

## TEACHING PLAN :: MANGALDAI COLLEGE, MANGALDAI

P-STA-RC-2016

Session : 2023-24 :: Department : Statistics :: Name of the Teacher : Dr. Ranjita Goswami :: Semester : III :: Course : R.E.

Months	Teaching Days	Syllabus Unit No.	No. of periods prescribed in the syllabus	Title of the Topic to be taught	No. of periods allotted in the routine	Remarks
August	26	Unit -1	20	Tests of Hypothesis: The basic idea of significance test, null & Alternative hypothesis, Type I, Type II, level of significance, etc.	2/weeks	
September	18	Unit -1	20	Concept of p-value. Tests of hypothesis for the parameters of a normal distribution (one sample)	4	Unit Test -1 12-09-2023
October	16	Unit -1	20	Estimation of population mean, confidence intervals, for the parameters of a normal distribution. Final Exam. Q.P.S discussed and problems solved.	4	
November	22					
December						

Note: Teaching Plan to be prepared for each course. Class Test/Unit Test to be included.

Signature of the Faculty

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## TEACHING PLAN :: MANGALDAI COLLEGE, MANGALDAI

P-STA-HG-3016

Session : 2023-24 :: Department : Statistics :: Name of the Teacher : Dr. Ranjita Goswami :: Semester : III :: Course : H.G.

Months	Teaching Days	Syllabus Unit No.	No. of periods prescribed in the syllabus	Title of the Topic to be taught	No. of periods allotted in the routine	Remarks
August	26	Unit - 1	20	Test of Hypothesis; The basic idea of significance test, Null & Alternative hypothesis, Type I, Type II errors, level of significance, etc.	3/week	
September	18	Unit - 1	20	Concept of p-value. Tests of hypotheses for the parameters of a normal distribution (one sample)	3/week	Unit - Test - 1 12-09-2023
October	16	Unit - 1	20	Estimation of population mean, confidence intervals for the parameters of a normal distr. Final Exam Q.P.s. discussed and problems solved.	1	
November	22					
December						

Note: Teaching Plan to be prepared for each course. Class Test/Unit Test to be included.

Signature of the Faculty



## TEACHING PLAN :: MANGALDAI COLLEGE, MANGALDAI

P-STA-HC-5016

Session : 2023-24 :: Department : Statistics :: Name of the Teacher : Dr. Ranjita Goswami :: Semester : V :: Course : Mathematics

Months	Teaching Days	Syllabus Unit No.	No. of periods prescribed in the syllabus	Title of the Topic to be taught	No. of periods allotted in the routine	Remarks
August	26	Unit-1 1-2	8	Stochastic Process : Introduction, Markov chains,	7/Week	
September	18	Unit-2	18	Markov chains : Transition probability matrix, Orders of Markov chain, Markov chain as graphs, higher transition probabilities	"	unit Test-1 12-09-2023
October	16	Unit-2	18	Classification of states and chains	"	
November	22	unit-2	18	Problems related to Markov chain will be discussed	"	
December						

Note: Teaching Plan to be prepared for each course. Class Test/Unit Test to be included.

Signature of the Faculty



## TEACHING PLAN :: MANGALDAI COLLEGE, MANGALDAI

P-STAN-5026

Session : 2023-24 :: Department : Statistics :: Name of the Teacher : Dr. Ranjita Goswami :: Semester : V :: Course : Honours

Months	Teaching Days	Syllabus Unit No.	No. of periods prescribed in the syllabus	Title of the Topic to be taught	No. of periods allotted in the routine	Remarks
August	26	Unit 1 f 2,3	15	Introduction to Time Series, moving averages	4/Week.	
September	18	Unit 2 f 3	18	Detrending, Effect of elimination of trend on other components of time series, Seasonal component.	"	Unit Test - 1 13-09-2023
October	16	Unit 3 f 4	15 f 12	Ratio to moving averages and Link Relative method, Deseasonalization, Forecasting	"	
November	22	Unit 4	12	Forecasting and smoothing to time series.	"	
December						

Note: Teaching Plan to be prepared for each course. Class Test/Unit Test to be included.

Signature of the Faculty






## TEACHING PLAN :: MANGALDAI COLLEGE, MANGALDAI

P-STA-HC-3016

Session : 2023-24 :: Department : Statistics :: Name of the Teacher : Dr. Ranjita Goswami :: Semester : III :: Course : Honours

Months	Teaching Days	Syllabus Unit No.	No. of periods prescribed in the syllabus	Title of the Topic to be taught	No. of periods allotted in the routine	Remarks
August	26	Unit-2	20	Sampling Distributions: Large sample Tests, testing single proportion, difference of two proportions, single mean, difference of two means, standard deviation and difference of standard deviations.	7/week	
September	18	Unit-3	12	Exact sampling distributions: Def <sup>n</sup> and derivation of $\chi^2$ with ndf, mean, variance, mode, additive property, limiting form of $\chi^2$ , etc.	"	Unit Test - 1 12-09-2023
October	16	Unit-4	20	Student's and Fishers t-distribution, mean, variance, nature of the curves, Relationship between t, F and $\chi^2$ distributions, etc.	"	
November	22	Unit-2, 3 and 4		Final year question papers discussed and problems solved	"	
December						

Note: Teaching Plan to be prepared for each course. Class Test/Unit Test to be included.

Signature of the Faculty 


## TEACHING PLAN :: MANGALDAI COLLEGE, MANGALDAI

Session : 2023-24 :: Department : Statistics :: Name of the Teacher : Dr. Ranjita Goswami :: Semester : 1 Course : Major

P-STA-101

Months	Teaching Days	Syllabus Unit No.	No. of periods prescribed in the syllabus	Title of the Topic to be taught	No. of periods allotted in the routine	Remarks
August	26	Unit-3	15	Probability: Introduction, random experiments, sample space, events, Def <sup>n</sup> of probability, laws of addition and multiplication	2/Week	
September	18	Unit-3 & Unit-4	15	Conditional probability, Independent events, random variables, Bayes theorem.	"	Unit Test 1 13-09-2023
October	16	Unit-4	9	Random variables and Expectations: Discrete and Continuous random variables, P.m.f, p.d.f, c.d.f. Expectation of univariate random variables.	4	
November	22	Unit-3 & 4		problems related to question papers will be solved.	"	
December						

Note: Teaching Plan to be prepared for each course. Class Test/Unit Test to be included.

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## TEACHING PLAN :: MANGALDAI COLLEGE, MANGALDAI

P-STA-101

Session : 2023 :: Department : Statistics :: Name of the Teacher : Dr. Rangita Goswami :: Semester : 1 :: Course : M.Com

Months	Teaching Days	Syllabus Unit No.	No. of periods prescribed in the syllabus	Title of the Topic to be taught	No. of periods allotted in the routine	Remarks
August	26	Unit-3	15	Probability: Introduction, random experiments, sample space, events, Defn of probability, laws of addition and multiplication, Bayes theorem	2/week	
September	18	Unit-3 & Unit-4	15	Conditional probability, Independent events, random variables, Random variables and expectation; Discrete and continuous random variables;	"	
October	16	Unit-4	9	P.m.f, p.d.f, c.d.f, expectation of univariate random variables, problems related to probability will be discussed.	"	
November	22	Unit-3 & 4		Final exams Q.P.s will be discussed.	"	
December						

Note: Teaching Plan to be prepared for each course. Class Test/Unit Test to be included.

Signature of the Faculty



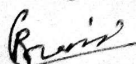
**TEACHING PLAN :: MANGALDAI COLLEGE, MANGALDAI**

Data Collection and presentation

Session : 2023-2024 :: Department : Statistics :: Name of the Teacher : Dr. Rangita Goswami :: Semester : 1 :: Course : SEC

Months	Teaching Days	Syllabus Unit No.	No. of periods prescribed in the syllabus	Title of the Topic to be taught	No. of periods allotted in the routine	Remarks
August	26					
September	18	unit-2		Meaning ; how to prepare a questionnaire and interview schedule	4	
October	16	unit-2		Use of questionnaire and interview schedule	4	
November	22	unit-2		Questions <sup>will</sup> discussed and to prepare questionnaire.	4	
December						

Note: Teaching Plan to be prepared for each course. Class Test/Unit Test to be included.

  
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TEACHING PLAN :: MANGALDAI COLLEGE, MANGALDAI

Session : 2023-24 :: Department : Statistics :: Name of the Teacher : Prunab Das :: Semester : I Course : Major

Months	Teaching Days	Syllabus Unit No.	No. of periods prescribed in the syllabus	Title of the Topic to be taught	No. of periods allotted in the routine	Remarks
August-23	26	Unit-2	12.	Measures of Central tendency :- Defs, different types of M.C.T. Properties of A.M, Median, Ex: of Mean Median	8	Done - 8.
September-23	18	Unit-2	12	Mode, G.M, H.M, Measures of location. Ex. of Mode, G.M. H.M..	8	Done - 3 Unit Test - I
October	16	Unit-2	12.	Practical Ex. of Measures of central tendency; Measures of dispersion - Defs, Different types of Measures of dispersion;	8	
November	22	Unit-2	12	Practical problem and Q. P. discussion.		
December						

Note: Teaching Plan to be prepared for each course. Class Test/Unit Test to be included.

Prunab Das  
Signature of the Faculty

## TEACHING PLAN :: MANGALDAI COLLEGE, MANGALDAI

Session : 2023-24 :: Department : Statistics :: Name of the Teacher : Pramod Das :: Semester : 1<sup>st</sup> :: Course : Honours

Months	Teaching Days	Syllabus Unit No.	No. of periods prescribed in the syllabus	Title of the Topic to be taught	No. of periods allotted in the routine	Remarks
August-23	26	4.	20	Calculus of finite difference : Def. of $\Delta$ , $E$ , Ex. of $\Delta$ , $E$ and Fundamental theorem, $\Delta$ using value. Ex. of $\Delta$ , $E$ , operators.	36- <del>27</del>	
September-23	18	4.	20	Divided difference, Lagrange's formula. Ex. of Div. differences & Lagrange formula.		unit Test - I
October	16	4	20.	Interpolation - Newton Gregory interpolation formula for Forward & Backward Method. → Sample Survey.		
November	22	4		Practical problem and Q. Paper discussion		
December						

Note: Teaching Plan to be prepared for each course. Class Test/Unit Test to be included.

*Pramod Das*  
Signature of the Faculty

## TEACHING PLAN :: MANGALDAI COLLEGE, MANGALDAI

Session : 2023-24 :: Department : Statistics :: Name of the Teacher : Pranab Das :: Semester : V Course : Honours

Months	Teaching Days	Syllabus Unit No.	No. of periods prescribed in the syllabus	Title of the Topic to be taught	No. of periods allotted in the routine	Remarks
August-23	26	1	20.	O.R - Introduction to O.R - Def <sup>n</sup> of O.R, Phases of O.R, L.P.P, Formulation of L.P.P, Graphical sol <sup>n</sup> ,	32	
September	18	2.	20.	Transportation problem :- Def <sup>n</sup> of T.P. Different methods of sol <sup>n</sup> of T.P.		Unit Test - I.
October	16	3	20.	Inventory model :- Def <sup>n</sup> of Inventory model, different models of inventory. Game theory :- Concept of game theory.		
November	22			Solve of inventory problem and Q.Paper discussion		
December						

Note: Teaching Plan to be prepared for each course. Class Test/Unit Test to be included.

Pranab Das  
Signature of the Faculty

## TEACHING PLAN :: MANGALDAI COLLEGE, MANGALDAI

Session : 2023-24 :: Department : Statistics :: Name of the Teacher : Pramod Das :: Semester : I :: Course : Maths

Months	Teaching Days	Syllabus Unit No.	No. of periods prescribed in the syllabus	Title of the Topic to be taught	No. of periods allotted in the routine	Remarks
August-23	26	2.	12.	Measures of central tendency : Defn., Different types of M. of central tendency. A.M, properties of A.M., Median.	8	
September	18	2.	12	Mode, G.M. H.M. & Measures of location. Ex. of Mode, G.M, H.M & Quantile, Decile, & Percentile.		Unit-Test-1
October	16	2	1	Measures of dispersion - Defn., Different types of Measure of dispersion.		
November	22	2	1	Practical problem and G. P. distribution.		
December						

Note: Teaching Plan to be prepared for each course. Class Test/Unit Test to be included.

*Pramod Das*  
Signature of the Faculty



## TEACHING PLAN :: MANGALDAI COLLEGE, MANGALDAI

Session : 2023-24 :: Department : Statistics :: Name of the Teacher : Pranab Das :: Semester : III Course : HA/RC

Months	Teaching Days	Syllabus Unit No.	No. of periods prescribed in the syllabus	Title of the Topic to be taught	No. of periods allotted in the routine	Remarks
August-23	26	3	22	AOV :- Defn of AOV, Linear model, Assumptions, one way classified data,	16.	
September -23	18	3		Design of experiments : CRD, RBD		unit Test - I
October -23	16	3.		Practical Example of CRD, RBD		
November	22	3		H. Paper solve and Practical problem,		
December						

Note: Teaching Plan to be prepared for each course. Class Test/Unit Test to be included.

Pranab Das  
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**TEACHING PLAN :: MANGALDAI COLLEGE, MANGALDAI**

2023-24 :: Department : Statistics :: Name of the Teacher : Pramod Das :: Semester : I Course : SEC

Teaching Days	Syllabus Unit No.	No. of periods prescribed in the syllabus	Title of the Topic to be taught	No. of periods allotted in the routine	Remarks
August					
26					
September					
18	1		use of data : use of data in Social Science, types and source of data, data collection methods.	4.	Unit-Test-I
October					
16	1		Population census v/s sample survey and random sampling.	4.	
November					
22	1		Sample survey related example discussion.	4.	
December					

Note: Teaching Plan to be prepared for each course. Class Test/Unit Test to be included.

Pramod Das  
Signature of the Faculty

**TEACHING PLAN :: MANGALDAI COLLEGE, MANGALDAI**

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Session : 2023-24 :: Department : Statistics :: Name of the Teacher : Sabnam Hazarika :: Semester : 1st Course : DI (Major)

Months	Teaching Days	Syllabus Unit No.	No. of periods prescribed in the syllabus	Title of the Topic to be taught	No. of periods allotted in the routine	Remarks
August	26	1	9	Definition and Scope of Statistics, Concepts of Statistical population and sample, Data: Primary and Secondary, Qualitative and Quantitative	5	
September	18	1.	9	Scales of measurement - nominal, ordinal, interval and ratio. Presentation - tabular and graphical, including histogram and ogive.	5	Unit test 1
October	16	1.	9	Boxplot, Collection and scrutiny of data: primary data designing a questionnaire and a schedule.	5	
November	22	1	9	Secondary data - their Major Sources including some government publications	5	
December						

Note: Teaching Plan to be prepared for each course. Class Test/Unit Test to be included.

Sabnam Hazarika  
Signature of the Faculty

**TEACHING PLAN :: MANGALDAI COLLEGE, MANGALDAI**

Session : 2023-24 :: Department : Statistics :: Name of the Teacher : Sakram Hazarika :: Semester : 1st :: Course : D. (M. Stat)

Months	Teaching Days	Syllabus Unit No.	No. of periods prescribed in the syllabus	Title of the Topic to be taught	No. of periods allotted in the routine	Remarks
August	26	1.	9	Definition and Scope of Statistics, Concepts of statistical population and sample, data: Primary and Secondary, Qualitative and Quantitative.	5	
September	18	1.	9	Interval & Ratio scale, Presentation: Tabular and graphical, including Histogram and Ogives	5	Unit-Test I
October	16	1.	9	Boxplot. Collection and Scrutiny of Data: Primary data designing a questionnaire and schedule.	5	
November	22	1	9	Secondary data - their sources including some government publications.	5	
December						

Note: Teaching Plan to be prepared for each course. Class Test/Unit Test to be included.

Sakram Hazarika  
Signature of the Faculty

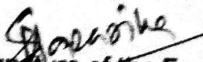


**TEACHING PLAN :: MANGALDAI COLLEGE, MANGALDAI**

Session : 2023-24 :: Department : Statistic :: Name of the Teacher : Sabnam Hazarika Semester : 6<sup>th</sup> Course : S7A-5E-3014

Months	Teaching Days	Syllabus Unit No.	No. of periods prescribed in the syllabus	Title of the Topic to be taught	No. of periods allotted in the routine	Remarks
August	26	1.	8	To load data, plotting of graph viz. box-plot, stem-leaf, frequency polygon pie-charts and ogives in an excel sheet. To load data in SPSS.	4	
September	18	3 & 2	8+6	Generating random nos., Polynomial and exponential graphs.	4	
October	16	3 & 2	8+6	Problems based on fitting of suitable distn, Normal Probability Plot. Report Generation	4	
November	22	4	8	Analysis : Simple Analysis, Import data, code editing, understanding hypothesis and computing p value and confidence intervals	4	
December						

Note: Teaching Plan to be prepared for each course. Class Test/Unit Test to be included.

  
Signature of the Faculty

**TEACHING PLAN :: MANGALDAI COLLEGE, MANGALDAI**

Session : 2023-2024 :: Department : Statistics :: Name of the Teacher : Sabnam Hazarika :: Semester : 3rd Course : STA-HC-3016

Months	Teaching Days	Syllabus Unit No.	No. of periods prescribed in the syllabus	Title of the Topic to be taught	No. of periods allotted in the routine	Remarks
August	26	1.	8	Introduction to order statistics, distribution of the $r$ th order statistic, smallest and largest order statistic.	2/week	
September	18	1.	8	Applications of order statistics, joint order statistics, distribution of sample median and sample range.	2/week	Unit TSP I
October						
November						
December						

Note: Teaching Plan to be prepared for each course. Class Test/Unit Test to be included.

S. Hazarika  
Signature of the Faculty

## TEACHING PLAN :: MANGALDAI COLLEGE, MANGALDAI

Session : 2023-24 :: Department : Statistics :: Name of the Teacher : Saknam Hazarika Semester : 3rd Course : STA-HC-3026

Months	Teaching Days	Syllabus Unit No.	No. of periods prescribed in the syllabus	Title of the Topic to be taught	No. of periods allotted in the routine	Remarks
August	26	4.	6	Present official statistical system in India. Methods of collection of order statistics. MasPI and CSO, NSSO and National Statistical Commission.	2/week	
September						Unit test 1
October	16	4	6	Government of India's principal publications containing data on the topics such as population, industry and finance.	2/week	
November						
December						

Note: Teaching Plan to be prepared for each course. Class Test/Unit Test to be included.

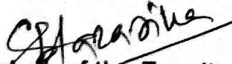
Saknam Hazarika  
Signature of the Faculty

## TEACHING PLAN :: MANGALDAI COLLEGE, MANGALDAI

Session : 2023-24 :: Department : Statistics :: Name of the Teacher : Sabnam Parashika :: Semester : 3rd Course : STA-HC-3026

Months	Teaching Days	Syllabus Unit No.	No. of periods prescribed in the syllabus	Title of the Topic to be taught	No. of periods allotted in the routine	Remarks
August	26	1.	12	Representation of real numbers as points on the line, Bounded and unbounded sets, neighbourhoods and limit points, Supremum and infimum, defined sets, open and closed sets.	2/week	
September	18	1 & 2	12+12	Sequence and their convergence, limits of some special sequences, Cauchy's general principle of convergence, Cauchy's theorem on limits, Monotonic sequence, lim sup & lim inf, Infinite series :- Leibnitz test etc	2/week	Unit Test 1
October	16	2	12	L Hospital's rule, examples of indeterminate forms.	"	
November						
December						

Note: Teaching Plan to be prepared for each course. Class Test/Unit Test to be included.

  
Signature of the Faculty

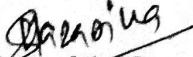


## TEACHING PLAN :: MANGALDAI COLLEGE, MANGALDAI

Session : 2023-2024 :: Department : Statistics :: Name of the Teacher : Sabnam Hazarika :: Semester : 3rd :: Course : STA-HG-3016

Months	Teaching Days	Syllabus Unit No.	No. of periods prescribed in the syllabus	Title of the Topic to be taught	No. of periods allotted in the routine	Remarks
August	26	2.	18	Tests of association and goodness of fit using chi-square tests, Yates's correction.	1/week	
September	18	2. & 1	18	Test of proportions, Non-parametric test: Signed test, wilcoxon ranked sign test.	n	Unit Test 1
October	16	1	18	Problems on wilcoxon test, paired sign test.	n	
November						
December						

Note: Teaching Plan to be prepared for each course. Class Test/Unit Test to be included.

  
Signature of the Faculty

**TEACHING PLAN :: MANGALDAI COLLEGE, MANGALDAI**

Session: 2023-24 :: Department: Statistics :: Name of the Teacher: Sabnam Hazarika :: Semester: 3rd :: Course: STARC-3016

Months	Teaching Days	Syllabus Unit No.	No. of periods prescribed in the syllabus	Title of the Topic to be taught	No. of periods allotted in the routine	Remarks
August	26	2.	18	Tests of association and tests of goodness of fit test using chi-square test, Yates' correction.	1/week	
September	18	2&1	18	Test of proportions Non-parametric test: Signed test, Wilcoxon ranked sign test, etc.	n	Unit Test 1
October	16	1	18	Signed test, Wilcoxon ranked sign test.	n	
November						
December						

Note: Teaching Plan to be prepared for each course. Class Test/Unit Test to be included.

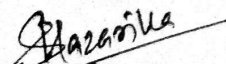
Sabnam Hazarika  
Signature of the Faculty

## TEACHING PLAN :: MANGALDAI COLLEGE, MANGALDAI

Session : 2023-24 :: Department : Statistics :: Name of the Teacher : Sabnam Hazarika :: Semester : 5th Course : STA-HC-5026

Months	Teaching Days	Syllabus Unit No.	No. of periods prescribed in the syllabus	Title of the Topic to be taught	No. of periods allotted in the routine	Remarks
August	26	1.	30	C - Programming :- History and importance of C, basic structure programming, C-tokens keywords, identifiers, Data types, Constants and variables, Operators and Expressions	3/week	
September	18	2.	30	Decision making and Arrays :- decision making and branching :- switch, conditional. looping in C.	3/week	Unit Test 1
October	16	2	30	Arrays :- Declaration and initialization of one-dim and two-dim arrays, character array and strings.	3	
November	22	1&2		All practicals (in computer lab)		
December						

Note: Teaching Plan to be prepared for each course. Class Test/Unit Test to be included.

  
Signature of the Faculty

**TEACHING PLAN :: MANGALDAI COLLEGE, MANGALDAI**

Session : 2023-24 :: Department : Statistics :: Name of the Teacher : Sabnam Hazarika :: Semester : 5th :: Course : STA-HC-5016

Months	Teaching Days	Syllabus Unit No.	No. of periods prescribed in the syllabus	Title of the Topic to be taught	No. of periods allotted in the routine	Remarks
August						
September	18	3&1	18	Poisson Process ; Its mean and variance, Postulates of Poisson process, properties and inter-arrival time. Generating fns, Bivariate probability generating fn	4/week	Unit Test 1
October	16	4	16	Problems on Poisson process, General concept of Queuing process. Steady-state distribution	"	
November	22	4	16	Queuing models M/M/1 model with finite and infinite system capacity, waiting time distribution.	"	
December						

Note: Teaching Plan to be prepared for each course. Class Test/Unit Test to be included.

Sabnam Hazarika  
Signature of the Faculty



**TEACHING PLAN :: MANGALDAI COLLEGE, MANGALDAI**

Session : 2023-24 :: Department : Statistics :: Name of the Teacher : Sabnam Hazarika :: Semester : 1st Sem Course : B.A.(SEC)

Months	Teaching Days	Syllabus Unit No.	No. of periods prescribed in the syllabus	Title of the Topic to be taught	No. of periods allotted in the routine	Remarks
August						
September	18	3		data presentation in tabular format,	4	
October	16	3		use of diagrams for data presentation creating charts in excel. file	4	
November	22	3		diagrams in MS-Excel - Bar, line, pie, scatter, radar, bubble diagrams, population pyramids, etc.	4	
December						

Note: Teaching Plan to be prepared for each course. Class Test/Unit Test to be included.

Sabnam Hazarika  
Signature of the Faculty