

SARDAR PATEL UNIVERSITY
Programme: Master of Education
Semester: II
Syllabus with effect from: June 2013

Paper Code: PE02EMED02	Total Credits: 4
Title Of Paper: Inferential Statistical Methods in Educational Research	

Unit	Description in detail	Weightage (%)
1	Test of Significance: Types of Hypotheses Testing of null hypothesis <ul style="list-style-type: none"> • level of significance • one tailed and two tailed tests • two types of errors • degree of freedom T-test <ul style="list-style-type: none"> • Significance of the difference between two-means, medians, standard deviations percentage and correlations. F-test <ul style="list-style-type: none"> • The basis of ANOVA • ANOVA – one way and two way analysis and factorial analysis. • Concept of ANCOVA (No calculation) 	25 %
2	Non Parametric Tests: Concept of parametric and non-parametric test. Assumptions in the use of non-parametric test. Non parametric techniques. <ul style="list-style-type: none"> • Chi square, sign test, median test. • Mann whitney-U test • Wilcoxon matched pair sign rank test. • Kurskal wallis one way analysis of variance • Friedman – two way analysis of variance 	25 %
3	Other Methods of Correlation: Biserial and Point Biserial Tetrachoric Phi Coefficient of Correlation. Multiple and Partial Correlation techniques Regression and Prediction	25 %
4	Factor Analysis: Meaning and purpose of factor analysis Different approaches to extract factors Interpretation of factors	25 %

Basic Text & Reference Books:

- Adkins, D.C. Statistical Columbus. Ohio Charles e Merrill books Inc. 1964.
- Anderson, T.R. & Morris, Zelditch, Jr. A Basic Courses in Statistics New York: Hoft. Rinchar & Winston, 1968.
- Champion, F.J. Basic Statistics for Social research, New York, Macmillan Publishing Co. Inc. 1981.



- Cohah, Lewis & Michael, Holdiday, Statistics for Education and Physical Education. London : Harper & Row Publisher, 1979.
- Downie, M.M. & Experimental Design in Psychological Research, New York: Holt. Rinchar & Winstons. 1968.
- Edwards, A. L. Statistical Methods for the behavior Science, New York : Holt Rinchar & Winstons. 1967.
- Ferguson, G.A. Statistical Analysis in Psychology & Education New York: McGrew Hill Co. Inc. 1966.
- Fruchter, B. Introduction to Factor Analysis, New Delhi. Affiliated East West Press Pvt. Ltd. 1967.
- Gattert, H.E. & Woodworth, R.S. Statistics in Psychology and Education, Bombay: Vakils, feffer & Simons Pvt. Ltd., 1979.
- Guilford, J.P. Fundamental Statistics in Psychology and Education New York: McGraw Hill, 1965.
- Hays, W.L. Statistics for Psychologists New York Holt Rinehart, & Winston, 1965.
- Hyas, A.K. & May S.T. Statistical Methods in Education & Psychology New Delhi: Marosa Publishing House, 1980.
- Levin, Jack Elementary Statistics in Social Research, New York Harper & Row Publishers, 1977.
- Lindquist E.F. Statistical Analysis in Education Research, New Delhi Oxford and IBH Publishing Co. 1970
- Lynch, M.D. & Hundruberger, D.V. Elements of Statistical Inference for Education and Psychology, London: Allways & Bacon Inc. 1976.
- Popham, W. Hames & Sirethik, K.A. Educational Statistics New York:L Harper & Row 1973.
- Siegel Sixney, Non Parametrics Statistics for the Behour Sciences New York: Mc. Graw Hill, 1956.
- Tate, M.V. Statistical Principles in Experimental design. New York McGraw-Hill, 1971.
- Winer, B.J. Statistical Principles in Experimental design. New York : McGraw Hill, 1971.
- Winer, B.J. Statistical Principles in Experimental Design, New York : McGraw Hill, 1971
- ઉચાટ ડી.એ. વિચરણ પૃથ્થરણ રાજકોટ : સ્વ.ડી.એચ.ત્ર.દેસાઈ મેમોરીયલ ટ્રસ્ટ-૧૯૯૨
- ત્રિવેદી એમ. ડી. અને પારેખ, બી.યુ. શિક્ષણમાં આંકડાશાસ્ત્ર અમદાવાદ : યુનિવર્સિટી ગ્રંથ નિર્માણ બોર્ડ, ૧૯૮૯

