Statistics Practical 2
[CORE COURSE]

Semester II	Credits: 1.5	Subject Code:BSP22011	Lectures : 40

Course outcomes:

At the end of this course, the learner will be able to:

- Analyze the relationship between two variables using scatter plot.
- Compute coefficient of correlation, coefficient of regression.
- Fit various regression models and to find best fit.
- Fit the Normal distribution.
- Perform Test of Hypothesis for a population parameter for single sample and two sample cases. Understand the concept of p-values
- Analyze the trend in time series and how to remove it.
- Generate model sample from given distributions.
- Understand the importance and functions of different statistical organizations in the development of nation.
- Report writing on application of some statistical technique in the field of computers.

Sr. No.	Title of the practical
1	Linear correlation and regression (use of scatter plot for explaining the linear relationship between two variables)
2	Fitting of non-linear regression. (use of scatter plot for explaining the non- linear relationship between two variables)
3	Fitting of normal distribution and computation of expected frequencies.
4	Fitting of linear regression model (Simple and Multiple) and non-linear regression models and finding the best fit by-using EXCEL.
5	Model-sampling from continuous uniform, exponential and normal distributions using Excel.
6	Large sample tests.
7	F test, t test, χ^2 test using EXCEL (one problem each with equal and unequal variance) (χ^2 test – for goodness of fit-use fitted problems of Binomial, Poisson and Normal distribution in previous practical problems)
8	Time Series- Estimation of trend by using the method of moving averages.
9	Write a report on application of some statistical technique in the field of computers.(individual activity)
10	Project (Part-II) - Analysis of data collected in semester-I.

Board of studies	Name	Signature
Chairman	Anjali Kale, St. Mira's College for Girls, Pune	

Recommended Text Books:

- Gupta S. C.and Kapoor V. K. 1987, *Fundamentals of Applied Statistics (3rd Edition)* S. Chand and Sons, New Delhi.
- Kulkarni M.B., GhatpandeS.B.,Gore S.D. 1999, *Common Statistical Tests*, Satyajeet Prakashan, Pune
- Kulkarni M.B., Ghatpande S.B. 2007, *Introduction to Discrete Probability and Probability Distributions* SIPF Academy
- Sarma K.V.S. 2001 *Statistics Made Simple. Do it Yourself on P.C.s* Prentice Hall.

Reference Books:

- Agarwal B. L., *Programmed Statistics*, New Age International Publishers.
- Freund J.E., *Modern Elementary Statistics*, ,Pearson Publication, 2005.
- Ghatpande S.B., Gore S.D., *Common Statistical Tests Kulkarni M.B.*, Satyajeet Prakashan, 1999.
- Law A. M. and Kelton W.D., *Simulation Modeling and Analysis*, Tata McGrawHill, 2007.
- Medhi J., *Statistical Methods (An Introductory Text)*, New Age International 1992.
- Mukhopadhyay P., *Mathematical Statistics (3rdEdition)*, Books And Allied (P), Ltd., 2015.
- Ross Sheldon, *A First course in Probability*, Pearson EducationInc.
- Trivedi K.S., *Probability, Statistics, Design of Experiments and Queuing Theory with Applications of Computer Science,* Prentice Hall of India, New Delhi, 2001.

Board of studies	Name	Signature (in white cell)	
Chairman(HoD)	Ms. Anjali Kale	21/7/20	
Faculty	Ms. Amrita Basu		21/7/20
Subject Expert(Outside SPPU)	Dr. Sharvari Shukla,	21/7/20	
Subject Expert(Outside SPPU)	Dr. Suresh Pathare		21/7/20
V.C. Nominee(SPPU)	Dr. Mohan Kale,	21/7/20	
Industry Expert	Dr. Saikat Roy		21/7/20
Alumni	Anuja	21/7/20	

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Chairman(HoD)	Anjali Kale, St. Mira's College for Girls, Pune	