

B. Tech. (Biotechnology): 2011 Syllabus

I Year I Semester

Sl. No.	Course No.	Course Title	Credit Hours	Department
1	BTB 101	Basic Cell Biology	1+1	DPMB & B
2	AGR 151	Production of Agricultural crops	2+1	Agronomy
3	AGM 151	Fundamentals of Microbiology	2+1	Agrl. Microbiology
4	COM 111	Fundamentals of Information Technology	1+1	PS & IT
5	MAT 111	Applied Mathematics	1+1	PS & IT
6	SAC 101	Principles of Analytical Chemistry	1+1	SS & AC
7	PBG 101	Introduction to Agricultural Botany	1+1	PB & G
8	ENG 101	English for Effective Communication	0+1	English
9	NSS / NCC 101	National Service Scheme / National Cadet Corps	0+1	NSS /NCC Units
10	PED 101	Physical Education	0+1	Physical Education
Total			9+10=19	

I Year II Semester

Sl. No.	Course No.	Course Title	Credit Hours	Department
1.	BTB 102	Chemistry of Nucleic Acids and Proteins	2+1	DPMB & B
2.	BTB103	Basic Molecular Biology	2+1	DPMB & B
3.	BTB 104	Instrumentation in Biotechnology	0+1	DPMB & B
4.	BIF 101	Introduction to Bioinformatics	1+1	DPMB & B
5.	BIC 101	Fundamentals of Biochemistry	2+1	Biochemistry
6.	PHY 151	Biophysics	1+1	Physics (PS&IT)
7.	CRP 101	Crop Physiology	2+1	Crop Physiology
8.	PBG 102	Principles of Genetics	2+1	PB & G
Total			12+8=20	

II Year III Semester

Sl. No	Course No.	Course Title	Credit Hours	Department
1.	BTB 201	Fundamentals of Organic Chemistry	1+1	DPMB & B
2.	BTB 202	Plant Cell and Tissue Culture	2+1	DPMB & B
3.	BTB 203	Enzymology	2+1	DPMB & B
4	BIF 201	Biological Databases	1+1	DPMB & B
5	AGM 251	Microbial Genetics	1+1	Agri. Microbiology
6	FPE 253	Process Engineering in Biotechnology	1+1	Engineering
7	BTH 251	Production Technology of Horticultural Crops	2+1	Horticulture
8	AEN 251	Fundamentals of Entomology and Pest Management	2+1	Entomology
9	ANM 201	Introductory Nematology	1+1	Nematology
		Total	13+9=22	

II Year IV Semester

S. No.	Course No.	Course Title	Credit Hours	Department
1.	BTB 204	Introduction to Genetic Engineering	2+1	DPMB & B
2.	BIC 251	Intermediary Metabolism	2+1	Biochemistry
3.	SST 201	Principles of Seed Technology	2+1	SS & T
4.	PAT 251	Fundamentals of Plant Pathology and Disease Management	2+1	Pathology
5.	FOR 211	Forest Resource Management	1+ 1	Forestry
6.	ARM201	Introduction to Agribusiness Management	1+1	ARM
7.	AMP 251	Animal Physiology	1+1	Animal Husbandry
8.	STA 211	Applied Statistics	1+1	PS & IT
		Total	12+8=20	

III Year V Semester

Sl. No.	Course No.	Course Title	Credit Hours	Department
1.	BTB301	Bioprospecting	2+1	DPMB & B
2.	BTB302	Biotechnology for Biotic Stress Management	2+1	DPMB & B
3.	BTB303	Molecular Markers and Genome Mapping	2+1	DPMB & B
4.	BTB304	Plant Genetic Transformation	2+1	DPMB & B
5.	BTB305	Applied Cell Biology	2+0	DPMB & B
6.	BTB 306	Immunology	2+1	DPMB & B
7	AGM 351	Fermentation Technology	1+1	Agrl. Microbiology
8	PBG 301	Principles and Methods of Plant Breeding	2 +1	PB & G
9	NST 301	Fundamentals and Applications of Nanotechnology	1 +0	Nano Technology
		Total	16+7=23	

III Year VI Semester

Sl. No	Course No.	Course Title	Credit Hours	Department
1.	BTB307	Biotechnology for Abiotic Stress Management in Crops	1+1	DPMB & B
2.	BTB308	Biopharmaceutical Technology	2+1	DPMB & B
3.	BIF 303	Genetic Diversity Analysis	1+1	DPMB & B
4.	AGM 352	Food Biotechnology	1+1	Agrl. Microbiology
5.	AMP 351	Animal Biotechnology	2+1	Animal Husbandary
6.	ENS 351	Environmental Biotechnology	2+1	Environmental Sciences
7.	ENG 301	Soft skills for Employability	0+1	English
8.	EXP 301	Experiential Learning - 1	0+5	DPMB & B
		Total	9+12=21	

IV Year VII Semester

Sl. No	Course No.	Course Title	Credit Hours	Department
1.	BTB401	Biotechnology Work Experience (BWE)	0+12	DPMB & B
2.	BTB402	Project Work	0+4	DPMB & B
3.	BTB403	Industrial and Institutional Education tour	0 +1	DPMB & B
		Total	0+17=17	

IV Year VIII Semester

Sl. No	Course No.	Course Title	Credit Hours	Department
1.	BTB404	Molecular Pharming	1+1	DPMB & B
2.	BTB405	Molecular Virology	1+1	DPMB & B
3	BTB406	Genomics and Proteomics	2+1	DPMB & B
4	BTB407	Molecular Ecology and Evolution	2+1	DPMB & B
5	BTB 408	Biosafety and Bioethics	1+0	DPMB & B
6	TIP 451	Intellectual property and its application in Biotechnology	1+0	Dept. of Trade and IP
7	TAM 401 /ENG 401	,yf;fpa';fspy; ntshz;ika[k; mwptpay; jkpH; gadhf;fKk; / Development Education – for non Tamil students	0 +1	Tamil / English
8	EXP 401	Experiential Learning – II	0+5	DPMB & B
		Total	8+10=18	

Abstract

Semester wise Distribution of Courses for B. Tech. (Biotechnology)

Semester	Number of courses	Credit Hours
I	10	9+10=19
II	8	12+8=20
III	9	12+9=21
IV	8	13+8=21
V	9	15+7=22
VI	8	10+12=22
VII	3	0+17=17
VIII	8	8+10=18
Total	63	79+81=160