



Gujarat National Law University

Gujarat National Law University

Center for Law & Economics



Six Days Workshop

on Advanced Applied Statistics

using

IBM SPSS & IBM SPSS AMOS for Legal Studies

(5th to 7th April, 2019 & 12th to 14th April, 2019)

About the Course

This workshop is designed to offer an understanding on Advanced Applied Statistics for Law students to analyze summarize numerical and categorical data obtained from surveys, experiments, etc. The topics included are about different data types, measures of location, variability, shape, association between variables & predictions. The participants are expected to learn the fundamental concepts of estimation, confidence intervals, hypothesis testing which can be applied for appropriate tests like population mean, proportion, variance and difference, independence and goodness to fit.

IBM SPSS & IBM SPSS AMOS are Windows based program/software for editing, analysing and representing the data. These programs are capable of handling large amounts of data. These programs are used by market researchers, health researchers, survey companies, government entities, academic researchers, marketing organizations, data miners and many more.

Aim

To equip the participants with the tools of Applied Statistics using IBM SPSS & IBM SPSS AMOS for Legal Studies, with which they will be able to carry out advanced and detailed research activities. This workshop aims at providing the participants with an ability to use empirical data and analyze them subsequently to give them a fruitful conclusion to their research project.

Benefits

1. It will enable the participants to understand the importance of empirical data in legal research.
2. It will enable the participants to relate their understanding of economics and analyse laws regarding efficiency by using tools of Econometrics/ Applied Statistics.
3. It will enable the participants to appreciate the quantitative data at hand in terms of its varied use.
4. It will empower the participants to put on their skills in this interdisciplinary area to research inputs which will help them in publications and thus add scholarship in Law and Economics, from an Indian perspective.

Fees (Including GST)

- For GNLU participants - 1500/-
- For external participants - 2500/- (Excluding boarding & lodging in GNLU) (Including tuition fee/study material/registration)

Duration & Dates

- 36 Hours
- 5th to 7th April, 2019 & 12th to 14th April, 2019.

Who may participate?

Under Graduate & Post Graduate students pursuing (Law, Social Science, Commerce, Management and Science), Research Scholars, Professionals and Academics.

Payment Link

<https://www.onlinesbi.com/sbicollect/icollecthome.htm>

Registration link

<https://goo.gl/forms/g5ndY8CDZwaB7dnD2>

Provisional Class Schedule

Date	Time	Topic	Resource Person
5/4/2019 Day 1	2:00 to 3:30 pm	Types of Data and Scale of Measurements <ul style="list-style-type: none"> ➤ Primary and Secondary Data ➤ Cross Section, Time Series, Panel Data ➤ Cardinal and Ordinal Data which includes Ratio, Interval, Nominal and Ordinal Scale ➤ Questionnaire Preparation and Introduction of IBM SPSS Statistics ➤ Sample questionnaire preparation ➤ Creating file, define a variable, entering data, modified data etc. Frequency Distribution and Charts <ul style="list-style-type: none"> ➤ Frequency distribution ➤ Pie chart ➤ Bar chart ➤ Chart editing 	Dr. Vijay S Jariwala
	3:45 to 5:45 pm	Descriptive Statistics & Measures of Central Tendency <ul style="list-style-type: none"> ➤ Mean (Arithmetic Mean, Geometric Mean, Harmonic Mean, Combined Mean/ Group Mean, Weighted Mean, Trimmed Mean), Median, Mode Descriptive Statistics & Measures of dispersions <ul style="list-style-type: none"> ➤ Maximum, Minimum, Range, Mean Deviation, Standard Deviation, Coefficient of Variation, Standard Error of the mean, Skewness, Kurtosis etc. Multiple Response Analysis <ul style="list-style-type: none"> ➤ Multiple Response Frequency ➤ Multiple Response Cross-tabulation ➤ Interpretation output in APA format 	
	6:00 to 6:30 pm	Practice hour	
6/4/2019 Day 2	9:30 to 11:00 am	Parametric Tests <ul style="list-style-type: none"> ➤ One sample t-test ➤ Independent Sample t-test ➤ Paired / Related Sample t-test 	Dr. Gaurang Rami
	11:15 to 12:45 pm	<ul style="list-style-type: none"> ➤ One Way ANOVA, ➤ ANCOVA ➤ Interpretation output in APA format 	
	1:30 to 3:00 pm	Generalized linear model (GLM) Interpretation output in APA format	
	3:15 to 4:45 pm	Continue GLM Non-Parametric Tests <ul style="list-style-type: none"> ➤ Mann – Whitney Test ➤ Wilcoxon signed-rank test ➤ Kruskal-Wallis test ➤ Runs Test ➤ Friedman Test ➤ Interpretation output in APA format 	
	5:00 to 6:00 pm	Continue Non-Parametric Tests	

7/4/2019 Day 3	9:00 to 11:00 am	Correlation Analysis <ul style="list-style-type: none"> ➤ Assumptions along with testing of Normality ➤ Pearson Technique ➤ Spearman Technique ➤ Kendall's Tau 'b' ➤ Interpretation output in APA format 	Dr. Gaurang Rami
	11:15 to 12:45 pm	Analysis of Association <ul style="list-style-type: none"> ➤ Chi-square test ➤ Phi & Craemer's V Coefficient ➤ Contingency Coefficient ➤ Interpretation output in APA format 	
	1:30 to 4:00 pm	Regression Analysis (Basic) <ul style="list-style-type: none"> ➤ Assumptions for the Regression ➤ Linear Trend, Multiple & Logistic Regression Analysis ➤ Interpretation output in APA format 	
	4:15 to 5:15 pm	Practice hour	Mr Rahil Mathakia
12/4/2019 Day 4	2:00 to 4:00 pm	<ul style="list-style-type: none"> ➤ Two Way ANOVA, ➤ Repeated measures ANOVA ➤ MANOVA Interpretation output in APA format	Dr. Hitesh Parmar/Dr. Dhaval Maheta
	4:15 to 6:15 pm	Multi-dimensional Scaling Discriminant analysis Correspondence Analysis Interpretation output in APA format	
13/4/2019 Day 5	9:30 to 11:00 am	Exploratory Factor Analysis <ul style="list-style-type: none"> ➤ Interpretation output in APA format 	Dr. Hitesh Parmar/Dr. Dhaval Maheta
	11:15 to 12:45 pm	Cluster Analysis <ul style="list-style-type: none"> ➤ Interpretation output in APA format 	
	1:30 to 3:30 pm	Regression Analysis (Advance) <ul style="list-style-type: none"> ➤ Assumptions for the Regression 	
	3:45 to 4:45 pm	<ul style="list-style-type: none"> ➤ Linear, Binomial, Multinomial, Multiple and Logistic Regression ➤ Multicollinearity ➤ Dummy Variable ➤ Interpretation output in APA format 	
	4:45 to 5:30 pm	Practice hour	Mr Rahil Mathakia
14/4/2019 Day 6	9:00 to 11:00 am	SEM by AMOS <ul style="list-style-type: none"> ➤ Introduction of AMOS 	Dr. Hitesh Parmar/Dr. Dhaval Maheta
	11:15 to 1:15 pm	<ul style="list-style-type: none"> ➤ SEM Basics ➤ Basic interface & Data Entry ➤ Assumptions for the SEM 	
	2:00 to 3:30 pm	Building and Testing a Model using AMOS Graphics. <ul style="list-style-type: none"> ➤ Reliability and Validity testing ➤ Confirmatory Factor Analysis 	
	3:45 to 4:45 pm	<ul style="list-style-type: none"> ➤ Regression Modelling by AMOS ➤ Interpretation AMOS output in APA format 	
	4:45 to 5:30 pm	Practice hour	Mr Rahil Mathakia

Resource Persons

Dr. Gaurang Rami

Professor,
Department of Economics,
Veer Narmad South Gujarat University, Surat

Dr. Vijay S Jariwala

Assistant Professor
Department of Economics,
Sardar Patel University, Vallabh Vidyanagar

Mr. Rahil Mathakia

Research Data Analyst.
Gujarat National Law University, Gandhinagar.

Dr. Dhaval Maheta

Assistant Professor
Department of Business and Industrial Management,
Veer Narmad South Gujarat University, Surat

Dr. Hitesh Parmar

Assistant Professor
Department of Business Management,
Sardar Patel University, Vallabh Vidyanagar.

Organizing Committee

Coordinator:

Dr. Viralkumar B. Mandaliya,
Assistant Professor (Research), GNLU.

Mr. Liladhar Patil
Junior Administrative Assistant, GNLU

Co-Coordinator:

Mr. Rahil Mathakia,
Research Data Analyst, GNLU.

Mr. Shubham Tiwari
Student Coordinator, GNLU.



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