GANPAT UNIVERSITY

FACULTY OF MANAGEMENT STUDIES

Programme	BBA		Branch / Spec.	Business Analytics	
Semester	VI		Version	1.0.0.0	
Effective from Academic Year	2025-26		Effective for the Batch Admitted in	July 2023	
Subject Code	6A02BAE	Subject Name	Basic Econometrics		

Teaching Scheme						Examination Scheme (Marks)			
(Per week)	Lecture (DT)		Practical (Lab.)		Total		CE	SEE	Total
	L	TU	P	TW					
Credit	04	00	00	00	04	Theory	40	60	100
Hours	04	00	00	00	04	Practical	00	00	00

Pre-requisite:

1A02FOS Fundamental of Statistics, 2A03BUS Business Statistics, 1A03BUE Business Economics and 1B05BCO Basics of Computers

Objective:

- Course will familiarize students with methods of data packages that help to do descriptive statistics and regression analysis.
- Course will focus towards students' knowledge on various econometrics tools and techniques to solve various business problem through SPSS.

Learning Outcomes/Course Outcomes:

On successful completion of the course, the students will be able to:

CO1- Students will learn about different statistical tools and techniques in SPSS.

CO2- Students will learn how and when to apply the different statistical test.

CO3- Students will learn the concepts involved while analyzing data, its detection techniques, and remedies.

CO4- Students will learn about time series modeling.

Mapping of PO-CO and PSO-CO:

Course Outcome (CO) No.	PO-CO Mapping						PSO-CO Mapping			
	PO1	PO2	PO3	PO4	PO5	PO6	PSO1	PSO2	PSO3	PSO4
CO1	3	3	2	3	2	3	3	3	2	2
CO2	3	3	2	3	2	3	2	3	2	2
CO3	2	2	2	1	1	1	2	2	1	2
CO4	2	2	2	2	2	2	2	2	1	2

Theory Syllabus

Unit	Content	Hrs.
1	Introduction to Econometrics, Introduction to SPSS, Define Statistical Hypothesis, Statistical Inference, Type-I and Type-II error, Types of Variables, Estimation – Point and Interval, Properties of Good Estimation, Introduction to Measurement of Scale used in SPSS, Test of Normality using different methods in SPSS (Skewness-Kurtosis, Box Plot, Q-Q Plot, Kolmogorov-Smirnov test, Shapiro Wilk Test).	15
2	T-test, F-distribution ANOVA, Chi-Square Test, Estimation of model by method of ordinary least square, Multiple Linear Regression Models, Goodness of fit R^2 and Adjusted R^2, differences between standardized and unstandardized coefficients, partial regression coefficients, dummy variables, Multiple Regression, Model building of Regression, Interpretation of SPSS Output.	20
3	Introduction to Best Linear Unbiased Estimate(BLUE), Assumptions under BLUE, Gauss Markov theorem and its applications, Violation of Classical Assumptions- consequence, remedies and detection, Multicollinearity- detection and interpretation, Introduction to Heteroscedasticity, nature, and Consequence.	15
4	Introduction to Time Series, Importance of Time Series, Variation in Time Series: Secular, Seasonal, Cyclical, and Irregular, Time Series Model, Concept of Auto Regression (AR), Moving Average (MA), Auto Regression Integrated Moving Average (ARIMA), Generalized Auto Regression Conditional Heteroscedasticity (GARCH).	10
	Note: **All topics are already covered in pre-requisite subjects given, in this subject more emphasis given on use of SPSS for practical understanding and outcome-based learning**	
	Exam Theory 50% and Practical Output base 50%	

Text Book:

	Basic Econometrics by Damodar N. Gujarati, Sangeetha Gunasekar by Tata Mc-Graw Hill
Reference Books:	
	• Probability and Statistics for Engineers by Jay L. Devore, Cengage Learning, 2010. • Introduction to Econometrics by Christopher Dougherty, 4 th edition, OUP, Indian edition, 2011. • Mathematical Statistics by John E. Freund, Prentice Hall, 2011. • Mathematical Statistics with Applications by Irwin Miller and Marylees Miller, John E. Freund's, 8th edition, Pearson.
Online Resource:	
	https://ocw.mit.edu/courses/economics/14-32-econometrics-spring-2007/syllabus/