

**Department  
of  
Mathematics and Statistics**

**School of Mathematical and Physical Science**



**Curriculum Framework  
M.Sc.-Mathematics**

**Based on National Education Policy- 2020**

**Date of BoS -16/09/2022**

**Doctor Harisingh Gour Vishwavidyalaya  
(A Central University)  
Sagar-Madhya Pradesh-470003**

## 5. Structure of the Programme for Post Graduate Diploma

L-5

| Level<br>8 | Semester I                     |             |                                  |         |                                      |
|------------|--------------------------------|-------------|----------------------------------|---------|--------------------------------------|
|            | Nature of Course               | Course Code | Course Title                     | Credits | Course Coordinator                   |
|            | Discipline Specific Major-1    | MTS-DSM-121 | Abstract Algebra                 | 4       | Dr. M.K.Yadav<br>Dr. K.Shrivastava   |
|            | Discipline Specific Major-2    | MTS-DSM-122 | Real Analysis-II                 | 4       | Dr. RK Pandey                        |
|            | Discipline Specific Major-3    | MTS-DSM-123 | Topology                         | 4       | Dr. P. Gupta                         |
|            | Multi-Disciplinary Major-1     | MTS-MDM-121 | Operation Research-I             | 4       | Dr. U.K.Khedlekar                    |
|            | Skill Enhancement Course (SEC) | MTS-SEC-121 | Integral Transform               | 4       | Dr. Bhupendra                        |
|            | Semester II                    |             |                                  |         |                                      |
|            | Nature of Course               | Course Code | Course Title                     | Credits | Course Coordinator                   |
|            | Discipline Specific Major-1    | MTS-DSM-221 | Complex Analysis                 | 4       | Dr. S. Kumar                         |
|            | Discipline Specific Major-2    | MTS-DSM-222 | Measure Theory                   | 4       | Dr. T Nath                           |
|            | Discipline Specific Major-3    | MTS-DSM-223 | Partial Differential Equations   | 4       | Dr. M.K.Yadav                        |
|            | Multi-Disciplinary Major-1     | MTS-MDM-221 | Mathematical Modeling in Biology | 4       | Dr. K.S.Mathur                       |
|            | Skill Enhancement Course (SEC) | MTS-SEC-221 | Project                          | 4       | Research Areas of<br>Faculty Members |

## 6. Exit: Certificate in Mathematical Sciences

### 7. Teaching Learning Approach:

Mainly this programme will transact the under given pedagogic approach-

- Lecture/ Seminar format
- Demonstration
- Readings/written assignments and Field Projects
- Group discussions/tutorial Community visit
- Project work
- Field Visit/Survey/Dissertation

### 8. Assessment

The learner in the programme will be assessed throughout the duration of the programme in a formative and summative evaluations i.e. Mid (I&II) and End Semester examinations. To be eligible to appear in End semester examination a student must appear in Mid semester examinations along with 75 per cent attendance in classroom processes

**DOCTOR HARISINGH GOUR VISHWAVIDYALAYA, SAGAR**

**(A Central University)**

**Department of Mathematics and Statistics**

**Summary of Ph. D. Course Work in Statistics**

**From Session 2022 -23 onwards**

**Semester-I**

| <b>Paper Code</b>                     | <b>Title of Paper</b>                           | <b>Credit</b> |
|---------------------------------------|-------------------------------------------------|---------------|
| RPE-CC-140                            | Research & Publications Ethics                  | 2             |
| STAT-CC-141                           | Research Methodology with Computer Applications | 4             |
| STAT-CC-142                           | History of Statistics and Modeling              | 4             |
| STAT-CC-143                           | Review of Published Research Work               | 4             |
| <b>Opt any one from the following</b> |                                                 |               |
| STAT-EC-1401                          | Mathematical Finance                            | 4             |
| STAT-EC-1402                          | Advanced Sampling & Modeling of Computer System | 4             |
| STAT-EC-1403                          | Theory of Estimation and Testing                | 4             |
| STAT- EC-1404                         | Inventory Modeling and Optimization             | 4             |

## 5. Structure of the Programme (B.Sc./B.A.) for : Certificate in Mathematical Sciences

| Level<br>5 | Semester I                  |             |                         |         |                                   |
|------------|-----------------------------|-------------|-------------------------|---------|-----------------------------------|
|            | Nature of Course            | Course Code | Course Title            | Credits | Course Coordinator                |
|            | Discipline Specific Major-1 | MTS-DSM-111 | Calculus                | 6       | Dr. U.K.Khedlekar<br>Dr. P. Gupta |
|            | Multi-Disciplinary Major-3  | MTS-MDM-111 | Matrix Theory           | 6       | Dr. KS Mathur                     |
|            | Ability Enhancement Course  | MTS-AEC-111 | Graph Theory            | 2       | Dr. MK Yadav                      |
|            | Skill Enhancement Course    | MTS-SEC-111 | Vector Calculus         | 2       | Dr. UK Khedlekar<br>Dr. Bhupendra |
| Level<br>5 | Semester II                 |             |                         |         |                                   |
|            | Nature of Course            | Course Code | Course Title            | Credits | Course Coordinator                |
|            | Discipline Specific Major-1 | MTS-DSM-211 | Basic Algebra           | 6       | Dr. T Nath                        |
|            | Multi-Disciplinary Major-3  | MTS-MDM-211 | Numerical Methods       | 6       | Dr. RK Pandey                     |
|            | Ability Enhancement Course  | MTS-AEC-211 | Fundamental of Computer | 2       | Dr.K.S.Mathur                     |
|            | Skill Enhancement Course    | MTS-SEC-211 | Boolean Algebra         | 2       | Dr. K Shrivastava                 |

## 6. Exit: Certificate in Mathematical Sciences

### 7. Teaching Learning Approach:

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## 5. Structure of the Programme B.Sc./B.A. for : Certificate in Statistical Method

| Semester I  |                                |             |                             |         |                    |
|-------------|--------------------------------|-------------|-----------------------------|---------|--------------------|
|             | Nature of Course               | Course Code | Course Title                | Credits | Course Coordinator |
| Level 5     | Discipline Specific Major-1    | STA-DSM-111 | Descriptive Statistics      | 6       | Prof. R.K.Gangele  |
|             | Multi-Disciplinary Major-3     | MTS-MDM-111 | Matrix Theory               | 6       | Dr. K.S.Mathur     |
|             | Ability Enhancement Course     | MTS-AEC-111 | Graph Theory                | 2       | Dr. K.Shrivastava  |
|             | Skill Enhancement Course SEC)  | MTS-SEC-111 | Vector Calculus             | 2       | Dr. U.K.Khedlekar  |
| Semester II |                                |             |                             |         |                    |
|             | Nature of Course               | Course Code | Course Title                | Credits | Course Coordinator |
|             | Discipline Specific Major-1    | STA-DSM-211 | Probability & Distributions | 6       | Prof. D. Shukla    |
|             | Multi-Disciplinary Major-3     | MTS-MDM-211 | Numerical Methods           | 6       | Dr. R.K. Pandey    |
|             | Ability Enhancement Course     | MTS-AEC-211 | Fundamentals of Computer    | 2       | Dr. K.S.Mathur     |
|             | Skill Enhancement Course (SEC) | MTS-SEC-211 | Business Statistics         | 2       | Prof. D. Shukla    |
|             |                                |             |                             |         |                    |

## 6. Exit: Certificate in Statistical Method

## 7. Teaching Learning Approach:

Mainly this programme will transact the under given pedagogic approach-

- Lecture/ Seminar format
- Demonstration
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