

I – Academic Planner

A. Teaching Plan (Year: 2021, Semester: EVEN- Jan to May)

Teacher's Name DR. VANDANA SARIN WALIA Department STATISTICS

S. No.	UPC	Paper Name	Core/AECC/GE/SEC	Topic/Unit	Start Date	End Date
1.	32371601	Design of Experiments	STAT-C-601	Experimental designs: Role, historical perspective, terminology, experimental error, basic principles, uniformity trials, fertility contour maps, choice of size and shape of plots and blocks.	1 st Jan., 2021	11 th Jan., 2021
				Basic designs: Completely Randomized Design (CRD), Randomized Block Design (RBD), Latin Square Design (LSD) – layout, model and statistical analysis, relative efficiency, analysis with missing observations. Practical work	14 th Jan., 2021	1 st Feb., 2021
				Incomplete Block Designs: Balanced Incomplete Block Design (BIBD) – parameters, relationships among its parameters, incidence matrix and its properties, Symmetric, Resolvable, and Affine Resolvable BIBD, Intra Block analysis, complimentary, Residual, Dual, Derived BIBD. Practical work.	2 nd Feb., 2021	18 th Feb., 2021
				Factorial experiments: advantages, notations and concepts, 2^2 , 2^3 ... 2^n and 3^2 factorial experiments, design and analysis, Total and Partial confounding for 2^n ($n \leq 5$), 3^2 and 3^3 . Factorial experiments in a single replicate. Practical work.	22 nd Feb., 2021	29 th Mar., 2021
				Fractional factorial experiments: Construction of one-half and one-quarter fractions of 2^n ($n \leq 5$) factorial experiments, Alias structure, Resolution of a design. Practical work.	30 th Mar., 2021	Dispersal of classes
2.	32371402	Linear Models	STAT-C-402	Gauss-Markov set up: Theory of linear estimation, Estimable linear parametric functions, Method of least squares, Gauss-Markov theorem, Estimation of error variance. Distribution of quadratic forms. Practical work	1 st Jan., 2021	24 th Jan., 2021
				Analysis of Variance: Definition of fixed, random and mixed effect models, ANOVA and ANOCOVA in one-way classified data for fixed effect models, ANOVA in two-way classified data with equal number of observations per cell for fixed effect models. Practical work	27 th Jan., 2021	22 nd Feb., 2021
				Regression analysis: Simple and Multiple Linear Regression analysis, Estimation and hypothesis testing in case of simple and multiple regression analysis, Confidence intervals and Prediction intervals, Concept of model matrix and its use in estimation. Effect of orthogonal columns in the X matrix, Partial F-test and Sequential F-test, Bias in regression estimates. Practical work	24 th Feb., 2021	29 th Mar., 2021
				Model checking: Prediction from a fitted model, Residuals and Outliers, Lack of fit and pure error, Violation of usual assumptions concerning normality, Homoscedasticity and collinearity, Diagnostics using quantile-quantile plots. Practical work	31 st Mar., 2021	Dispersal of classes

*Online Classes due to Covid-19

B. Internal Assessment: House Exam (Test/Presentation etc.) & Assignment*

Course Code	Course Name	Unique Paper Code	Topic Name	Day and Date	Date/s of Exhibiting the Assessment Sheet to students, Discussing the marks, Returning/Retaining
568	Statistics	32371601	UNIT I-III (Test)	30 th Mar., 2021	April 2021 (Returning)
568	Statistics	32371601	UNIT I-IV (Assignment)	26 th April, 2021	30 th April, 2021
568	Statistics	32371402	UNIT I-III (Test)	30 th Mar., 2021	April 2021 (Returning)
568	Statistics	32371402	UNIT I-IV (Assignment)	26 th April, 2021	30 th April, 2021

*Marks of the Internal Assessment to be submitted to the College 15 days before the last working day of every semester