



**Integral University, Lucknow**  
**Department of Mathematics & Statistics**  
**Study and Evaluation Scheme (w.e.f. 2020-21)**

**M. Sc. (Mathematics)**

**II<sup>nd</sup> year / III<sup>rd</sup> Semester**

| S. No.          | Course code | Course Title                                | Type of Paper | Period Per hr/week/sem |           |           | Evaluation Scheme |            |            |            | Sub. Total | Credit    | Total Credits | Attributes    |                  |                   |                 |                              |             | United Nations Sustainable Development Goals (SDGs) |
|-----------------|-------------|---|---------------|------------------------|-----------|-----------|-------------------|------------|------------|------------|------------|-----------|---------------|---------------|------------------|-------------------|-----------------|------------------------------|-------------|---|
|                 |             |   |               | L                      | T         | P         | CT                | TA         | Total      | ESE        |            |           |               | Employability | Entrepreneurship | Skill Development | Gender Equality | Environment & Sustainability | Human Value |   |
| <b>THEORIES</b> |             |   |               |                        |           |           |                   |            |            |            |            |           |               |               |                  |                   |                 |                              |             |   |
| 1               | MT504       | Differential Geometry-II                    | Core          | 03                     | 01        | 00        | 40                | 20         | 60         | 40         | 100        | 3:1:0     | 4             | √             |                  | √                 |                 |                              |             |   |
| 2               | MT505       | Applied Functional Analysis                 | Core          | 03                     | 01        | 00        | 40                | 20         | 60         | 40         | 100        | 3:1:0     | 4             | √             |                  | √                 |                 |                              |             |   |
| 3               | MT506       | Integral Equations                          | Core          | 03                     | 01        | 00        | 40                | 20         | 60         | 40         | 100        | 3:1:0     | 4             | √             |                  | √                 |                 |                              |             |   |
| 4               | MT507       | Optimization Techniques                     | Core          | 03                     | 01        | 00        | 40                | 20         | 60         | 40         | 100        | 3:1:0     | 4             | √             |                  | √                 |                 |                              |             |   |
| 5               | MT508       | Fluid Dynamics                              | Core          | 03                     | 01        | 00        | 40                | 20         | 60         | 40         | 100        | 3:1:0     | 4             | √             |                  | √                 |                 |                              |             |   |
| 6               | MT509       | Special Function and Orthogonal Polynomials | Core          | 03                     | 01        | 00        | 40                | 20         | 60         | 40         | 100        | 3:1:0     | 4             | √             |                  | √                 |                 |                              |             |   |
| <b>Total</b>    |             |   |               | <b>18</b>              | <b>06</b> | <b>00</b> | <b>240</b>        | <b>120</b> | <b>360</b> | <b>240</b> | <b>600</b> | <b>24</b> | <b>24</b>     |               |                  |                   |                 |                              |             |   |

CT = Class Test; TA = Teacher's Assessment; ESE = End Semester Examination; Sessional = CT + TA; Subject Total = Sessional + ESE



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| S. No.          | Course code | Course Title                          | Type of Paper | Period Per hr/week/sem |           |           | Evaluation Scheme |           |            |            | Sub. Total | Credit    | Total Credits | Attributes    |                  |                   |                 |                              |             |                     |  |  |
|-----------------|-------------|---------------------------------------|---------------|------------------------|-----------|-----------|-------------------|-----------|------------|------------|------------|-----------|---------------|---------------|------------------|-------------------|-----------------|------------------------------|-------------|---------------------|--|--|
|                 |             |                                       |               | L                      | T         | P         | CT                | TA        | Total      | ESE        |            |           |               | Employability | Entrepreneurship | Skill Development | Gender Equality | Environment & Sustainability | Human Value | Professional Ethics |  |  |
| <b>THEORIES</b> |             |                                       |               |                        |           |           |                   |           |            |            |            |           |               |               |                  |                   |                 |                              |             |                     |  |  |
| 1               | MT510       | Mechanics                             | Core          | 03                     | 01        | 00        | 40                | 20        | 60         | 40         | 100        | 3:1:0     | 4             | √             |                  | √                 |                 |                              |             |                     |  |  |
| 2               | MT511       | Advanced Functional Analysis          | Core          | 03                     | 01        | 00        | 40                | 20        | 60         | 40         | 100        | 3:1:0     | 4             | √             |                  | √                 |                 |                              |             |                     |  |  |
| 3               | MT512       | Topology                              | Core          | 03                     | 01        | 00        | 40                | 20        | 60         | 40         | 100        | 3:1:0     | 4             | √             |                  | √                 |                 |                              |             |                     |  |  |
| 4               | MT513       | Magneto Hydrodynamics                 | Elective      | 03                     | 01        | 00        | 40                | 20        | 60         | 40         | 100        | 3:1:0     | 4             | √             |                  | √                 |                 |                              |             |                     |  |  |
|                 | MT514       | Mathematical Modelling and Simulation | Elective      |                        |           |           |                   |           |            |            |            |           |               | √             |                  | √                 |                 |                              |             |                     |  |  |
|                 | MT515       | Calculus of Variations                | Elective      |                        |           |           |                   |           |            |            |            |           |               | √             |                  | √                 |                 |                              |             |                     |  |  |
| <b>PROJECT</b>  |             |                                       |               |                        |           |           |                   |           |            |            |            |           |               |               |                  |                   |                 |                              |             |                     |  |  |
| 5               | MT516       | *Project                              | Core          | 06                     | 00        | 00        | 00                | 00        | 00         | 200        | 200        | 06        | 06            | √             |                  | √                 |                 |                              |             |                     |  |  |
| <b>Total</b>    |             |                                       |               | <b>18</b>              | <b>04</b> | <b>00</b> | <b>160</b>        | <b>80</b> | <b>240</b> | <b>360</b> | <b>600</b> | <b>22</b> | <b>22</b>     |               |                  |                   |                 |                              |             |                     |  |  |

CT = Class Test; TA = Teacher's Assessment;; ESE = End Semester Examination; Sessional = CT + TA; Subject Total = Sessional + ESE

**Total Credits = 24 + 22 + 24 + 22 = 92**

**\* The Evaluation scheme for Project**

|         | <b>Course Code</b> | <b>Project Dissertation</b> | <b>Presentation</b> | <b>Viva-Voce</b> | <b>Total</b> |
|---------|--------------------|-----------------------------|---------------------|------------------|--------------|
| Project | MT516              | 100                         | 50                  | 50               | 200          |