

"Education through self-help is our motto"- KARMAVEER
RAYAT SHIKSHAN SANSTHA'S
RAJARSHI CHHATRAPATI SHAHU COLLEGE, KOLHAPUR
DEPARTMENT OF STATISTICS

Organized

Exploratory Data Analysis using MS-Excel

Self – Funded under Short Term Courses in the academic year 2025-26

COURSE REPORT

Department of statistics organized the certificate course in Exploratory Data Analysis using MS-Excel in statistics for B. Sc. II students for the academic year 2025-26. The main objectives of this course are:

- To indicate names and functions of excel interface components.
- To learn how to enter and edit the data.
- To learn how to formulate the data and cells.
- To learn how to create and modify chart and graph.
- Preview and print worksheets.
- To identify different statistical inbuilt functions.
- To learn techniques of computations of various statistical measures using Excel.

For this course fee of Rs.300 charged to the students. The course was conducted in the period of 09/02/2026 to 26/02/2026. Total number of beneficiaries for this course is 15. After completion of this course student's knowledge was checked through various computation tasks through assignments. Each student who successfully completed this course was awarded by certificate. Dr. Kurane T.S.(Head and co-ordinator). Mr. Kamble S.S. and Mr. Chavan P. S. worked as a Resource person for this course.

Outcomes: The students shall become confident and they acquire the knowledge requires to perform exploratory data analysis activities using MS-Excel.

**Total number of
beneficiaries is 12.**

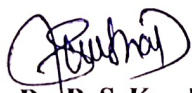


9130363331, Kadamwadi Rd, Tarabai Park, Kolhapur, Maharashtra 416003, India 🇮🇳
Latitude 16.71246037° Longitude 74.25188236°
Local 03:40:14 PM Altitude 558 meters
GMT 10:10:14 AM Tuesday, 10.02.2026



9130363331, Kadamwadi Rd, Tarabai Park, Kolhapur, Maharashtra 416003, India 🇮🇳
Latitude 16.71244563° Longitude 74.25188576°
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GMT 10:10:40 AM Tuesday, 10.02.2026


Dr. T.S. Kurane
Head and Co-ordinator
Department of Statistics


Dr. D. S. Kumbhar
Incharge
Short term Courses

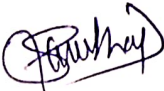

Dr. U. S. Shelke
IQAC Co-ordinator

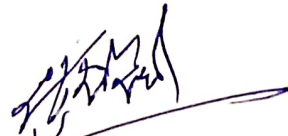

Prof. Dr. D. R. Bhosale
I/C Principal
R. C. Shahu College,
Kolhapur

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 Rayat Shikshan Sanstha's
Rajarshi Chhatrapati Shahu College, Kolhapur
Department of Statistics
 Organized
Certificate Course on Exploratory Data Analysis by Using MS-Excel
 (Self – Funded)
 Under
 Short Term Courses
 2025-2026
Income and Expenditure Statement

Income	Amount (in Rs.)	Expenditure	Amount (in Rs.)
Particulars		Particulars	
1) Total Participants = 12 (12*300)	3600/-	1) GST 18%	648/-
		1) Certificate Printing	156/-
		2) Remuneration for Recourse Person Lumsum (40% of Total amount 2952/- is 1180/- is distributed as Certificate Printing + remaining equally distributed into 2 persons)	
		i) Mr. Kamble S. S.	512/-
		ii) Mr. Chavan P. S.	512/-
		3)Balance to College	1772/-
Total	3600=00	Total	3600=00


Dr. T.S. Kurane
 Coordinator & Head
 Department of Statistics


Dr. D.S. Kumbhar
 Incharge
 Short term Courses


Prof. Dr. D. R. Bhosale
 I/C Principal
 R. C. Shahu College, Kolhapur

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Rayat Shikshan Sanstha's



RAJARSHI CHHATRAPATI SHAHU COLLEGE, KOLHAPUR

NAAC 4th Cycle Reaccredited with A++ (CGPA- 3.78)

DEPARTMENT OF STATISTICS

CERTIFICATE

This is to certify that Prof./Shri./Smt. Adarsh Paachi Dilip of

Rajarshi Chhatrapati Shahu College, Kolhapur has attended and Participated/Delivered a Lecture as Resource Person/Successfully Completed Certificate Course on **Exploratory data analysis using MS-Excel** organized by Department of Statistics, Rajarshi Chhatrapati Shahu College, Kolhapur from 09/02/2026 to 26/02/2026.


Dr. T. S. Kurane
Coordinator & HOD
Dept. of Statistics


Dr. D. S. Kumbhar
In charge
Short term Courses

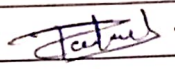
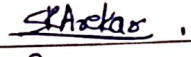
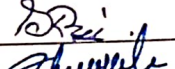
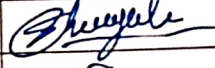
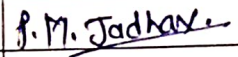
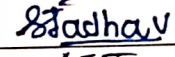
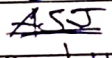
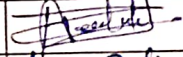
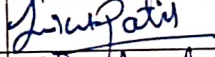
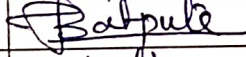
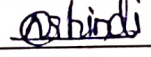

Dr. U. S. Shelke
IQAC
Coordinator


Prof. Dr. D. R. Bhosale
I/C Principal,
R. C. Shahu College, Kolhapur.

**RAYAT SHIKSHAN SANSTHA'S
RAJARSHI CHHTRPATI SHAHU COLLEGE, KOLHAPUR
DEPARTMENT OF STATISTICS**

Organized
Short Term Courses
**EXPLORATORY DATA ANALYSIS BY USING MS EXCEL
2025-26**

List of Students

Roll No.	Name of Student	Fee	Sign
1	Adsul Prachi Dilip	300	
2	Arekar Samruddhi Ramesh	300	
3	Bepari Saba Khudboddin	300	
4	Chougale Swapnil Akash	300	
5	Gokhale Shreeyash Sachin	300	
6	Jadhav Piyush Mahadev	300	
7	Jadhav Soham Bharat	300	
8	Jogi Aditya Suresh	300	
9	Padaval Aditi Anil	300	
10	Patil Aniket Balasaheb	300	
11	Satpute Tejswini Pankaj	300	
12	Shindi Aasiya Alfaj	300	


Head
Department of Statistics
Rajarshi Chh. Shahu College, Kolhapur




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R.C. SHAHU COLLEGE
KOLHAPUR

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Rayat Shikshan Sanstha's
Rajarshi Chhatrapati Shahu College, Kolhapur
Department of Statistics
Organized
Certificate course on
"Exploratory Data Analysis By Using Ms Excel"
Question Paper (2025-26)

Date: 27/02/2025

Marks: 50

Time: 1 hour

Choose Correct alternative	
1	MS-Excel is a A) Operating System B) Programming Language C) Spreadsheet Software D) Database Software
2	A collection of worksheets is called A) Workbook B) Sheet C) Cell D) Table
3	The intersection of a row and a column is called A) Box B) Cell C) Range D) Sheet
4	Which of the following is a text function in Excel? A) IF B) LEFT C) PMT D) DSUM
5	Which function is used for logical testing? A) IF B) LEN C) FV D) MID
6	VLOOKUP function is used to A) Look vertically in a table B) Look horizontally in a table C) Calculate mean D) Draw chart
7	Which chart is used to show trends over time? A) Pie chart B) Bar chart C) Line chart D) Area chart
8	Pivot Table is used for A) Drawing pictures B) Data summarization C) Typing text D) Formatting cells
9	Data validation is used to A) Delete data B) Restrict data entry C) Copy data D) Print data
10	Which of the following is a financial function? A) PMT B) LEN C) IF D) COUNT
11	Which function counts numeric values? A) COUNT B) COUNTA C) COUNTIF D) SUM
12	Conditional formatting is used to A) Delete cells B) Format cells based on condition C) Insert chart D) Sort data
13	Histogram is used to display A) Text data B) Frequency distribution C) Financial data D) Logical data
14	Mean is calculated using which function? A) SUM B) AVERAGE C) COUNT D) MAX
15	Standard deviation is a measure of A) Central tendency B) Dispersion C) Skewness D) Correlation
16	Correlation measures A) Difference between variables B) Relationship between variables C) Mean value D) Total value



17	Regression is used for A) Prediction B) Classification C) Sorting D) Filtering
18	BINOM.DIST function is used for A) Binomial probability B) Normal probability C) Poisson probability D) Mean calculation
19	NORM.DIST function is used for A) Binomial distribution B) Normal distribution C) Poisson distribution D) Uniform distribution
20	Random numbers in Excel can be generated using A) RAND() B) IF() C) LEN() D) MID()
21	Macro in Excel is used for A) Drawing charts B) Automating tasks C) Data entry D) Printing
22	Which database function calculates average? A) DSUM B) DAVERAGE C) DCOUNT D) DMAX
23	CONCAT function is used to A) Count text B) Join text C) Split text D) Delete text
24	INDEX and MATCH functions are used for A) Lookup and reference B) Financial calculation C) Statistical analysis D) Chart creation
25	Data Analysis ToolPak is used for A) Games B) Statistical analysis C) Drawing diagrams D) Formatting tables



Answer Key

1	C
2	A
3	B
4	B
5	A
6	A
7	C
8	B
9	B
10	A
11	A
12	B
13	B
14	B
15	B
16	B
17	A
18	A
19	B
20	A
21	B
22	B
23	B
24	A
25	B



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RAJARSHI CHHTRPATI SHAHU COLLEGE, KOLHAPUR
DEPARTMENT OF STATISTICS**

Organized
Short Term Courses
EXPLORATORY DATA ANALYSIS BY USING MS EXCEL
Result of Enrolled Students (2025-26)

Roll No.	Name of Student	Marks
1	Adsul Prachi Dilip	48
2	Arekar Samruddhi Ramesh	48
3	Bepari Saba Khudboddin	42
4	Chougale Swapnil Akash	46
5	Gokhale Shreeyash Sachin	44
6	Jadhav Piyush Mahadev	40
7	Jadhav Soham Bharat	44
8	Jogi Aditya Suresh	46
9	Padaval Aditi Anil	48
10	Patil Aniket Balasaheb	46
11	Satpute Tejswini Pankaj	44
12	Shindi Aasiya Alfaj	48


Head
Department of Statistics
Rajarsi Chh. Shahu College, Kolhapur




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**RAYAT SHIKSHAN SANSTHA'S
RAJARSHI CHHATRAPATI SHAHU COLLEGE, KOLHAPUR
DEPARTMENT OF STATISTICS**

“Exploratory Data Analysis by using MS-Excel”

B. Sc. II

2025-26

ROLL NO	NAME OF STUDENT	DATE											
		9/2/26	10/2/26	11/2/26	12/2/26	13/2/26	14/2/26	16/2/26	17/2/26				
1	Adsul Prachi Dilip	Adsul.	Adsul.	Adsul.	Adsul.	Adsul.	Adsul.	Adsul.	Adsul.				
2	Arekar Samruddhi Ramesh	Arekar	Arekar	Arekar	Arekar	Arekar	Arekar	Arekar	Arekar				
3	Bepari Saba Khudboddin	Bepari.	Bepari	Bepari	Bepari	Bepari	Bepari	Bepari	Bepari				
4	Chougale Swapnil Akash	Chougale	Chougale	Chougale	Chougale	Chougale	Chougale	Chougale	Chougale				
5	Gokhale Shreeyash Sachin	Gokhale	Gokhale	Gokhale	Gokhale	Gokhale	Gokhale	Gokhale	Gokhale				
6	Jadhav Piyush Mahadev	Jadhav	Jadhav	Jadhav	Jadhav	Jadhav	Jadhav	Jadhav	Jadhav				
7	Jadhav Soham Bharat	Jadhav	Jadhav	Jadhav	Jadhav	Jadhav	Jadhav	Jadhav	Jadhav				
8	Jogi Aditya Suresh	ASI	ASI	ASI	ASI	ASI	ASI	ASI	ASI				
9	Padaval Aditi Anil	Aditi	Aditi	Aditi	Aditi	Aditi	Aditi	Aditi	Aditi				
10	Patil Aniket Balasaheb	Patil	Patil	Patil	Patil	Patil	Patil	Patil	Patil				
11	Satpute Tejswini Pankaj	Satpute	Satpute	Satpute	Satpute	Satpute	Satpute	Satpute	Satpute				
12	Shindi Aasiya Alfaj	Shindi	Shindi	Shindi	Shindi	Shindi	Shindi	Shindi	Shindi				


Head

**Department of Statistics
Rajarshi Chh. Shahu College, Kolhar**




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RAJARSHI CHHATRAPATI SHAHU COLLEGE, KOLHAPUR
DEPARTMENT OF STATISTICS**

“Exploratory Data Analysis by using MS-Excel”

B. Sc. II

2025-26

ROLL NO	NAME OF STUDENT	DATE											
		18/2/26	20/2/26	21/2/26	23/2/26	24/2/26	25/2/26	26/2/26	27/2/26				
1	Adsul Prachi Dilip	Patil.	Patil.	Patil.	Patil.	Patil.	Patil.	Patil.	Patil.				
2	Arekar Samruddhi Ramesh	Patil.	Patil.	Patil.	Patil.	Patil.	Patil.	Patil.	Patil.				
3	Bepari Saba Khudboddin	Patil.	Patil.	Patil.	Patil.	Patil.	Patil.	Patil.	Patil.				
4	Chougale Swapnil Akash	Patil.	Patil.	Patil.	Patil.	Patil.	Patil.	Patil.	Patil.				
5	Gokhale Shreevash Sachin	Patil.	Patil.	Patil.	Patil.	Patil.	Patil.	Patil.	Patil.				
6	Jadhav Piyush Mahadev	Patil.	Patil.	Patil.	Patil.	Patil.	Patil.	Patil.	Patil.				
7	Jadhav Soham Bharat	Patil.	Patil.	Patil.	Patil.	Patil.	Patil.	Patil.	Patil.				
8	Jogi Aditya Suresh	Patil.	Patil.	Patil.	Patil.	Patil.	Patil.	Patil.	Patil.				
9	Padaval Aditi Anil	Patil.	Patil.	Patil.	Patil.	Patil.	Patil.	Patil.	Patil.				
10	Patil Aniket Balasaheb	Patil.	Patil.	Patil.	Patil.	Patil.	Patil.	Patil.	Patil.				
11	Satpute Tejswini Pankaj	Patil.	Patil.	Patil.	Patil.	Patil.	Patil.	Patil.	Patil.				
12	Shindi Aasiya Alfaj	Patil.	Patil.	Patil.	Patil.	Patil.	Patil.	Patil.	Patil.				


Head
Department of Statistics
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RAJARSHI CHHTRPATI SHAHU COLLEGE, KOLHAPUR
DEPARTMENT OF STATISTICS**

Organized

Short Term Courses

EXPLORATORY DATA ANALYSIS BY USING MS EXCEL

2025-26

List of Students

Roll No.	Name of Student	Fee	Receipt No.	Sign
1	Adsul Prachi Dilip	300	8473	<i>Adsul</i>
2	Arekar Samruddhi Ramesh	300	8474	<i>Arekar</i>
3	Bepari Saba Khudboddin	300	8475	<i>S. Bepari</i>
4	Chougale Swapnil Akash	300	8476	<i>S. Chougale</i>
5	Gokhale Shreeyash Sachin	300	8477	<i>Gokhale</i>
6	Jadhav Piyush Mahadev	300	8472	<i>P.M. Jadhav</i>
7	Jadhav Soham Bharat	300	8478	<i>S. Jadhav</i>
8	Jogi Aditya Suresh	300	8479	<i>AST</i>
9	Padaval Aditi Anil	300	8480	<i>Padaval</i>
10	Patil Aniket Balasaheb	300	8481	<i>Aniket Patil</i>
11	Satpute Tejswini Pankaj	300	8482	<i>Satpute</i>
12	Shindi Aasiya Alfaj	300	8483	<i>Shindi</i>



Department of Statistics
Rajarsi Chh. Shahu College, Kolhapur.



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KOLHAPUR

Rayat Shikshan Sanstha'
Rajarshi Chhatrapati Shahu College, Kolhapur
Department of Statistics
Organised

Certificate Course on Exploratory Data Analysis using MS-Excel in statistics
(Self - Funded Under COC)

Time Table 2025-26

	Venue	Date			9/2/2026	10/2/2026	11/2/2026	12/2/2026	13/2/2026	14/2/2026	16/2/2026	17/2/2026
		Time										
Theory & Practical	Lab 1 (Stat.Lab.)	4.00 - 5.30		SSK		PSC	SSK	SSK	PSC	SSK	PSC	SSK

	Venue	Date			18/2/2026	20/2/2026	21/2/2026	23/2/2026	24/2/2026	25/2/2026	26/2/2026
		Time									
Theory & Practical	Lab 1 (Stat.Lab.)	4.00 - 5.30		PSC		SSK	PSC	SSK	PSC	SSK	PSC

Sr. No.	Name of Lecturer	
1	SSK	Mr.Kamble S.S.
2	PSC	Mr. Chavan P.S.


Head
 Department of Statistics
 Rajarshi Chh. Shahu College, Kolhapur




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**RAYAT SHIKSHAN SANSTHA'S
RAJARSHI CHHATRAPATI SHAHU COLLEGE, KOLHAPUR
DEPARTMENT OF STATISTICS
B.Sc. II (2025-26)**

NOTICE

All students of B.Sc. II hereby informed that, your “Exploratory Data Analysis using MS-Excel in statistics” organized by Department of Statistics, will be start from 02/02/2025. The course will be conducted in Statistics lab from 4:00 PM to 5:30 PM. All students are requested to attend the course regularly and actively participate.


Head
Department of Statistics
Rajarsi Chh. Shahu College, Kolhapur



रयत शिक्षण संस्थेचे
राजर्षी छत्रपती शाह कॉलेज, कोल्हापूर

शॉर्ट टर्म / सीओसी कोर्सेस फी आणि त्याच्या खर्चाबाबतचा ठराव
(शैक्षणिक वर्ष २०२५-२६)

प्रस्ताव : महाविद्यालयातील विद्यार्थ्यांनी पारंपरिक शिक्षणाबरोबरच विविध कौशल्ये आत्मसात करून त्यांनी आत्मनिर्भर व्हावे यासाठी चालू शैक्षणिक वर्षात महाविद्यालयात एकूण २० शॉर्ट टर्म कोर्स व इतर १६ कौशल्य आधारित आणि मूल्यवर्धित कोर्सेस राबविले जात आहेत. या कोर्सेस साठी महाविद्यालयातील विद्यार्थी प्रवेशित होत असतात. इंग्रजी विभागामार्फत चालवला जाणारा बॉश ब्रिज कोर्स (फी. रु. १०००/-) आणि संख्याशास्त्र विभागामार्फत चालविले जाणारे तीन कोर्सेस (फी. प्रत्येकी रु. ५००/-) वगळता इतर सर्व कोर्सेस साठी रु. ३००/- एवढी फी प्रति विद्यार्थी आकारली जाते. सदर प्रत्येक कोर्समधून जमा होणाऱ्या फी पैकी GST व प्रमाणपत्र खर्च वजाकरता उर्वरित रकमेच्या ४०% रक्कम कोर्सच्या मानधनासाठी खर्च करावी व ६०% रक्कम महाविद्यालयाच्या विकासासाठी खर्च करण्यात यावी. रयत शिक्षण संस्थेच्या परिपत्रकानुसार, चालू शैक्षणिक वर्षात कनिष्ठ आणि वरिष्ठ विभागामध्ये कृत्रिम बुद्धिमत्ता (AI) हा कोर्स सुरु करण्यात यावा व सदर कोर्ससाठी वरिष्ठ विभाग (रु. २०००/-) आणि कनिष्ठ विभाग (रु. १५००/-) अशी फी आकारण्यात यावी.

तांत्रिक माहिती: महाविद्यालयात कला, वाणिज्य, विज्ञान, बी.एस्सी.कॉम्प्युटर सायन्स, बी.एस्सी.कॉम्प्युटर सायन्स (बी.सी.एस.) तसेच एम.ए. इंग्लीश, एम.कॉम.(आय.टी). एम. एस्सी.केमिस्ट्री, एम. एस्सी. संख्याशास्त्र इ. विद्याशाखांमध्ये महाविद्यालयाचे शैक्षणिक कामकाज सुरू आहे. चालू शैक्षणिक वर्षात (२०२५-२६) मध्ये महाविद्यालयात एकूण १२८६ विद्यार्थ्यांनी प्रवेश घेतला आहे. तसेच विद्यार्थ्यांना विद्यापीठाच्या अभ्यासक्रमाव्यतिरिक्त त्यांच्या विषयाच्या अनुषंगाने तसेच इतर कौशल्य विकसित व्हावित यासाठी गेली अनेक वर्षे महाविद्यालयातील विद्यार्थिनींना खालील शॉर्ट टर्म व सी. ओ. सी. कोर्सेसची संधी उपलब्ध करून देण्यात आली आहे. यामध्ये

Sr.No	Course Name	Department	Fee
1	Preparation of Household chemicals	Chemistry	300/-
2	Understanding of Basic Electronics Devices	Physics	300/-
3	Biodiversity Conservation	Botany	300/-
4	Vermicomposting Technology	Zoology	300/-
5	Applications of Statistics using ME-EXCEL	Statistics	300/-

6	Exploratory Data Analysis using MS-Excel	Statistics	300/-
7	Advanced Excel	Statistics	500/-
8	Computational Statistics using R- Software	Statistics	500/-
9	Computation of Statistics using open source Software	Statistics	500/-
10	वातमी लेखन	Marathi	300/-
11	अनुवाद सिद्धांत और प्रयोग	Hindi	300/-
12	Bosch- Bridge Course	English	1000/-
13	Surveying	Geography	300/-
14	Secretarial Training	Economics	300/-
15	Introducing forts in Maharashtra	History	300/-
16	Yoga & Meditation	Phy. Education	300/-
17	Entrepreneurship Development	Commerce	300/-
18	Basics to Share Market	Commerce IT	300/-
19	Artificial Intelligence	Sr. College	2000/-
20	Artificial Intelligence	Jr. College	1500/-

यासारखे कोर्सेस उपलब्ध करून दिले जातात. सदर शॉर्ट टर्म व सी. ओ. सी. कोर्सेस पूर्ण करून महाविद्यालयातील विद्यार्थी स्वतःचे व्यवसाय सुरू करून ते स्वावलंबी होऊ शकतात.

सदर कोर्सेस व्यतिरिक्त काही विभागांतर्गत १६ मूल्यवर्धित आणि कौशल्याधारित अभ्यासक्रम चालविले जातात, सदर कोर्सेस याही वर्षी सुरु ठेवण्यात यावेत; यासाठी कोणत्याही प्रकारची फी आकारली जात नाही.

Sr. No	Name of the Course	Name of the Department	Type of Course
01	Flower arrangement	Botany	VAC
02	Apiculture	Zoology	SBC
03	Mathematics to LaTeX	Mathematics	VAC
04	Artificial Intelligence	Computer Science	VAC
05	मुद्रित शोधन	Marathi	SBC
06	प्रयोजनमूलक हिन्दी	Hindi	VAC
07	TCS: Campus to Corporate	English	SBC
08	Tourism	Geography	VAC
09	Social Reformers in Maharashtra	Sociology	VAC
10	Indian Ethics	Philosophy	VAC
11	Consumer Rights	Economics	VAC
12	Work of women social reformers in Maharashtra	History	VAC
13	Panchayat Raj	Pol. Science	VAC
14	Positive Thinking & Emotional Intelligence	Psychology	VAC
15	Nutrition and Diet	Physical Education	VAC
16	Tally	Commerce	SBC

आर्थिक तरतूद : महाविद्यालयामध्ये प्रवेश घेतलेल्या विद्यार्थ्यांपैकी जे विद्यार्थी सदर कोर्सस साठीही प्रवेश घेतात त्या विद्यार्थ्यांकडून प्रति विद्यार्थी प्रति कोर्स साठी रुपये ३००/- या प्रमाणे फी आकारली जाते सदर प्रत्येक कोर्समधून जमा होणाऱ्या फी पैकी GST व प्रमाणपत्र खर्च वजाकरता उर्वरित रकमेच्या ४०% रक्कम कोर्सच्या मानधना साठी खर्च करावी व ६०% रक्कम महाविद्यालयाच्या विकासासाठी खर्च करण्यास यावी.

कार्यालयाचे मत: महाविद्यालयामध्ये सुरू असलेले शॉर्ट टर्म व सी. ओ. सी. कोर्सेस हे विद्यार्थ्यांबरोबरच महाविद्यालयाच्या विकासासाठी उपयुक्त आहेत. या माध्यमातून अनेक विद्यार्थ्यांना आपले स्वतंत्र व्यवसाय सुरू केले आहेत. त्यामुळे सदर शॉर्ट टर्म कोर्सेसमधून विद्यार्थिनींच्या कौशल्याबरोबरच महाविद्यालयास चांगल्या प्रकारचे उत्पन्न प्राप्त होत असते. सदर उत्पन्नातून प्रत्यक्ष खर्च करण्यात येणाऱ्या ४०% रकमेचे खर्चाची विवरण खालील प्रमाणे करण्यात यावा.

१. जमा होणाऱ्या फी पैकी GST व प्रमाणपत्र खर्च वजाकरता उर्वरित रकमेच्या ४०% रक्कम, व कोर्स अध्यापन, मानधन, स्टेशनरी, पुस्तके व अनुषंगिक इतर सर्व खर्च
२. जमा होणाऱ्या फी पैकी GST व प्रमाणपत्र खर्च वजाकरता उर्वरित रकमेच्या ४०% रक्कम वजा करता उर्वरित ६०% रक्कम महाविद्यालयात जमा करावी.

ठराव: महाविद्यालयाच्या सर्व विभागप्रमुख आणि कोर्स समन्वयक यांची मिटींग मा. प्राचार्य यांच्या उपस्थितीत दिनांक २५/०८/२०२५ रोजी पार पडली. सदर मिटींगमध्ये चर्चा करून सर्वानुमते महाविद्यालयामध्ये सुरू असलेले शॉर्ट टर्म व सी. ओ. सी. कोर्सेस हे विद्यार्थ्यांबरोबरच महाविद्यालयाच्या विकासासाठी उपयुक्त आहेत. त्यामुळे सदर शॉर्ट टर्म कोर्सेसमधून विद्यार्थ्यांच्या कौशल्याबरोबरच महाविद्यालयास चांगल्या प्रकारचे उत्पन्न प्राप्त होत असते. त्यामुळे सदर कोर्सेस चालू करावेत व प्रति कोर्सेसकरिता रुपये ३०० फी घ्यावी व त्या जमा होणाऱ्या एकूण फी च्या मधून GST व प्रमाणपत्र खर्च वजाकरता उर्वरित रकमेच्या ४०% रक्कम ही कोर्स अध्यापन, मानधन, स्टेशनरी, पुस्तके व अनुषंगिक इतर बाबींवर खर्च करावी व उर्वरित उर्वरित ६०% रक्कम महाविद्यालयात जमा करावी. असे सर्वानुमते ठरले. सदर मीटिंग करिता खालील विभाग प्रमुख उपस्थितीत होते.

सूचक: प्रो. डॉ. एम. बी. देसाई

अनुमोदक: प्रो. डॉ. पी. बी. पिस्टे

ठराव सर्वानुमते मंजूर.....

सदर मिटिंग करिता खालील विभागप्रमुख उपस्थितीत होते,

अ. क्र.	विभागप्रमुखाचे नाव	विभाग	सही
01	प्रो. डॉ. पिस्टे पी. बी.	रसायनशास्त्र	
02	प्रो. डॉ. देसाई एम. बी.	अर्थशास्त्र	
03	प्रो. डॉ. खोले एस. सी.	इतिहास	
04	डॉ. उबाळे ए. पी.	मराठी	
05	प्रो. डॉ. पाटील एम. ए.	इंग्रजी	
06	डॉ. लंवगारे जी. एम.	शारीरिक शिक्षण	
07	श्रीमती. मुलाणी एस. पी.	तत्वज्ञान	
08	डॉ. पाटील आर. सी.	हिन्दी	
09	श्रीमती. पुदाले पी. डी.	कॉमर्स	
10	डॉ. पालकर जे. एम.	भूगोल	
11	डॉ. परित पी. डी.	मानसशास्त्र	
12	डॉ. शेख एस. डी.	वनस्पतीशास्त्र	
13	डॉ. कुंभार डी. एस.	प्राणिशास्त्र	
14	डॉ. कुरणे टी. एस.	संख्याशास्त्र	
15	डॉ. पाटील ए. आर.	भौतिकशास्त्र	
16	श्री. शेडगे एस. डी.	गणित	
17	श्रीमती. माळवेकर डी. ए.	सूक्ष्मजीवशास्त्र	
18	श्रीमती. शेख झेड. जे.	संगणकशास्त्र	

समन्वयक
शॉर्ट टर्म कोर्से कमिटी

प्राचार्य
राजर्षी छत्रपती शाह कॉलेज, कोल्हापूर
I/C PRINCIPAL
R.C. SHAHU COLLEGE
KOLHAPUR





Rayat Shikshan Sanstha's

RAJARSHI CHHATRAPATI SHAHU COLLEGE, KOLHAPUR

Tal.Karveer, Dist.Kolhapur,416003

{NAAC Accredited 'A++' Grade (CGPA 3.78) / ISO 9001:2015 Certified}

DEPARTMENT OF STATISTICS

Skill-Based Short Term Course on

“Exploratory Data Analysis using MS-Excel”



**Exploratory
Data Analysis**

— using MS-Excel in Statistics —

.....Syllabus & Course Information.....

SKILL BASED SHORT TERM COURSE ON

“Exploratory Data Analysis using MS-Excel”

INTRODUCTION:

Exploratory Data Analysis (EDA) is an important step in statistics that helps to understand the data before applying any statistical methods. It involves data cleaning, data transformation, summarization, and visualization of data. EDA helps in identifying patterns, trends, relationships, outliers, and errors in data.

MS-Excel is a powerful and user-friendly tool for performing exploratory data analysis. It provides various tools such as sorting, filtering, charts, Pivot Tables, functions, Data Analysis ToolPak, and macros which help in analyzing data easily and effectively.

This course is designed to provide practical knowledge of data handling, data visualization, and basic statistical analysis using MS-Excel. This course will help students to analyze real-life data and interpret results using Excel.

PROGRAMME OUT COMES (PO):

PO-1: Apply fundamental statistical concepts and computational skills to analyze real-world data.

PO-2: Use appropriate tools and techniques, including MS-Excel, for data processing, visualization, and interpretation.

PO-3: Develop problem-solving abilities and logical thinking in statistical data analysis.

PO-4: Communicate statistical findings effectively through reports, tables, and graphical representations.

PROGRAMME SPECIFIC OUT COMES (PSO):

PSO-1: Perform data entry, cleaning, and management using MS-Excel efficiently.

PSO-2: Apply Excel functions (logical, lookup, financial, and database functions) for data analysis.

PSO-3: Analyze and summarize data using Pivot Tables, charts, and Data Analysis ToolPak.

PSO-4: Interpret statistical results and apply them to real-life situations using MS-Excel.

COURSE OUT COMES (CO):

CO-1: Understand and perform data entry, validation, formatting, and manipulation in MS-Excel.

CO-2: Apply Excel functions and tools for organizing, summarizing, and visualizing data.

CO-3: Perform basic statistical analysis and interpret results using MS-Excel tools and functions.



Name of the course: Certificate Course in Exploratory Data Analysis using MS-Excel

Eligibility: Higher Secondary Education

Duration: 48 Hours (02 Credits)

Medium: English

Admission Criterion: First cum First Serve

Lecture/Practical Timing: 15-16 days

(1:30 Hrs. daily = 30 Minutes. Theory + 1 Hr. Practical)

Assessment: At the end of the course, examination will be conducted and certificates are issued to the participants who qualify the passing criterion.

Examination Pattern: Practical : 50 Marks

Syllabus

Total Credits	02
Total Hours	48
Theory	16
Practical	32

Detailed Syllabus

THEORY SYLLABUS: (16 Hrs)

Sr. No.	Name of the Topic	Theory Periods (16)
1	Unit I: Basics of MS-Excel and Data Entry Introduction to MS-Excel, Excel interface such as Workbook, Worksheet, Cells, Rows, Columns, Data types in Excel, Data entry and editing, Sorting and Filtering data, Formatting cells and tables, Data validation, Conditional formatting.	04
2	Unit II: Data Management and Functions Data manipulation, Text functions such as LEFT, RIGHT, MID, LEN, CONCAT, UPPER, LOWER, Logical functions such as IF, AND, OR, NOT, Lookup and Reference functions such as VLOOKUP, HLOOKUP, XLOOKUP, INDEX, MATCH, Financial functions such as PMT, FV, PV, Database functions such as DSUM, DAVERAGE, DCOUNT, Working with large datasets, Data consolidation.	04
3	Unit III: Data Visualization and Pivot Tables Charts in Excel such as Bar chart, Line chart, Pie chart, Histogram, Formatting charts, Pivot Tables, Pivot Charts, Data summarization, Frequency distribution, Descriptive statistics, Dashboard creation in Excel.	04
4	Unit IV: Statistical Analysis using Excel Data Analysis ToolPak, Measures of Central Tendency such as Mean, Median, Mode, Measures of Dispersion such as Range, Variance, Standard Deviation, Correlation, Regression, Probability functions such as BINOM.DIST, NORM.DIST, POISSON.DIST, Sampling and Random number generation, Recording and running Macros in Excel.	04



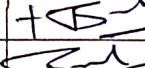
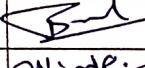
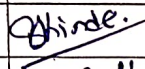
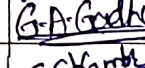
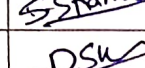
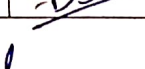
PRACTICAL SYLLABUS: (32Hrs.)

Sr. No.	Aim of the Practical	Practical Periods
01	Data Entry in MS- Excel	04
02	Data manipulation, validation, consolidation and formatting using MS-Excel	04
03	Summarizing and visualizing data using Pivot table and Pivot chart in MS-Excel	04
04	Statistical data analysis using Data Analysis Tool Pack in MS-Excel	04
05	Probabilities and Inverse Probabilities using MS-Excel	04
06	Using Logical, Lookup and reference, Financial and Database functions in MS-Excel	04
07	Working with Text data using MS-Excel	04
08	Recording MS-Excel Macros	04

REFERENCE BOOKS:

- D. S. Malik – *Statistical Methods with MS-Excel*
- S. C. Gupta & V. K. Kapoor – *Fundamentals of Applied Statistics*

BOARD OF STUDIES (BOS):

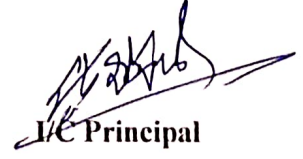
Sr.No.	Name	Designation	Sign
1	Prof.(Dr.) D. R. Bhosale	I/C. Principal	
2	Dr. U. S. Shelke	IQAC Co-ordinator	
3	Mr. P. S. Chougule	Head, Dept. of Statistics	
4	Dr. T. S. Kurane	Course Coordinator	
5	Dr. S. S. Shinde	Member, M. H. Shinde Mahavidyalaya, Tisangi.	
6	Smt. G. A. Gadhari	Member	
7	Mr. S. S. Kamble	Member	
8	Smt. D. S. Vhtakar	Member	



Course Coordinator
Exploratory Data Analysis
using MS-Excel



Head
Department of Statistics



I/C Principal
Rajarshi Chh. Shahu College,
Kolhapur

