Name of the Programme	:	Ph.D. Commerce
Course Code	:	COM-700
Course Title	:	Research Methodology
Number of Credits	:	4 [60 hours]
Effective from AY	:	2022 – 2023

Pre-requisites for the Course:	Nil	
Description of the Course:	To familiarize students with the meaning and importance of carrying out successful research, its wide applications in various fields of study, and the importance of making calculated decisions in the present globalized business world. This course is designed to give an overview of different approaches to research design (focusing on quantitative, qualitative, and mixed) which will motivate the students to identify research gaps, identification and collection of relevant data (uni-Variate, bi-Variate, and multi-Variate data sets) and finally analysis of data using various statistical techniques starting from reliability/normality testing, organizing, describing, relationship and prediction, and testing the significance. Students are also familiarized with intellectual honesty and ethics while preparing a research report.	
Course Objectives:	1. To identify the role and importance of various research approaches (quantitative, qualitative, and mixed). 2. To understand the significance of the research, carry out the literature review, prepare content analysis, and identify the research gap. 3. To develop research questions, objectives, and related hypotheses. 4. To enable and acquire the ability to active listening skills in interviews and focus group discussions to engage in data collection, by expressing interest in collecting the information so participants get encouraged to provide relevant and in-depth information promptly. 5. To learn how to process the data, interpret results and prepare a research report.	
Content:	**Unit 1** **Introduction to Research** Need, Purpose and Importance of research – Application of research – Approaches to Research Design and steps to be followed in carrying out research (Quantitative, Qualitative i.e. art and science of knowing Ontology, Epistemology, Phenomenology, Ethnography, Narrative Inquiry, Case Study research, Grounded Theory, Historical research and Mixed - Examples of when a quantitative, qualitative and mixed research approaches are used. Identification of Research Gap – Content Analysis of the existing literature – Develop Research Questions, related Objectives and Hypothesis – 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 – Collection of data (pilot studies and Pre-tests).	10 Hours
	Unit 2 **Data Analysis – 1** Types of Data- Uni / Bi Multi-Variate Data and How to Collect them – Digital and Internet Data – Triangulation and Mixed methods – Qualitative data collection and data analysis skills – Doing field work	20 hours

	– Role of gaining, maintaining access and nurturing field relationships – Interaction and carrying out participant-observation – Making field visits for data collection (Interviewing – Observing – Collecting and examining – Feelings). – Organizing sample data (Tabulation and Graphs). [Reading relevant research papers]. Describe the nature of sampling distribution – How to assess Performance, Reliability, Symmetry and Normality. [Reading relevant research papers]. Analysing relationships and prediction using Regression and Time Series Analysis (Predictive Analytics) – Assessing relationships, reliability, cause and effect, lag and lead, and level of significance. [Reading relevant research papers] Application of probability, Mathematical Expectation and probability distributions (Binomial / Poisson / Normal). **Unit 3** **Data Analysis – 2** Importance of Theory of Estimation and Testing of Hypothesis (Large and Small Sample Testing, Non-Parametric Testing). 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]. Qualitative- Data Analytic Strategies – Their Analysis – Recording data – What to record – Note-taking – Converting field-notes into fuller notes – Recording data through Audio/Video mediums – Personal Journals – Importance of Online Data. Using and Assessing Qualitative Data Analysis – Analysing and Interpretation of Qualitative Data – Qualitative Data Analytic Phases – Online Data Analysis (Compiling, Dissembling, Reassembling (Arraying), Interpreting, and Concluding). **Unit 4** **Report Writing** What constitutes a research report- Presenting Qualitative, Quantitative and Mixed Research results – Narrative, Tabular, Graphic, and Pictorial – Creating Slides for Oral Presentations – Composing Research for the Benefit of Stakeholders – Challenges of Research. – Types of reports – Intellectual honesty and ethics (Plagiarism, Cheating, Fabrication and Falsification, Multiple Submission, Misuse of Academic Materials, Complicity in Academic Dishonesty). (Application of Technology)	**20 Hours** **10 Hours**
Pedagogy:	Lectures, Case Studies and Discussions. Discussion on carrying out literature review and preparing content analysis. Discussion on solving home assignments using MS Excel and other statistical software's, working with psychometric data and also identification of relevant research problems.	
References/ Readings:	1. C. R. Kothari, *Research Methodology: Methods and Techniques*, New Age International Publishers. (2020) 2. Chawla, Deepak and Sondhi, Neena. *Research Methodology: Concepts and Cases*, Vikas Publishing House Private Ltd. (2020) 3. Cooper, Donald R and Schindler, Pamela S, *Business Research Methods*, Tata	

McGraw Hill. (2020)

4. Sherri L. Jackson, ***Research Methods and Statistics: A Critical Thinking Approach***, Cengage. (2018)
5. Krishnaswami, O. R, Ranganathan. M and Harikumar P. N. ***Research Methodology***, Himalaya Publishing house. (2017)
6. Gupta, S.C. ***Fundamentals of Statistics***, Himalaya Publishing House. (2020)
7. Aizel, Amir D and Sounderpandian, Jayavel. ***Complete Business Statistics***, Tata McGraw Hill. (2020)
8. Sharan B. Merriam and Elizabath J. Tisdell, ***Qualitative Research: A Guide to Design and Implementation***, Wiley. (2017)
9. Steven J. Taylor, Robert Bogdan, and Marjorie L. DeVault, ***Introduction to Qualitative Research Methods: A Guidebook and Resource***, Wiley. (2017)
10. Robert K. Yin, ***Qualitative Research from Start to Finish***, The Guilford Press. (2018)
11. Patricia Leavy, ***Research Design: Quantitative, Qualitative, Mixed Methods, Arts-Based, and Community-Based Participatory Research Approaches***, The Guilford Press. (2018)
12. John W. Creswell, ***Research Design: Qualitative, Quantitative and Mixed Methods Approaches***, Sage. (2017)
13. R. Burke Johnson and Larry Christensen, ***Educational Research: Quantitative, Qualitative, and Mixed Approaches***, Sage. (2017)
14. Scott W. Vanderstoep and Dierdre D. Johnston, ***Research Methods for Everyday Life***, John Wiley & Sons. (2017)
15. Uwe Flick, ***The SAGE Handbook of Qualitative Data Collection***, Sage (2018)
16. Uwe Flick (Editor), ***The SAGE Handbook of Qualitative Data Analysis***, Sage. (2018)

Online Resources

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

Course Outcomes:	Upon completion of the course the student will be able to: CO1. Successfully carry out a literature review, and content analysis, and identify relevant research problems. CO2. Identify and collect relevant psychometric data and use the appropriate tool for analysing the data. CO3. Develop relevant interview questions, carry out field survey, collect data and analyze the same for understanding the research problem so identified CO4. Ensuring intellectual honesty and ethics while preparing a research report.