Vidyasagar University

Curriculum for B.Sc (General) in Statistics

[Choice Based Credit System]

Semester-I

Course	Course Code	Name of the Subjects	Course Type/ Nature	Teaching Scheme in hour per week			Credit	Marks
				L	T	P		
CC1 [DSC-1A]		**C1T:** Descriptive Statistics	Core Course-1	4	0	0	6	75
		C1P: Descriptive Statistics		0	0	4		
CC2 [DSC-2A]	TBD	**DSC-2A (other Discipline)**	Core Course-2				6	75
CC3 [DSC-3A]	TBD	**DSC-3A (other Discipline)**	Core Course-3				6	75
AECC		English	AECC (Elective)	1	1	0	2	50
Semester Total							**20**	**275**

L=Lecture, **T**=Tutorial, **P**=Practical, **CC =** Core Course, **TBD =** To be decided, **AECC=** Ability Enhancement Compulsory Course

DSC-1 = Discipline Specific Core of Subject-1, **DSC-2** = Discipline Specific Core of Subject-2,**DSC-3** = Discipline Specific Core of Subject-3.

Semester -I
Core Course (CC)

CC-1: Descriptive Statistics **Credits 06**

C1T: Descriptive Statistics **Credits 04**

Unit 1

Introduction: Definition and scope of Statistics, concepts of statistical population and sample. Data: quantitative and qualitative, attributes, variables, scales of measurement - nominal, ordinal, interval and ratio. Frequency distribution, Presentation: tabular and graphic, including histogram and ogives.

Unit 2

Measures of Central Tendency: mathematical and positional. Measures of Dispersion: range, quartile deviation, mean deviation, standard deviation, coefficient of variation, moments, skewness and kurtosis.

Unit 3

Bivariate data: Definition, scatter diagram, simple, partial and multiple correlation (3 variables only), rank correlation (Spearman). Simple linear regression, principle of least squares and fitting of polynomials and exponential curves.

C1P: Descriptive Statistics (Practical) **Credits 02**

Practical:

1. Graphical representation of data
2. Problems based on measures of central tendency
3. Problems based on measures of dispersion
4. Problems based on combined mean and variance and coefficient of variation
5. Problems based on moments, skewness and kurtosis
6. Fitting of polynomials, exponential curves
7. Karl Pearson correlation coefficient
8. Partial and multiple correlations (3 variables only)
9. Spearman rank correlation with and without ties.
10. Correlation coefficient for a bivariate frequency distribution
11. Lines of regression, angle between lines and estimated values of variables.

Suggested Readings :

1. Goon A.M., Gupta M.K. and Dasgupta B. (2002): Fundamentals of Statistics, Vol. I& II, 8th Edn. The World Press, Kolkata.
2. Miller, Irwin and Miller, Marylees (2006): John E. Freund's Mathematical Statistics with Applications, (7th Edn.), Pearson Education, Asia.
3. Mood, A.M. Graybill, F.A. AndBoes, D.C. (2007): Introduction to theTheory of Statistics, 3rd Edn. (Reprint), Tata McGraw-Hill Pub. Co. Ltd.
4. Goon A.M., Gupta M.K. and Dasgupta B. : Basic Statistics. The World Press, Kolkata.
5. Chakraborty, Arnab (2016) : Probability and Statistics. Sarat Book House.