Syllabus for 2-Years M.Sc. in Computational Mathematics

Department of Mathematics

Techno India University, West Bengal

EM-4, EM Block, Sector V, Bidhannagar, Kolkata, West Bengal 700091

M.Sc. in Computational Mathematics

Course Curriculum for All Semesters

Semester I

Sl. No.	Course Code	Course Title	Contact Hrs. / Week			Credit	Page No.
			L	T	P		
Theory							
1	MCM101_TIU	Theory of Computations	05	01	00	6	
2	MCM102_TIU	Concrete Mathematics					
3	MCM103_TIU	Introduction to AI & Machine Learning	06	01	00	7	
4	MCM104_TIU	Integral Transform	05	00	00	5	
Practical							
1	MCM101L_TIU	AI & Machine Learning: LAB	00	00	04	4	
2	MCM102L_TIU	Theory of Computations: LAB	00	00	03	3	
Total Credit						25	

Semester II

Sl. No.	Course Code	Course Title	Contact Hrs. / Week			Credit	Page No.
			L	T	P		
Theory							
1	MCM201_TIU	Elective I: • Image Processing and	06	01	00	7	

		Computer Vision • Cryptography • Natural Language Processing					
2	MCM202_TIU	Integral Equation	06	01	00	7	
3	MCM203_TIU	Project	06	00	00	6	
Practical							
1	MCM201L_TIU	Elective I: LAB	00	00	05	5	
Total Credit						25	

Semester III

Sl. No.	Course Code	Course Title	Contact Hrs. / Week			Credit	Page No.
			L	**T**	**P**		
Theory							
1	MCM301_TIU	Financial Mathematics	05	00	00	5	
2	MCM302_TIU	Continuum Mechanics	05	00	00	5	
4	MCM303_TIU	Advanced Vector Analysis	05	00	00	5	
5	MCM304_TIU	Numerical Analysis	06	00	00	6	
Practical							
3	MCM301L_TIU	Numerical Analysis: Lab	00	00	04	4	
Total Credit						25	

Semester IV

Sl. No.	Course Code	Course Title	Contact Hrs. / Week			Credit	Page No.
			L	T	P		
Theory							
1	MCM401_TIU	Functional Analysis	06	00	00	6	
2	MCM402_TIU	Stochastic Process	05	00	00	5	
3	MCM403_TIU	Advanced Algorithm	06	00	00	6	
4	MCM404_TIU	Quantum Computing and Quantum Information Processing	05	01	00	6	
5	MCM405_TIU	Project Submission and Grand Viva (Publication)	05	00	00	5	
Practical							
1	MCM401L_TIU	Advanced Algorithm: LAB	00	00	03	3	
2	MCM402L_TIU	Quantum Computing and Quantum Information Processing: LKAB	00	00	04	4	
Total Credit						35	