

SBS UNIVERSITY, BALAWALA, DEHRADUN

SCHEME OF COURSE M.SC.

M. Sc. BIOCHEMISTRY

SEMESTER I

Type of course	Course code	Title of the Course	L-T-P /Week	No. of Credits	University Exam	Internal assessment	Total
Core course 1	BIOC-511	Fundamentals of Biochemistry	3-0	3	60	40	100
Core course 2	BIOT-511	Cell Biology	3-0	3	60	40	100
Core course 3	MICR-511	Gen Microbiology	3-0	3	60	40	100
Core course 4	BIOT-512	Bioanalytical Techniques	3-0	3	60	40	100
Core course practical 1	BIOC-512	Fundamentals of Biochemistry + Cell Biology	0-9	3	60	40	100
Core course practical 2	BIOC-513	General Microbiology + Bioanalytical Techniques	0-9	3	60	40	100
Elective I		OPEN ELECTIVE/ INTERDISCIPLINARY COURSE I	3-0	3	60	40	100
				21			
LIST OF OPEN ELECTIVES/ INTERDISCIPLINARY COURSE I (Any One)							
	BIOT-516	Animal Biotechnology	3-0	3	60	40	100
	CHEM-517	Basic Pharmacology	3-0	3	60	40	100
	BIOC-514	Human Physiology and Endocrinology	3-0	3	60	40	100

SEMESTER II

Type of course	Course code	Title of the Course	L-T-P /Week	No. of Credits	University Exam	Internal assessment	Total
Core course 5	BIOT-521	Molecular Biology	3-0	3	60	40	100
Core course 6	BIOC-521	Immunology	3-0	3	60	40	100
Core course 7	BIOC-522	Enzymes & Vitamins	3-0	3	60	40	100
Core course 8	BIOC-523	Metabolism	3-0	3	60	40	100
Core course practical 3	BIOC-524	LAB- Molecular Biology + Immunology	0-9	3			
Core course practical 4	BIOC-525	LAB- Enzymes & Vitamins + Metabolism	0-9	3			
Elective II		OPEN ELECTIVE/ INTERDISCIPLINARY COURSE I	3-0	3	60	40	100
				21			
LIST OF OPEN ELECTIVES/ INTERDISCIPLINARY COURSE II (Any One)							
	BIOT-524	Nanobiotechnology	3-0	3	60	40	100
	STAT-521	Biostatistics, Biomaths and Research methodology	3-0	3	60	40	100
	BIOI-516	Introduction to Bioinformatics	3-0	3	60	40	100

SEMESTER III

Type of course	Course code	Title of the Course	L-T-P /Week	No. of Credits	University Exam	Internal assessment	Total
Core course 9	BIOC-631	Nutritional Biochemistry	3-0	3	60	40	100
Core course practical 5	BIOC-632	Lab-Nutritional Biochemistry	0-9	3	60	40	100
Core course 10	BIOT-633	Genetic Engineering- Tools and Techniques	3-0	3			
Core course practical 6	BIOC-633	Lab-Genetic Engineering- Tools and Techniques	0-9	3	60	40	100
Elective III		Discipline Specific Elective I	3-0	3	60	40	100
Elective IV		Discipline Specific Elective II	3-0	3	60	40	100
Core course 11	BIOC 634	Project I	0-3	1	60	40	100
				19			
List of Discipline Specific Electives-(DSE)- Any Two							
	BIOC-635	Plant Biochemistry	3-0	3	60	40	100
	BIOC-636	Biology of Cancer	3-0	3	60	40	100
	BIOC-637	Principles of Cell Signalling	3-0	3	60	40	100
	BIOC-638	Biochemical and Environmental Toxicology	3-0	3	60	40	100

SEMESTER IV

Type of course	Course code	Title of the Course	L-T-P /Week	No. of Credits	University Exam	Internal assessment	Total
Core course 12	BIOC-641	Clinical Biochemistry	3-0	3	60	40	100
Core course 13	BIOC-642	Project II	0-27	9	80	120	200
				12			
List of Self Study Papers (Any One in semester III OR IV)							
Self Study	BIOT-643	Intellectual Property Rights, Biosafety, and Bioethics	3-0	3	60	40	100
Self Study	BIOC-643	Principles of Neurobiology	3-0	3	60	40	100
Self Study	BIOC-644	Regulation of Gene Expression	3-0	3	60	40	100