School of Basic Sciences : BSc(Hons. with research with specialization in Computational Mathematics) Mathematics

Year 1						
Semester-I						
S. No.	**Category**	**Name of the Course**				
			L	**T**	**P**	**C**
1	Core	Fundamental of Mathematics I	3	1	0	4
2	Core	Calculus	3	0	1	4
3	AEC	English Proficiency I	0	0	2	2
4	VAC	IT Tools and Data Analytics	0	0	2	2
5	MDC-1	Foundation of Programming	2	0	2	4
6	GE	Generic Elective/Minor-1	-	-	-	4
Total Credits						**20**
Semester-II						
S. No.	**Category**	**Name of the Course**				
			L	**T**	**P**	**C**
1	Core	Fundamental of Mathematics II	3	1	0	4
2	Core	Linear Algebra I	3	0	1	4
3	Core	Multivariable Calculus	3	1	0	4
4	AEC	English Proficiency II	0	0	2	2
5	VAC	Choose Any one from Basket of VAC	2	0	0	2
6	GE	Generic Elective/Minor-2	-	-	-	4
Total Credits						**20**
Year 2						
Semester-III						
S. No.	**Category**	**Name of the Course**				
			L	**T**	**P**	**C**
1	Core	Real Analysis I	3	1	0	4
2	Core	Linear Algebra II	3	1	0	4
3	Core	Ordinary Differential Equations	3	0	1	4
4	AEC	Today's Science, Tomorrow's World I	2	0	0	2
5	Internship	Social Internship	-	-	-	2
6	SEC	Choose Any one from Basket of SEC	3	0	0	3

S. No.	Category	Name of the Course	L	T	P	C
7	GE	Generic Elective/Minor-3	-	-	-	4
Total Credits						**23**

Semester-IV

S. No.	Category	Name of the Course	L	T	P	C
1	Core	Advanced Numerical Analysis	3	0	1	4
2	Core	Partial differential Equations	3	1	0	4
3	Core	Descriptive Statistics	3	0	1	4
4	AEC	Today's Science, Tomorrow's World II	2	0	0	2
5	SEC	Choose Any one from Basket of SEC	-	-	-	3
6	MDC-2		-	-	-	2
7	GE	Generic Elective/Minor-4	-	-	-	4
Total Credits						**23**

Year 3

Semester-V

S. No.	Category	Name of the Course	L	T	P	C
1	Core	Complex Analysis	3	1	0	4
2	Core	Modern Algebra	3	0	1	4
3	Elective	Specialized Elective 1	-	-	-	4
4	GE	Generic Elective/Minor-5	-	-	-	4
5	SEC	Choose Any one from Basket of SEC	3	0	0	3
6	VAC	Choose Any one from Basket of VAC	-	-	-	2
7	Internship	Internship (Industrial/Academic/Research)	0	0		2
Total Credits						**23**

Semester-VI

S. No.	Category	Name of the Course	L	T	P	C
1	Elective	Modelling and Simulations	3	1	0	4
2	Elective	Probability Theory	3	1	0	4
3	Elective	Specialized Elective-2	-	-	-	4
4	Elective	Specialized Elective -3	-	-	-	4

S. No.	Category	Name of the Course	L	T	P	C
5	**Minor**	Generic Elective/Minor-6	-	-	-	4
6	**MDC-3**		-	-	-	3
Total Credits						**23**

Semester-VII

S. No.	Category	Name of the Course	L	T	P	C
1	**Core**	Topology				4
2	**Elective**	Specialized Elective 6				4
3	**Elective**	Specialized Elective 7				4
4	**Minor**	Generic Elective/Minor-7				4
5	**Minor**	Generic Elective/Minor-8				4
Total Credits						**20**

Semester-VIII

S. No.	Category	Name of the Course	L	T	P	C
1	**Project**	Dissertation				12
Total Credits						**12**

Electives

S. No.	Category	Name of the Course	L	T	P	C
1		Operation Research	3	1	0	4
2	**Elective 1**	Numerical Linear Algebra	-	-	-	4
3		Graph Theory	3	1	0	4
4	**Elective 2**	Numerical Optimization Techniques	3	1	0	4
5		Database Management system	3	0	1	4
6	**Elective 3**	Computational Physics	3	1	0	4
7		Machine Learning	3	1	0	4
8	**Elective 4**	Computational Number Theory and Cryptography	3	1	0	4
9		Data Mining and Warehouse	3	1	0	4

10	**Elective 5**	Algorithms in Mathematical Finance	3	1	0	4
11		Cloud Computing	3	1	0	4

|