

**DEPARTMENT OF BOTANY AND  
MICROBIOLOGY**

**REVISED  
SYLLABUS**

**M.Sc.  
(MICROBIOLOGY)**

Effective from academic session 2015-  
2016



**H.N.B. Garhwal  
University  
(A Central University)  
Srinagar-Garhwal,  
Uttarakhand**

**SCHOOL OF LIFE SCIENCES  
PAPER CODES  
PROGRAMME- M.Sc. MICROBIOLOGY**

**M.Sc. I Semester**

Code	Paper	Credits				MM
		L	T	P	C	
SLS/MIC/C001	General Microbiology	4	0	0	4	100
SLS/MIC/C002	Fundamentals of Biochemistry	4	0	0	4	100
SLS/MIC/C003	Cell Biology	4	0	0	4	100
SLS/MIC/C004	Molecular Biology and Microbial Genetics	4	0	0	4	100
SLS/MIC/C005	Laboratory Course-I	0	0	3	3	100
SLS/MIC/C006	Laboratory Course-II	0	0	3	3	100
<b>Total</b>						<b>600</b>

**Core Credits= 22**

**M.Sc. II Semester**

Code	Paper	Credits				MM
		L	T	P	C	
SLS/MIC/C007	Microbial Physiology and Metabolism	4	0	0	4	100
SLS/MIC/C008	Immunology	4	0	0	4	100
SLS/MIC/C009	Biological Techniques	4	0	0	4	100
SLS/MIC/C010	Recombinant DNA Technology	4	0	0	4	100
SLS/MIC/C011	Laboratory Course-I	0	0	3	3	100
SLS/MIC/C012	Laboratory Course-II	0	0	3	3	100
<b>Total</b>						<b>600</b>

**Core Credits= 22 with additional 03 Credits of Self Study\***

**M.Sc. III Semester**

Code	Paper	Credits				MM
		L	T	P	C	
SLS/MIC/C013	Medical Microbiology	4	0	0	4	100
SLS/MIC/C014	Industrial Microbiology	4	0	0	4	100
SLS/MIC/C015	Laboratory Course-I	0	0	3	3	100
SLS/MIC/E01A	Food and Dairy Microbiology	3	0	0	3	100
SLS/MIC/E01B	Drug Designing and Nanobiotechnology	3	0	0	3	100
SLS/MIC/E01C	Genomics and Proteomics	3	0	0	3	100
SLS/MIC/E01D	Epidemiology Bioprocess	3	0	0	3	100
SLS/MIC/E01E	Technology Environmental	3	0	0	3	100
SLS/MIC/E01F	Microbiology	3	0	0	3	100
SLS/MIC/E02A	Agricultural Microbiology	3	0	0	3	100
SLS/MIC/E02B	Microbial Diversity	3	0	0	3	100
SLS/MIC/E02C	Pharmaceutical Microbiology	3	0	0	3	100
SLS/MIC/E02D	Infection and Immunity	3	0	0	3	100
SLS/MIC/E02E	Intellectual Property Rights	3	0	0	3	100
SLS/MIC/E02F	Research Methodology	3	0	0	3	100
SLS/MIC/E003	Laboratory Course-II	0	0	3	3	100
<b>Total</b>						<b>600</b>

**Total Credits = 20 (Core Credits= 11+ Elective Credits= 09) with additional 03 Credits of Self Study\***

**M.Sc. IV Semester**

Code	Paper	Credits				MM
		L	T	P	C	
SLS/MIC/E004	Dissertation	0	0	10	10	200
<b>Total</b>						<b>200</b>

**Total Credits = 10 with additional 03 Credits of Self Study\***

**Grand Total:** Core Credits 55+ Elective Credits 19= 74

\* With a total of 09 Credits (3+3+3 Credits in II, III and IV semester) of Self Study  
(2

Seminars equivalent to 2 Sessional Tests plus one End term written examination). Maximum Marks for each paper is 100 (Sessional Tests-40 + End Term Test- 60).

\*\* 01 Credit= 01 hour of lecture/instructions per week; 01 Credit course= 15 hours of lectures per semester.

\*\*\* 03 hours of laboratory course shall be considered equivalent to 01 hour of lecture.

**Attested**

  
Principal  
Dolphin (P.G.) Institute of  
Bio-Medical & Natural Sciences,  
Mansuwa, Behra Dun