"Education through self-help is our motto"- KARMAVEER

RAYAT SHIKSHAN SANSTHA'S

RAJARSHI CHHATRAPATI SHAHU COLLEGE, KOLHAPUR

DEPARTMENT OF STATISTICS

Organized

Application of MS-Excel in Statistics

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

COURSE REPORT

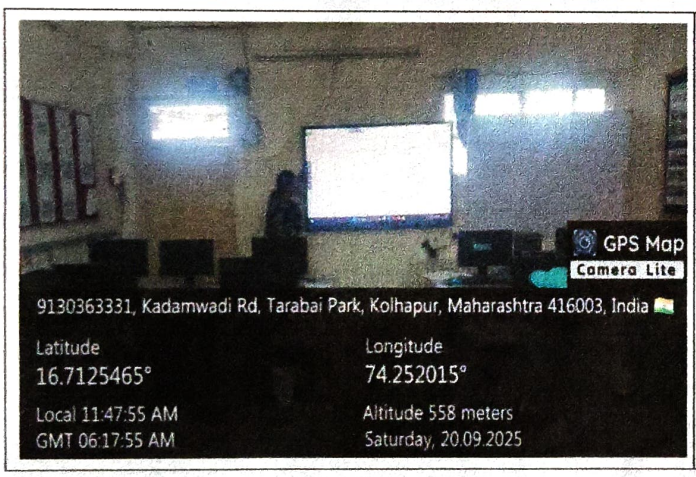
Department of statistics organized the certificate course in Advanced Excel in Statistics for B. Sc. I students for the academic year 2025-26. The main objectives of this course are:

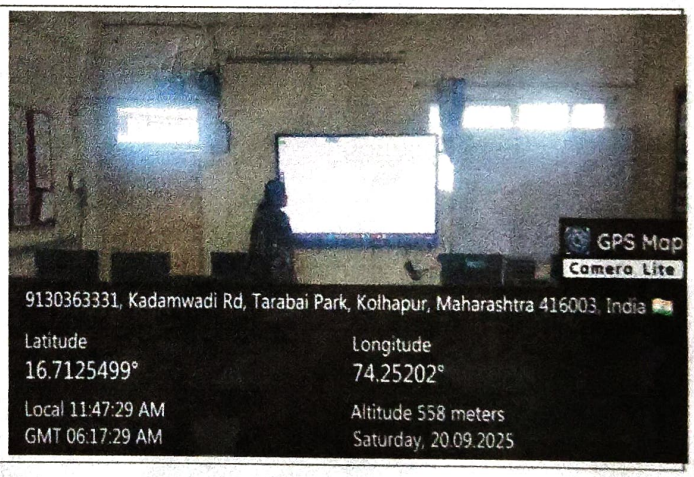
- To indicate names and functions of excel interface components.
- To learn how to enter and edit the data.
- To learn how to formulate the data and cells.
- To learn how to create and modify chart and graph.
- Preview and print worksheets.
- To identify different statistical inbuilt functions.
- To 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 08/09/2025 to 23/09/2025. 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). Smt. Gadhari G. A. 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 15.





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

Application of MS-Excel in Statistics

(Self – Funded)

Under

Short Term Courses

2025-2026

Income and Expenditure Statement

Income		Expenditure	
Particulars	Amount (in Rs.)	Particulars	Amount (in Rs.)
1) **Total Participants** = 15 (15*300)	4500/-	1) GST 18%	810/-
		2) Certificate Printing	195/-
		2) Remuneration for Recourse Person Lumsum (40% of Total amount 3690/- is 1476/- is equally distributed into 2 persons+ certificate printing)	
		i) Smt. Gadhari G.A.	641/-
		ii) Mr. Chavan P. S.	641/-
		3)Balance to College	2213/-
Total	**4500=00**	**Total**	**4500=00**

Dr. T.S. Kurane
Head and Coordinator
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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NAAC 4th Cycle Reaccredited with A++ (CGPA- 3.78)

DEPARTMENT OF STATISTICS

RAJARSHI CHHATRAPATI SHAHU COLLEGE ★ KOLHAPUR

Certificate

This is to certify that Prof./Shri./Smt. Pradnya Vikas Kamble *of* Rajarshi Chhatrapati Shahu College, Kolhapur. *has attended and Participated/Delivered a Lecture as Resource Person/ Successfully Completed Certificate Course on* ***Application of MS-Excel in Statistics*** *organized by Department of Statistics of Rajarshi Chhatrapati Shahu College, Kolhapur from 08/09/2025 to 23/09/2025.*

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.

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Rajarshi Chhatrapati Shahu College, Kolhapur

Department of Statistics

Organized

"Certificate course on Application of MS-Excel in Statistics"

Student Enrollment List(2025-26)

Sr. No.	Name of Student	Fee
1	Amruta Bhagwan Sawant	300
2	Atish Jayraj Shinde	300
3	Digamber Dipak Patil	300
4	Karan Bhivaji Tipugade	300
5	Manavjit Yuvaraj Biranje	300
6	Mohammad Umar Amit Jamadar	300
7	Pradnya Vikas Kamble	300
8	Ritesh Vithal Abhiram	300
9	Saariya Riyajahmad Jamadar	300
10	Savali Shashikant Taral	300
11	Shirish Nanaso Patil	300
12	Shrushti Mohan Pawar	300
13	Swaraj Sushil Tawade	300
14	Swayam Vijay Khot	300
15	Vidya Devadas Kadam	300
Total Amount (in Rs.)		4500

Head
Department of Statistics
Rajarshi Chh. Shahu College, Kolhapur.

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Rajarshi Chhatrapati Shahu College, Kolhapur

Department of Statistics

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"Certificate course on Application of MS-Excel in Statistics"

Question Paper (2025-26)

Date: 25/09/2025 **Marks: 50**

Time: 1 hour

Q.1 Represent the following data using Sub-divided and Multiple Bar Diagram. (10)

Class	F.Y.	S.Y.	T.Y.
Pass	300	325	210
Fail	100	125	90
Total	400	450	300

Q.2 Draw a Pie Diagram to represent the following data. (10)

Group of items	Monthly Expenditure(in Rs.)
Food	1080
Clothing	648
House Rent	720
Fuel and Lightening	252
Others	900

Q. 3 Find A.M., S.D. and C.V. of the following data. (10)

43, 42, 48, 35, 65, 12, 67, 88

Q. 4 Find Correlation Coefficient between X and Y. (10)

Price (X)	71	68	66	67	70	72	69	73	70	65
Supply(Y)	59	64	65	63	62	61	60	58	57	65

Q. 5 Obtain M.D. about mean, C.V. for the following data. (10)

Class	10-15	15-20	20-25	25-30	30-35
Frequency	3	12	34	21	7

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Result of Enrolled Students (2025-26)

Sr. No.	Name of Student	Marks
1	Amruta Bhagwan Sawant	42
2	Atish Jayraj Shinde	46
3	Digamber Dipak Patil	49
4	Karan Bhivaji Tipugade	48
5	Manavjit Yuvaraj Biranje	45
6	Mohammad Umar Amit Jamadar	49
7	Pradnya Vikas Kamble	47
8	Ritesh Vithal Abhiram	49
9	Saariya Riyajahmad Jamadar	43
10	Savali Shashikant Taral	44
11	Shirish Nanaso Patil	46
12	Shrushti Mohan Pawar	48
13	Swaraj Sushil Tawade	48
14	Swayam Vijay Khot	46
15	Vidya Devadas Kadam	47

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RAJARSHI CHHTRPATI SHAHU COLLEGE, KOLHAPUR
DEPARTMENT OF STATISTICS
Certificate course on Applications of MS-Excel in Statistics (2025-26)

Sr.No.	Name of the Students	08/09/25	09/09/25	10/09/25	11/09/25	12/09/25	13/09/25	15/09/25	16/09/25
1	Amruta Bhagwan Sawant								
2	Atish Jayraj Shinde								
3	Digamber Dipak Patil								
4	Karan Bhivaji Tipugade								
5	Manavjit Yuvaraj Biranje								
6	Mohammad Umar Amit Jamadar								
7	Pradnya Vikas Kamble								
8	Ritesh Vithal Abhiram								
9	Saariya Riyajahmad Jamadar								
10	Savali Shashikant Taral								
11	Shirish Nanaso Patil								
12	Shrushti Mohan Pawar								
13	Swaraj Sushil Tawade								
14	Swayam Vijay Khot								
15	Vidya Devadas Kadam								

Head
Department of Statistics
Rajarshi Chh. Shahu College, Kolhapur

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RAJARSHI CHHTRPATI SHAHU COLLEGE, KOLHAPUR
DEPARTMENT OF STATISTICS
Certificate course on Applications of MS-Excel in Statistics (2025-26)

Sr.No.	Name of the Students	17/09/25	18/09/25	19/09/25	20/09/25	21/09/25	22/09/25	23/09/25
1	Amruta Bhagwan Sawant							
2	Atish Jayraj Shinde							
3	Digamber Dipak Patil							
4	Karan Bhivaji Tipugade							
5	Manavjit Yuvaraj Biranje							
6	Mohammad Umar Amit Jamadar							
7	Pradnya Vikas Kamble							
8	Ritesh Vithal Abhiram							
9	Saariya Riyajahmad Jamadar							
10	Savali Shashikant Taral							
11	Shirish Nanaso Patil							
12	Shrushti Mohan Pawar							
13	Swaraj Sushil Tawade							
14	Swayam Vijay Khot							
15	Vidya Devadas Kadam							

Head
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Rajarshi Chh. Shahu College, Kolhapur

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Rajarshi Chhatrapati Shahu College, Kolhapur

Department of Statistics

Organized

"Application of MS-Excel in Statistics"

Student Enrollment List(2025-26)

Sr. No.	Name of Student	Fee	Signature of student
1	Amruta Bhagwan Sawant	300	
2	Atish Jayraj Shinde	300	
3	Digamber Dipak Patil	300	
4	Karan Bhivaji Tipugade	300	
5	Manavjit Yuvaraj Biranje	300	
6	Mohammad Umar Amit Jamadar	300	
7	Pradnya Vikas Kamble	300	
8	Ritesh Vithal Abhiram	300	
9	Saariya Riyajahmad Jamadar	300	
10	Savali Shashikant Taral	300	
11	Shirish Nanaso Patil	300	
12	Shrushti Mohan Pawar	300	
13	Swaraj Sushil Tawade	300	
14	Swayam Vijay Khot	300	
15	Vidya Devadas Kadam	300	

Head
Department of Statistics
Rajarshi Chh. Shahu College, Kolhapur

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Rajarshi Chhatrapati Shahu College, Kolhapur

Department of Statistics

Organized

"Certificate course on Application of MS-Excel in Statistics"

List of Enrolled Students(2025-26)

Sr. No.	Name of Student	Receipt No.	Signature of student
1	Amruta Bhagwan Sawant	8915	Sawant
2	Atish Jayraj Shinde	8916	Shinde.
3	Digamber Dipak Patil	8917	Patil
4	Karan Bhivaji Tipugade	8918	KBTipugade
5	Manavjit Yuvaraj Biranje	8919	Biranje.
6	Mohammad Umar Amit Jamadar	8920	Jamadar
7	Pradnya Vikas Kamble	8921	Kamble.
8	Ritesh Vithal Abhiram	8922	Abhiram
9	Saariya Riyajahmad Jamadar	8923	
10	Savali Shashikant Taral	8924	Savali
11	Shirish Nanaso Patil	8925	Shirish Patil
12	Shrushti Mohan Pawar	8926	Pawar
13	Swaraj Sushil Tawade	8927	STawade
14	Swayam Vijay Khot	8928	
15	Vidya Devadas Kadam	8929	Kadam.

Head
Department of Statistics
Rajarshi Chh. Shahu College, Kolhapur

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Rajarshi Chhatrapati Shahu College, Kolhapur
Department of Statistics
Organised
Certificate Course on Application of MS-Excel in Statistics
(Self - Funded Under COC)
Time Table 2025-26

	Venue	Date / Time	8/9/2025	9/9/2025	10/9/2025	11/9/2025	12/9/2025	13/9/2025	15/9/2025	16/9/2025
Theory & Practical	Lab 1 (Stat.Lab .)	4.00 - 5.30	GAG	PSC	GAG	GAG	PSC	GAG	PSC	GAG

	Venue	Date / Time	17/9/2025	18/9/2025	'19/9/2025	20/9/2025	21/9/2025	22/9/2025	23/9/2025
Theory & Practical	Lab 1 (Stat.Lab .)	4.00 - 5.30	PSC	GAG	PSC	GAG	PSC	GAG	PSC

Sr. No.	Name of Lecturer	
1	GAG	Smt. Gadhari G. A.
2	PSC	Mr. Chavan P.S.

Head
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RAJARSHI CHHATRAPATI SHAHU COLLEGE, KOLHAPUR
DEPARTMENT OF STATISTICS
B.Sc. I (2025-26)

NOTICE

All students of B.Sc. I hereby informed that, your **"Application of MS-Excel in Statistics"** organized by Department of Statistics, will be start from 01/09/2025. 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.

RAJARSHI CHHATRAPATI SHAHU COLLEGE KOLHAPUR

Head
Department of Statistics
Rajarshi Chh. Shahu College, Kolhapur

रयत शिक्षण संस्थेचे
राजर्षी छत्रपती शाहू 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 रू. 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.कॉम्पुटर सायन्स, बी.एस्सी.कॉम्पुटर 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 MS EXCEL	Statistics	300 -

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6	Exploratory Data Analysis using MS-Excel	Statistics	30
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	Entreprencurship 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 विभागाअंतर्गत १६ मूल्यवर्धित आणि कौशल्याधारित अभ्यासक्रम चालविले जातात, सदर कोर्सेस याही वर्षी सुरु ठेवंण्यात 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 Intellegence	Psychology	VAC
15	Nutrition and Diet	Physical Education	VAC
16	Tally	Commerce	SBC

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र्थिक तरतूद : महाविद्यालयामध्ये प्रवेश घेतलेल्या विद्यार्थीपैकी जे विध्यार्थी सदर कोर्सस साठीही प्रवेश घेतात त्या विद्यार्थ्याकडून 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 मतः 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 40% रकमेचे खर्चाची विवरण खालील प्रमाणे करण्यात यावा

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

ठरावः महाविद्यालयाच्या सर्व विभागप्रमुख आणि कोर्स समन्वयक यांची मिटीग मा. प्राचार्य यांच्या उपस्थितीत दिनाक 25/08/2025 रोजी पार पडली. सदर मिटीगमध्ये 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 बाबीवर 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.....

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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. परिट 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 शाहू कॉलेज, कोल्हापूर

I/C PRINCIPAL
R.C. SHAHU COLLEGE
KOLHAPUR

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Rayat Shikshan Sanstha's

RAJARSHI CHHATRAPATI SHAHU COLLEGE, KOLHAPUR

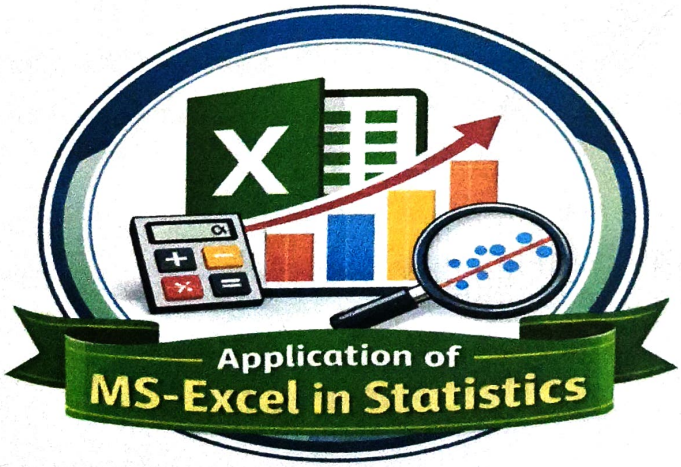
Tal.Karveer, Dist.Kolhapur, 416003

{NAACAccredited'A++' Grade (CGPA3.78)/ISO9001:2015Certified}

DEPARTMENT OF STATISTICS

Skill-Based Short Term Course on

"Application of MS-Excel in Statistics"



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

SKILL BASED SHORT TERM COURSE ON

"Application of MS-Excel in Statistics"

INTRODUCTION:

MS-Excel is one of the most widely used and easily accessible software tools for data handling, statistical analysis, and graphical presentation. The course **"Application of MS-Excel in Statistics"** is designed to introduce B.Sc.I students to the practical use of MS-Excel for performing basic statistical operations efficiently and accurately.

This course provides hands-on training in data entry, data management, and the application of built-in Excel functions for computing descriptive statistics, correlation, and regression. Students will learn to organize and analyze data using sorting, filtering, conditional formatting, and data validation tools. The course also emphasizes graphical representation through charts and diagrams, enabling students to present statistical information clearly and effectively.

By integrating statistical concepts with MS-Excel applications, the course bridges the gap between theoretical knowledge and practical implementation. It enhances computational skills, analytical thinking, and problem-solving abilities required for academic studies, research work, and entry-level employment. Overall, this course prepares students to use MS-Excel as a reliable statistical tool for real-life data analysis across various disciplines such as economics, business, social sciences, and research.

PROGRAMME OUT COMES (PO):

PO-1: Apply fundamental concepts of statistics for data collection, organization, analysis, and interpretation.

PO-2: Analyze quantitative data using appropriate statistical tools and techniques to solve real-life problems.

PO-3: Interpret statistical results and draw meaningful conclusions for decision-making.

PO-4: Use computer applications and statistical software for numerical computation and data analysis.

PROGRAMME SPECIFIC OUT COMES (PSO):

PSO-1: Demonstrate proficiency in using MS-Excel for data entry, formatting, and worksheet management.

PSO-2: Compute and interpret descriptive statistics using built-in Excel functions.

PSO-3: Construct and interpret statistical charts and diagrams for effective data visualization.

PSO-4: Use Excel's Data Analysis ToolPak for frequency distributions, histograms, and descriptive summaries.

COURSE OUT COMES (CO):

CO-1: To introduce MS-Excel as a statistical tool

CO-2: To develop skills for data entry, data analysis, and interpretation.

CO-3: To apply Excel functions for statistical computations and graphical presentation

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Name of the course: Certificate Course in Application of MS-Excel in Statistics

Eligibility: Higher Secondary Education

Duration: 48 Hours (02Credits)

Medium: English

Admission Criterion: First cum First Serve

Lecture/Practical Timing: 15-16 days in September
(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:(16Hrs)

Sr. No.	Name of the Topic	Theory Periods (16)
1	1. Why Microsoft Excel? 1.1 Introduction to Ms-Excel, features of Ms-Excel, starting and ending of Ms-Excel, getting help in Ms-Excel. 1.2 Writing and using formulae in Excel 1.3 Mathematical and Statistical Functions using Excel. a) Absolute value, combination, Exponent, Factorial, multinomial, Random numbers, Square root, sum. b) Statistical Functions: Mean, geometric mean, Harmonic mean, mode, median, quartile, deciles, percentiles, variance.	04
2	2.1 Diagrams: Simple bar diagram, subdivided bar diagram, multiple bar diagram, Pie diagram, Scatter diagam. 2.2 Graphs: Histogram (both equal and unequal class intervals),frequency polygon, ogive curves (less than and greater than).	03
3	3.1 Measures of central Tendency: Computation of following measures for all types of data. Mean, mode, median, quartiles, Deciles, Percentiles, Geometric mean, Harmonic mean. 3.2 Measures of dispersion: Computation of following measures for all types of data. Range, Quartile Deviation, Variance, Standard Deviation, Coefficient of Variation, Mean Deviation, Mean Squared Deviation.	03

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4	4.1 Correlations: Computation of following measures for real-life of datasets. Karl Pearson's correlation coefficient, Spearman's correlation coefficient, Interpretation of correlation results. 4.2 Moments: Computation of following measures for all types of data. Raw moments, Central moments, Interpretation of skewness and kurtosis. 4.3 Probability: Computation of following measures for all types of data. Concept of probability, Discrete and Continuous random variables.	02

PRACTICAL SYLLABUS: (32Hrs.)

Sr. No.	Aim of the Practical	Practical Periods
01	Introduction to MS-Excel, Handling and Organize the data.	04
02	Writing and Using Formulas and Mathematical Functions in MS-Excel	04
03	Statistical Functions and Measures of Central Tendency using Excel	04
04	Measures of Dispersion using MS-Excel	04
05	Diagrammatic and Graphical Representation of Data using Excel	04
06	Correlation and Scatter Diagrams using MS-Excel	04
07	Probability Distributions, Random Numbers and Probability Functions using Excel	04
08	Compute Raw Moments and Central Moments using Excel	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
Application of MS-Excel in Statistics

Head
Department of Statistics

I/C Principal
Rajarshi Chh. Shahu College, Kolhapur

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