Semester: I

Course Title: Data Analysis

Course Code: ECO-SE-501

Course Objectives

CO.1	**To understand the students about frequency distribution of one variable as well as two variables**
CO.2.	To understand the learners about the measures of central tendency and measures of dispersion to summarize the frequency distribution of one variable.
CO.3	Know correlation and regression for analysing frequency distribution of two variables.
CO.4	To impart the knowledge of estimating population parameters from sample data.
CO.5	To understand the learners about the Index numbers for measuring average change in price and quantity over time & space.

CO No.	**Course outcome upon completion of this course, students will be able to**
CO 1.	Understand frequency distribution of one variable as well as two variables.
CO 2.	Know the measure of central tendency and measures of dispersion to summarize the frequency distribution of one variable.
CO 3.	Know correlation and regression for analysing frequency distribution of two variables.
CO 4.	Acquire knowledge of estimating population parameters from sample data.

CO 5.	Measure average change in price and quantity over time and space.

Unit	Section	Topic	Lecture hours	Learning outcomes	Pedagogy	Assessment Evaluation
I	**1.**	University frequency distributions.	1	Will have a clear understanding distribution of one variable.	Lecture	CIA
	2.	Measures of central tendency, mean, median and mode.	7	Will have the knowledge of how to summarize the frequency distribution with measures of central tendency	Lecture Calculation	Home assignment CIA
	3.	Measures of dispersion; range, mean deviation, standard deviation	7	Will understand various measures of dispersion for analyzing frequency distribution	Lecture Calculation	Formative assignment CIA
II	**1.**	Bivariate frequency distribution	1	Will learn frequency distribution with two variables	Lecture	CIA
	2.	Correlation	5	Will learn the degree of relationship between two variables.	Lecture Calculation	Home assignment CIA
	3.	Regression	5	Will have the idea on functional relation of two variables and estimation of dependent variable etc.	Lecture Calculation	Formative assignment CIA
III	**1.**	Estimation of population parameters from sample data	4	Will learn about the methods for estimating population parameters.	Lecture	Formative assessment CIA
	2.	Unbiased estimator for population mean variance	4	Will understand the properties of a good estimator and use of proper estimator to estimate mean and variance	Lecture discussion	Formative assessment CIA
IV	**1.**	Basic Index number	2	Will have the knowledge of index number& its kind.	Lecture	Formative assessment CIA

	2.	Price index	8	Will understand different types of price index like wholesale price, retail price /consume price.	Lecture calculation	Home assignment CIA
	3.	Quantity Index	6	Will learn agricultural and industrial product index	Lecture calculation	Home assignment CIA

Course Teacher: Md.Dr. Asraf Ali **Signature of HOD**