

NATIONAL INSTITUTE OF TECHNOLOGY SIKKIM

RAVANGLA CAMPUS

BIOTECHNOLOGY CURRICULUM 2017 – 2021

3RD TO 8TH SEMESTER CORE COURSES

Semester III						
No.	Code	Course	L	T	P	C
1	MA13101	Mathematics - III	3	1	0	4
2	BT13101	Advance Chemistry for Biotechnology	3	0	0	3
3	BT13102	Microbiology	3	0	0	3
4	BT13103	Biochemistry	4	0	0	3
5	BT13104	Thermodynamics in Biology	3	0	0	3
6	BT13105	Fluid Mechanics	3	0	0	3
7	BT13201	Microbiology Laboratory	0	0	3	2
8	BT13202	Biochemistry Laboratory	0	0	3	2
Total credit			19	1	6	23

Semester IV						
No.	Code	Course	L	T	P	C
1	MA14101	Mathematics - IV	3	1	0	4
2	BT14101	Process Calculation	3	0	0	3
3	BT14102	Bioprocess Principles	3	0	0	3
4	BT14103	Cell Biology	3	0	0	3
5	BT14104	Molecular Biology	3	0	0	3
6	BT14105	Biostatistics	2	0	0	2
7	BT14106	Principles of Heat Transfer	3	0	0	3
8	BT14201	Bioprocess Laboratory	0	0	3	2
9	BT14202	Molecular Biology Laboratory	0	0	3	2
Total credit			20	1	6	25

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Semester V						
No.	Code	Course	L	T	P	C
1	BT15101	Immunotechnology	3	0	0	3
2	BT15102	Bioreactor Design and Analysis	3	0	0	3
3	BT15103	Downstream Processing	3	0	0	3
4	BT15104	Instrumental Method and Analysis for Biotechnology	3	0	0	3
5	BT15105	Genetic Engineering	3	0	0	3
6	BT15201	Immunotechnology Laboratory	0	0	3	2
7	BT15202	Downstream Processing Laboratory	0	0	3	2
Total credit			15	0	6	19

Semester VI						
No.	Code	Course	L	T	P	C
1	HS16101	Professional Communication	2	0	0	2
2	BT16101	Bioinformatics	3	0	0	3
3	BT16102	Systems Biology	3	0	0	3
4	BT16103	Enzyme Kinetics & Technology	3	0	0	3
5	BT16104	Environmental Biotechnology	3	0	0	3
6	BT1630U	Elective - I	3	0	0	3
7	BT16201	Enzyme Technology Laboratory	0	0	3	2
8	BT16202	Bioinformatics Laboratory	0	0	3	2
Total credit			17	0	6	21

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Semester VII						
No.	Code	Course	L	T	P	C
1	HS17011	Principles of Management & Entrepreneurship	2	0	0	2
2	BT17101	Ethics and Regulatory Issue in Biotechnology	2	0	0	2
3	BT17102	Structural Biology	3	0	0	3
4	BT1730V	Elective II	3	0	0	3
5	BT1730W	Elective III	3	0	0	3
6	BT17401	Project Phase - I	0	0	6	3
Total credit			13	0	6	16

Semester VIII						
No.	Code	Course	L	T	P	C
1	HS18101	Engineering Economics	2	0	0	2
2	BT1830X	Elective - IV	3	0	0	3
3	BT1830Y	Elective - V	3	0	0	3
4	BT1830Z	Elective - VI	3	0	0	3
5	BT18401	Project Phase - II	0	0	10	5
6	BT18402	Seminar	0	0	2	1
Total credit			11	0	12	17