

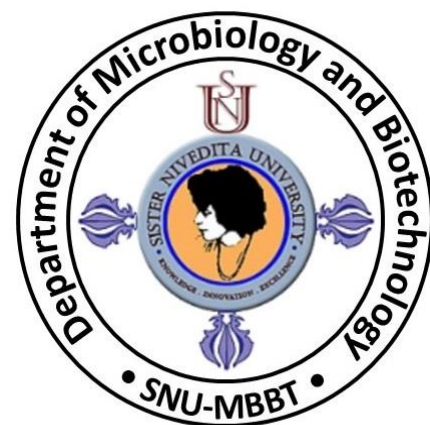


2020

SYLLABUS

School of Natural Sciences

**M.Sc. in
Microbiology
under UGC – CBCS**



M.Sc. Microbiology Course Structure

Category definition with credit breakup

Semester	Credit					
	CC	DSE	GE	SEC	USC	Total/Sem
First	20	4	4	1	2	31
Second	20	4		1	2	27
Third	24			1	2	27
Fourth	12			1	2	15
Total Credit/ Course	76	8	4	4	8	
Total Credit						100

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	Cell Biology and Cell Signaling	4	3	1	0
CC – 2	Genetic Engineering	4	3	1	0
CC – 3	Molecular Biology	4	3	1	0
CC – 4	Bacteriology and Virology	4	3	1	0
CC – 5	M.Sc. Microbiology Practical – I	4	0	0	8
DSE – 1	Chemistry of Biomolecules	4	3	1	0
GE - 1	Generic Elective	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 = 35		
Semester – II					
CC – 6	Enzymes and Metabolism	4	3	1	0
CC – 7	Cellular Immune System	4	3	1	0
CC – 8	Microbial Diversity and Metabolism	4	3	1	0
CC – 9	Genetics of Bacteria and Virus	4	3	1	0
CC – 10	M.Sc. Microbiology Practical – II	4	0	0	8
DSE – 2	Biophysics	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 – 11	Fermentation and Bioprocess Technology	4	3	1	0
CC – 12	Bioinformatics and Biostatistics	4	3	1	0
CC – 13	Eukaryotic Microbiology	4	3	1	0
CC – 14	Medical Microbiology and Cancer Biology	4	3	1	0
CC – 15	Environmental Microbiology and Ecology	4	3	1	0
CC – 16	M.Sc. Microbiology Practical – III	4	0	0	8
USC – 3	Foreign language – III	2	2	0	0
SEC – 3	Mentored Seminar – III	1	1	0	0
Total Credit = 27			Teaching Hour = 31		
Semester – IV					
CC – 17	Microbiology Master Project / Dissertation	12	0	0	24
USC – 4	Foreign language – IV	2	2	0	0
SEC – 4	Microbiology Master Seminar	1	1	0	0
Total Credit = 27			Teaching Hour = 27		