## **Syllabus Structure of ITEP Mathematics Programme (3-yrs)**

## **Disciplinary Courses**

Mathematics	SEM-I	SEM-II	SEM-III	SEM-IV	SEM-V	SEM-VI
(Major)	Credit: [4+4]	[4 + 4]	[4 + 4+4]	[4 + 4+4]	[4 + 4 + 4+2]	[4 + 4+2]
	1. Calculus and Analytic Geometry (3-1-0:4)  2. Linear Algebra (3-1-0:4)	3. Probability and Statistics (3-1-0:4) 4. Real Analysis (3-1-0:4)	5. C-programming with LAB (3-0-2:4) 6. Discrete Mathematics (3-1-0:4) 7. Differential Equation (3-1-0:4)	8. Numerical Methods (3-1-0:4)  9. Abstract Algebra (3-1-0:4)  10. Optimization techniques (3-1-0:4)	11. Elementary Number Theory (3-1-0:4) 12. Graph theory (3-1-0:4) 13. Elective (Functions of Several Variables/ Fluid Dynamics/ Topology) (3-1-0:4) 14. Seminar (0-0-3:2)	15. Complex Analysis (3-1-0:4) 17. Rings and Fields (3-1-0:4) 18. Project (0-0- 3:2)
Mathematics (Minor)	SEM-I Credit: [4+4]	SEM-II [4]	SEM-III [4]	SEM-IV [4]	64 - credit Major Mathematics Courses 20 - credit Minor Mathematics Courses	
	1. Calculus and Analytic Geometry (3-1-0:4) 2. Linear Algebra (3-1-0:4)	3. Probability and Statistics (3-1-0:4)	4. C-programming with LAB (3-0-2:4)	5. Numerical Methods (3-1-0:4)		

<sup>\*</sup> List of Electives:

- 1. Topology
- 2. Calculus of Several Variables
- 3. Fluid Dynamics