical Methods I	4	3	1	0
CC – 4	Introduction to Continuum Mechanics	4	3	1	0
CC – 5	Discrete Mathematics, Graph theory and Non Linear Dynamics	4	3	1	0
DSE – 1	Introduction to Classical Mechanics	4	3	1	0
GE – 1	GE	4	4	0	0
USC – 1	Foreign language – I	2	2	0	0
SEC – 1	Mentored Seminar – I	1	1	0	0
Total Credit = 31			Teaching Hour = 31		
Semester – II					
CC – 6	Numerical Analysis	6	3	1	4
CC – 7	Mathematical Methods II	4	3	1	0
CC – 8	Basic knowledge of Python Programming	6	3	1	4
CC – 9	Elective - I	4	3	1	0
DSE – 2	Condensed Matter Physics	4	3	1	0
USC – 2	Foreign language – II	2	2	0	0
SEC – 2	Mentored Seminar – II	1	1	0	0
Total Credit = 27			Teaching Hour = 31		

Second Year

Category	Course name	Credit	Teaching Scheme		
			L	T	P
Semester – III					
CC – 10	Topology, Functional Analysis and Operator Theory	4	3	1	0
CC – 11	Data mining and warehousing	4	3	1	0
CC – 12	Optimization and Operations Research	4	3	1	0
CC – 13	Elective -II	4	3	1	0
CC – 14	Financial Mathematics and Biomathematics	4	3	1	0
USC – 3	Foreign language – III	2	2	0	0
SEC – 3	Mentored Seminar – III	1	1	0	0
Total Credit = 23			Teaching Hour = 23		
Semester – IV					
CC – 15	Master Project / Dissertation	12	0	0	24
USC – 4	Foreign language – IV	2	2	0	0
SEC – 4	Mentored Seminar – IV	1	1	0	0
Total Credit = 15			Teaching Hour = 27		