DEPARTMENT OF BIOSCIENCES AND BIOENGINEERING
INDIAN INSTITUTE OF TECHNOLOGY ROORKEE

Program Code : **XXX M.Tech. (Structural and Computational Biology)**
Department : **Department of Biosciences and Bioengineering**
Year : **I**
Model : **2**

Teaching Scheme					Contact Hours/Week			Exam Duration	
S.No.	**Subject Code**	**Course Title**	**Subject Area**	**Credits**	**L**	**T**	**P**	**Theory**	**Practical**
Semester-I (Autumn)									
1.	BEC-511	Essentials of Biosciences and Mathematics	PCC	4	3	1	0	3	0
2.	BEC-513	Computer Programming	PCC	3	2	0	2	3	0
3.	BEC-515	Structural Biology	PCC	3	3	0	0	3	0
4.	BEC-517	Bioanalytical Techniques	PCC	3	3	0	0	3	0
5.	BEC-519	SCB Laboratory-I	PCC	3	0	0	6	0	0
6.		Social Science Course	SSC	2	-	-	-	-	-
		Total		**18**					
Semester-II (Spring)									
1.		Program Elective-I	PEC	4	-	-	-	-	-
2.		Program Elective-II	PEC	4	-	-	-	-	-
3.		Program Elective-III	PEC	4	-	-	-	-	-
4.		Program Elective-IV	PEC	4	-	-	-	-	-
5.		Science, Technology, and Advanced Research-tools	STAR	3	-	-	-	-	-
6.	BEC-700	Seminar	SEM	2	-	-	-	-	-
		Total		**21**					

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Year : **II**
Model : **2**

Teaching Scheme					**Contact Hours/Week**			**Exam Duration**	
S.No.	**Subject Code**	**Course Title**	**Subject Area**	**Credits**	**L**	**T**	**P**	**Theory**	**Practical**
Semester-I (Autumn)									
1.	BEC-691	Internship Social Activity	ISA	3	-	-	-	-	-
2.	BEC-701A	Thesis Stage-I	THESIS	10	-	-	-	-	-
		Total		**13**					
Semester-II (Spring)									
1.	BEC-701B	Thesis Stage-II	THESIS	14	-	-	-	-	-
		Total		**14**					

Summary				
Semester	**1**	**2**	**3**	**4**
Semester-wise Total Credits	18	21	13	14
Total Credits	**66**			

M.Tech. (Structural and Computational Biology)

Program Elective Courses

Teaching Scheme					Contact Hours/Week			Exam Duration	
S.No.	Subject Code	Course Title	Subject Area	Credits	L	T	P	Theory	Practical
1.	BEL-511	Protein Design and Engineering	PEC	4	3	1	0	3	0
2.	BEL-512	Molecular Dynamics Simulations	PEC	4	3	1	0	3	0
3.	BEL-513	Structural and Translational Bioinformatics	PEC	4	3	1	0	3	0
4.	BEL-514	Computational Biology	PEC	4	3	1	0	3	0
5.	BEL-526	Biomolecular Interactions and Drug Design	PEC	4	3	1	0	3	0
6.	BEL-527	Advanced Biophysics	PEC	4	3	1	0	3	0
7.	BEL-515	Probabilistic Machine Learning	PEC	4	3	1	0	3	0

Science, Technology, and Advanced Research-tools Basket

Teaching Scheme					Contact Hours/Week			Exam Duration	
S.No.	Subject Code	Course Title	Subject Area	Credits	L	T	P	Theory	Practical
1.	BET-501	Bioinformatics	STAR	3	2	0	2	3	0