



TECHNO INDIA UNIVERSITY
WESTBENGAL

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 Semester

Semester I

Sl. No.	Course Code	Course Title	Contact Hrs./ Week			Credit	Page No.
			L	T	P		
Theory							
1	MCM101_TIU	Advanced Graph Theory	3	0	0	3	
2	MCM102_TIU	Advanced Algorithm	3	0	0	3	
3	MCM103_TIU	Advanced Multivariate Statistical Technique	2	0	0	2	
4	MCM104_TIU	Artificial Neural Network	3	0	0	3	
5	MCM105_TIU	Algebraic Topology	3	0	0	3	
Practical							
1	MCM101L_TIU	Advanced Algorithm: LAB	0	0	2	2	
2	MCM102L_TIU	Artificial Neural Network: LAB	0	0	2	2	
Sessional							
1	MCM101S_TIU	Entrepreneurship Skill Development (ESD)	0	2	0	2	
2	MCM102S_TIU	Career Advancement Skill Development (CASD)	2	0	0	2	
Total Credit						22	



Semester II

Sl. No.	Course Code	Course Title	Contact Hrs./ Week			Credit	Page No.
			L	T	P		
Theory							
1	MCM201_TIU	Computational Geometry	2	1	0	3	
2	MCM202_TIU	Deep Learning	2	1	0	3	
3	MCM203_TIU	Functional Analysis	3	0	0	3	
4	MCM204_TIU	Integral Transforms	3	0	0	3	
5	MCM205_TIU	Concrete Mathematics	3	0	0	3	
Practical							
1	MCM201L_TIU	Deep Learning: LAB using Python	0	0	2	2	
Sessional							
1	MCM201S_TIU	Entrepreneurship Skill Development (ESD)	0	2	0	2	
2	MCM202S_TIU	Career Advancement Skill Development (CASD)	2	0	0	2	
Total Credit						21	



Semester III

Sl. No.	Course Code	Course Title	Contact Hrs./ Week			Credit	Page No.
			L	T	P		
Theory							
1	MCM301_TIU	Bioinformatics	2	0	0	2	
2	MCM302_TIU	Optimization Techniques	2	0	0	2	
3	MCM303_TIU	Differential Geometry	2	0	0	2	
4	MCM304_TIU	Machine Learning	3	0	0	3	
5	MCM305_TIU	Project Synopsis	4	0	0	4	
Practical							
1	MCM301L_TIU	Machine Learning: LAB	0	0	2	2	
2	MCM302I_TIU	Internship	0	0	3	3	
Sessional							
1	MCM301S_TIU	Entrepreneurship Skill Development (ESD)	0	2	0	2	
2	MCM302S_TIU	Career Advancement Skill Development (CASD)	2	0	0	2	
Total Credit						22	



Semester IV

Sl. No.	Course Code	Course Title	Contact Hrs./ Week			Credit	Page No.
			L	T	P		
Theory							
1	MCM401_TIU	Cryptography	3	0	0	3	
2	MCM402_TIU	Advanced Stochastic Process	3	0	0	3	
3	MCM403_TIU	Project Submission	3	0	0	3	
4	MCM404_TIU	Project: Grand Viva	7	0	0	7	
Practical							
1	MCM401L_TIU	Cryptograph: LAB	0	0	2	2	
Sessional							
1	MCM401S_TIU	Entrepreneurship Skill Development (ESD)	0	2	0	2	
2	MCM402S_TIU	Career Advancement Skill Development (CASD)	2	0	0	2	
Total Credit						22	