

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

Type of course	Course code	Title of the Course	L-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	<b>3</b>	60	40	100
Core course 2	<b>BIOT-511</b>	Cell Biology	3-0	<b>3</b>	60	40	100
Core course 3	<b>MICR511</b>	Gen Microbiology	3-0	<b>3</b>	60	40	100
Core course 4	<b>BIOT-512</b>	Bioanalytical Techniques	3-0	<b>3</b>	60	40	100
Core course practical 1	<b>BIOT-513</b>	Fundamentals of Biochemistry + Cell Biology	0-9	<b>3</b>	60	40	100
Core course practical 2	<b>BIOT-514</b>	General Microbiology + Bioanalytical Techniques	0-9	<b>3</b>	60	40	100
Elective I		<b>OPEN ELECTIVE/ INTERDISCIPLINARY COURSE</b>	3-0	<b>3</b>	60	40	100
				<b>21</b>			
<b>LIST OF OPEN ELECTIVES/ INTERDISCIPLINARY COURSE I (Any One)</b>							
	<b>BIOT-515</b>	Human Physiology and Endocrinology	3-0	<b>3</b>	60	40	100
	<b>BIOT-516</b>	Animal Biotechnology	3-0	<b>3</b>	60	40	100
	<b>CHEM-517</b>	Basic Pharmacology	3-0	<b>3</b>	60	40	100
	<b>BIOT-517</b>	Food Biotechnology	3-0	<b>3</b>	60	40	100

**SEMESTER II**

Core course 5	<b>BIOT-521</b>	Molecular Biology	3-0	<b>3</b>	60	40	100
Core course 6	<b>STAT-521</b>	Biostatistics, Biomaths and Computers	3-0	<b>3</b>	60	40	100
Core course 7	<b>BIOT-524</b>	Bioprocess Engineering	3-0	<b>3</b>	60	40	100
Core course 8	<b>BIOC-521</b>	Immunology	3-0	<b>3</b>	60	40	100
Core course practical 3	<b>BIOT-522</b>	Molecular Biology + Biostatistics, Biomaths and Computers	0-9	<b>3</b>	60	40	100
Core course practical 4	<b>BIOT-523</b>	Bioprocess Engg. & Technology + Immunology	0-9	<b>3</b>	60	40	100
Elective II		OPEN ELECTIVE/ INTERDISCIPLINARY COURSE I	3-0	<b>3</b>	60	40	100
				<b>21</b>			

**LIST OF OPEN ELECTIVES/ INTERDISCIPLINARY COURSE II (Any One)**

	<b>BIOI-525</b>	Introduction to Bioinformatics	3-0	<b>3</b>	60	40	100
	<b>BIOC-522</b>	Enzymes & Vitamins	3-0	<b>3</b>	60	40	100
	<b>BIOT-524</b>	Fundamentals of Virology	3-0	<b>3</b>	60	40	100

**SEMESTER III**

Core course 9	<b>BIOT-631</b>	Environmental Biotechnology	3-0	<b>3</b>	60	40	100
Core course practical 5	<b>BIOT-632</b>	LAB- Environmental Biotechnology	0-9	<b>3</b>	60	40	100
Core course 10	<b>BIOT-633</b>	Genetic Engineering- Tools and Techniques	3-0	<b>3</b>	60	40	100
Core course practical 6	<b>BIOT-634</b>	LAB- Genetic Engineering- Tools and Techniques	0-9	<b>3</b>	60	40	100
Elective III		Discipline Specific Elective I	3-0	<b>3</b>	60	40	100
Elective IV		Discipline Specific Elective II	3-0	<b>3</b>	60	40	100
Core course 11	<b>BIOT-637</b>	Project I	0-3	<b>1</b>	60	40	100
				<b>19</b>			
<b>List of Discipline Specific Electives (Any Two)</b>							
	<b>BIOT-635</b>	Plant Biotechnology	3-0	<b>3</b>	60	40	100
	<b>BIOC-635</b>	Biology of Cancer	3-0	<b>3</b>	60	40	100
	<b>BIOT-636</b>	Pharmaceutical Biotechnology & Drug Design	3-0	<b>3</b>	60	40	100

**SEMESTER IV**

Core course 12	<b>BIOT-641</b>	Genomics And Proteomics	3-0	3	60	40	100	
Core course 13	<b>BIOT-645</b>	Project II	0-27	9	80	120	200	
		Total		12				
<b>List of Self Study Papers (Any One in semester IV)</b>								
Self Study	<b>BIOT-642</b>	Nanobiotechnology	3-0-0	3	60	40	100	
Self Study	<b>BIOT-643</b>	Intellectual Property Rights, Biosafety, and Bioethics	3-0-0	3	60	40	100	
Self Study	<b>BIOT-644</b>	Medical Biotechnology	3-0-0	3	60	40	100	
			<b>TOTAL CREDITS- 76</b>					