

**VIKRAM UNIVERSITY, UJJAIN**  
**MASTER OF SCIENCE**  
**M.Sc. MATHEMATICS**  
**UNDER CBCS (2016-2017)**

**The Course of Study and the Scheme of Examinations**

S.NO.	Study Components		Ins. hrs /week	Cre dit	Title of the Paper	Maximum Marks		
						CIA	Uni. Exam	Total
<b>SEMESTER I</b>								
1	CORE	MAT-C101	6	6	Advanced Abstract Algebra I	10	40	50
2	CORE	MAT-C102	6	6	Real Analysis I	10	40	50
3	CORE	MAT-C103	6	6	Topology I	10	40	50
4	CORE	MAT-C104	6	5	Complex Analysis I	10	40	50
5	ELECTIVE	MAT-E105(A,B,C,D)	6	3+2=5	(to choose 1 out of 4) A. Programming in C-I (Theory +Practical) B. Differential Equation I C. Advanced Discrete Mathematics I D. Differential Geometry of Manifolds I	10 10 10 10	25+15 40 40 40	50
6	CORE	MAT-C106	6	2	Comprehensive Viva-Voce	-	50	50
						<b>50</b>	<b>250</b>	<b>300</b>
<b>SEMESTER II</b>								
7	CORE	MAT-C201	6	6	Advanced Abstract Algebra II	10	40	50
8	CORE	MAT-C202	6	6	Lebesgue Measure and Integration	10	40	50
9	CORE	MAT-C203	6	6	Topology II	10	40	50
10	CORE	MAT-C204	6	5	Complex Analysis II	10	40	50
11	ELECTIVE	MAT-E205(A,B,C,D)	6	3+2=5	(to choose 1 out of 4) A. Programming in C-II (Theory +Practical) B. Differential Equation II C. Advanced Discrete Mathematics II D. Differential Geometry of Manifolds II	10 10 10 10	25+15 40 40 40	50
12	CORE	MAT-C106	6	2	Comprehensive Viva-Voce	-	50	50
						<b>50</b>	<b>250</b>	<b>300</b>

*R. Babbar*  
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**M.Sc. Mathematics : Syllabus (CBCS)**

SEMESTER III					CIA	Uni. Exam	Total
13	CORE	MAT-C301	6	6	10	40	50
14	CORE	MAT-C302	6	6	Integration Theory and Functional Analysis-I	10	40
					Fundamentals of Computer Science(Theory)-I	10	25
					-	15	15
15	ELECTIVE-I	MAT-E303 (A,B,C,D,E)	6	6	10	40	50
					<b>(to choose 1 out of 5)</b> A. Advanced Functional Analysis-I B. Partial Differential Equations C. Differentiable Structures on manifolds-I D. General Theory of Relativity and Cosmology-I E. Abstract Harmonic Analysis-I F. Mathematics of Finance & Insurance -I		
16	ELECTIVE-II	MAT-E304 (A,B,C,D,E)	6	5			
					<b>(to choose 1 out of 5)</b> A. Theory of Linear Operator I B. Advanced Numerical Analysis -I C. Fuzzy Sets and their Applications-I D. Advanced Graph Theory-I E. Advanced Special Function-I F. Spherical Trigonometry and astronomy-I		
17	ELECTIVE-III	MAT-E305 (A,B,C,D,E)	6	5			
					<b>(to choose 1 out of 5)</b> A. Operations Research -I B. Computational Biology -I C. Fluid Mechanics -I D. Bio- Mechanics -I E. Analytic Number Theory-I F. Integral Transform-I		
18	CORE	MAT-C306	6	2	-	50	50
			<b>36</b>	<b>30</b>	<b>50</b>	<b>250</b>	<b>300</b>

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SEMESTER IV					CIA	Uni. Exam	Total	
19	CORE	MAT-C401	6	6	Functional Analysis-II	10	40	50
20	CORE	MAT-C402	6	6	Fundamentals of Computer Science(Theory)-II	10	25	35
					Fundamentals of Computer Science ( Practical)-II	-	15	15
21	ELECTIVE-I	MAT-E403 (A,B,C,D,E)	6	6	(to choose 1 out of 6) A. Advanced Functional Analysis-II B. Mechanics C. Differentiable Structures on manifolds-II D. General Theory of Relativity and Cosmology-II E. Abstract Harmonic Analysis-II F. Mathematics of Finance & Insurance -II	10	40	50
22	ELECTIVE-II	MAT-E404 (A,B,C,D,E)	6	4	(to choose 1 out of 6) A. Theory of Linear Operator II B. Advanced Numerical Analysis -II C. Fuzzy Sets and their Applications-II D. Advanced Graph Theory-II E. Advanced Special Function-II F. Spherical Trigonometry and astronomy-II	10	40	50
23	ELECTIVE-III	MAT-E405 (A,B,C,D,E)	6	4	(to choose 1 out of 6) A. Operations Research -II B. Computational Biology -II C. Fluid Mechanics -II D. Bio- Mechanics -II E. Analytic Number Theory-II F. Integral Transform-II	10	40	50
24	CORE	MAT-C406	6	2	Comprehensive Viva-Voce	-	50	50
25	CORE	MAT-P407		2	Job Oriented Project Work	-	50	50
			36	30		50	300	350

*M. Adhikari*  
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# **COURSE STRUCTURE FOR**

**School of Studies in Mathematics**

**Under CBCS**

***M.Sc. Mathematics***

***(Regular)***

***I & II Semester 2016-2017***

***and***

***M.Sc. Mathematics***

***(Regular)***

***III & IV Semester 2017-2018***

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**MASTER OF SCIENCE**

**M.Sc. MATHEMATICS**

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6	CORE	MAT-C106	6	2	Comprehensive Viva-Voce	-	50	50
			<b>36</b>	<b>30</b>		<b>50</b>	<b>250</b>	<b>300</b>
<b>SEMESTER II</b>						<b>CIA</b>	<b>Uni. Exam</b>	<b>Total</b>
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			<b>36</b>	<b>30</b>		<b>50</b>	<b>250</b>	<b>300</b>

*Prabhat*  
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