



Mahatma Gandhi Vidyamandir's
MAHARAJA SAYAJIRAO GAIKWAD ARTS, SCIENCE AND COMMERCE COLLEGE,
Malegaon Camp, Dist. Nashik-423105

Dept. of Psychology

And

Savitribai Phule Pune University, Pune

-: Certificate Course:-

Applications of Statistical Techniques in Social Science Research

Syllabus

Unit	Name of the Units / subunits	No. of lectures
Unit-1	Experimental Design	12
	1.1: Overview and variance control	3
	1.2: Single factor experiments	3
	1.3: Factorial experiments	3
	1.4: Other designs	3
Unit-2	Sampling and Testing	12
	2.1: Sampling – Meaning and types	3
	2.2: Hypothesis testing	3
	2.3: Test construction techniques	3
	2.4: Test standardization techniques	3
Unit-3	Descriptive Statistics	12
	3.1: Normal distribution, NPC	3
	Measures of central tendencies and variability	3
	3.3: Chi-square	3
	3.4: Correlation	3
Unit-4	Inferential Statistics	12
	4.1: t-test, ANOVA, Post-Hoc	3
	4.2: Regression, Multiple regression	3
	4.3: Multivariate analysis	3
	4.4: Factor analysis, Trend and Path analysis	3
	Practical Applications / Training	12
	Excel, SPSS, R-Studio	
		60 Hrs – 4 Credits

References:

Cohen, Barry H. and Lea, R. Brooke (2004). *Essentials of Statistics for the Social and Behavioral Sciences*. John Wiley & Sons, Inc.

DeVellis, R.F. (2016). *Scale development: Theory and applications* (4th edn). Thousand Oaks, California: Sage.

Goodwin, C.J. (2013). *Research in psychology: Methods and design* (7th edn). New York: John Wiley.

Hair, J.F., Black, W.C., Babin, B.J., Anderson, R.E. & Tatham, R.L. (2019). *Multivariate data analysis* (8th edn). Cengage.

Howell, D. (2012). *Statistical Methods for Psychology* (8th edn). Belmont: Duxbury Press.

Kline, P. (2015). *A handbook of test construction*. New York: Methuen.

Pallant, J. (2000). *SPSS Survival Manual: A step by step guide to data analysis using SPSS* (4th edn.) McGraw-Hill.

Tabachnick, B.G.; Fidell, L.S.; Ullman, J. B. (2018). *Using multivariate statistics* (7th edn). Boston: Pearson Education.

Co-ordinator
[Signature]

HEAD
Dept. Of Psychology
M.S.G. College
Malegaon-Camp, Malegaon(Nashik)

Principal
M.S.G. Arts, Science & Commerce
College, Malegaon Camp (Nashik)