

**SARDAR PATEL UNIVERSITY**  
**Programme: Master of Education**  
**Semester: IV**  
**Syllabus with effect from: December 2016**

<b>Paper Code: PE04EMD2C3</b>	<b>Total Credits: 4</b>
<b>Title Of Paper: (P-3) Statistical Methods of Educational Research</b>	

Unit	Description in detail
1	<p><b>Normal Probability Curve and Its applications</b></p> <ol style="list-style-type: none"> <li>1. Normal probability curve and its properties</li> <li>2. Causes of Non-normal distribution, Skewness and kurtosis</li> <li>3. Applications of Normal probability curve</li> <li>4. Standardized Scores: 6Score , Z Scor, PR, TScore, Stanine</li> </ol>
2	<p><b>Statistical Inference and Testing of null hypothesis</b></p> <ol style="list-style-type: none"> <li>1. Concept of statistical inference, standard error, level of confidence, Confidence interval and central limit theorem</li> <li>2. Significance of Mean, Median, standard deviation, percentage and Coefficient of correlation</li> <li>3. t-test-significance of the difference between two means, medians, standard deviations, Percentage and Correlations</li> <li>4. F-test-ANOVA one way, two way and concept of ANCOVA</li> </ol>
3	<p><b>Non parametric tests</b></p> <p>Chi square, sign test, medium test  Mann whitney U test  Wilcoxon matched pair sign rank test,  Kruscal-wallis test  Friedman test</p>
4	<p><b>Correlation and Regression</b></p> <p>Pearson Product method  Spearman's Rank-difference  Other methods of correlation  Biserial, Point biserial  Tetrachoric, Phi  Multiple and Partial correlation  Regression and Prediction</p>

**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.
- Chamption, 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. & Experiemental 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. Statistcal 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, 956.
- Tate, M.V. Statistical Princi;es in Experiemental design. New York McGraw-Hill, 1971.
- Winer, B.J. Statistlcal Principles in Experiemental 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

