

TEACHING PLAN: 2016

Name : Sri N.C.Dutta

Course : B.Sc

Class: 1st Semester.

Programme : Core

Class allotted : 30

Paper, Unit	Course content	Key Aspects	Teaching Method	Classes Required
STSM Unit-II	Measures of Central Tendency;	Mean, Median, Mode, Quartiles,etc.	Chalk-Board, Tutorial class	5
	Measures of Dispersion.	Range, Standard deviation, Moments.		5
	Measures of Skewness	Pearson's & Bowley's formulae		
	Measures of Kurtosis (including Practicals)	Pearson's coefficient.		4
				6
Unit – IV	Index Numbers (including Practicals)	Definition Construction of Index Numbers Problems in the Construction Weighted and Unweighted Index Numbers Laspeyre's, Paasche's, Fisher's, Edgeworth-Marshall, Cost of Living Index Numbers, Chain Base and Fixed Based Index Numbers	Board & etc.	10

Course : B.Sc

Class: 5th Semester.

Programme : Major

Class allotted : 20

Paper,Unit	Course Content	Key Aspects	Teaching method	Periods required
STSM 503 Unit – I	Sample Survey	Population and Sample, Need for Sampling, Advantages and Disadvantages of Sampling, Principal Steps, Probability and Non-probability Sampling, Errors in Sampling, NSSO, CSO, Census of India	Board &chalk, practicals	10
	Unit -II	Simple Random Sampling		Properties of the Estimates and Variances, f.p.c., S.E., Confidence Limits, Sampling for Proportions, Ratio and Regression estimates in SRS

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Course : B.Sc

Class: 3rd Semester.

Programme : Major

Class allotted : 30

Paper,Unit	Course Content	Key Aspects	Teaching method	Periods required
STSM 302 Unit – I	Finite differences Applications of Finite differences to Summation of Series	Operators , their properties & applications	Board &chalk, practicals	15
	Unit - III Numerical Differentiation	Derivatives upto Second order- using Newton's formulae I and II, Central Difference InterpolationFormula		15

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Course : B.Sc
Programme : GE I

Class: 1st Semester
Class allotted : 20

Paper, Unit	Course content	Key Aspects	Teaching Method	Classes Required
Statistical Methods Unit-II	Measures of Central Tendency;	Mean, Median, Mode, Quartiles, etc.	Chalk-Board, Tutorial class	5
	Measures of Dispersion.	Range, Standard deviation, Moments.		5
	Measures of Skewness	Pearson's & Bowley's formulae		4
	Measures of Kurtosis (including Practicals)	Pearson's coefficient.		6

Teaching Plan: 2016

Name: Munmun Borah (Borgohain)

Course: B.Sc

Semester: First

Dept: Statistics

Programme: Generic Elective

Classes allotted: 40

Paper/Unit	Course Content	Key aspects	Teaching Methods	Classes required
STAT-GE-1 Statistical Methods UNIT 1	Definition and scope of Statistics	Statistics as data, Statistics as a Body of methods	Lecture method with chalk and board	2
	Statistical Population and Sample Data	Qualitative and Quantitative data Attributes and variables Discrete and Continuous data		4
	Measurement Scales	Nominal, Ordinal, Interval and Ratio Scale		1
	Presentation of data: tabular and graphic	Frequency distribution, histogram, frequency curve, ogives Practical on these topics		4 2
Unit 3	Bivariate data : Correlation	Scatter Diagram ,simple, partial and multiple correlation(3 variables only), rank correlation Practical on these topics		8 6
	Regression	Simple linear regression, Principle of least squares, fitting of polynomials and exponential curves. Practical on these topics		7 6

Signature of the teacher

Teaching Plan: 2016

Name: Munmun Borah(Borgohain)

Course: BSc

Programme: Core

First Semester

Classes allotted: 32

Paper/Unit	Course Content	Key aspects	Teaching Methods	Classes required
STAT-C 101 Unit I	Statistical Methods	Definition and Scope of Statistics	Lecture using chalk and board	3
		Concept of Statistical population and sample	Assignment	7
		Data: quantitative and qualitative, attributes, variables, scales of measurement. Tabular and graphical presentation of data, consistency and independence of data.	Seminar	
		Practical: Graphical representation of data		2
UNIT III	Bivariate Data	Definition, scatter diagram, simple, partial and multiple correlation, rank correlation,	Do	5
		Simple linear regression, principle of least squares and fitting of polynomials and exponential curves.		5
		Practical: Problems based on Unit III		10

Signature of the teacher

Teaching Plan: 2016

Name: Munmun Borah (Borghain)

Course: B.Sc

Semester: 3rd

Department: Statistics

Programme: Major

Class allotted: 18

Paper/Unit	Course content	Key aspects	Teaching Methods	Classes required
STSM-301 PROBABILITY AND DISTRIBUTION-I UNIT 1	Probability	Random Experiments, Events, Sample space, Event space	Lecture using chalk and board	3
	Definition of probability and problems	Algebra of events, Definitions of Probability- Classical, Statistical and Axiomatic probability and problems	Discussions , Assignments	5
		Concept of odds and odds ratio Addition theorem , Conditional Probability	Seminar	6
		Independence of events Multiplication theorem Bayes' theorem and application		4

Signature of the teacher

Teaching Plan: 2016

Name: Munmun Borah (Borgohain)

Course: B.Sc

Semester: 5th

Department: Statistics

Programme: Major

Class allotted: 44

Paper/Unit	Course content	Key aspects	Teaching Methods	Class required
STSM- 502 TESTING OF HYPOTHESES UNIT 1	Testing of Hypotheses	Simple and Composite hypothesis, Null and Alternative Hypotheses Two types of errors, Critical region ,p- value Power of a test, most powerful test, Neyman Pearson Lemma UMP tests, LR tests	Lecture using chalk and board Discussion Assignments Seminar	4
				5
				11
				8
STSM 503 SAMPLE SURVEY UNIT 3	Stratified Random Sampling	Stratified Random Sampling: Properties of the estimates and their variances, Proportional allocation, Optimum allocation, Advantages and disadvantages, Variance of the sample estimates. Relative precision of Stratified Random Sampling over Simple Random Sampling Practical: Problems based on Unit 3	Do	12 4

Signature of the teacher

Teaching Plan: 2016

Name: Munmun Borah (Borgohain)

Course: BSc

Programme: Core

First Semester

Classes allotted: 32

Paper/Unit	Course Content	Key aspects	Teaching Methods	Classes required
STAT-C 101 Unit I	Statistical Methods	Definition and Scope of Statistics	Lecture using chalk and board	3
		Concept of Statistical population and sample	Assignment	7
		Data: quantitative and qualitative, attributes, variables, scales of measurement. Tabular and graphical presentation of data, consistency and independence of data.	Seminar	2
	Practical: Graphical representation of data			
UNIT III	Bivariate Data	Definition, scatter diagram, simple, partial and multiple correlation, rank correlation,	Do	5
		Simple linear regression, principle of least squares and fitting of polynomials and exponential curves.		5
		Practical: Problems based on Unit III		10

Signature of the teacher

Teaching Plan: 2016

Name: Munmun Borah (Borgohain)

Course: B.Sc

Semester: 3rd

Department: Statistics

Programme: Major

Class allotted: 18

Paper/Unit	Course content	Key aspects	Teaching Methods	Classes required
STSM-301 PROBABILITY AND DISTRIBUTION-I UNIT 1	Probability	Random Experiments, Events, Sample space, Event space	Lecture using chalk and board	3
	Definition of probability and problems	Algebra of events, Definitions of Probability- Classical, Statistical and Axiomatic probability and problems	Discussions, Assignments	5
		Concept of odds and odds ratio Addition theorem, Conditional Probability	Seminar	6
		Independence of events Multiplication theorem Bayes' theorem and application		4

Signature of the teacher

Teaching Plan: 2016

Name: Munmun Borah (Borgohain)

Course: B.Sc **Semester:** 5th

Department: Statistics

Programme: Major

Class allotted: 44

Paper/Unit	Course content	Key aspects	Teaching Methods	Class required
STSM- 502 TESTING OF HYPOTHESES UNIT 1	Testing of Hypotheses	Simple and Composite hypothesis, Null and Alternative Hypotheses Two types of errors, Critical region ,p- value Power of a test, most powerful test, Neyman Pearson Lemma UMP tests, LR tests	Lecture using chalk and board Discussion Assignments Seminar	4
				5
				11
				8
STSM 503 SAMPLE SURVEY UNIT 3	Stratified Random Sampling	Stratified Random Sampling: Properties of the estimates and their variances, Proportional allocation, Optimum allocation, Advantages and disadvantages, Variance of the sample estimates. Relative precision of Stratified Random Sampling over Simple Random Sampling Practical: Problems based on Unit 3	Do	12 4

Signature of the teacher

Teaching Plan

Name: Dr. M. K. Bhowal

Course: B. Sc.

Semester: Fifth Semester

Programme: Major

Class allotted: 48

Paper/ Unit	Course Content	Key aspects	Teaching Methods	Classes required
STSM 501 Unit 1	Point Estimation	<ul style="list-style-type: none">a. Properties of Estimatorb. Unbiasedness, Asymptotically Unbiased Estimatorc. MVUEd. Uniqueness of MVUEe. Concept of Efficiencyf. Cramer-Rao Inequalityg. Uses of Cramer-Rao Inequalityh. Consistent Estimatori. Properties of Consistent Estimatorj. Sufficient condition for Consistencyk. Concept of Sufficient Statisticsl. Factorization Theoremm. Rao-Blackwell Theoremn. Examples and Illustrationo. Question Paper Discussion	Chalk and Board	3 3 4 2 2 3 5 5 4 3 2 2 4 6

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Course: B. Sc.

Semester: Third Semester

Programme: Non-Major

Class allotted: 3 per week

Paper/ Unit	Course Content	Key aspects	Teaching Methods	Classes required
STSG30100 Unit 1	Estimation	Point estimation, properties of good estimator	Chalk and Board	5
		MVUE		3
		Cramer-Rao inequality		3
		Consistent estimator		4
		Sufficiency and efficiency		5

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Paper/ Unit	Course Content	Key aspects	Teaching Methods	Classes required
STSG30100 Unit 2	Estimation	Method of estimation, Method of MLE	Chalk and Board	5
		Method of Moments		3
		Interval estimation		3
		Confidence interval		4
		Confidence coefficient		5
		Confidence intervals for the parameters of Univariate Normal		3
		Applications		5

28

Course: B. Com.

Semester: Third

Programme: Specialty & Non-Major

Class allotted: 50

Paper/ Unit	Course Content	Key aspects	Teaching Methods	Classes required	
Business Statistics	Data Analysis	Introduction	Chalk and Board	2	
		Types of Data		3	
		Univariate Data Analysis		2	
		Central Tendency		4	
		Dispersion		4	
		Bivariate Data Analysis	Correlation & Regression		10
		Index Number	Meaning, Types, Method of construction, Problems, Base shifting ,Splicing Deflating, CPI		10
		Time Series	Meaning, Components, Decomposition, Determination of Trend,		10

Course: H.S.

Class allotted: 48

Paper/ Unit	Course Content	Key aspects	Teaching Methods	Classes required
Unit-2	Theory of Probability	<p>p. Random Experiment</p> <p>q. Sample Point and Sample Space</p> <p>r. Occurrence of an event</p> <p>s. Certain and Null events</p> <p>t. Exhaustive, Mutually Exclusive events</p> <p>u. Probability of an event</p> <p>v. Definitions of Probability</p> <p>w. Unconditional and Conditional Probability</p> <p>x. Dependent and Independent events</p> <p>y. Addition Rule of Probability</p> <p>z. Generalised Addition Rule</p> <p>aa. Multiplicative Rule of Probability</p>	Chalk and Board	<p>3</p> <p>1</p> <p>2</p> <p>2</p> <p>2</p> <p>2</p> <p>2</p> <p>2</p> <p>4</p> <p>2</p> <p>3</p> <p>3</p>
	Random Variable and Distribution	<p>a. Discrete and Continuous r.v.</p> <p>b. p.m.f. and p.d.f.</p> <p>c. Presentation of p.m.f. and p.d.f.</p> <p>d. Mathematical Expectation</p> <p>e. Addition Theorem and Multiplication Theorem of Mathematical Expectation</p> <p>f. Bernoulli Trials</p> <p>g. Binomial Distribution</p> <p>h. Poisson Distribution</p> <p>i. Normal Distribution</p>		<p>2</p> <p>3</p> <p>4</p> <p>2</p> <p>3</p> <p>4</p>

Teaching plan (2016-17)

Name: Pranab Barua

Course: Core
Programme: B.Sc.

Semester: 1st
Class allotted: 28

Paper/unit	Course content	Key aspect	Teaching method	Class required
102/3	Differential Equations: Exact differential equations, Integrating factors, change of variables, Total differential equations		Lecture, Assignment, Group discussion	14
	Differential equations of first order and first degree			5
	Differential equations of first order but not of first degree, Equations solvable for x, y, q, Equations of the first degree in x and y, Clairaut's equations. Higher Order Differential Equations: Linear differential equations of order n			9

Course: Major
Programme: B.Sc.

Semester: 3rd
Class allotted: 14

Paper/unit	Course content	Key aspect	Teaching method	Class required
301/3	Bi-variate distribution, discrete and continuous		Lecture, Assignment, Group discussion, seminar	4
	joint and marginal, conditional, marginal and conditional expectation			4
	covariance and correlation			6

Course: Major
Programme: B.Sc.

Semester: 5th
Class allotted: 32

Paper/unit	Course content	Key aspect	Teaching method	Class required
501/3	Interval estimation, Concept of confidence interval & coefficient		Lecture, Assignment, Group discussion, seminar	10
	confidence interval for normal and exponential distribution			10
	Large sample confidence interval for proportion, mean and variance			10

Course: B. Com.
Programme: Specialty & Non-Major

Semester: Third Semester
Class allotted: 40

Paper/ Unit	Course Content	Key aspects	Teaching Methods	Classes required
Business Statistics	Data Analysis	Introduction	Chalk and Board	2
		Types of Data		3
		Univariate Data Analysis		2
		Central Tendency		4
	Bi-variate Data Analysis	Correlation & Regression		15
	Index Number	Meaning, Types, Method of construction, Problems, Base shifting ,Splicing Deflating, CPI		10

Signature of the teacher:

Teaching plan for 2016

Name: Rituraj Baruah

Course: B. Sc.

Semester: 1st

Programme: Major

Class allotted: 25

Paper/ Unit	Course Content	Key aspects	Teaching Methods	Classes required
	<p>Homogeneous and non-homogeneous linear differential equations of order n with constant coefficients, Different forms of particular integrals, Linear differential equations with non-constant coefficients, Reduction of order method, The Cauchy-Euler's equation of order n, Legendre's linear equation.</p> <p>Formation and solution of a partial differential equations. Equations easily integrable. Linear partial differential equations of first order. Non-linear partial differential equation of first order and their different forms. Statement and application of Charpit's method. Homogeneous linear partial differential equations with constant coefficients. Different cases for complimentary functions and particular integrals.</p>		<p>Chalk and Board</p> <p>Power Point</p> <p>Seminar</p>	35

Course: B. Sc.

Semester: 3rd semester

Programme: Major

Class allotted: 20

Paper/ Unit	Course Content	Key aspects	Teaching Methods	Classes required
STSM 302 Unit 2 & 3	Numerical Methods	Interpolation with equal intervals , Newton forward and backward difference formulae, Central difference formulae, Interpolation with unequal intervals, Lagrange's formula and Inverse interpolation	Chalk and Board	25
		Solution of algebraic and transcendental equations, Bisection method, Regula- falsi method and Newton Raphson method.	Power point, Seminar	

Course: B. Sc.

Semester: 3rd Semester

Programme: Core

Class allotted: 24

Paper/ Unit	Course Content	Key aspects	Teaching Methods	Classes required
STSG 30100 Unit 3	Statistical Hypothesis	Simple and Composite Hypothesis, Null and Alternative Hypothesis, Two types of errors, Critical region, p –value, power of a test,	Chalk and Board	32
	Test of Significance	Exact and large sample test for one and two sample mean and proportions based on Normal distribution, t test for one and two sample mean, Chi – Square, F test	Power Point	

Course: B. Sc.

Semester: 5th Semester

Programme: Major

Class allotted: 45

Paper/ Unit	Course Content	Key aspects	Teaching Methods	Classes required
STSM 501 Unit 2	Method of Estimation	Method of Maximum Likelihood, properties of Maximum likelihood estimator, Method of moments, Method of Minimum variance, Method of least square, Method of minimum chi square	Chalk and Board Power Point	28
STSM 502 Unit 2	Test of Significance	Exact and large sample test for one and two sample mean and proportions based on Normal distribution, t test for one and two sample mean, Chi – Square, F test	Chalk and Board Power Point Chalk and board Chalk and board	26

Course: B.Com.

Semester: 3rd

Programme: Major

Class allotted: 24

Paper/ Unit	Course Content	Key aspects	Teaching Methods	Classes required
Business Statistics		Measures of Dispersion : Range, Quartile Deviation, Mean deviation, Standard Deviation Time Series : Components of time series: trend, Seasonal variation, Cyclical Variation, Random Variation, Methods of measuring trend	Chalk and Board	30

Course: CMS

class : HS 1st year

Programme: HS

Class allotted: 24

Paper/ Unit	Course Content	Key aspects	Teaching Methods	Classes required
Statistics (Unit 3 and 4)	Classification of data and tabulation of data Diagrams and graphs	Definition, types of classification, Definition of table, Parts of a table, frequency distribution Types of Diagrams and graphs,	Chalk and Board	34

Course: Statistics

Class: HS 1st year

Programme: HS

Class allotted: 40

Paper/ Unit	Course Content	Key aspects	Teaching Methods	Classes required
Statistics (Unit 2)	Descriptive Statistics	Meaning of Statistics, Measures of central tendency, Measures of Dispersion, Skewness, Kurtosis, correlation and regression	Chalk and Board	50