

Vivekanand College, Kolhapur (Empowered Autonomous)

Department of Mathematics

Departmental Teaching and Evaluation scheme

Three/Four- Years UG Programme

Department/Subject Specific Core or Major (DSC)

(as per NEP-2020 Guidelines)

First Year Semester-I & II

Sr. No.	Course Abbr.	Course code	Course Name	Teaching Scheme Hours/week		Examination Scheme and Marks				Course Credits
				TH	PR	ESE	CIE	PR	Marks	
Semester-I										
1	DSC-I	DSC03MAT11	Differential Calculus	2	-	40	10	-	50	2
2	DSC-II	DSC03MAT12	Basic Algebra and Complex Numbers	2	-	40	10	-	50	2
3	MIN-I	MIN03MAT11	Differential Calculus	2	-	40	10	-	50	2
4	MIN-II	MIN03MAT12	Basic Algebra and Complex Numbers	2	-	40	10	-	50	2
5	OEC-I	OEC03MAT11	Logical Reasoning	2	-	40	10	-	50	2
6	OEC-II	OEC03MAT12	Quantitative Aptitude	2	-	40	10	-	50	2
7	IKS-I	IKS03GEC11	Indian Knowledge System	2	-	25	-	-	25	2
8	DSC-PR-I	DSC03MAT19	DSC Mathematics Lab-1	-	4	-	-	25	25	2
9	MIN-PR-I	MIN03MAT19	MIN Mathematics Lab-1	-	4	-	-	25	25	2
10	OEC-PR-I	OEC03MAT19	OEC Mathematics Lab-1	-	4	-	-	25	25	2
Semester –I Total				14	12	265	60	75	400	20
Semester-II										
1	DSC-III	DSC03MAT21	Differential Equation-I	2	-	40	10	-	50	2
2	DSC-IV	DSC03MAT22	Geometry	2	-	40	10	-	50	2
3	MIN-III	MIN03MAT21	Differential Equation-I	2	-	40	10	-	50	2
4	MIN-IV	MIN03MAT22	Geometry	2	-	40	10	-	50	2
5	OEC-III	OEC03MAT21	Quantitative Analysis	2	-	40	10	-	50	2
6	OEC-IV	OEC03MAT22	Introduction to Applied Mathematics	2	-	40	10	-	50	2
7	VSC-PR-I	VSC03MAT29	Foundation of Mathematics	-	4	-	-	25	25	2
8	DSC-PR-II	DSC03MAT29	DSC Mathematics Lab-2	-	4	-	-	25	25	2
9	MIN-PR-II	MIN03MAT29	MIN Mathematics Lab-2	-	4	-	-	25	25	2
10	OEC-PR-II	OEC03MAT29	OEC Mathematics Lab-2	-	4	-	-	25	25	2
Semester –II Total				12	16	240	60	100	400	20

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Second Year Semester-III & IV

Sr. No.	Course Abbr.	Course code	Course Name	Teaching Scheme Hours/week		Examination Scheme and Marks				Course Credits
				TH	PR	ESE	CIE	PR	Marks	
Semester-III										
1	DSC-V	DSC03MAT31	Multivariable Calculus and Differential Equation-II	2	-	40	10	-	50	2
2	DSC-VI	DSC03MAT32	Integral Calculus	2	-	40	10	-	50	2
3	MIN-V	MIN03MAT31	Vector Analysis	2	-	40	10	-	50	2
4	MIN-VI	MIN03MAT32	Integral Calculus	2	-	40	10	-	50	2
5	VSC-PR-II	VSC03MAT39	Introduction to Python	-	4	-	-	25	25	2
6	DSC-PR-III	DSC03MAT39	DSC-Mathematics Lab-3	-	8	-	-	50	50	4
7	MIN-PR-III	MIN03MAT39	MIN-Mathematics Lab-3	-	4	-	-	25	25	2
Semester –III Total				8	16	160	40	100	300	16
Semester-IV										
1	DSC-VII	DSC03MAT41	Discrete Mathematics	2	-	40	10	-	50	2
2	DSC-VIII	DSC03MAT42	Integral Transform	2	-	40	10	-	50	2
3	MIN-VII	MIN03MAT41	Discrete Mathematics	2	-	40	10	-	50	2
4	MIN-VIII	MIN03MAT42	Integral Transform	2	-	40	10	-	50	2
5	VSC-PR-III	VSC03MAT49	Numerical Methods Using Python	-	4	-	-	25	25	2
6	DSC-PR-IV	DSC03MAT49	DSC-Mathematics Lab-4	-	8	-	-	50	50	4
7	MIN-PR-IV	MIN03MAT49	MIN-Mathematics Lab-4	-	4	-	-	25	25	2
Semester –IV Total				8	16	160	40	100	300	16

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Third Year Semester-V & VI

Sr. No.	Course Abbr.	Course code	Course Name	Teaching Scheme Hours/week		Examination Scheme and Marks				Course Credits
				TH	PR	ESE	CIE	PR	Marks	
Semester-V										
1	DSC-IX	DSC03MAT51	Real Analysis	2	-	40	10	-	50	2
2	DSC-X	DSC03MAT52	Abstract Algebra	2	-	40	10	-	50	2
3	DSC-XI	DSC03MAT53	Partial Differential Equation-I	2	-	40	10	-	50	2
4	DSC-XII	DSC03MAT54	Numerical Methods-I	2	-	40	10	-	50	2
5	DSE-I	DSE03MAT51	Relativity	2	-	40	10	-	50	2
		DSE03MAT52	Graph Theory	2	-	40	10	-	50	2
6	VSC-PR-IV	VSC03MAT59	Introduction to Scilab	-	4	-	-	25	25	2
7	FP	FPR03MAT51	Field Project		4			50	50	2
8	DSC-PR-V	DSC03MAT59	DSC Mathematics Lab-5	-	16	-	-	100	100	8
Semester –V Total				10	24	200	50	175	425	22
Semester-VI										
1	DSC-XIII	DSC03MAT61	Metric Space	2	-	40	10	-	50	2
2	DSC-XIV	DSC03MAT62	Linear Algebra	2	-	40	10	-	50	2
3	DSC-XV	DSC03MAT63	Complex Analysis	2	-	40	10	-	50	2
4	DSC-XVI	DSC03MAT64	Numerical Methods-II	2	-	40	10	-	50	2
5	DSE-II	DSE03MAT61	Optimization Techniques	2	-	40	10	-	50	2
		DSE03MAT61	Differential Geometry	2	-	40	10	-	50	2
6	VSC-PR-V	VSC03MAT69	Mathematics into LaTeX	-	4	-	-	25	25	2
7	OJT	OJT03MAT61	On Job Training		4			50	50	2
8	DSC-PR-VI	DSC03MAT69	DSC Mathematics Lab-6	-	16	-	-	100	100	8
Semester –VI Total				10	24	200	50	175	425	22

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Fourth Year Semester-VII & VIII

Sr. No.	Course Abbr.	Course code	Course Name	Teaching Scheme Hours/week		Examination Scheme and Marks				Course Credits
				TH	PR	ESE	CIE	PR	Marks	
Semester-VII										
1	DSC-XVII	DSC03MAT71	Modern Algebra	4	-	80	20	-	100	4
2	DSC-XVIII	DSC03MAT72	Ordinary Differential Equation	4	-	80	20	-	100	4
3	DSC-XIX	DSC03MAT73	Measure and Integration	4	-	80	20	-	100	4
4	DSC-XX	DSC03MAT74	Numerical Analysis-I	2	-	40	10	-	50	2
5	DSE-III	DSE03MAT71	Operations Research	4	-	80	20	-	100	4
		DSE03MAT72	Introduction to Data Science	4	-	80	20	-	100	4
		DSE03MAT73	Dynamical Systems-I	4	-	80	20	-	100	4
6	RMD-I	RMD03MAT71	Research Methodology	4	-	80	20	-	100	4
Semester –VII Total				22	-	440	60	-	550	22
Semester-VIII										
1	DSC-XXI	DSC03MAT81	Linear Algebra	4	-	80	20	-	100	4
2	DSC-XXII	DSC03MAT82	General Topology	4	-	80	20	-	100	4
3	DSC-XXIII	DSC03MAT83	Advanced Calculus	4	-	80	20	-	100	4
4	DSC-XXIV	DSC03MAT84	Numerical Analysis-II	2	-	40	10	-	50	2
5	DSE-IV	DSE03MAT81	Number Theory	4	-	80	20	-	100	4
		DSE03MAT82	Fuzzy Mathematics-I	4	-	80	20	-	100	4
		DSE03MAT83	Dynamical Systems-II	4	-	80	20	-	100	4
6	OJT	OJT03MAT81	On Job Training		4			100	100	4
Semester –VIII Total				18	04	360	90	100	550	22

Abbreviations: TH-Theory, PR-Practical, PRO- Project, ESE- End Semester Examination, CIE-Continuous Internal Examination

Note: Minimum passing for 10 marks Internal evaluation = 04 marks
Minimum passing for 40 marks Theory paper = 16 marks
Minimum passing for 25 marks Practical = 10 marks
Minimum passing for 50 marks Practical/FP/OJT = 20 marks
Minimum passing for 100 marks Practical/FP = 40 marks

Passing percentage for Democracy, Election and Good Governance (DEGG) and Environmental Studies papers should be 40%

Separate passing for each Head - ESE, CIE and Practicals