



University of Engineering & Management, Kolkata

B.Tech – Biotechnology (4-years degree programme)



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Syllabus for Admission Batch 2023-2027

SEMESTER III

S. No.	Course Code	Course Title	L	T	P	C
1	BSBT301	Biochemistry	2	0	0	2
2	BSBT302	Microbiology	2	0	0	2
3	BSBT 303	Genetics	2	0	0	2
4	BSBT306	Biophysics	2	0	0	2
5	BSBT304	Cell & Molecular Biology	2	0	0	2
6	BSBT305	Plant Biology	2	0	0	2
7	HSMC301	Effective Technical Communication	3	0	0	3
8	BSBT391	Biochemistry Lab	0	0	2	1
9	BSBT392	Microbiology Lab	0	0	2	1
7	BSBT393	Genetics Lab	0	0	2	1
10	BSBT394	Cell & Molecular Biology Lab	0	0	2	1
11	BSBT395	Plant Biology Lab	0	0	2	1
12	PSBT381	Technical Seminar	0	0	6	3
13	ESP301	Essential Studies for Professionals – III	2	0	0	0.5
14	SDP381	Skill Development for Professionals - III	0	0	2	0.5
		TOTAL	17	0	18	24

SEMESTER IV

S. No.	Course Code	Course Title	L	T	P	C
1	HSMC401	Engineering Economics	2	0	0	2
2	PCCBT401	Bioprocess Engineering	2	1	0	3
3	PCCBT402	Green Biotechnology and Pollution Abatement	2	0	0	2
4	PCCBT403	Immunology & Immuno- technology	2	0	0	2
5	PCCBT404	Structural Biology	2	1	0	3
6	PCCBT405	rDNATechnology	2	1	0	3
7	AUBT401	Environmental Science	1	0	0	0
8	PCCBT406	Bioinformatics &Computational Biology	2	1	0	3
9	PCCBT491	Bioprocess Engineering Lab	0	0	2	1
10	PCCBT 493	Immunology & Immuno- technology Lab	0	0	4	2
11	PCCBT495	rDNATechnology Lab	0	0	4	2
12	PCCBT 496	Bioinformatics &Computational Biology Lab	0	0	4	2
13	PSBT481	Comprehensive viva voice	0	0	2	1
14	ESP401	Essential Studies for Professionals – IV	2	0	0	0.5
15	SDP481	Skill Development for Professionals – IV	0	0	2	0.5
		Total	16+2	4	14	27

SEMESTER V

S. No.	Course Code	Course Title	L	T	P	C
1	HSMC501	Entrepreneurship and Startups	1	1	0	2
2	PCCBT501	Analytical Techniques	2	0	0	2
3	PCCBT502	Metabolic Engineering	2	0	0	2
4	PCCBT503	Cheminformatics & Medicinal Chemistry	2	0	0	2
5	PECBT501	Biosimilars Technology	2	0	0	2
6	OSCBT501	Biomaterials	2	0	0	2
7	OSCBT581	Data Structure and Algorithm	0	0	2	1
8	AUBT501	Indian Constitution	1	0	0	0
9	PCCBT591	Analytical Techniques Lab	0	0	2	1
10	PCCBT592	Metabolic Engineering Lab	0	0	2	1
11	PCCBT593	Cheminformatics & Medicinal Chemistry Lab	0	0	2	1
12	PECBT591	Biosimilars Technology Lab	0	0	2	1
13	OSCBT591	Biomaterials Lab	0	0	2	1
14	PCCBT506	Good Manufacturing and Laboratory Practice	2	1	0	3
15	PSBT581	Summer Internship- I	0	0	4	2
16	ESP(BT) 501	Essential Studies for Professionals – V	2	0	0	0.5
17	SDP581	Skill Development for Professionals – V	0	0	2	0.5
		Total	16	2	18	24

SEMESTER VI

S. No.	Course Code	Course Title	L	T	P	C
1	PCCBT601	Bioseparation Engineering	2	0	0	2
2	PCCBT602	Synthetic & Systems Biology	2	1	0	3
3	PCCBT603	Animal & Plant Biotechnology	2	1	0	3
4	PECBT601	Waste Management & Upcycling	2	0	0	2
5	OECBT601	Database Management System	2	0	0	2
6	PCCBT691	Bioseparation Engineering Lab	0	0	2	1
7	PCCBT692	Synthetic & Systems Biology Lab	0	0	2	1
8	PCCBT693	Animal & Plant Biotechnology Lab	0	0	2	1
9	PECBT691	Waste Management & Upcycling Lab	0	0	2	1
10	OECBT691	Database Management System Lab	0	0	2	1
11	ESPBT 601	Essential Studies for Professionals – VI	2	0	0	0.5
12	SDP681	Skill Development for Professionals – VI	0	0	2	0.5
TOTAL			12	0	12	18

SEMESTER VII

S. No.	Course Code	Course Title	L	T	P	C
1	HSMC702	Intellectual Property Rights (IPR) & Regulatory	2	0	0	2
2	OSCBT701	Data analysis and Simulations	2	1	0	3
3	PECBT701	State-of-the-art Imaging	2	0	0	2
4	PCCBT701	Food and Nutrition Technology	2	1	0	3
5	PECBT702	Nano Biotechnology	2	1	0	3
6	OSCBT702	Bioterrorism and National Security	2	0	0	2
7	OSCBT 791	Data analysis and Simulations Lab	0	0	2	1
8	PECBT791	State-of-the-art Imaging Lab	0	0	2	1
9	PCCBT791	Food and Nutrition Technology Lab	0	0	2	1
10	PSCBT791	Project-I	0	0	8	4
11	PSCBT781	Summer Internship- II	0	0	4	2
12	ESP (BT) 701	Essential Studies for Professionals – VII	2	0	0	0.5
13	SDP781	Skill Development for Professionals – VII	0	0	2	0.5
TOTAL			15	4	20	25

SEMESTER VIII

S. No.	Course Code	Name	L	T	P	C
1	PSCBT891	Project-II	0	0	18	9
2	PSCBT881	Grand Viva	0	0	0	5
3	ESP801	Essential Studies for Professionals – VIII	2	0	0	2
4	SDP881	Skill Development for Professionals – VIII	0	0	2	1
TOTAL			2	0	20	17

