

**PES's Modern College of Arts, Science and Commerce(Autonomous),  
Ganeshkhind, Pune 16  
Department of Mathematics  
Structure of MSc(Mathematics)**

Semester	Vertical	Name of the Paper	Theory/ Practical	No of Credits	CIE	ESE	Total
I	Major	Advance Course in Linear Algebra	Theory	4	40	60	100
		Real Analysis	Theory	4	40	60	100
		Advance Course in Group	Theory	4	40	60	100
		Practical in Python Programming -I	Practical	2	20	30	50
	DSE	Advance Calculus	Theory	4	40	60	100
		Advance course in Ordinary Differential Equations	Theory	4	40	60	100
	Minor	Research Methodology	Theory	2	20	30	50
	Minor	Research Methodology	Practical	2	20	30	50
II	Major	Advance Course in Complex Analysis	Theory	4	40	60	100
		General Topology	Theory	4	40	60	100
		Rings and Modules	Theory	4	40	60	100
		Introduction to MS-Excel	Practical	2	20	30	50
	DSE	Advance Course in Numerical Analysis	Theory	4	40	60	100
		OR					
	Minor	Advance course in Ordinary Differential Equations	Theory	4	40	60	100
		On Job Training	OJT	4	40	60	100
		Functional Analysis	Theory	4	40	60	100

III	Major	Field Theory	Theory	4	40	60	100
		Integral Equations	Theory	4	40	60	100
		Practical in Combinatorics	Practical	2	20	30	50
	DSE	Mathematical Techniques using Python	Theory	2	20	30	50
		Mathematica Practical Based on Mathematical Techniques using Python	Practical	2	20	30	50
		OR					
		Advance Complex Analysis	Theory	2	20	30	50
		Mathematica Practical Based on Advance Complex Analysis	Practical	2	20	30	50
		Research Project	Practical	4	20	30	50
	Minor	Research Project	Practical	4	20	30	50
IV	Major	Fourier Series and Boundary Value	Theory	4	40	60	100
		Differential Geometry	Theory	4	40	60	100
		Probability and Statistics	Theory	4	40	60	100
	DSE	Introduction to Data Science	Theory	2	20	30	50
		Mathematica Practical Based on Introduction	Practical	2	20	30	50
		OR					
		Number Theory and its applications	Theory	2	20	30	50
		Mathematics Practical Bases on Number Theory	Practical	2	20	30	50
Minor	Research Project	Practical	6	60	90	150	