

**SBS UNIVERSITY, BALAWALA, DEHRADUN**  
**SCHEME OF COURSE**  
**M. Sc. MICROBIOLOGY**

Type of course	Course code	Title of the Course	L-T-P /Week	No. of Credits	University Exam	Internal assessment	Total
<b>SEMESTER I</b>							
Core course 1	<b>BIOC-511</b>	Fundamentals of Biochemistry	3-0-0	<b>3</b>	50	50	100
Core course 2	<b>BIOT-511</b>	Cell Biology	3-0-0	<b>3</b>	50	50	100
Core course 3	<b>MICR-511</b>	General Microbiology	3-0-0	<b>3</b>	50	50	100
Core course 4	<b>BIOT-512</b>	Bioanalytical Techniques	3-0-0	<b>3</b>	50	50	100
Core course practical 1	<b>MICR-512</b>	Fundamentals of Biochemistry+ Cell Biology	0-0-9	<b>3</b>	50	50	100
Core course practical 2	<b>MICR-513</b>	General Microbiology + Bioanalytical Techniques	0-0-9	<b>3</b>	50	50	100
Open Elective I		Open Elective/ Interdisciplinary Course I	3-0-0	<b>3</b>	50	50	100
<b>Total Credits</b>				<b>21</b>			
<b>LIST OF OPEN ELECTIVES/ INTERDISCIPLINARY COURSE I (Any One)</b>							
	<b>BIOI-525</b>	Introduction to Bioinformatics	3-0-0	<b>3</b>	50	50	100
	<b>MICR-514/OE-01</b>	Virology	3-0-0	<b>3</b>	50	50	100
	<b>MICR-514/OE-02</b>	Agricultural Microbiology	3-0-0	<b>3</b>	50	50	100
<b>SEMESTER II</b>							
Core course 5	<b>MICR-521</b>	Molecular Biology & Microbial Genetics	3-0-0	<b>3</b>	50	50	100
Core course 6	<b>MICR-522</b>	Industrial Microbiology	3-0-0	<b>3</b>	50	50	100
Core course 7	<b>BIOC-521</b>	Immunology	3-0-0	<b>3</b>	50	50	100
Core course 8	<b>MICR-523</b>	Microbial Physiology and Metabolism	3-0-0	<b>3</b>	50	50	100
Core course practical 3	<b>MICR-524</b>	Molecular Biology + Industrial Microbiology	0-0-9	<b>3</b>	50	50	100
Core course practical 4	<b>MICR-525</b>	Immunology + Microbial Physiology and Metabolism	0-0-9	<b>3</b>	50	50	100
Open Elective II		Open Elective/ Interdisciplinary Course II	3-0-0	<b>3</b>	50	50	100
<b>Total Credits</b>				<b>21</b>			

<b>LIST OF OPEN ELECTIVES/ INTERDISCIPLINARY COURSE II (Any One)</b>							
	<b>MICR-526/OE-01</b>	Pharmaceutical Microbiology	3-0-0	3	50	50	100
	<b>BIOC-522</b>	Enzymes & Vitamins	3-0-0	3	50	50	100
	<b>STAT-521</b>	Biostatistics, Biomaths and Computers	3-0-0	3	50	50	100
<b>SEMESTER III</b>							
Core course 9	<b>MICR-631</b>	Food and Dairy Microbiology	3-0-0	<b>3</b>	50	50	100
Core course 10	<b>MICR-632</b>	Recombinant DNA Technology	3-0-0	<b>3</b>	50	50	100
Core Course Practical 5	<b>MICR-633</b>	Food and Dairy Microbiology+ Recombinant DNA Technology	0-0-9	<b>3</b>	50	50	100
DS Elective III		Discipline Specific Elective I	3-0-0	<b>3</b>	50	50	100
DS Elective IV		Discipline Specific Elective II	3-0-0	<b>3</b>	50	50	100
DSE Course Practical 1	<b>MICR-634/ DSE-04</b>	Discipline Specific Elective I+ Discipline Specific Elective II	0-0-9	<b>3</b>	50	50	100
			3-0-0	<b>3</b>	50	50	100
Core course 11	<b>MICR-635</b>	Dissertation I	0-0-3	<b>1</b>	50	50	100
Self-Study		<b>Self Study Paper</b>	0-0-3	<b>3</b>	50	50	100
<b>Total Credits</b>				<b>22</b>			
<b>LIST OF DISCIPLINE SPECIFIC ELECTIVES (Any two)</b>							
	<b>MICR-634/DSE-01</b>	Medical Microbiology	3-0-0	3	50	50	100
	<b>MICR-634/DSE-02</b>	Microbial Ecology And Plant Microbial Interactions	3-0-0	3	50	50	100
	<b>MICR-634/DSE-03</b>	Vaccines & Diagnostics	3-0-0	3	50	50	100
<b>LIST OF SELF STUDY PAPERS (Any one)</b>							
	<b>MICR-636/SS-01</b>	Extremophiles	3-0-0	3	50	50	100
	<b>MICR-636/SS-02</b>	Microbial Biotechnology	3-0-0	3	50	50	100
	<b>BIOT-643</b>	Intellectual Property Rights, Biosafety, and Bioethics	3-0-0	3	50	50	100
<b>SEMESTER IV</b>							
Core course 12	<b>MICR-641</b>	Environmental Microbiology	3-0-0	3	50	50	100
Core course 13	<b>MICR-642</b>	Dissertation II	0-0-27	9	100	100	200
<b>Total Credits</b>				<b>12</b>			
<b>Grand Total of Credits</b>				<b>73+3</b>			