

Syllabus

The department has already completed Curricula Development Workshop under the guidance of renowned academicians from IITs and NITs. Detailed syllabus to be uploaded soon. A summary of courses are given below:

Semester I							
Sl. No	Course Code	Course Title	Contact hours	L	T	P	Credits
1	PH1001	Physics	3	3	0	0	3
2	MA1001	Mathematics I	4	3	1	0	3
3	MS1001	English Language & Composition	3	1	0	2	2
4	ZZ1004	Computer Programming	2	2	0	0	2
5	ZZ1091	Workshop Practice I	4	0	0	4	2
6	ZZ1091	Physics Lab	4	0	0	4	2
7	ZZ1001	Engineering Mechanics	3	3	0	0	3
8		NSS, Physical Education (Audit Course)	-	-	-	-	2
		Value Education		1	0	0	1
TOTAL			24	13	1	10	17+3

Semester II							
Sl. No	Course Code	Course Title	Contact hours	L	T	P	Credits
1	CY1001	Chemistry	3	3	0	0	3
2		Mathematics II	4	3	1	0	3
3	EVS1001	Environmental Studies, Disaster Management, Climate change	4	4	0	0	4
4	ZZ1092	Workshop Practice II	4	0	0	4	2
5	ZZ1003	Basic Electrical Science	3	3	0	0	3
6	ZZ1002	Engineering graphics	5	1	0	4	3
7	BT1001	Introduction to Departmental Subjects	2	2	0	0	2
8	ZZ1094	Chemistry Lab	4	0	0	4	2
TOTAL			29	14	1	12	22

Semester III						
No	Code	Course	L	T	P	C
1	MA2001	Mathematics – III	3	1	0	3
2	CY 2001	Chemistry for Biotechnology	3	0	0	3
3	BT2005	Fluid Mechanics	3	0	0	3
4	BT2002	Microbiology	3	0	0	3
5	BT2003	Biochemistry	4	0	0	3
6	BT2004	Thermodynamics in Biology	3	0	0	3
7	BT2091	Microbiology Laboratory	0	0	3	2
8	BT2092	Biochemistry Laboratory	0	0	3	2
Total			19	1	6	22

Semester IV						
No	Code	Course	L	T	P	C
1	MA2001	Mathematics – IV	3	1	0	3
2	BT2006	Bioprocess Principles	3	0	0	3
3	BT200x	Cell Biology	3	0	0	3
4	BT2007	Molecular Biology	3	0	0	3
5	BT2008	Biostatistics	3	0	0	3
6	ME 3002	Principles Heat & Mass Transfer	3	0	0	3
7	BT 2005	Process Calculations	2	0	0	2
8	BT2093	Bioprocess Laboratory	0	0	3	2
9	BT2094	Molecular Biology Laboratory	0	0	3	2
Total			20	1	6	24

Semester V						
No	Code	Course	L	T	P	C
1	BT3001	Immunotechnology	3	0	0	3
2	BT3002	Bioreactor Design and Analysis	3	0	0	3
3	BT3003	Downstream Processing	3	0	0	3
4	BT3004	Instrumental Methods of Analysis	3	0	0	3
5	BT3008	Genetic Engineering	3	0	0	3
6	-	Elective – I	3	0	0	3
7	BT3091	Plant and Animal cell technology laboratory	0	0	3	2
8	BT3092	Enzyme Technology and Downstream Processing Laboratory	0	0	3	2
Total			18	0	6	22

Semester VI						
No	Code	Course	L	T	P	C
1	BT3007	Bioinformatics	3	0	0	3
2	BT3008	Genetic Engineering	3	0	0	3
3	BT3009	Enzyme Kinetics & Technology	3	0	0	3
4	BT3025	Environmental Biotechnology	3	0	0	3
5	BT3026	Systems Biology	3	0	0	3
6	BT3010	IPR & Professional Ethics	2	0	0	2
7	BT3012	Elective – II	3	0	0	3
8	BT3093	Enzyme Kinetics Laboratory	0	0	3	2
9	BT3094	Bioinformatics Laboratory	0	0	3	2

10	BT3015	Mini Project / Industrial Training	0	0	3	1
Total			20	0	9	25

Semester VII						
No	Code	Course	L	T	P	C
1	ME4104	Principles of Management & Entrepreneurship	2	0	0	2
2	BT4001	Ethics & Regulatory Issues in Biotech	2	0	0	2
3	BT4002	Structural Biology	3	0	0	3
4	BT4003	Elective – III	3	0	0	3
5	BT4004	Elective – IV	3	0	0	3
6	BT4005	Elective – V	3	0	0	3
9	BT4016	Mini Project / Industrial Training	0	0	3	1
Total			16	0	3	17

Semester VIII						
No	Code	Course	L	T	P	C
1	MS4003	Economics	3	0	0	3
2	BT4006	Elective – VI	3	0	0	3
3	BT4007	Elective – VII	3	0	0	3
4	BT4008	Elective – VIII	3	0	0	3
5	BT4098	Seminar	0	0	2	1
9	BT4017	Project	0	0	10	4
Total			12	0	12	17
Grand Total Credit = 169 in 8 semesters						

List of Electives

No	Code	Course	Credits
1	BT3006	Plant Biotechnology	3
2	BT3022	Biopharmaceutical Technology	3
3	BT3023	Food Biotechnology	3
4	BT3024	Bioreaction Engineering	3
5	BT4022	Good Manufacturing Practices	3
6	BT4023	Protein Engineering	3
7	BT4024	Molecular Modeling & Drug Design	3
8	BT4025	Biocatalysis & Metabolic Engineering	3
9	BT4026	Animal Biotechnology	3
10	BT4027	Cancer Biology	3
11	BT4028	Nanobiotechnology	3
12	BT4031	Stem Cell Biotechnology	3
13	BT4038	Biosensors	3
14	BT4040	Biomaterials & Biopolymer Engineering	3
15	BT4042	Proteomics & Genomics	3