ADD ON COURSE: DATA ANALYSIS IN SPSS

DEPARTMENT OF EDUCATION

L.T.K. COLLEGE, Azad, Lakhimpur, 787032, Assam

1. Aims and Objectives: This course intends to provide sound understanding of data analysis process and how this could be applied in different research activities. The learning objectives are described in the following manner:

    i.   To enhance the knowledge and skills in the field of data analysis by using SPSS software.

    ii.   To bridge the gap between theory and practice.

    iii.   To provide hands-on-training in using SPSS in the data analysis process.

    iv.   To develop an in-depth understanding about the descriptive statistics which are used for the analysis of data.

    v.   To develop a comprehensive understanding about the inferential statistics which are used for making inferences about the study.

2. Syllabus

Unit	Content	Marks	L	P	T
1	**Concept** 1.1.Data 1.2.Variable 1.3.Hypothesis 1.4.Normal Probability Curve 1.5.Scales of Measurement 1.6.Level of Significance 1.7.Degrees of Freedom 1.8.One-tailed Test and Two-tailed Test 1.9.Setting Up an SPSS Data File	30	5	3	2
2	**Graphical Representation of Data** 2.1. Bar Diagram 2.2. Histogram 2.3. Pie-diagram 2.4. Frequency Polygon	15	1	3	1
3	**Descriptive Statistics** 3.1. Frequencies 3.2. Measures of Central Tendency 3.3. Correlation	25	3	3	1
4	**Inferential Statistics** 4.1. t-test 4.2. F-test	20	3	4	1

Attendance: 10 Marks

References:

a. Argyrous, G. (2014). Statistics for Research with a Guide to SPSS. Sage Publication: New Delhi.

b. Brace, N., Kemp, R., and Snelgar, R. (2012). SPSS for Psychologists. Palgrave Macmillan: China.

c. Elliott, A. C. and Woodward, W. A. (2007). Statistical Analysis Quick Reference Guidebook with SPSS Example. Sage Publication: New Delhi.
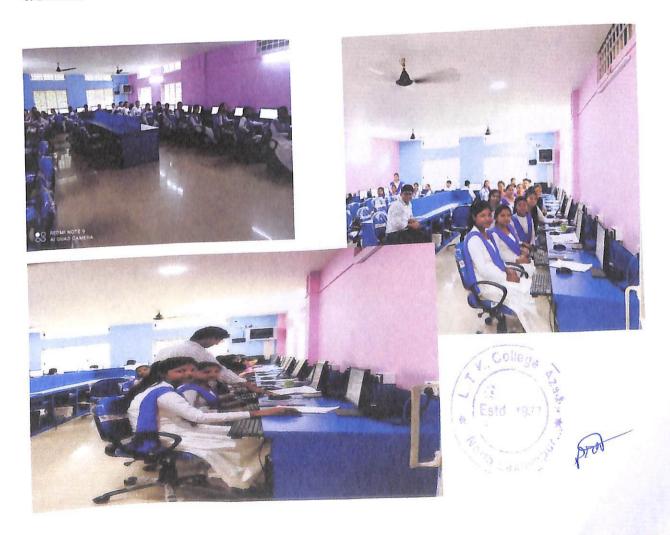
3. Class Routine:

Education Department Add on Course Daily Class Routine 2022, L.T.K. College, Azad, North Lakhimpur

DAYS	CLASS TIMINGS AND ROOM ALLOTMENT		NUMBER OF CLASSES
MON	1:30-2:15 PM		1
	Computer Lab		
TUE	11:00-12:00 AM	1:30-2:15 PM	2
	Computer Lab	Computer Lab	
WED	11:00-12:00 AM	1:30-2:15 PM	2
	Computer Lab	Computer Lab	
THUR	10:00-11:00	1:30-2:15 PM	2
	Computer Lab	Computer Lab	
FRI	11:00-12:00 AM	1:30-2:15 PM	2
	Computer Lab	Computer Lab	
SAT	10:00-11:00	1:30-2:15 PM	2

4. Photo:

5. Student List:

Student Enrolment List and List of Students Who Completed the Course

Sl. No	Roll No	Name
1	4	Chandika Sonowal
2	28	Riti Saikia
3	32	Janmoni Doley
4	33	Sewabrat Dutta
5	44	Samikshya Borah
6	47	Jyoti Bhuyan
7	49	Priyanka Saikia
8	52	Borasha Borah
9	57	Shanti Boruah
10	58	Bobi Nath
11	61	Jayanta Madhab Gohain
12	64	Nimisha Dutta
13	77	Santosh Sonowal
14	83	Monalisha Sonowal
15	85	Ranjan Das
16	90	Gargee Nath
17	94	Gitika Borah
18	95	Dulumoni Sonowal
19	100	Junmi Dutta
20	103	Tanaya Borah
21	115	Parismita Saikia
22	116	Suniya Das
23	128	Pranjal Chutia
24	129	Rahul Doley
25	131	Pallabi Hazarika
26	141	Rupjyoti Gogoi
27	165	Dibyajyoti Saikia
28	204	Mridusmita Doley

6. Question Paper:

Education Department Add On Course (Theoretical) Final Examination, 2022

Department: Education Department of L.T.K. College

Class: B.A. 2nd Semester

Paper Title: Data Analysis in SPSS

Full Marks: 40

Time: 90 Minutes

1. Answer the Following Questions: 1X5=5

a. What is Data?

b. Write down one difference between bar diagram and histogram?

c. Give one example of nominal scale.

d. Who invented the product moment method?

e. F-test helps us to see the difference between two groups-True or False.

2. Write Briefly on the following points (Any Three):   5X3=15

a. Concept of t-test

b. Scales of measurement

c. Meaning of Hypothesis

d. Types of F-test

e. Co-relation of co-efficient

3. What is normal probability curve? Discuss the characteristics of normal probability curve.

3+7=10

5+5=10

4. Describe the benefits of using mean and median.

Education Department Add On Course (Practical) Final Examination, 2022

Department: Education Department of L.T.K. College

Class: B.A. 2nd Semester

Paper Title: Data Analysis in SPSS

Full Marks: 50

Time: 2 Hours

1. A researcher has collected data from 50 students about different variables such as gender, location, caste, attitude, academic achievement in order to conduct a study. For better visualization of data, the researcher need to use different descriptive statistics as well as inferential statistics. For this research, the researcher formulated different hypotheses which need to be tested and proper interpretation is needed. Some Examples of null hypotheses are:

H_01: There is no significant difference between rural and urban students in respect to their attitude.

H_02: There is no significant difference among the caste of different students in respect to their academic achievement.

H_03: There is no significant relationship between the academic achievement and attitude score of the students.

In such a situation, you need to find out descriptive statistics (mean, median, mode, range, maximum score, minimum score, frequencies, cumulative percentage, bar diagram), independent sample t-test, one-way ANOVA, PEARSON co-relation from the following data and give proper interpretation of these results:

(Marking Pattern: Data Entry in SPSS: 15, Descriptive Statistics: 20, independent sample t-test:5, One-way ANOVA: 5, PEARSON co-relation: 5)
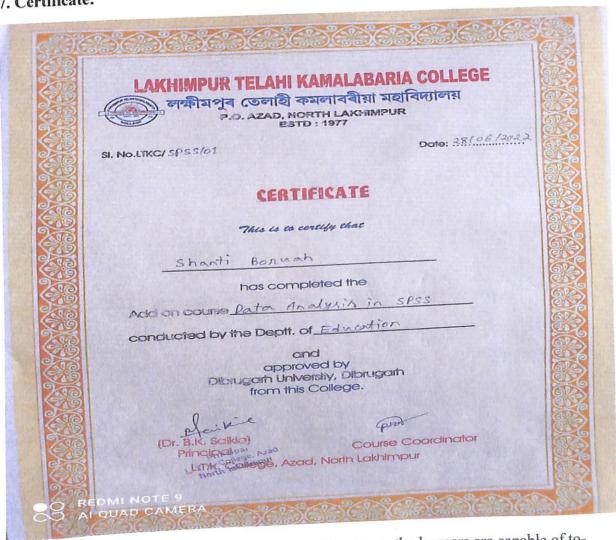
Sl. No.	Name	Caste	Location	Attitude_Score	Academic_Achievement_Score
1	A	SC	Rural	65	65
2	B	SC	Urban	76	74
3	C	SC	Rural	67	68
4	D	SC	Urban	68	68
5	E	SC	Rural	72	70
6	F	SC	Urban	74	74
7	G	ST	Rural	75	76
8	H	ST	Urban	82	84
9	I	ST	Urban	45	47
10	J	ST	Urban	43	44
11	K	ST	Urban	65	66

12	L	ST	Urban	76	79
13	M	ST	Urban	67	65
14	N	ST	Urban	68	74
15	O	ST	Rural	72	73
16	P	ST	Rural	74	80
17	Q	ST	Rural	75	80
18	R	ST	Rural	82	84
19	S	OBC	Rural	45	49
20	T	OBC	Rural	43	48
21	U	OBC	Rural	78	79
22	V	OBC	Rural	65	68
23	W	OBC	Rural	42	47
24	X	OBC	Rural	56	59
25	Y	OBC	Rural	64	68
26	Z	OBC	Urban	38	41
27	AA	General	Urban	40	38
28	AB	General	Urban	41	46
29	AC	General	Urban	42	45
30	AD	General	Urban	47	49
31	AE	General	Rural	53	54
32	AF	General	Rural	53	56
33	AG	General	Rural	59	60
34	AH	General	Urban	60	62
35	AI	General	Urban	61	64
36	AJ	General	Urban	62	64
37	AK	General	Urban	43	45
38	AL	General	Urban	41	43
39	AM	General	Urban	38	39
40	AN	General	Rural	40	43
41	AO	General	Rural	41	43
42	AP	General	Rural	42	46
43	AQ	General	Rural	47	50
44	AR	General	Rural	53	54
45	AS	EWS	Rural	68	69
46	AT	EWS	Rural	64	62

47	AU	EWS	Rural	76	77
48	AV	EWS	Rural	69	70
49	AW	General	Rural	65	66
50	AX	EWS	Urban	78	80

7. Certificate:

LAKHIMPUR TELAHI KAMALABARIA COLLEGE

লক্ষীমপুৰ তেলাহি কমলাবৰীয়া মহাবিদ্যালয়

P.O. AZAD, NORTH LAKHIMPUR
ESTD : 1977

Sl. No.LTKC/ SPSS/01

Date: 28/06/2022

CERTIFICATE

This is to certify that

Shanti Boruah

has completed the

Add on course *Data Analysis in SPSS*

conducted by the Deptt. of *Education*

and
approved by
Dibrugarh University, Dibrugarh
from this College.

(Dr. B.K. Saikia)
Principal
L.T.K. College, Azad
North Lakhimpur

Course Coordinator
L.T.K. College, Azad, North Lakhimpur

8. Learning Outcome: After the completion of the course the learners are capable of to-

i. Define the concept of data, variable, hypothesis, normal probability curve

ii. Understand the meaning of level of significance, degrees of freedom

iii. Develop the mastery in setting up an SPSS file

iv. Develop different graphs by using SPSS software

v.   Develop in-depth understanding about the concept of descriptive statistics

vi. Comprehend the concept and situation where they can use inferential statistics.

(Pranjal Das)

Course Co-ordinator

Add on Course

Department of Education

L.T.K. College, Azad, North Lakhimpur