# DEVI AHILYA VISHWAVIDYALAYA, INDORE

## SCHOOL OF STATISTICS

**PROGRAMME CODE: ST5A**

**PROGRAMME TITLE: M.A./M.Sc. (Statistics)**

### OBJECTIVES

- To prepare the students to understand to take decisions under uncertainties.
- Students can expect to have a workable knowledge of R-programming and SPSS.
- To impart theoretical and practical knowledge of statistics big data.

### ELIGIBILITY

B.Sc./B.A./B.C.A. (With Mathematics /Statistics as a major paper in all the three years) with minimum 50% marks

### AGE LIMIT: No Age Limit.

### ADMISSIONPROCEDURE

Admission will be done through Common Entrance Test (CET -2019).

**SEATS: 40** (reservation as per state Govt. rules).

| Course | Total Seats | UR | | ST | | SC | | OBC | | NRI | PH | JKR | JKM | EW | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | O | F | O | F | O | F | O | F | | | | | T | NT |
| MA/M. Sc. (Statistics) | 30 | 8 | 5 | 4 | 2 | 3 | 2 | 3 | 1 | 2 | 1 | 1 | 1 | 1 | 1 |

UR_OP-Unreserved Open, UR_F-Unreserved Female, ST_OP-Scheduled Tribe Open, ST_F-Scheduled Tribe Female, SC_OP-Scheduled Caste Open, SC_F-Scheduled Caste Female, OBC_OP-OBC Open, OBC_F-OBC Female, NRI-Non Residing Indian, PH-Physically Handicapped, JKR-Jammu&Kashmir Resident, JKM-Jammu&Kashmir Migrant, EWT-Employee Ward Teaching, EWNT-Employee Ward Non-Teaching staff.

**DURATION:** Four Semesters (Two Years)

## FEE STRUCTURE (2020-22)

| Semester | Academic Fee | Development &Maintenance Fee | Students' Services Fee | | Examination Fee | Total (Rs.) | |
|---|---|---|---|---|---|---|---|
| | | | **Boys** | **Girls** | | **Boys** | **Girls** |
| First | 2500 | 2000 | 3300 | 3111 | 2500 | 10300 | 10111 |
| Second | 2500 | 2000 | 2911 | 2722 | 2500 | 9911 | 9722 |
| Third | 2500 | 2000 | 3300 | 3111 | 2500 | 10300 | 10111 |
| Fourth | 2500 | 2000 | 2911 | 2722 | 2500 | 9911 | 9722 |

- Caution money (Refundable) of Rs. 4000/ - will be charged additionally in the first semester.
- Alumni Fee ofRs.500/-will be charged extra in the first semester.
- If a student repeats a paper(s) in a semester, an additional fee of Rs.500/ - per paper shall be payable.
- For NRI/FN/PIO Candidates, a fee of US$ 3500 Per Annum shall be payable on yearly basis. They will have to pay a refundable deposit of US$ 500 once at the time of admission.
- Hostel Fee and Central Library Fee will be extra.

## PROGRAMMESTRUCTURE (2020 -22)

### Semester I     28Credits

| Sr. No. | Course Code | Course Name | Lecture (L) Hr | Tutorial (T) Hr | Practical (P) Hr | Credit |
|---|---|---|---|---|---|---|
| 1 | ST5A-501 | Measure and Probability Theory | 3 | 1 | 0 | 4 |
| 2 | ST5A-503 | Linear algebra * | 3 | 1 | 0 | 4 |
| 3 | ST5A-505 | Distribution Theory | 3 | 1 | 0 | 4 |
| 4 | ST5A-507 | Statistical methods | 3 | 1 | 0 | 4 |
| 5 | ST5A-509 | Statistical Computing * | 3 | 1 | 0 | 4 |
| 6 | ST5A-511 | Practical paper | | | 8 | 4 |
| 7 | ST5A-551 | Comprehensive Viva-voce | - | - | - | 4 |

### Semester II     28Credits

| Sr. No. | Course Code | Course Name | Lecture (L) Hr | Tutorial (T) Hr | Practical (P) Hr | Credit |
|---|---|---|---|---|---|---|
| 1 | ST5A-502 | Sample Surveys and Indian Official Statistics | 3 | 1 | 0 | 4 |
| 2 | ST5A-504 | Stochastic Processes | 3 | 1 | 0 | 4 |
| 3 | ST5A-506 | Statistical Inference - I | 3 | 1 | 0 | 4 |
| 4 | ST5A-508 | Word Processing Through MS Word and Spreadsheets: MS Excel* | 3 | 1 | 0 | 4 |
| 5 | ST5A-510 | Multivariate Analysis | 3 | 1 | 0 | 4 |
| 6 | ST5A-512 | Practical Paper | | | 8 | 4 |
| 7 | ST5A-552 | Comprehensive Viva-voce | - | - | - | 4 |

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**Semester III**                                                                 **26Credits**

| Sr. No. | Course Code | Course Name | Lecture (L) Hr | Tutorial (T) Hr | Practical (P) Hr | Credit |
|---|---|---|---|---|---|---|
| 1 | ST5A-601 | Statistical Inference II | 3 | 1 | 0 | 4 |
| 2 | ST5A-603 | Design and Analysis of Experiments | 3 | 1 | 0 | 4 |
| 3 | ST5A-605 | Operations Research (i) | 3 | 1 | 0 | 4 |
| 4 | ST5A-607 | Statistical process and Quality Control | 3 | 1 | 0 | 4 |
| 5 | ST5A -609 | Project involving: Statistical techniques/Operations research/ Computer software/Programming | | 12 | | 6 |
| 6. | ST5A-651 | Comprehensive Viva-voce | - | - | - | 4 |

**Semester IV**                                                                 **26Credits**

| Sr. No. | Course Code | Course Name | Lecture (L) Hr | Tutorial (T) Hr | Practical (P) Hr | Credit |
|---|---|---|---|---|---|---|
| 1 | ST5A-602 | Linear Models and Regression Analysis | 3 | 1 | 0 | 4 |
| 2 | ST5A-604 | Econometrics* | 3 | 1 | 0 | 4 |
| 3 | ST5A-606 | Operations Research (ii)* | 3 | 1 | 0 | 4 |
| 4 | ST5A-608 | Planning and Analysis of Industrial Experiments * | 3 | 1 | 0 | 4 |
| 5 | ST5A-610 | Analysis* | 3 | 1 | 0 | 4 |
| 6 | ST5A-612 | Project involving: Statistical techniques/Operations research/Computer software/Programming | | 12 | | 6 |
| | ST5A-652 | Comprehensive Viva-voce | - | - | - | 4 |

**Note: The above programme structure can be modified as per requirement from time to time in accordance with University Ordinance No. 14.**

## PROGRAMME OUTCOMES

The M.Sc. course is designed with a view to catering to present day requirements in various Industries, IT Sector, Research and Development fields, Higher Studies, Planning Commission, Medical and Social Researches, Finance/ Econometric Modeling using Big-Data. Moreover, the course structure intends to inculcate strong laboratory skills (Using R-Programming, SPSS and EXCEL) so that students can take up independent industrial projects, Consultancy in any areas of Research with very strong knowledge of Designing of Experiments, Sample Surveys, Statistical Quality Control, Operations Research, Stochastic Processes, Advanced Econometrics etc.

In this course we boost analytical skills among students, developing the understanding of statistical theory and its real life applications.

## JOB OPPORTUNITIES:

**There is a wide choice of career opportunities for well qualified statisticians for example**

1. **Banking/ Insurance**
2. **Govt. Sector as statistical officers**
3. **Indian Statistical service**
4. **Scientists in agriculture as expert in designing the experiments**
5. **Statistical quality control experts in industries**
6. **IT professionals**
7. **Teaching in higher educations**