Semester 3

Programme   : **Master of Commerce [M.Com]**
Course Code   : **COM-600**
Course Title   : **Research Methodology**
Number of Credits : **4**
Effective from AY   : **2022 – 2023**

Pre-requisites for the Course:
NIL
Objectives of the Course:
1. To understand the significance of the research, carry out the literature review, prepare content analysis, and identify the research gap.
2. To develop research questions, objectives, and related hypotheses.
3. To learn how to process the data and interpret results.

Course Content		
Unit 1	**Introduction to Research**	**08 Hours**
Need, Purpose, and Importance of Research – Application of Research – Approaches to Research Design and steps to be followed in research (Quantitative, Qualitative, and Mixed). Identifying Research Gap – Content Analysis of the existing literature – Develop Research Questions, related Objectives, and Hypotheses – Research Design. Importance of Data (sample Vs. population/sampling methods/primary Vs. secondary) identification, collection, and analysis – Preparation of Questionnaire. Measurement and Scaling Techniques – Validity and Reliability – Data collection (pilot studies and Pre-tests).		
Unit 2	**Data Analysis – 1**	**24 Hours**
Uni / Bi / Multi-Variate Data – Organizing sample data (Tabulation and Graphs). [*self-study of reading relevant research papers*] [*Includes practical problems on testing Cross Tabulation*]. Describe the nature of sampling distribution – How to assess Performance, Reliability, Symmetry, and Normality. [*Discussion on reading relevant research papers*] [*Includes practical problems*]. Analyzing relationships and prediction using Regression and Time Series Analysis (Predictive Analytics) – Assessing relationships, reliability, cause and effect, lag and lead, and significance level. [*Discussion on reading relevant research papers*] [*Includes practical problems*]. Application of probability, Mathematical Expectation, and probability distributions (Binomial / Poisson / Normal). [*Includes practical problems*].		
Unit 3	**Data Analysis – 2**	**22 Hours**
Importance of Theory of Estimation and Testing of Hypothesis (Large and Small Sample Testing, Non-Parametric Testing). [*includes practical problems*] Importance of Multi-variate data analysis using Exploratory Factor Analysis (EFA), Confirmatory Factor Analysis (CFA), and Structural Equation Modelling (SEM). [*reading and discussion of relevant research papers*].		
Unit 4	**Report Writing**	**6 Hours**
What constitutes a research report – Types of reports – Intellectual honesty and ethics (Plagiarism, Cheating, Fabrication and Falsification, Multiple Submission, Misuse of Academic Materials, Complicity in Academic Dishonesty).		

Pedagogy:
Lectures, Case Studies, and Discussions.
Discussion on carrying out the literature review and preparing the content analysis.
Discuss solving home assignments using M.S. Excel and other statistical software, working with psychometric data, and identifying relevant research problems.

Reference / Readings:
1. Aizel, Amir D and Sounderpandian, Jayavel. *Complete Business Statistics*, Tata McGraw Hill., 2020.
2. C. R. Kothari, *Research Methodology: Methods and Techniques*, New Age International Publishers. 2nd Edition, 2020.
3. Chawla, Deepak, and Sondhi, Neena. *Research Methodology: Concepts and Cases*, Vikas Publishing House Private Ltd. 2nd Edition, 2020.
4. Cooper, Donald R, and Schindler, Pamela S, *Business Research Methods*, Tata McGraw Hill. 11th Edition, 2020.
5. Gupta, S.C. *Fundamentals of Statistics*, Himalaya Publishing House. 7th Edition, 2020.
6. Krishnaswami, O. R, Ranganathan. M and Harikumar P. N. *Research Methodology*, Himalaya Publishing house. 2020.
7. Sherri L. Jackson, *Research Methods and Statistics: A Critical Thinking Approach*, Cengage. 5th Edition, 2020.

Online Resources:
1. https://mfs.mkcl.org/images/ebook/Fundamental%20of%20Research%20Methodology%20and%20Statistics%20by%20Yogesh%20Kumar%20Singh.pdf
2. http://www.ascdegreecollege.ac.in/wp-content/uploads/2020/12/Research-Methods-and-Statistics.pdf
3. https://ccsuniversity.ac.in/bridge-library/pdf/Research-Methodology-CR-Kothari.pdf
4. https://www.statisticssolutions.com/research-methodology/

Course Outcomes:
Upon completion of the course, the students will be able to:
CO1: Successfully identify research gap and frame relevant research questions.
CO2: Identify the type of sample data required, collect and analyse, identify nature of sampling distribution and also reliability of the sample data.
CO3: Perform testing procedure to ensure randomness of the sample for further statistical inferences
CO4: Ensuring intellectual honesty and ethics while preparing a research report.