

First year		
Code	Course details	
Course code	Course Name Course structure Instructor name(s)	
MAT 121	Matrices and Calculus I [3104] Prof. M. P. Rajan	
IDC 121	Mathematical Tools II [2103] Prof. Utpal Manna	

Second year			
Code	Course details	Other information	
Course code	Course Name Course structure Instructor name(s)	Mention if Minor Mention if compulsory for other major students	
MAT 203	Introduction to Real Analysis [3003] Dr. P. Devaraj	minor	
MAT 204	Introduction to Groups and Rings [3003] Dr. Mitra Koley	can be minor	
MAT 205	Linear Algebra and Complex Analysis [3003] Dr. Sarbeswar Pal/Dr. Ramiz Reza	can be minor	
MAT 315	Mathematical Statistics [3003] Dr. Shyamal Ghosh (DSc)	Core for i2DSc	
MAT 316	Mathematical Statistics Lab [0021] Dr. Shyamal Ghosh (DSc)	Core for i2DSc	
MAT 2011*	Optimisation Techniques and Linear Programming (2 credits) [2002] Dr. Shrihari Sridharan	Elective for BSMS Math and i2M math, Core for i2DSc.	
MAT 2012*	Number Theory (2 credits) [2002] Dr. Jyothsnaa Sivaraman	Elective for BSMS 2nd year and i2M. 2 credit course with per week 3 hours of instruction Course will be completed in	
DSC 316	Machine Learning I [3003] Dr. Saptarshi Bej (DSc)	Core for i2DSc Core for i2M Elective for MSc 1st year, IPHD 1st year	
	* runs in parallel.		

Third year			
Code	Course details	Other information	
Course code	Course Name Course structure Instructor name(s)	Mention if Minor Mention if compulsory for other major students	
MAT 321 MSM 321	Complex Analysis [3003] Dr. Dhanya Rajendran	Minor for 4th year	
MAT 322 ^{SEP} MSM 322	Fields, Modules and Algebras [3003] Dr. Viji Thomas		
MAT 323 ^{SEP} MSM 323	General Topology [3003] Dr. Saikat Chatterjee	Minor for 3rd year	
MAT 324 MSM 324	Theory of ODE [3003] Dr. Asha Dond		
MAT 325 ^{SEP} MSM 325	Probability Theory and Stochastic Processes [3003] Dr. Samya Kumar Ray		
i2M 321 DSC3202	Scientific Computing (4 Credits) [3034] Dr. K. R. Arun	Core for i2DSc Elective for MSc 1st year, IPhd 1st year	
I2M322/MAT3202	Mathematical Modelling [3003] Dr. Sheetal Dharmatti	Elective for MSc 1st year, IPhd 1st year	

Fourth year			
Code	Course details	Other information	
Course code	Course Name Course structure Instructor name(s)	Mention if Minor/Open-elective Mention if compulsory for other major students Mention prerequisites if this is a minor course	
MAT 421 MSM421	Functional Analysis [3003] Dr. Sachindranath Jayaraman		
MAT 422	Algebraic Topology [3003] Dr. Geetha Thangavelu	Elective for MSc 2nd year	
MAT 423 MSM 423	Differential Geometry [3003] Dr. Sarbeswar Pal/Dr. Ramiz Reza	Stream Course for PhD	
MAT424/MAT4214	Number Theory and Cryptography [3003] Dr. Jyothisnaa Sivaraman	Elective for MSc 1st year i2M 4th year	
I2M421/MAT4201	Variational Methods and Control Theory [3003] Dr. K. Sudarshan Kumar	Elective for IPHD 2nd year, BSMS 4th year, MSc 2nd year	
I2M422/MAT4202	High Performance Computing [3003] Dr. Nagaiah Chamakuri	Elective for IPHD 2nd year, BSMS 4th year, MSc 2nd year	
I2M423/MAT4205/6205	Finite Element Methods [3003] Dr. Nagaiah Chamakuri/Dr. Asha Dond	Elective for IPHD 2nd year, BSMS 4th year, MSc 2nd year, Stream Course for PhD	
MAT 4223	Approximation Theory [3003] Dr. Shrihari Sridharan	Elective for IPHD 2nd year, BSMS 4th year, i2M 4th year, MSc 2nd year Prerequisites: Real Analysis and Linear Algebra	

	Only fifth year			Only PhD		
	Code	Course details		Code	Course details	
	Course code	Course Name Course structure Instructor name(s)		Course code	Course Name Course structure Instructor name(s)	
				MAT 6201	Topics in Analysis II [3003] Dr. Jayaraman/Dr. Manna/Dr. Ray	Stream for PhD 1st year
				MAT 6204/4204	Sobolev Spaces [3003] Dr. Dharmatti/Dr. Kumar/Dr. Rajendran	Elective for i2M and BSMS 4th year; IPhD 2nd year, MSc 2nd year
				MAT 6202/MAT4226	Topics in Algebra [3003] Dr. Chatterjee/Dr. Koley/Dr. Krishnamoorthy/Dr. Pal/Dr. Than	Elective for i2M and BSMS 4th year; IPhD 2nd year, MSc 2nd year
				MAT 620	Research Methodology [1000] Dr. Jyothsna Sivaraman	