

MEDI-CAPS UNIVERSITY

Department Of Mathematics
Master of Science

Credit Scheme for M. Sc. (Mathematics)

S. No.	Particulars	Credits
1	Maximum Credits that can be earned in a semester	30
2	Minimum Credits to be registered in a semester	04
3	Minimum Credits to be earned to pass out first year	34
4	Makeup Semester: Maximum credits which can be opted in Makeup semester out of the courses registered in that academic year (Previous odd and even semester)	18
5	Minimum total credits to be earned for awarding the degree	90
6	Maximum total credits which can be earned	120

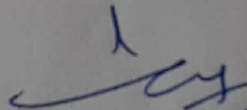
Honourable Sir,

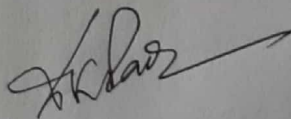
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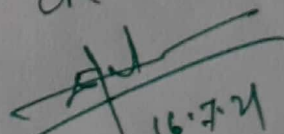


9 July 2021

Dr. Rekha Jain
HOD, Mathematics


(Dr. A. Akar)
Hc Dean Science



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16.7.21

MEDI-CAPS UNIVERSITY

Department Of Mathematics

Master of Science

SEMESTER - I

Code	Course	L	T	P	Hrs.	Credits
MA5CO01	Advance Abstract Algebra-I	4	0	0	4	4
MA5CO02	Real Analysis -I	4	0	0	4	4
MA5CO03	Topology-I	4	0	0	4	4
MA5CO04	Complex Analysis-I	4	0	0	4	4
MA5CO05	Advanced Discrete Mathematics-I	4	0	0	4	4
MA5SE01	Microsoft Excel	0	0	4	4	2
		20	0	4	24	22

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MEDI-CAPS UNIVERSITY

Department Of Mathematics

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SEMESTER - II

Code	Course	L	T	P	Hrs.	Credits
MA5CO06	Advance Abstract Algebra -II	4	0	0	4	4
MA5CO07	Real Analysis -II	4	0	0	4	4
MA5CO08	Topology-II	4	0	0	4	4
MA5CO09	Complex Analysis-II	4	0	0	4	4
MA5CO10	Advanced Discrete Mathematics-II	4	0	0	4	4
MA5SE02	Professional Communication	2	0	0	2	2
		22	0	0	22	22

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SEMESTER - III

Code	Course	L	T	P	Hrs.	Credits
MA5CO11	Integration Theory and Functional Analysis- I	4	0	0	4	4
MA5CO12	Partial Differential Equations & Mechanics -I	4	0	0	4	4
MA5EL01	Elective- I (a)	4	0	0	4	4
MA5EL02	Elective -II(a)	4	0	0	4	4
MA5OE01	Open Elective	3	0	0	3	3
MA5SE03	Mathematical Simulation Tools	0	0	4	4	2
		19	0	0	19	21

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SEMESTER - IV

Code	Course	L	T	P	Hrs.	Credits
MA5CO13	Integration Theory and Functional Analysis- II	4	0	0	4	4
MA5CO14	Partial Differential Equations & Mechanics- II	4	0	0	4	4
MA5EL03	Elective -I(b)	4	0	0	4	4
MA5EL04	Elective- II(b)	4	0	0	4	4
MA5PC01	Dissertation	0	0	10	10	5
MA5SE04	MOOC	0	0	4	4	2
MA5CV04	Comprehensive Viva	0	0	0	0	2
		16	0	14	30	25

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MEDI-CAPS UNIVERSITY

Department Of Mathematics

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Credit scheme for M.Sc. (Mathematics)

S. No.	Course Type	Range of total credit		Range of total credit		Model Scheme	
		Min.%	Max%	Min.	Max	%	Absolute
1.	Core (CO)	58	65	53	58	62.23	56
2.	Discipline Specific Elective (EL)	15	24	14	21	17.58	16
3.	Project / Training /Dissertation (PC)	2	8	2	7	5.55	5
4.	Skill Enhancement (SE)	3	10	3	9	8.89	8
5	Comprehensive (CV)	1	5	1	4	2.22	2
6	Open Elective (OE)	1	6	1	5	3.33	3
					Total	100	90

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Credit scheme for M.Sc. (Mathematics)

S. No.	Course Type	Total Credits (%) Model scheme	Range (in %)	Model Scheme (with suggested Additional)			I Semester			II Semester			III Semester			IV Semester		
				Credit	No. of courses	Credits	Hrs.	Course	Credits	Hrs.	Course	Credits	Hrs.	Course	Credits	Hrs.	Course	Credits
1.	Core(CO)	62.23	58-65	14	56	56	05	20	20	05	20	20	02	08	08	02	08	08
2.	Discipline Specific Elective (EL)	17.58	15-24	4	16	16	00	00	00	00	00	00	02	08	08	02	08	08
3.	Project / Training (PC)	5.55	2-8	01	05	10	00	00	00	00	00	00	00	00	00	01	05	10
4.	Skill Enhancement (SE)	8.89	3-10	04	08	14	01	02	04	01	02	02	01	02	04	01	02	04
5.	Comprehensive (CV)	2.22	1-5	01	02	00	00	00	00	00	00	00	00	00	00	01	02	00
6.	Open Elective (OE)	3.33	1-6	01	03	03	00	00	00	00	00	00	01	03	03	00	00	00
				25	90	99	06	22	24	06	22	22	06	21	23	07	25	30

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Course Basket for M.Sc. (Mathematics) Program

Core Courses(CO)

S.No	Course Code	Course Title	L	T	P	Credit	Hr	Preferred Semester
1	MA5CO01	Advance Abstract Algebra-I	4	0	0	4	4	I
2	MA5CO02	Real Analysis -I	4	0	0	4	4	I
3	MA5CO03	Topology-I	4	0	0	4	4	I
4	MA5CO04	Complex Analysis-I	4	0	0	4	4	I
5	MA5CO05	Advanced Discrete Mathematics-I	4	0	0	4	4	I
6	MA5CO06	Advance Abstract Algebra-II	4	0	0	4	4	II
7	MA5CO07	Real Analysis -II	4	0	0	4	4	II
8	MA5CO08	Topology-II	4	0	0	4	4	II
9	MA5CO09	Complex Analysis-II	4	0	0	4	4	II
10	MA5CO10	Advanced Discrete Mathematics-II	4	0	0	4	4	II
11	MA5CO11	Integration Theory and Functional Analysis- I	4	0	0	4	4	III
12	MA5CO12	Partial Differential Equations & Mechanics- I	4	0	0	4	4	III
13	MA5CO13	Integration Theory and Functional Analysis -II	4	0	0	4	4	IV
14	MA5CO14	Partial Differential Equations & Mechanics- II	4	0	0	4	4	IV
Total			56	0	0	56	56	

Discipline Specific Elective Courses (EL)

S.No.	Course Code	Course Title	L	T	P	Credit	Hr	Preferred Semester
1	MA5EL01	Elective I (a)	4	0	0	4	4	III
2	MA5EL02	Elective II (a)	4	0	0	4	4	III
3	MA5EL03	Elective I (b)	4	0	0	4	4	IV
4	MA5EL04	Elective II (b)	4	0	0	4	4	IV
Total			16	0	0	16	16	

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Open Elective Courses (OE)								
S.No.	Course Code	Course Title	L	T	P	Credit	Hr	Preferred Semester
1	MA5OE01	Open Elective	3	0	0	3	3	III
Total			3	0	0	3	3	
Skill Enhancement Courses (SE)								
S.No.	Course Code	Course Title	L	T	P	Credit	Hr	Preferred Semester
1	MA5SE01	Microsoft EXCEL	0	0	2	2	4	I
2	MA5SE02	Professional Communication	2	0	0	2	2	II
3	MA5SE03	Mathematical Simulation Tools	0	0	2	2	4	III
4	MA5SE04	MOOC	0	0	2	2	4	IV
Total			2	0	6	8	14	
Comprehensive Viva (CV)								
S.No.	Course Code	Course Title	L	T	P	Credit	Hr	Preferred Semester
1	MA5CV01	Comprehensive Viva	0	0	0	2	0	IV
Total			0	0	2	2	0	
Project, Training , Dissertation courses (PC)								
S.No.	Course Code	Course Title	L	T	P	Credit	Hr	Preferred Semester
1	MA5PC01	Dissertation	0	0	10	5	10	IV
Total			0	0	10	5	10	
Grand Total						90	99	

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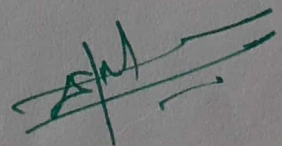
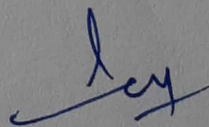
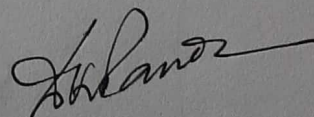
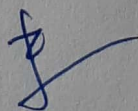
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List of Discipline Specific Elective Papers

1. Programming in C (with ANSI features)–Theory and Practical
2. Fundamentals of Computer Science–Theory and Practical
3. Advanced Functional Analysis
4. (i) Advanced Theory of Partial Differential Equations /or (ii) Sobolev Spaces
5. Theory of Ordinary Differential Equations
6. Difference Equations
7. Dynamical Systems
8. Fluid Mechanics
9. Magneto Fluid Dynamics
10. Differentiable Structures on a Manifold
11. Computational Fluid Dynamics
12. Mathematics of Finance and Insurance
13. (i) Harmonic Analysis /or (ii) Abstract Harmonic Analysis
14. Bases in Banach Spaces
15. Space Dynamics
16. Information Theory
17. Algebraic Coding Theory
18. Algebraic Topology
19. Fractal Geometry
20. Mechanics of Solids
21. Operations Research
22. Non-Linear Programming
23. Geometry of Numbers
24. Mathematical Biology
25. Computational Biology



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26. Non-linear Optimization in Banach Spaces
 27. General Relativity and Cosmology
 28. Banach Algebras
 29. Fuzzy Sets and Their Applications
 30. Category Theory
 31. Projective representations of the Symmetric Groups
 32. Wavelets
 33. Non-Commutative Rings
 34. Integral Equations and Boundary Value Problems.
 35. Theory of Linear Operators
 36. Fundamentals of Applied Functional Analysis
 37. Biomechanics
 38. Global Differential Geometry
 39. Analytic Number Theory
 40. Algebraic Number Theory
 41. Algebraic Curves
- Other optional papers according to the availability of subject experts may be added.

