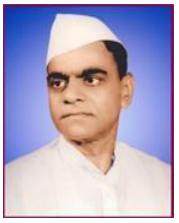
JanataShikshanSanstha's

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. **One Sample Certificate**
7. **Result**

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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:

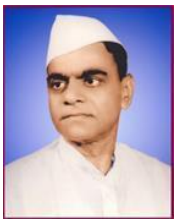
Exam is conducted along with Shivaji University practical exam.
The exam is conducted in a practical manner.

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

JanataShikshanSanstha'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 18/11/2022

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

Head
Department of Statistics
Kisan Veer Mahavidyalaya, Wai
Dist. Satara - 412803

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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.

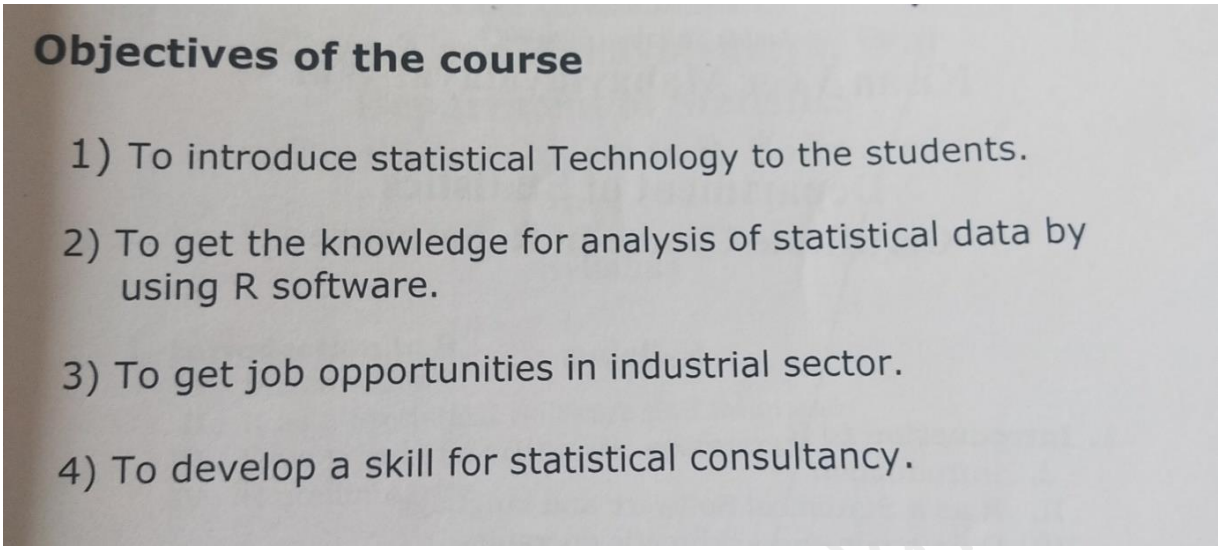
Normal Distribution, Exponential Distribution.

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.

Kisan Veer Mahavidyalaya, We

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 Mahavidyala

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. One Sample Certificate

Janata Shikshan Sanstha's

KISAN VEER MAHAVIDYALAYA, WAI.
DIST- SATARA

Department of Statistics

✻ CERTIFICATE ✻

This is to certify that Mr / Miss_____ has Successfully completed the Certificate Course in "R-Software " conducted by Department of Statistics Kisan Veer Mahavidyalaya, Wai, Dist- Satara during the academic year 20 - 20

Head, Dept of Statistics

Principal

Janata Shikshan Sanstha's

Kisan Veer Mahavidyalaya, Wai

Department of Statistics (B. Sc III) 2022-23

R-Software course Attendance

Sr. No.	Roll No	1-11-22	7-11-22	8-11-22	14-11-22	15-11-22	21-11-22	22-11-22	28-11-22	29-11-22	5-12-22	6-12-22	12-12-22
1	121												
2	122	H.S.Shinde	H.S.Shinde	H.S.Shinde	H.S.Shinde	H.S.Shinde	H.S.Shinde	H.S.Shinde	H.S.Shinde	H.S.Shinde	H.S.Shinde	H.S.Shinde	H.S.Shinde
3	123												
4	124												
5	125												
6	126												
7	129	S.A.G	S.A.G	S.A.G	S.A.G	S.A.G	S.A.G	S.A.G	S.A.G	S.A.G	S.A.G	S.A.G	S.A.G
8	130												
9	132												
10	133	Sawale	Sawale	Sawale	Sawale	Sawale	Sawale	Sawale	Sawale	Sawale	Sawale	Sawale	Sawale
11	135	S.G.Gaikwad	S.G.Gaikwad	S.G.Gaikwad	S.G.Gaikwad	S.G.Gaikwad	S.G.Gaikwad	S.G.Gaikwad	S.G.Gaikwad	S.G.Gaikwad	S.G.Gaikwad	S.G.Gaikwad	S.G.Gaikwad

7. Attendance Sheet

Janata Shikshan Sanstha's

Kisan Veer Mahavidyalaya, Wai

Department of Statistics (B. Sc III) 2022-23

R-Software course Attendance

Sr. No.	Roll No	13-12-22	9-1-23	10-1-23	16-1-23	17-1-23	23-1-23	24-1-23	30-1-23	31-1-23	6-2-23	7-2-23	13-2-23
1	121												
2	122	H.S.Shinde	H.S.Shinde	H.S.Shinde	H.S.Shinde	H.S.Shinde	H.S.Shinde	H.S.Shinde	H.S.Shinde	H.S.Shinde	H.S.Shinde	H.S.Shinde	H.S.Shinde
3	123												
4	124												
5	125												
6	126												
7	129	S.A.G	S.A.G	S.A.G	S.A.G	S.A.G	S.A.G	S.A.G	S.A.G	S.A.G	S.A.G	S.A.G	S.A.G
8	130												
9	132												
10	133												
11	135	S.G.Gaikwad	S.G.Gaikwad	S.G.Gaikwad	S.G.Gaikwad	S.G.Gaikwad	S.G.Gaikwad	S.G.Gaikwad	S.G.Gaikwad	S.G.Gaikwad	S.G.Gaikwad	S.G.Gaikwad	S.G.Gaikwad

Janata Shikshan Sanstha's

Kisan Veer Mahavidyalaya, Wai

Department of Statistics (B. Sc III) 2022-23

R-Software course Attendance

Sr. No.	Roll No	14-2-23	20-2-23	21-2-23	27-2-23	28-2-23	6-3-23	7-3-23	13-3-23	14-3-23	20-3-23	21-3-23	27-3-23
1	121												
2	122	H.S.Shinde	H.S.Shinde	H.S.Shinde	H.S.Shinde	H.S.Shinde	H.S.Shinde	H.S.Shinde	H.S.Shinde	H.S.Shinde	H.S.Shinde	H.S.Shinde	H.S.Shinde
3	123	S.B	S.B	S.B	S.B	S.B	S.B	S.B	S.B	S.B	S.B	S.B	S.B
4	124												
5	125												
6	126	Dore	Dore	Dore	Dore	Dore	Dore	Dore	Dore	Dore	Dore	Dore	Dore
7	129	S.A.G	S.A.G	S.A.G	S.A.G	S.A.G	S.A.G	S.A.G	S.A.G	S.A.G	S.A.G	S.A.G	S.A.G
8	130												
9	132	Thelen	Thelen	Thelen	Thelen	Thelen	Thelen	Thelen	Thelen	Thelen	Thelen	Thelen	Thelen
10	133	Shewale	Shewale	Shewale	Shewale	Shewale	Shewale	Shewale	Shewale	Shewale	Shewale	Shewale	Shewale
11	135	S.G.Gaikwad	S.G.Gaikwad	S.G.Gaikwad	S.G.Gaikwad	S.G.Gaikwad	S.G.Gaikwad	S.G.Gaikwad	S.G.Gaikwad	S.G.Gaikwad	S.G.Gaikwad	S.G.Gaikwad	S.G.Gaikwad

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