

Syllabus
Paper-STA 101

Unit I: Statistical Methods: (No. of classes: 09, Weightage: 15%)

Definition and scope of Statistics, concepts of statistical population and sample. Data: quantitative and qualitative, attributes, variables, scales of measurement - nominal, ordinal, interval and ratio. Presentation: tabular and graphical, including histogram and ogives, boxplot. Collection and Scrutiny of Data: Primary data-designing a questionnaire and a schedule; Secondary data- their Major sources including some government publications.

Unit 2: Measures of Central Tendency, Dispersion and location:

(No. of classes: 12, Weightage: 20%)

Mathematical measures of central tendency. Measures of Dispersion: range, quartile deviation, mean deviation, standard deviation, coefficient of variation, Moments, skewness and kurtosis, Deciles, percentiles, quartiles.

Unit 3 : Probability: (No. of classes: 15 , Weightage : 25%)

Introduction, random experiments, sample space, events. Definitions of Probability – classical, statistical, and axiomatic. Conditional Probability, laws of addition and multiplication, independent events, theorem of total probability, Bayes’ theorem and its applications.

Unit 4: Random variables and Expectations: (No. of classes: 9, Weightage: 15%)

Discrete and continuous random variables, p.m.f., p.d.f. and c.d.f., illustrations and properties. Expectation of univariate random variables.

Teaching Plan: STA001

Name of the teacher: Dr. Rijusmita Sarma
Dr. Pranjal Sarma
Dr. Jumi Kalita

Session: Jan--May

Syllabus	Period		Method (including experiential- E /participative learning-P)	Aids Used	Assessment method
Unit I JK	Jan	Definition and scope of Statistics, concepts of statistical population and sample. Data: quantitative and qualitative, attributes, variables, scales of measurement - nominal, ordinal,	<ul style="list-style-type: none"> • Lecture, • Oral question- P • problem solving- E ICT 	Blackboard/ Chalk/ppt	

		interval and ratio. Presentation: tabular and graphical, including histogram and ogives, boxplot. Collection and Scrutiny of Data: Primary data-designing a questionnaire and a schedule; Secondary data- their Major sources including some government publications.			Class test, sessional, Oral quiz
Unit II JK	Feb	Mathematical measures of central tendency	<ul style="list-style-type: none"> Lecture, Oral question- P problem solving- E 	Blackboard/ Chalk	
	March	. Measures of Dispersion: range, quartile deviation, mean deviation, standard deviation,	<ul style="list-style-type: none"> Lecture, Oral question- P problem solving- E 	Blackboard/ Chalk	
Unit II PS Unit I, II	April	Coefficient of variation,, , Moments, skewness and kurtosis, Deciles, percentiles, quartiles.	<ul style="list-style-type: none"> Oral question- P problem solving- E 	Blackboard/ Chalk	
	May	Revision, Question paper discussion	problem solving- E	Blackboard/ Chalk	
Unit III PS	Jan	Introduction, random experiments, sample space, events. Definitions of Probability – classical, statistical, and axiomatic.	<ul style="list-style-type: none"> Oral question- P problem solving- E 	Blackboard/ Chalk	
	Feb	Conditional Probability, laws of addition and multiplication	<ul style="list-style-type: none"> Oral question- P problem solving- E 	Blackboard/ Chalk	
	March	Independent events, theorem of total probability, Bayes' theorem and its applications.	<ul style="list-style-type: none"> Oral question- P problem solving- E 	Blackboard/ Chalk	
	May	Revision	Discussion	Blackboard/ Chalk	
Unit IV RS	Jan	Discrete and continuous random variables, p.m.f., p.d.f. and c.d.f	<ul style="list-style-type: none"> Lecture, Oral question- P problem solving- E 	Blackboard/ Chalk	
	Feb	Illustrations and properties.	ICT	PPT	
	March	Expectation of univariate, random variables.	<ul style="list-style-type: none"> Lecture, Oral question- P problem solving- E 	Blackboard/ Chalk	
	April	Variance with example	<ul style="list-style-type: none"> problem solving- E 	Blackboard/ Chalk	
	May	Revision	<ul style="list-style-type: none"> problem solving- E 	Blackboard/ Chalk	

