



R. J. COLLEGE of Arts, Science & Commerce (AUTONOMOUS)

(Hindi Vidya Prachar Samiti's RAMNIRANJAN JHUNJHUNWALA COLLEGE of Arts, Science & Commerce)

Opposite Ghatkopar Railway Station, Ghatkopar (West), Mumbai 400086, Maharashtra, INDIA.

Website: www.rjcollege.edu.in Email: rjcollege@rjcollege.edu.in Tel No: +91 22 25151763 Fax No: +91 22 25150957

College is recognized under Section 2(f) & 12(B) of the UGC Act, 1956

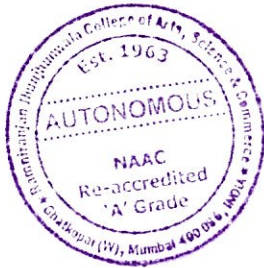
Affiliated to UNIVERSITY OF MUMBAI || NAAC Re-Accredited 'A' Grade (CGPA: 3.50)

25/03/2019

NOTICE

DEGREE COLLEGE

The Department of Statistics is organising a Value-Added Course in **Intermediate R Programming Using R Studio**. The value-added course will commence from April 2019. On successful completion of the course students will be awarded with a certificate.



[Signature]

Principal
PRINCIPAL

RAMNIRANJAN JHUNJHUNWALA COLLEGE
OF ARTS, SCIENCE & COMMERCE (AUTONOMOUS)
Ghatkopar (W), Mumbai-400086, Maharashtra, INDIA

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Department of Statistics
Value Added Course in
Intermediate R programming Using R Studio
Organized on
April 2019- May 2019



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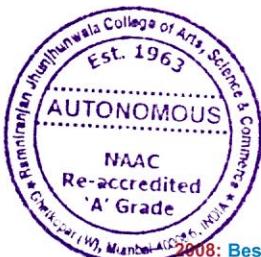
DEPARTMENT OF STATISTICS
organises

Value added course in

'Intermediate R Programming Using R Studio'



April 2019 to May 2019



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BROCHURE



Hindi Vidya Prachar Samiti's RAMNIRANJAN JHUNJHUNWALA COLLEGE (AUTONOMOUS)

(Also known as R. J. College of Arts, Science & Commerce as per UGC Notification)

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NAAC Accredited 'A GRADE' with CGPA 3.50

Knowledge is all Ambrosia

**CERTIFICATE
COURSE IN**

**DATA
ANALYTICS
USING
R SOFTWARE**

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CERTIFICATE COURSE IN DATA ANALYTICS USING R SOFTWARE

ABOUT US

Hindi Vidya Prachar Samiti was incepted on the auspicious day of Shri Krishna Janmashtami, 15th August 1938. A brain child of a visionary Late Shri Nandkishore Singh Jairamji, samiti was established with the objectives of catering to the educational needs of the Hindi speaking community. Ramniranjan Jhunjunwala College came into existence in 1963, enabling a larger section of the society to take advantage of the facilities provided for higher education.

From 1999-2000 the College has added a number of self-financing courses like B.M.S., B.B.I., B.Sc. in Computer Science, Information Technology, Biotechnology, M.Sc. in Computer Science, Biotechnology and Information Technology as well as add on courses, which further hone the special skills of the students.

The college has been reaccredited with 'A' Grade by NAAC in 2014 with a CGPA 3.50 and received the Best College Award (2007-2008) of the University of Mumbai. The College has been bestowed with IMC "Ramkrishna Bajaj Performance Excellence Trophy", 2010.

The Former Principal of the college was awarded "Best Teacher" by Government of Maharashtra in 2011.

Government of Maharashtra conferred the college with "JAAGAR JAANIVANCHA" (First in Mumbai Suburban- in 2013 and Second in Mumbai Suburban- in 2014) for safety of girls.

Course Code: **RJSTAT**

Duration: **30** hours

Credits: **02**

ABOUT COURSE

- This Course will be introduced to enhance the students' skills of Using R software.
- From this course students will come to know how to analyse statistical data using R software and Excel.



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COURSE OBJECTIVE

Unit	Objectives	Suggested Activities	Duration	Mode of Assessment
I	Understanding the R work-space and how to write R commands to solve statistical problems.	Lectures Assignment Library work	2 Hours 3 Hours 2 Hours	Quiz (20 Minutes)
II	Writing codes to find different types of central tendency and dispersions in R software and Excel.	Lectures Assignment Library work	2 Hours 3 Hours 2 Hours	Quiz (20 Minutes)
III	Visualize the data and analyze it using correlation and regression in R software	Lectures Assignment Library work	2 Hours 3 Hours 2 Hours	Quiz (20 Minutes)
IV	Understanding how to write codes for different probability distributions in R.	Lectures Assignment Library work	2 Hours 3 Hours 2 Hours	Quiz (20 Minutes)

COURSE CONTENT

Unit I
R Fundamentals: Introduction to the interface (R/ R Studio): Basic Functionalities: Type of vectors, Data Exploration using R, Reading Data into R, Subsetting, Matrices & Data Frames. Diagrammatic Representation - Bar Diagrams – Subdivided, Multiple, Percentage, Pie Charts, Stem & Leaf, Box-plot. Frequency distributions- preparation of freq. distribution table, graphical representation, histogram (grouped ungrouped), polygon, ogives, empirical distribution.

Unit II
Using R software :-
Measures of central tendency and dispersion – Mean(Arithmetic Mean, Geometric Mean, Harmonic Mean), Median, Mode, Quantiles (for grouped and ungrouped data), Mean deviation, Quartile deviation, Standard deviation, Skewness, Kurtosis. Simple Random Sampling (WR and WOR), Estimation of sample size, Stratified and Systematic Sampling.

Unit III
Using R software :-
Scatter Diagram, Product Moment correlation and its properties. Spearman's Rank Correlation'
Concept of linear regression. Fitting a straight line by method of least square. Relation between regression coefficients and correlation coefficient. Concept and use of coefficient of determination R^2 .

Unit IV
Using R software :-
Some standard discrete distributions:
Discrete Uniform, Binomial, Poisson and Hypergeometric distribution. Recurrence relation for probabilities of Binomial and Poisson distribution. Some standard continuous distribution:
Uniform, Exponential, memory less property of exponential distribution. Normal and Standard Normal distribution. Properties of Normal and SNV.



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EVALUATION

Evaluation Criteria	Maximum Marks	Minimum Marks to be Scored
Quiz	10	04
Assignment	20	08
Examination - Problem Solving	20	08
Total	50	20

MEDIUM OF INSTRUCTION English

50 MARKS  **PASSING 20**

WHO SHOULD DO IT?

Any UG and or PG student



Use

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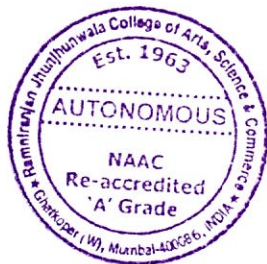
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Report

Department of Statistics conducted a value-added course titled "Intermediate R Programming Using R Studio" from April 2019 to May 2019. The course was conducted by Balachandra Devadiga, Vivekananth Nadar, Rajashimman Achari, Anil Kumar and Mr. Atul Patil. It spanned a total duration of 30 hours and aimed to enhance participants' skills in R programming. The course incorporated various assessment methods such as quizzes, assignments, and mini projects to evaluate the students' understanding and progress. These evaluations served as an opportunity for participants to apply their knowledge and demonstrate their proficiency in R programming. A total of 20 TYBSC Statistics students and one staff from another department benefitted from this course. The participants had the opportunity to learn and develop their skills in R programming, equipping them with valuable knowledge in statistical analysis and data manipulation.

No. of registered students = 21

No. of participants benefited = 20 TYBSC (Statistics)+ 1 Staff



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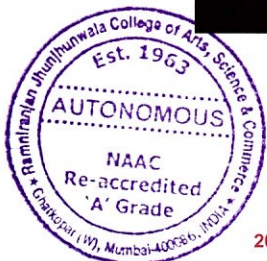
PHOTOS OF THE VALUE-ADDED COURSE IN R SOFTWARE HELD FROM 8TH APRIL 2019 ONWARDS



Students during the value-added course.



Students during the certificate distribution function



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List of students

Sr No	Name
1	Sachin Rampratap Gupta
2	vishwakarma chhotelal rajendra
3	Satyanarayan kori
4	Sayyed Sadaf Bande Nawaz
5	Shyama Suresh Shukla
6	Khan reshma ramzan
7	PRATIKSHA RAMCHANDRA JADHAV
8	Swati Janardan sakre
9	Yadav Manish Rammilan
10	Pooja Garud
11	Manisha Gupta
12	Chandrabhushan pandey
13	Mishra Rupesh Girjashankar
14	YADAV CHANDRABHAN GAMA
	Dipesh Kumar Ramesh Kumar
15	Jaiswal
16	Harsh Sudesh Waghmare
17	Sachin Gupta
18	Madhura Udhav Jejurkar
19	Neha Sanjay Chavhan
20	Yadav Mukesh Lalbahadur
21	Satyavati Rao



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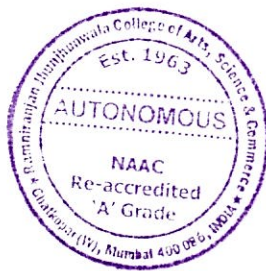
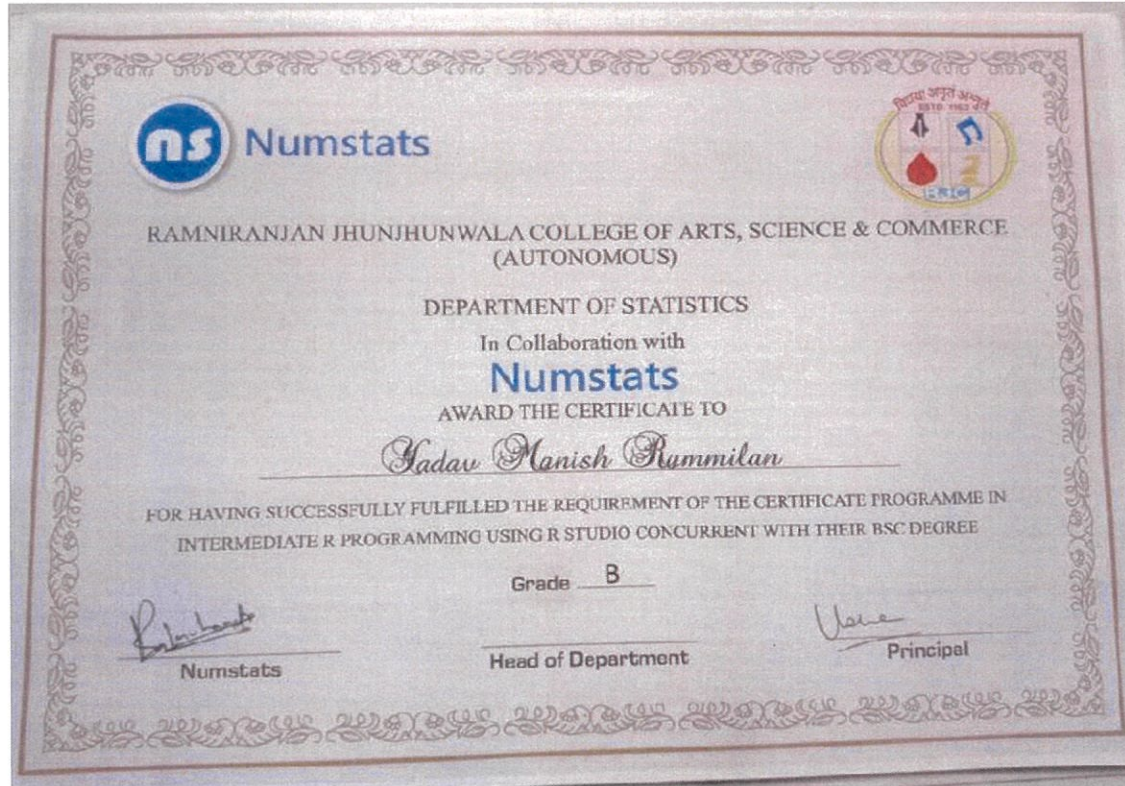
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Certificate



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