Proposed Semester-wise Pattern for Students Admitted to B.E. Mathematics and Computing Programme

Year	First Semester	Units	Second Semester	Units
	MATH F111 Mathematics I	3	MATH F112 Mathematics II	3
	BIO F110 Biology Laboratory	1	ME F112 Workshop Practice	2
	BIO F111 General Biology	3	CS F111 Computer Programming	4
	CHEM F110 Chemistry Laboratory	1	EEE F111 Electrical Sciences	3
	CHEM F111 General Chemistry	3	BITS F112 Technical Report Writing	2
	PHY F110 Physics Laboratory	1	MATH F113 Probability and Statistics	3
	PHY F111 Mechanics, Oscillations, and Waves	3	BITS F111 Thermodynamics	3
	BITS F110 Engineering Graphics	2		
		17		**20**
	First Semester	**U**	**Second Semester**	**U**
II	MATH F211 Mathematics III	3	MAC F241 Numerical Analysis	3
	MAC F211 Linear Algebra and Applications	3	MAC F242 Data Structures & Algorithms	4
	MAC F212 Object Oriented Programming	4	MAC F243 Numerical Optimization	3
	MAC F213 Discrete Mathematics	3	MAC F244 Stochastic Calculus and Application to Finance	3
	MAC F214 Elementary Real Analysis	3	MAC F245 Scientific Computing Laboratory	1
	Humanities Elective	3	MGTS F211 Principles of Management (or)	3
	BITS F225 Environmental Studies	3	ECON F211 Principles of Economics	
		22		**17**
Summer	BITS F221 Practice School -1			
	First Semester	**U**	**Second Semester**	**U**
III	MAC F311 Algebra I	3	MAC F341 Design and Analysis of Algorithms	3
	MAC F312 Foundations of Data Science	3	MAC F342 Computations Partial Differential Equations	4
	MAC F313 Statistical Data Analysis	4	Discipline Elective	6
	MAC F314 Mathematical Modelling	4	Humanities Elective	2
	Humanities Elective	3	Open Elective	3
	Discipline Elective	3		
		20		**18**
	First Semester	**U**	**Second Semester**	**U**
IV	Open Electives	12	BITS Practice School-II	20
			or	or
	Discipline Elective	3	BITS F421T Thesis	16
			or	or
			Thesis (9) and Electives (6 to 9)	15 to 18
		15		**15/20**

Discipline core – **48** Units (**15** Courses)
Discipline elective – **12** Units (**4** Courses)