

B. Tech. (Bioinformatics) : 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	Agri. 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 Unit
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	BIF 101	Introduction to Bioinformatics	1+1	DPMB & B
2	BTB 103	Basic Molecular Biology	2+1	DPMB & B
3	BTB 104	Instrumentation in Biotechnology	0+1	DPMB & B
4	PBG 102	Principles of Genetics	2+1	PB & G
5	BIC 101	Fundamentals of Biochemistry	2+1	Biochemistry
6	PHY 151	Biophysics	1+1	Physics (PS&IT)
7	COM 151	Linux Operating Systems and Computer Networks	2+1	PS&IT
8	COM 152	Advanced Programming in C	2+1	PS&IT
		Total	12+8=20	

II Year III Semester

Sl. No	Course No.	Course Title	Credit Hours	Department
1.	BIF 201	Biological Databases	1+1	DPMB & B
2.	BIF 202	Macromolecular Structures	2+0	DPMB & B
3.	BTB201	Fundamentals of Organic Chemistry	1+1	DPMB & B
4.	BTB203	Enzymology	2+1	DPMB & B
5.	AGM 251	Microbial Genetics	1+1	Agri. Microbiology
6.	PBG 251	Principles and Applications of Quantitative and Population Genetics	2+1	PB & G
7.	COM 251	Data Structures and Programming in C++	2+1	PS&IT
8.	COM 252	Database Management Systems	1+1	PS&IT
9.	COM 253	Web Designing and Internet Programming	1+1	PS&IT
		Total	13+8=21	

II Year IV Semester

Sl. No.	Course No.	Course Title	Credit Hours	Department
1.	BIF 203	Methods in Bioinformatics	2+0	DPMB & B
2.	BIF 204	Lab course on Sequence analysis	0+2	DPMB & B
3.	BTB 204	Introduction to Genetic Engineering	2+1	DPMB & B
4.	BIC 251	Intermediary metabolism	2+1	Biochemistry
5.	MAT 252	Mathematics for Bioinformatics	2+1	PS&IT
6.	COM 254	Java Programming and BioJava	2+1	PS&IT
7.	COM 255	Visual Basic and Visual Basic .Net	1+2	PS&IT
8.	ARM 201	Introduction to Agribusiness Management	1+1	ARM
9.	STA 211	Applied Statistics	1+1	PS&IT
		Total	13+10=23	

III Year V Semester

Sl. No.	Course No.	Course Title	Credit Hours	Department
1	BIF 301	Molecular Modeling and Simulation	2+1	DPMB & B
2	BTB303	Molecular markers and genome mapping	2+1	DPMB & B
3	BTB305	Applied cell Biology	2+0	DPMB & B
4	BTB 306	Immunology	2+1	DPMB & B
5	COM 351	Perl Programming	2+1	PS&IT
6	COM 352	Data Mining and Warehousing	2+1	PS&IT
7	STA 351	Statistics for Bioinformatics	2+1	PS&IT
8	NST 301	Fundamentals and Applications of nanotechnology	1+0	Nano Technology
Total			15+6=21	

III Year VI Semester

Sl. No.	Course No.	Course Title	Credit Hours	Department
1.	BIF 302	Pharmacogenomics and Toxicogenomics	2+1	DPMB & B
2.	BIF 303	Genetic Diversity Analysis	1+1	DPMB & B
3.	BTB308	Biopharmaceutical Technology	2+1	DPMB & B
4.	COM 353	Parallel Processing for Bioinformatics	2+1	PS&IT
5.	AMP 351	Animal Biotechnology	2+1	Animal Husbandry
6.	ENG 301	Soft skills for Employability	0+1	English
7.	EXP 301	Experiential Learning - 1	0+5	DPMB & B
Total			9+11=20	

IV Year VII Semester

Sl. No	Course No.	Course Title	Credit Hours	Department
1.	BIF401	BWE	0 + 12	DPMB & B
2.	BIF402	Project Work	0 + 4	DPMB & B
3.	BIF403	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.	BIF 404	Cheminformatics and Drug Discovery	2+1	DPMB & B
2.	BIF 405	Genome Sequencing, Assembly and Annotation	1+2	DPMB & B
3.	BTB406	Genomics and Proteomics	2+1	DPMB & B
4.	BTB407	Molecular Ecology and Evolution	2+1	DPMB & B
5.	TIP 451	Intellectual property and its application in Biotechnology	1+0	Trade and IPR
6.	TAM 401 / ENG 401	,yf;fpa';fspy; ntshz;ika[k; mwptpay; jkpH; gadhf;fKk; / Development Education – for non Tamil students	0 +1	Tamil / English
7.	EXP 401	Experiential Learning – II	0+5	DPMB&B
		Total	8+11=19	

ABSTRACT

Summary of semester wise distribution of courses: B. Tech. (Bioinformatics)

Semester	Number of Courses	Credits
I	10	9+10=19
II	8	12+8=20
III	9	13+8=21
IV	9	13+10=23
V	8	15+6=21
VI	7	9+11=20
VII	3	0+17=17
VIII	7	8+11=19
Total	61	79+81=160