

COURSE TITLE- QUANTITATIVE TECHNIQUES FOR BUSINESS DECISIONS

| Semester | Course Type | Course Level | Course Code | Credits | Total Hours |
|----------|-------------|--------------|--------------|---------|-------------|
| 2 | DSC | 100-199 | KU2DSCCOM110 | 4 | 60 |

| Learning Approach (Hours/ Week) | | | Marks Distribution | | | Duration of ESE (Hours) |
|---------------------------------|-----------------------|----------|--------------------|-----|-------|-------------------------|
| Lecture | Practical/ Internship | Tutorial | CE | ESE | Total | |
| 4 | - | 2 | 30 | 70 | 100 | 2 |

Course Description: Quantitative Techniques for Business Decisions is a foundational course that provides students with a comprehensive understanding of quantitative techniques and their applications in business. This course covers fundamental statistical methods such as correlation and regression analysis, time series analysis and probability. This course will help the students to analyse relationships between variables, identify trends over time and apply probability theories to business decision-making.

Course Outcomes:

| CO No. | Expected Outcome | Learning Domains |
|--------|---|------------------|
| 1 | Understand and explain Quantitative Techniques in business | U |
| 2 | Analyse relationships between variables using Correlation and Regression Analysis | An |
| 3 | Apply time series analysis techniques | A |
| 4 | Understand Probability Theory and its application | U, A |
| 5 | Apply quantitative techniques to solve business problems | A |

****Remember (R), Understand (U), Apply (A), Analyse (An), Evaluate (E), Create (C)***

Mapping of Course Outcomes to PSO

| | PSO1 | PSO2 | PSO3 | PSO4 | PSO 5 |
|------|------|------|------|------|-------|
| CO 1 | | ✓ | ✓ | | |
| CO 2 | ✓ | ✓ | | | |
| CO 3 | ✓ | | ✓ | | |
| CO 4 | | | ✓ | ✓ | ✓ |
| CO 5 | | ✓ | | ✓ | |

COURSE CONTENTS

Contents for Classroom Transactions:

| Module | Unit | Content | Hrs |
|------------|---|---|-----------|
| I | Introduction to Quantitative Techniques and Correlation Analysis | | 12 |
| | 1 | Meaning and definition | |
| | 2 | Application and Limitations of Quantitative Techniques | |
| | 3 | Correlation Analysis: Meaning, Definition, Uses and Types of Correlation | |
| | 4 | Methods of Studying Simple Correlation: Scatter Diagram, Karl Pearson's coefficient of correlation, Spearman's Rank correlation | |
| II | Regression Analysis | | 12 |
| | 1 | Meaning, Definition, Uses and Types of Regression | |
| | 2 | Relation between Correlation and Regression | |
| | 3 | Regression lines | |
| | 4 | Regression equations | |
| III | Time Series Analysis | | 12 |
| | 1 | Meaning and Definition | |
| | 2 | Components of Time Series | |
| | 3 | Determination of Trend by the Methods of Semi Average, Moving Average and Least Square | |
| IV | Probability | | 12 |
| | 1 | Introduction, Meaning, Definition and Important Terms | |
| | 2 | Theorems of probability: Addition Theorem and Multiplication Theorem | |
| | 3 | Bayes' Theorem | |
| V | Teacher Specific Module | | 12 |
| | | ➤ Directions: By blending theoretical knowledge with practical skills, teachers can help students to develop a comprehensive understanding of quantitative techniques in business contexts. | |

Essential Readings:

3. S. P. Gupta. Statistical Methods. Thirty third Revised Edition, Sultan Chand & Sons, 2006.
4. D. C. Sancheti, and V. K. Kapoor. Statistics (Theory, Methods & Application). Seventh Revised Edition, Sultan Chand & Sons, 1999.
5. S.C. Gupta. Fundamentals of Statistics. Himalaya Pub. House, Bombay, 7th Revised Edition, 2011

Suggested Readings:

1. Quantitative Techniques for Managerial Decision making: Srivatsava U.K. & Sharma, Wiley Eastern, Revised Edition, 2011
2. Fundamental of Mathematical Statistics: S. C. Gupta & V.K. Kapoor, S. Chand & Sons, N. Delhi, Revised Edition 2010

Assessment Rubrics:

| Evaluation Type | Marks |
|--|--------------|
| End Semester Evaluation | 70 |
| Continuous Evaluation | 30 |
| a) Test Paper | 6 |
| b) Test Paper | 6 |
| c) Assignment | 9 |
| d) Seminar/Viva/Article or Book Review | 9 |
| Total | 100 |