



BRAINWARE UNIVERSITY
SCHOOL OF COMPUTATIONAL AND APPLIED SCIENCES
DEPARTMENT OF MATHEMATICS
M. Sc. in Mathematics - 2022

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 |
| | Total | 18 | 17 | 500 |

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 |
| | Total | 24 | 23 | 700 |

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 |
| | Total | 20 | 24 | 600 |



BRAINWARE UNIVERSITY
SCHOOL OF COMPUTATIONAL AND APPLIED SCIENCES
DEPARTMENT OF MATHEMATICS
M. Sc. in Mathematics - 2022

Electives I & II – Third Semester

| Group | Course Code | Course Name | L-T-P | Credit(s) |
|--------------------|-------------|--------------------------------|-------|-----------|
| Elective I | 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 |
| Elective II | 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 |
| | Total | 17 | 24 | 700 |



BRAINWARE UNIVERSITY
SCHOOL OF COMPUTATIONAL AND APPLIED SCIENCES
DEPARTMENT OF MATHEMATICS
M. Sc. in Mathematics - 2022

Electives III & IV – Fourth Semester

| Group | Code | Course Title | L-T-P | Credit(s) |
|---------------------|-------------|-----------------------------|--------------|------------------|
| Elective III | 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 |
| Elective IV | 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)

| Category | Core Course | Elective Course | Other Compulsory Courses | Total |
|------------------|--------------------|------------------------|---------------------------------|--------------|
| Credit(s) | 68 | 16 | 4 | 88 |
| Marks | 1800 | 400 | 300 | 2500 |