Course code DEMGN832

Course Title RESEARCH METHODOLOGY

Unit 1 Background of research- Developing research proposals, research paradigms- contributions of research to theory and practice and research ethics

Unit 2 An introduction to research- Meaning, process, defining, research problem: selection, understanding and necessity of defined problem, research design, need and types of Research Design

Unit 3 Reviewing literature- Identifying, accessing and managing sources of information and scholarly literature, academic writing and referencing and steps in literature review development

Unit 4 Types of data in research- Primary and secondary data and sources, nature of qualitative and quantitative research, data and variables used in qualitative and quantitative methods, writing up qualitative research

Unit 5 Sampling design- Sampling design process, characteristics of good sample, types of sampling design, sampling techniques- random and non-random

Unit 6 Measurement and scaling technique: Tools of sound measurement, techniques of developing measurement tools, scaling meaning and important scaling techniques, statistical properties of different scales

Unit 7 Data collection methods- Observation, experimentation and survey methods, questionnaire: introduction, design process and coding the questionnaire

Unit 8 Descriptive statistics and time series- Measures for central tendency- ungrouped and ungrouped data, dispersion and distribution, index number and time series analysis

Unit 9 Hypothesis testing- Hypothesis definition and process, types and hypothesis testing procedure for t and z tests differences for single, two populations and paired sample

Unit 10 Test of association- Correlation coefficient- Spearman rank and Karl's Pearson and test of association between nominal data- Chi-square test

Unit 11 Analysis of Variance (ANOVA) and prediction techniques- Analysis of variance for mean difference, reliability and validity, bivariate regression and multiple regression analysis

Unit 12 Multivariate analysis- Classification, important methods of factor analysis, factor analysis procedure, rotation in factor analysis, overview of cluster analysis, discriminant analysis, multi-dimensional scaling and conjoint analysis

Unit 13 Reporting a quantitative study- Technique and precaution of interpretation, significance of report writing, layout and types of report

Unit 14 Writing research proposals- Purpose, nature and evaluation-Content and format- Practical considerations-timelines, budgets, supervision management- Presentation and defense of proposals