



**JanataShikshanSanstha's**  
**KISAN VEER MAHAVIDYALAYA, WAI**



**Certificate Course Report**

**Supportive Documents for  
Certificate Course Annual Report**

**Certificate Course Annual Report includes-**

- 1. Short Report of the Particular Academic Year**
- 2. Notice regarding the Introduction date of the course**
- 3. Syllabus of the Course**
- 4. Course Objectives and Outcomes**
- 5. List of enrolled students.**
- 6. Result**
- 7. One Sample Certificate**

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Janta Shikshan Sanstha's  
**Kisan Veer Mahavidyalay, Wai**  
Department of Statistics  
**Certificate course in R- Software**



**Duration: 40 Clock Hours**

**Classes offered: B.Sc. III (STATISTICS)**

**Course Description:**

In this course you will learn how to program in R and how to use R for effective data analysis. You will learn how to install and configure software necessary for a statistical analysis. The course covers practical issues in statistical computing which includes programming in R, reading data into R, accessing R packages, writing R functions.

**Course Objectives:**

- ★ To introduce statistical Technology to the students.
- ★ To get the knowledge for analysis of statistical data by using R software.
- ★ To get job opportunities in industrial sector.
- ★ To develop a skill for statistical consultancy

**Course Content:**

- ★ Introduction to R
- ★ Methods of Data Input
- ★ Diagrammatic presentation
- ★ Preparation of frequency table and graphical representation
- ★ Measures of central tendency and dispersion
- ★ Measures of Moments, Skewness and kurtosis
- ★ Probability and Probability Distribution
- ★ Statistical Inference

**Course Outcome:**

1. To learn installation and configuration of R
2. To access and read data
3. To access packages in R
4. To write programs in R

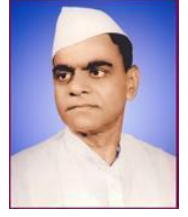
**Examination System:**

Exam is conducted along with Shivaji University practical exam.  
The exam is conducted in a practical manner.

Course Co-ordinator  
**Mr. R. H. Waliv**  
Dept. of Statistics



**Janata Shikshan Sanstha's**  
**KISAN VEER MAHAVIDYALAYA, WAI**  
Department of Statistics



**“Certificate course in R- Software”**

**Course Report 2022-23**



Janata Shikshan Sanstha's  
**KISAN VEER MAHAVIDYALAYA, WAI**  
Department of Statistics



**“Certificate course in R-Software”**

**Course Report 2022-23**

The Department of Statistics conducted a certificate course for B.Sc. III entitled “Certificate course in R – Software”. The course was conducted during 01/11/2022 to 9/05/2023. The time table was displayed on the notice board of the department.

In all 11 students were admitted for the course. Examination of the said course was conducted along with practical exam of B.Sc. III. Students gained knowledge about using R-software for statistical computation. The supportive staff and the administration of the College and especially the Principal supported a lot in conducting the course.

  
Principal

Kisan Veer Mahavidyalaya, Wai



  
Course Coordinator  
Department of Statistics



## 2. Notice of the Course

Department of Statistics  
Kisan Veer Mahavidyalaya, Wai  
Date 18/10/2022

All the students in B.Sc III are hereby informed that "**Certificate course in R-Software**" is going to start from 01/11/2022 This course is compulsory for B.Sc. III (Statistics) Students.



  
Head,  
Department of Statistics

## 3. Syllabus of the Course

*Janata Shikshan Sanstha's*  
**Kisan Veer Mahavidyalaya, Wai**  
**Department of Statistics**  
**Certificate Course in R- Software**

### Syllabus

#### 1. Introduction to R

- I. Introduction
- II. R as a Statistical Software and language
- III. Data types and arithmetic operators
- IV. R preliminaries

#### 2. Methods of Data Input

- I. C- function
- II. Seq-function
- III. Scan function
- IV. Rep-function
- V. Data-frame function
- VI. Matrix function

#### 3. Diagrammatic presentation

Standard plot functions , arguments to plot function, low level plotting functions Bar diagram, Sub-divided bar diagram, multiple bar diagram, subdivided bar diagram, pie- diagram, stem and leaf plot.

#### 4. Preparation of frequency table and graphical representation

Construction of frequency distribution table (for discrete and grouped data). Graphical representation- Rod and Spike graph, Histogram , Frequency polygon, Ogive curves.

#### 5. Measures of central tendency and dispersion-

Arithmetic Mean , Geometric mean, Harmonic mean, Median , Quartiles Deciles, Percentiles, Mode. Interquartile range, Mean deviation about mean, Variance , Standard Deviation, Coefficient of variation.

#### 6. Measures of Moments ,Skewness and kurtosis-

Raw and central moments, Measures of Skewness , Measures of Kurtosis.

#### 7. Probability and Probability Distribution

Application of Binomial Distribution, Fitting of Binomial distribution Application of hypergeometric distribution, fitting of hypergeometric distribution, Poisson Distribution.

Normal Distribution, Exponential Distribution.

**8. Statistical Inference**

- I. Sampling distribution of sample mean
- II. Estimation of parameters
- III. Plots to check normality
- IV. Hypothesis testing, chi-square test, t-test, f-test
- V. Goodness of fit tests.

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## 4. Objectives of the Course

### Objectives of the course

- 1) To introduce statistical Technology to the students.
- 2) To get the knowledge for analysis of statistical data by using R software.
- 3) To get job opportunities in industrial sector.
- 4) To develop a skill for statistical consultancy.

Kisan Veer Mahavidyalaya

## 5. List of enrolled students

Janata Shikshan Sanstha's  
Kisan Veer Mahavidyalaya, Wai  
Department of Statistics  
List of Students ( R Software Course 2022-23)

Sr. No.	Roll No	Name of Student
1	121	Wadkar Avinash Ananda
2	122	Shinde Harshad Sharad
3	123	Bhingare Suraj Sunil
4	124	Shinde Aditya Santosh
5	125	Bagal Adarsh Shivaji
6	126	More Rohan Ganesh
7	129	Ghadage Supriya Ashok
8	130	Dhumal Manali Sunil
9	132	Shelar Akanksha Uttam
10	133	Sonawale Priti Kisan
11	135	Gaikwad Sumit Girish



Head  
Department of Statistics  
Kisan Veer Mahavidyalaya, Wai



## 6. Time Table

Janata Shikshan Sanstha's  
Kisan Veer Mahavidyalaya, Wai

B.Sc. III (Statistics)

Year : 2022-23

R SOFTWARE COURSE (Time Table)

Sr. No.	Time	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
1	11.00 to 3.00	Batch-I	Batch-I				



Head

Department of Statistics











## 8. Result

Janata Shikshan Sanstha's  
Kisan Veer Mahavidyalaya, Wai  
Department of Statistics

Marksheet of Students R Software Course (2022-23)

Roll No.	Name of Student	Marks
121	Wadkar Avinash Ananda	7
122	Shinde Harshad Sharad	6
123	Bhingare Suraj Sunil	7
124	Shinde Aditya Santosh	7
125	Bagal Adarsh Shivaji	7
126	More Rohan Ganesh	6
129	Ghadage Supriya Ashok	10
130	Dhumal Manali Sunil	10
132	Shelar Akanksha Uttam	10
133	Sonawale Priti Kisan	10
135	Gaikwad Sumit Girish	6



  
Head  
Department of Statistics  
Kisan Veer Mahavidyalaya, Wai

## 9. One Sample Certificate



Janata Shikshan Sanstha's

**KISAN VEER MAHAVIDYALAYA, WAI.**  
**DIST- SATARA**

Department of Statistics

**\* CERTIFICATE \***

This is to certify that *Mr / Miss Dhumal Manali Sunil* has Successfully  
completed the Certificate Course in "R-Software " conducted by Department of Statistics  
Kisan Veer Mahavidyalaya, Wai, Dist- Satara during the academic year 2022 - 2023

  
**Head, Dept of Statistics**

  
**Principal**