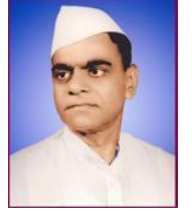




Janata Shikshan Sanstha's
KISAN VEER MAHAVIDYALAYA, WAI



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**

Kisan V



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 Application of R- Software”
Course Report 2023-24**



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




**“Certificate course in Applications of R-Software”
Course Report 2023-24**

The Department of Statistics conducted a certificate course for B.Sc. III entitled “Certificate course in Applications of R – Software”. The course was conducted during 01/09/2023 to 16/03/2024. The time table was displayed on the notice board of the department.

In all 14 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.


Course Coordinator
Department of Statistics



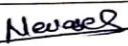




Principal
Kisan Veer Mahavidyalaya, Wai

2. Notice regarding the BOS and Introduction date of the Course

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


The Meeting of the Board of Studies of Statistics will be held on Thursday 15th May 2023 at 11.45 am in the Department of Statistics. The meeting will be chaired by Mr. B. B. Patkure, Head, Department of Statistics, Kisan Veer Mahavidyalaya, Wai. All the Members are advised to attend the meeting.

Sr. No.	Name	Designation	Position	Signature
1.	Prof. B.B. Patkure	Head Department of Statistics Kisan Veer Mahavidyalaya, Wai	Chairperson	
2.	Dr. R.H. Waliv	Assistant Professor Department of Statistics Kisan Veer Mahavidyalaya, Wai	Member	
3.	Mr. Shrikrushna Nevase	Data Science Maneger , Merck Shark & Dohme (MSD),Pune	Member	
4.	Mr. Rohan Jadhav	Senior Credit Analyst, Crisil , Pune	Member	

Agenda:

1. To recommend to the College Development Committee through the Principal the introduction of new Certificate Course/s
2. To recommend to the College Development Committee through the Principal the discontinuation of earlier Certificate Course
3. To recommend to the Principal the course syllabi, course structure & evaluation scheme of new Certificate Course/s
4. To recommend the reference books and other study material to be used for the study of the Course/s
5. Any other subject with the Permission of the Chair




Mr. B. B. Patkure
Head
Department of Statistics

Copy: 1. For signatures of all Members

2. Mr. B. B. Patkure

Date: 12th May 2023

Department of Statistics

Kisan Veer Mahavidyalaya, Wai

Date: 18/08/2023

All the students in B.Sc.III are hereby informed that the lectures of the "Certificate course in Application of R-Software" will be start from September 1, 2023. This course is compulsory for B.Sc.III Statistics students. If any student remains absent then he will be responsible for his losses.



A handwritten signature in black ink, appearing to be "R. S. Patil".

Head,

Department of Statistics

3. Syllabus Of the Course

**Janata Shikshan Sanstha's
KISAN VEER MAHAVIDYALAYA, WAI
Department of Statistics
Syllabus for "Certificate Course in Application of R Software"**

1. Introduction to R

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

2. Methods of Data Input

- I. C-function
- II. Seq-function
- III. Rep-function
- IV. Data frame function
- V. Matrix function
- VI. Programming: Algorithm, flow chart, Structure of programme.

3. Diagrammatic presentation

Standard plot functions, arguments to plot function, low level plotting functions, Bar diagram, Sub divided bar diagram, multiple bar diagram, pie – diagram, box plot.

4. Preparation of frequency table & graphical representation

Construction of frequency distribution table (for discrete & grouped data). Graphical representation – Histogram, Frequency polygon, Ogive curves.

5. Measures of central tendency & 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 & Kurtosis

Raw and central moments, Measures of skewness, Measures of kurtosis.

7. Probability & 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
- VI. ANOVA – one way, two way
- VII. Simulation techniques.

Reference Books :

1. Statistics using R: Sudha Purohit, Sharad Gore, Shailaja Deshmukh.
2. Statistics using R: Prof. Pawgi V.R.

Duration of the Course - Four Month (40 clock hours)

Laboratory Requirements:

Laboratory should be well equipped computers along with R software, UPS, and printers.



Head
Department of Statistics
Kisan Veer Mahavidyalaya, Wai

Practical Programs:

1. Data input/ output using R
2. Diagrammatic representation of data
3. Graphical representation of data
4. Measures of Central Tendency
5. Measures of Dispersion
6. Simulation I (Bernoulli, Binomial, Poisson and Geometric distribution)
7. Simulation II (Exponential , Normal distribution)



Head
Department of Statistics
Kisan Veer Mahavidyalaya, Wai

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.

5. List of enrolled students

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

List of Students in Application of R Software Course (2023-24)

Sr. No.	Roll No.	Student's Name
1	121	PISAL JAGANNATH KUMAR
2	122	BHOSALE OM RAVINDRA
3	123	KHARE ATHARV NANDKUMAR
4	124	JAGTAP AVISHKAR JEEVAN
5	125	GAIKWAD RUTIKA VITTHAL
6	126	CHAVAN SAKSHI SUDHAKAR
7	127	SHINDE PRUTHVIRAJ PRAKASH
8	128	CHAUDHARI VINIT ASHOK
9	129	KARANJE SANKET SANJAY
10	130	THORAVE PRATIK SUDHIR
11	131	JAGTAP JIVAN ATMARAM
12	132	SUNEHA RAJPUT
13	136	JADHAV PRATHAMESH DASHRATH
14	137	SHINDE MAYUR VITTHAL




Head

Department of Statistics

6. Time Table

**Janata Shikshan Sanstha's
Kisan Veer Mahavidyalaya, Wai
B.Sc. III (Statistics)
Year: 2023-24
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

Mark sheet of Students in Application of R Software Course (2023-24)

Sr. No.	Roll No.	Student's Name	Marks
1	121	PISAL JAGANNATH KUMAR	7
2	122	BHOSALE OM RAVINDRA	7
3	123	KHARE ATHARV NANDKUMAR	10
4	124	JAGTAP AVISHKAR JEEVAN	7
5	125	GAIKWAD RUTIKA VITTHAL	9
6	126	CHAVAN SAKSHI SUDHAKAR	9
7	127	SHINDE PRUTHVIRAJ PRAKASH	9
8	128	CHAUDHARI VINIT ASHOK	9
9	129	KARANJE SANKET SANJAY	10
10	130	THORAVE PRATIK SUDHIR	8
11	131	JAGTAP JIVAN ATMARAM	8
12	132	SUNEHA RAJPUT	10
13	136	JADHAV PRATHAMESH DASHRATH	8
14	137	SHINDE MAYUR VITTHAL	9



Head

Department of Statistics

9. One Sample Certificate



JANATA SHIKSHAN SANSTHA'S
KISAN VEER MAHAVIDYALAYA, WAI.
DIST- SATARA




DEPARTMENT OF STATISTICS

❀ CERTIFICATE ❀

This is to certify that Mr/MissSuneha.....Rajput.....
has completed the Certificate Course in " APPLICATION OF R-SOFTWARE " conducted by the
Department of Statistics Kisan Veer Mahavidyalaya, Wai, Dist-Satara during the academic year 2023- 2024


Coordinator


Head
Dept of Statistics


Principal