

**M. Tech (Biotechnology) Programme w.e.f. 2018-19 Batch****FIRST SEMESTER**

Sl. No.	Course Code	Title	Contact Hours				Credits
			L	T	P	Total	
1.	17M11BT111	Biomolecules and cell communication	3	-	-	3	3
2.	17M11BT112	Molecular modeling and Drug Design	3	-	-	3	3
3.		Elective – I	3	-	-	3	3
4.		Elective – II	3	-	-	3	3
5.		Elective – III	3	-	-	3	3
6.	18M11GE111	Research Methodology and Intellectual Property Rights	2			2	2
7.	17M15BT111	Biotechniques Lab-I (One or more Units within the credit limits)	-		6	6	3
		<b>TOTAL</b>				23	20

**Departmental Elective (To be updated from time to time)**

- 17M12BT111 Biosensors
- 17M12BT112 Animal and Plant Biotechnology
- 17M12BT113 Information Technology for biologists
- 17M12BT114 Enzyme Technology
- 17M12BT115 Environmental Biotechnology
- 17M12BT116 Regulatory affairs
- 17M12BT117 Clinical Trials & Data base management
- 17M12BT118 Product development in biotechnology
- 17M12BT119 Phytotherapeutics and Pharmacology
- 17M12BT120 Innate immunology
- 17M12BT121 Advanced Molecular Biotechnology
- 17M12BT122 Advanced Microbiology and Immunology

**SECOND SEMESTER**

Sl. No.	Course Code	Title	Contact Hours				Credits
			L	T	P	Total	
1.	17M11BT113	Bioprocess and Industrial Biotechnology	3	-	-	3	3
2.	17M11BT114	Diseases and Healthcare	3	-	-	3	3
3.		Elective – IV	3	-	-	3	3
4.		Elective – V	3	-	-	3	3
5.		Audit-I	2	-	-	2	Qualifying
6.	17M17BT112	Project Based Learning - I				4	2
7.	17M15BT112	Biotechniques Lab-II (One or more Units within the credit limits)	-	-	6	6	3
		<b>TOTAL</b>					17

**Departmental Elective (To be updated from time to time)**

- 17M12BT123 Bio separation Technology
- 17M12BT124 System Biology and Neural Network

- 17M12BT125 Nanobiotechnology  
 17M12BT126 Vaccine Biotechnology  
 17M12BT127 Nutraceuticals  
 17M12BT128 Structural Biology  
 17M12BT129 Metagenomics  
 17M12BT130 Microbial Technology  
 17M12BT131 Drug Delivery  
 17M12BT133 Experimental Models in Research  
 17M12BT134 Genomics & Society

### THIRD SEMESTER

Sl. No.	Course Code	Title	Contact Hours				Credits
			L	T	P	Total	
1.		Open Electives	3			3	3
2.	17M17BT211	Seminar & Term Paper <b>OR</b> Earn credits by transfer eg. MOOCs, Course Work at another Institute, Supervised Study				4	4
3.	17M17BT212	Project Based Learning - II				8	4
4.	17M17BT213/ 17M17BT214/ 17M17BT215	Dissertation /Industrial Project / Entrepreneurial Project				8	4
5.		Audit-II	2			2	Qualifying
		<b>TOTAL</b>				25	15

### FOURTH SEMESTER

Sl. No.	Course Code	Title	Contact Hours				Credits
			L	T	P	Total	
1.	17M17BT216/ 17M17BT217/ 17M17BT218	Dissertation /Industrial Project/ Entrepreneurial Project				32	16
		<b>TOTAL</b>				32	16

**TOTAL CREDITS: 68**

#### Courses for Audit-I and II:

1. English for Research Paper Writing
2. Disaster Management
3. Sanskrit for Technical Knowledge
4. Value Education
5. Constitution of India
6. Pedagogy Studies
7. Stress Management by Yoga
8. Personality Development through life enlightenment skills

#### Subjects for Open Electives:

1. Business Analytics
2. Industrial Safety
3. Operations Research
4. Cost Management of Engineering Projects
5. Composite Materials
6. Waste to Energy