



**BRAINWARE UNIVERSITY**  
**SCHOOL OF COMPUTATIONAL AND APPLIED SCIENCES**  
**DEPARTMENT OF MATHEMATICS**  
**M. Sc. in Mathematics - 2023**

**SEMESTER – I**

Course Code	Course Name	L-T-P	Credit(s)	Total Marks
MSCMC101	Linear Algebra	3-1-0	4	100
MSCMC102	Real Analysis	4-0-0	4	100
MSCMC103	Mathematical Statistics	4-0-0	4	100
MSCMC104	Ordinary Differential Equations	3-1-0	4	100
MSCM(HU)191	Professional Communication Lab	0-0-2	1	100
	<b>Total</b>	<b>18</b>	<b>17</b>	<b>500</b>

**SEMESTER – II**

Course Code	Course Name	L-T-P	Credit(s)	Total Marks
MSCMC201	Abstract Algebra	4-0-0	4	100
MSCMC202	Complex Analysis	4-0-0	4	100
MSCMC203	Partial Differential Equations	3-1-0	4	100
MSCMC204	Fuzzy Logic	4-0-0	4	100
MSCMC205	General Topology	4-0-0	4	100
MSCM(CS)201	Computer Programming	2-0-0	2	100
MSCM(CS)291	Computer Programming Lab	0-0-2	1	100
	<b>Total</b>	<b>24</b>	<b>23</b>	<b>700</b>

**SEMESTER – III**

Course Code	Course Name	L-T-P	Credit(s)	Total Marks
MSCMC301	Functional Analysis	4-0-0	4	100
MSCMC302	Differential Geometry	4-0-0	4	100
MSCMC303	Integral Equations & Calculus of Variations	3-1-0	4	100
MSCME301	Elective I	4-0-0	4	100
MSCME302	Elective II	4-0-0	4	100
MSCM381	Project (Stage I)	-	4	100
	<b>Total</b>	<b>20</b>	<b>24</b>	<b>600</b>



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**Electives I & II – Third Semester**

Group	Course Code	Course Name	L-T-P	Credit(s)
<b>Elective I</b>	MSCME301A	Module Theory	4-0-0	4
	MSCME301B	Measure and Probability Theory	4-0-0	4
	MSCME301C	Analytical Number Theory	4-0-0	4
	MSCME301D	Harmonic Analysis	4-0-0	4
<b>Elective II</b>	MSCME302A	Algebraic Topology	4-0-0	4
	MSCME302B	Dynamical systems	4-0-0	4
	MSCME302C	Fluid Mechanics	4-0-0	4
	MSCME302D	Discrete Structures	4-0-0	4

**SEMESTER – IV**

Course Code	Course Name	L-T-P	Credit(s)	Total Marks
MSCMC401	Operations Research	4-0-0	4	100
MSCMC402	Applied Numerical Analysis	3-0-0	3	100
MSCMC492	Applied Numerical Analysis Lab	0-0-2	1	100
MSCME401	Elective III	4-0-0	4	100
MSCME402	Elective IV	4-0-0	4	100
MSCM481	Project (Final)	-	6	100
MSCM482	Grand Viva	-	2	100
	<b>Total</b>	<b>17</b>	<b>24</b>	<b>700</b>



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**Electives III & IV – Fourth Semester**

<b>Group</b>	<b>Code</b>	<b>Course Title</b>	<b>L-T-P</b>	<b>Credit(s)</b>
<b>Elective III</b>	MSCME401A	Manifolds and Applications	4-0-0	4
	MSCME401B	Mathematical Modelling	4-0-0	4
	MSCME401C	Financial Mathematics	4-0-0	4
	MSCME401D	Coding Theory	4-0-0	4
<b>Elective IV</b>	MSCME402A	Finite Element method	4-0-0	4
	MSCME402B	Mathematical Ecology	4-0-0	4
	MSCME402C	Applied Statistics	4-0-0	4
	MSCME402D	Automata & Formal Languages	4-0-0	4
	MSCME402E	Cryptography	4-0-0	4

**TOTAL CREDITS & MARKS**

**M. Sc. (Mathematics)**

<b>Category</b>	<b>Core Course</b>	<b>Elective Course</b>	<b>Other Compulsory Courses</b>	<b>Total</b>
<b>Credit(s)</b>	68	16	4	<b>88</b>
<b>Marks</b>	1800	400	300	<b>2500</b>