



# গড়গাঁও মহাবিদ্যালয় GARGAON COLLEGE

**TEACHING PLAN**  
**DEPARTMENT OF STATISTICS**  
**JULY 2019 - JUNE 2020**



Period of Semester	Semester	Tentative Date of Univ Exam (Notification of Dib. Univ.)	Name of the Faculty	Course Code: STAT-	Paper Name	Unit wise Title of the Topic	Number of Lectures (1 Hour per Lecture) Theory-TH Practical-P Seminar-S Group Discussion-GD Tutorial-TU Surprized Test-ST	Tools used for teaching  Black Board-BB Google Meet-GM Google Classroom-GC Online Class-OC
July, 2019-December, 2019	Sem-I  CBCS	2 <sup>nd</sup> - 16 <sup>th</sup> December, 2019	Dr. Ranjana Gogoi	C1	Descriptive Statistics	Unit1-Statistical Methods	TH-10, P-1 TU-1, ST-1	BB, OC
						Unit2-Measures of Central Tendency	TH-20, P-4, S-1, TU-2, ST-1	BB, GC
						Unit3- Correlation, Regression	TH-10, P-8, S-1, TU-1	BB, GC
						Unit4- Index Numbers	TH-10, P-3, TU-1, ST-1	BB, GC
			Ms. Bornali Dutta	C2	Calculus	Unit1-Differential Calculus	TH-10, S-1, TU-2,ST-1	BB
						Unit2- Integral Calculus	TH-9, S-1, TU-2,ST-2	BB, GC
						Unit3- Differential Equations	TH-9, S-1, TU-2,ST-1	BB,GC
						Unit4-Partial Differential Equations	TH6-, S-1, TU-1,ST-1	BB, GC
			Dr. Ranjana Gogoi	GE1	Statistical Methods	Unit1-Introduction	TH-10, TU-1, ST-1	BB, GC
						Unit2-Measures of Central Tendency	TH-16, P-4, S-1, TU-2	BB, GC
						Unit3- Correlation, Regression	TH-16, P-7, S-1, TU-2	BB, GC
						Unit4-Theory of Attributes	TH-8, P-1, TU-1, ST-1	BB, GC
January, 2020-June, 2020	Sem II		Dr. Ranjana Gogoi	C3	Probability and Probability Distribution	Unit1-Probability	TH-10, TU-1, ST-1	BB, OC
						Unit2-Random Variables	TH-10, S-1, TU-2, ST-1	BB, GC, OC
						Unit3-Mathematical Expectation	TH-10, S-1, TU-2, ST-1	BB, GC, OC
						Unit4-Probability Distributions	TH-15, P-15, TU-2	BB, GC
			Ms. Bornali Dutta	C4	Algebra	Unit1-Theory of Equations	TH-8,TU-2,ST-2,S-1	BB, GC,
						Unit2- Algebra of Matrices	TH-6,TU-1,ST-1,S-1	BB, GC,GM
						Unit3-Determinants of Matrices	TH-14,TU-3,ST-2,S-1	BB, GM
						Unit4-Rank of Matrix	TH-6,TU-1,ST-2,S-1	BB, ,GM
			Dr. Ranjana Gogoi	GE2	Introductory Probability	Unit1-Probability	TH-15, TU-2	BB, OC
						Unit2-Random Variable, Math. Expectation	TH-10, S-1, TU-1, ST-1	BB, GC, OC



						Unit3-Convergence in Probability	TH-10, TU-1, S-1, ST-1	BB, GC
						Unit4-Probability Distribution	TH-15, P-12, TU-2, ST-1	BB, GC
July, 2019-December, 2020	SEM III		Dr. Ranjana Gogoi	STSM-301	Probability & Distribution - I	Unit1-Random Experiment & Basic Introduction to probability	TH-6,TU-1,S-1,ST-1	BB
						Unit2-Random Variables	TH-8,TU-1,S-1,ST-1,P-7	BB, GC,
						Unit3-Bivariate Distribution	TH-6,TU-1,S-1,ST-1,P-3	BB
			Ms. Bornali Dutta	STSM-302	Numerical Methods	Unit1- Finite Differences	TH-8, TU-1, P-4, S-1	BB
						Unit2-Interpolation & Extrapolation	TH-8, S-1, TU-1, P-3, ST-1	BB
						Unt3-Numerical Differentiation	TH-5, TU-1, S-1, GD-1, P-2	BB
			Dr. Ranjana Gogoi	STSG-301	Estimation & Testing	Unit-1: Basic Introduction to Estimation	TH-8,TU-1,ST-1	BB
						Unit-2: Methods of Estimation	TH-8,TU-1,ST-1	BB
						Unit-3: Basic concept of Statistical Hypothesis	TH-4,TU-1,ST-1	BB,
Ms. Bornali Dutta	STSG-302	Practical	Large& Small Sample test, Test of significance	P-8	BB			
January, 2020-June, 2020	SEM IV		Dr. Ranjana Gogoi	STSM-401	Probability & Distribution	Unit-1 Discrete Distribution	TH-8,TU-1,S-1,ST-1	BB, GC,GM
						Unit-2 Continuous Distribution	TH-4,TU-1,ST-1,P-4	BB, GC,GM
						Unit-3 Sampling Distribution	TH-8,TU-1,ST-1,P-4	BB, GC,GM
						Unit-4 Chebyshev's inequality	TH-6,TU-1,ST-1,P-3	BB, GC,GM
			Ms. Bornali Dutta	STSM-402	Mathematics for Statistics-II	Unit1-Basic concepts of vector space	TH-8,TU-1,S-1,ST-1	BB, GC, OC
						Unit2-Matrices	TH-4,TU-1,ST-1,P-4	BB, GC, OC
						Unit3-Basic concept of differentiability	TH-8,TU-1,ST-1,P-4	BB, GC, OC
						Unit4-Basic concept of Integral	TH-6,TU-1,ST-1,P-3	BB, GC, OC
			Ms. Bornali Dutta	STSM-403	Practical	1. Problems based on Interpolation	P-6	BB, GC
						2. Problems based on numerical integration	P-5	BB, GC
3. Solution of algebraic equation using Newton Raphson Method	P-2	BB, GC						




July, 2020-December, 2020	SEM V					4. Fitting of distributions 5. Classification of Quadratic forms using Eigen values 6. Solution of system of simultaneous equations having four Roots	P-10	BB,
			Dr. Ranjana Gogoi	STSG-401	Sample Survey	Unit1: Basic concept of Sample Survey, NSSO & Population Census of India and their functions.	TH-15,TU-6,ST-2,S-1	BB,OC
						Unit2: Stratified Random Sampling .	TH-15,TU-6,ST-2,S-1	BB,OC
			Ms Bornali Dutta	STSG-402	Practical	1. Method of drawing simple random samples using random number table. 2. Analysis using simple random samples, stratified random sampling, systematic sampling	P-8	BB,G
			Ms. Bornali Dutta	STSM-501	Estimation	Unit1- Basic concept of point estimation	TH-6, TU-2, GD-1	BB, GC
						Unit2- Methods of Estimation	TH-10, S-1, TU-2, ST-1	BB
						Unit3- Interval Estimation	TH-10, TU-1, S-1, ST-1	BB
			Ms. Bornali Dutta	STSM-502	Testing of Hypothesis	Unit1-Basic concept of hypothesis testing	TH-7,TU-2,ST-2,P-3	BB
						Unit2-Test of significance	TH-4,TU-1,ST-1,P-3	BB
						Unit3-Nonparametric test	TH-4,TU-1,ST-1,P-3	BB
Dr. Ranjana Gogoi	STSM-503	Sample Survey	Unit1- Basic concept of population & sample	TH-5,TU-1,ST-1	BB			
			Unit2- Simple random sampling	TH-9,TU-2,ST-2,S-1	BB			
			Unit3- Stratified Random Sampling	TH-6,TU-1,ST-1,S-1	BB			
			Unit4- Systematic Sampling	TH-6,TU-1,ST-1,GD-1	BB			
Ms. Bornali Dutta	STSM-504	Practical	1. Tests for proportions	P-4	BB			
			2. Test based on t, F and chi-square	P-6	BB			
			3. Non parametric test	P-6	BB			
			4. Goodness of fit test	P-2	BB			
			5. Drawing of power curve	P-5	BB			



January, 2020- June, 2020	SEM VI		Dr. Ranjana Gogoi	STSM-504	Practical	6. Drawing of random sample using random number tables 7. Analysis of data using simple random sampling, stratified random sampling, systematic sampling	P-6	BB-6
			Ms. Bornali Dutta	STSG-501	Applied Statistics	Unit1: Basic concept of time series	TH-5,TU-2,ST-1,S-1	BB
						Unit2: Basic Index number	TH-7,TU-2	BB
						Unit3: Demand Analysis	TH-4,TU-2	BB
						Unit4: Sources of demographic data	TH-8,TU-2,ST-1,S-1	BB
						Unit5: Statistical Process Control	TH-8,TU-2,ST-1,S-1	BB
			Dr. Ranjana Gogoi	STSG-502	Practical	1. Measurement of trend by least squares method, moving average method	P-4	BB
						2. Construction of index number, CLIN 3. Calculation of CBR,STDR,GFR,TFR,NRR 4. Variable and attribute control chart 5. Drawing of OC,ASN, AOQ and ATI Curves	P-11	BB
			Ms. Bornali Dutta	STSM-601	Design of Experiments	Unit1- Linear Estimation	TH-6, TU-2	BB, OC, GC, GM
						Unit2-Principles of design of experiments	TH-8, S-1, TU-2, P-4	BB, GC, OC,GM
						Unit3-Factorial Experiments ,Split plot experiments	TH-8, TU-1, S-1, P-3	BB, GC, OC,GM
			Dr. Ranjana Gogoi	STSM-602	Applied Statistics	Unit1-Time Series Analysis	TH-7,TU-2,ST-1,P-6	BB, GC, OC,GM
Unit2-Index Numbers	TH-4,TU-1,ST-1,P-1	BB, GC, OC						
Unit3-Mathematical Economics & Econometrics	TH-7,TU-2,ST-1,P-2,S-1	BB, GC, OC						
Unit4-Demography	TH-6,TU-2,P-4,ST-2	BB, GC, OC,GM						
Ms. Bornali Dutta	STSM-603	Practical		1. Problem based on ANOVA 2. Problems based on CRD, RBD& LSD 3. Problems based on factorial experiment 4. Problems based on confounding 5. Problems based on measurement of trend 6. Construction of Laspeyre's, Paashe's, Marshall Edgeworth and Fisher Index number 7. Calculation of birth and death rates: Crude and	P-25	BB, GC,GM		



				Standardized. 8. Calculation of general and total fertility 9. Construction of variable and attribute control chart. 10. Calculation of general and total fertility rates. 11. Drawing OC, ASN,AOQ and ATI Curves of single sapling plan by attribute 12. Determination of Price Elasticity of demand for linear and log-linear demand function				
			Ms. Bornali Dutta & Dr. Ranjana Gogoi	STSM-604	Project work	Preparation of Questionnaire, Data Collection, Tabulation, Analysis, Report Writing	TH-6	GC,GM
			Ms. Bornali Dutta	STSG-601	Design of Experiments	Unit1-Analysis of Variance	TH-8, TU-2	BB, GC
		Unit2-Principles of design of experiments				TH-8, S-1, TU-2, ST-1	BB, GC	
		Unit3-Factorial Experiments				TH-8, TU-1, S-1, ST-1	BB, GC	
			Dr. Ranjana Gogoi & Ms. Bornali Dutta	STSG-602	Practical	1. Analysis of variance 2. Analysis of CRD, RBD, LSD. 3. Analysis of Factorial Experiment up to $2^4$ 4. Analysis of Factorial Experiment with confounding up to $2^3$	P-8	BB,GC

  
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