

संख्याशास्त्र विभाग

विवेकानंद कॉलेज,
कोल्हापूर (स्वायत्त)
दि. ११/०३/२०२२

प्रति,
मा. प्राचार्य,
विवेकानंद कॉलेज,
कोल्हापूर(स्वायत्त)

विषय :- R-Programming चे वर्कशॉप घेण्याकरीता
परवानगी व त्यासाठी लागणारा खर्चास मंजूरी
मिळणेबाबत...

महोदय,

खरील विषयी विनंती अर्ज करतो की, संख्याशास्त्र
विभागातील श्री. एरवी भाग तीन मधील विद्यार्थ्यांसाठी R-
Programming चे ज्ञान दिवसांचे वर्कशॉप दि. १४.०३.२०२२ ते
दि. २०.०३.२०२२ या कालावधीमध्ये घेण्यास परवानगी मिळावी तसेच
या वर्कशॉपसाठी अंदाजे खर्च रु. ६०००० येणार आहे. तर अद्वय
खर्चास मंजूरी मिळावी ही नम्र विनंती.

कळावे,

~~मंजूरी देणेस हरकत नाही~~

आपला विश्वासू

12/3/22

12/3/22

संख्याशास्त्र विभागप्रमुख

Department of Statistics
Vivekanand College Kolhapur

"ज्ञान विज्ञान आणि सुसंस्कार यासाठी शिक्षण प्रभाव"
-शिक्षणमहर्षी डॉ. जापूजी भाळूंखे

Vivekanand College (Autonomous), Kolhapur
Department of Statistics

B.Sc. III

Notice

Date: 12/03/2022

All students of B.Sc. - III are hereby informed that, our department is organizing a "Workshop on R-programming" during 14th march to 20th March, 2022 in Room no. 38.

Day	Day & Date	Topic Name	Lecturer	Time
1	Monday 14/03/2022	Unit 1,2 and 3	Mr. P.S. Chougale	8.00 am - 10.00am
2	Tuesday 15/03/2022			8.00 am - 10.00am
3	Wednesday 16/03/2022	Unit 4, 5, 6 and 7	Mr. Sachin Patil	8.00 am - 10.00am
4	Thursday 17/03/2022			8.00 am - 10.00am
5	Friday 18/03/2022	Unit 8 and 9	Mr. M. S. Barale	8.00 am - 10.00am
6	Saturday 19/03/2022			8.00 am - 10.00am
7	Sunday 20/03/2022	Unit 10	Mr. Krushnat Mali	8.00 am - 10.00am

Ms. V. V. Pawar

Ms. V. V. Pawar

Associate Professor

Head

Department of Statistics
Vivekanand College Kolhapur

Dr. R. R. Kumbhar

Dr. R. R. Kumbhar

PRINCIPAL
Vivekanand College
Kolhapur

Syllabus

Introduction to R

Units:

1. Installation and introduction to R, History.
2. Data Input/ Output
 - Creation of vector using commands: Combine (c), scan, cbind, rbind, seq, rep, edit, sort, length, which, order.
3. Operations on data
 - Operations on vectors: sum, prod, sort, rank, multiplication, division, exponent, modulus, integer division, max, min, summary.
 - Relation operators: Less than, Greater than, Less than or equal to, Greater than or equal to, Equal to, Not equal to.
 - Logical Operators: Logical NOT, Element-wise logical AND, Logical AND, Element-wise logical OR, Logical OR
 - Assignment Operators in R: Leftwards assignment (<-, <<-, =), Rightwards assignment (->, ->>)
 - Object identification: is.na, is.numeric, is.character, is.matrix, is.vector, is.null, is.factor. as. Functions.
4. Matrix manipulation: Creation of Matrix, Transpose, Addition, Subtraction, Multiplication, Determinant, Inverse of matrix, rank of matrix, diagonal matrix, zero matrix, common matrix.
 - Creation of data frame using commands: data.frame, dimension of data frame, extracton of elements of data frame, rbind, cbind functions, rowSums, colSums, rowMeans, colMeans, subset, attach, detach, apply functions.
5. Import and export data: read.table, read.csv, file.choose, write.table, write.csv.
6. Data visualization: r plot, Scatter Plot, hist, boxplot.
 - Diagrammatic representation of data: simple bar diagram, Sub - divided simple bar diagram, pie diagram.
 - Graphical representation of data: Histogram, frequency polygon, Ogive curves.
7. For loop, while loop, if else statement, break statement.
8. Exploratory data analysis: mean, variance, quantiles, pdf, cdf, random numbers, correlation, summary.
9. Statistical tools: prop.test, t.test, wilcox.test, ks.test, chisq.test, cor.test, linear regression.
10. Installation of packages.

Workshop on R- Programming
Vivekanand College, Kolhapur (Autonomous)

Sr.No	Student Name	14-Mar-22	15-Mar-22	16-Mar-22	17-Mar-22	18-Mar-22	19-Mar-22	20-Mar-22	21-Mar-22
1	Padmali R. Kolekar	M	M	M	M	M	M	M	M
2	Rujuta Shiraji Dhase	M	M	M	M	M	M	M	M
3	Supriya Narayan Mane	M	M	M	M	M	M	M	M
4	Sakshi S. Naware	M	M	M	M	M	M	M	M
5	Shweta R. Mundeale	M	M	M	M	M	M	M	M
6	Aakanksha C. Tadhar	M	M	M	M	M	M	M	M
7	Pooja Phanjaji Gurav	M	M	M	M	M	M	M	M
8	Madhuri Paratkhandra Powdy	M	M	M	M	M	M	M	M
9	Lalita Ramdas Koli	M	M	M	M	M	M	M	M
10	Rituja Anant Patil	M	M	M	M	M	M	M	M
11	Tisna Anoop Mathew	M	M	M	M	M	M	M	M
12	Shradha Dinkar Tadhav	M	M	M	M	M	M	M	M
13	Akanksha Nilesh Mugdar	M	M	M	M	M	M	M	M
14	shivam Nilbath Jabale	M	M	M	M	M	M	M	M
15	Sammed.M. Borwade	M	M	M	M	M	M	M	M
16	Pranav. More	M	M	M	M	M	M	M	M
17	Amey Jagadadi	M	M	M	M	M	M	M	M
18	Vedant C. Kambale	M	M	M	M	M	M	M	M
19	Debmukh Sivapnil	M	M	M	M	M	M	M	M
20	Kishor V. Khat	M	M	M	M	M	M	M	M
21	Siraj Y. Shidvankar	M	M	M	M	M	M	M	M
22	Yogiraj R. Killedar	M	M	M	M	M	M	M	M
23	Uditanshu Prabhavale	M	M	M	M	M	M	M	M
24	Santosh. A. Gurav	M	M	M	M	M	M	M	M
25	Kedar Kumathekar	M	M	M	M	M	M	M	M
26	Khushi D. Ramchandani	M	M	M	M	M	M	M	M
27	Bejal R. Shinde	M	M	M	M	M	M	M	M
28	Akhurini M. Kamble	M	M	M	M	M	M	M	M
29	Siddhesh R. Titakar	M	M	M	M	M	M	M	M
30	Siddhesh R. Lohar	M	M	M	M	M	M	M	M
31	Sakshi S. Naware	M	M	M	M	M	M	M	M
32	Sakshi S. Solase	M	M	M	M	M	M	M	M

Sakshi



“Education for Knowledge, Science and Culture”
-Shikshah Maharshi Dr. Bapuji Salunkhe

VIVEKANAND COLLEGE, KOLHAPUR
(AUTONOMOUS)

INTERNAL QUALITY ASSURANCE CELL



Report on One week workshop on “Introduction of R”

1. **Name of the Department** – Statistics
2. **Aim** –To make students familiar to R-software.
3. **Objectives** –
 - 1) To learn basics of R & write programs for iterative procedures using various loops.
 - 2) To learn data representation technique like graphs and tabulation.
 - 3) To perform statistical computation by using R.
4. **Day and Date** -14/3/2022 to 21/3/2022
5. **Venue**- Statistics Lab
6. **Resource persons** -1) Mr.P.S. Chougule, Head & Associate Prof. Dept. of Statistics Rajarshi Chh. Shahu College, Kolhapur
2) Mr. Sachin Patil, Assistant Prof. Dept of Statistics Shivaji University, Kolhapur
3) Mr.M.S. Barale, Assistant Professor, Symbiosis Statistical Institute, Pune.
4) Mr. Krushnath Mali Assistant Prof. Dept of Statistics Shri Shahaji Ch. Mahavidyalaya, Kolhapur
7. **Number of beneficiaries** – 32 students (17 girls +15 boys) + 6 Teachers
8. **Brief Description** –

On 14th March 2022 inaugural function of “**Introduction of R**” marked its beginning by President of the function Mr. P. S. Chougule, Head Department of Statistics Rajarshi Chh. Shahu College, Kolhapur. Ms. V. V. Pawar mentioned the progress in the field of statistics and the importance of staying updated with the technologies. Then, after the introduction Mr. P S Chougule explained importance and use of R Software

On 14th and 15th March Mr. P.S. Chougule taught about data types, data structure and arithmetic operations. In the next two days Mr. Sachin Patil enlightened on the concept of diagrammatic and graphical representation using R. In the next two days Dr. M.S. Barale discussed about exploratory data analysis in R and Loops in R. On 19th and 20th March Mr. Krushnah Mali introduced the concept of data import and export, install the package in R.

At the Valedictory function Principal Dr.R.R. Kumbhar motivated students with his experience and mentioned importance of computer language to sustain in this competitive and developing world.

Outcomes –

- 1) Students got knowledge to write R-program.
- 2) They learned how to represent data graphically using R.
- 3) Students became able to perform statistical computation with the help of R



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