



SREE KRISHNA
COLLEGE,
GURUVAYUR
P.G. DEPARTMENT
OF COMMERCE

CERTIFICATE
COURSE

**TO APPRAISE THE STUDENTS
ABOUT THE RELEVANCE OF
STATISTICS AND PROBABILITY IN
BUSINESS DECISION MAKING**

30 HOUR DURATION

**CONTACT:
DR. JISHA S. KUMAR
HOD**

**INTRODUCTION TO
PROBABILITY AND STATISTICS
FOR DECISION-MAKING**

2023-2024

SYSTEMATIC
AND SCIENTIFIC
METHODS FOR
SOLVING
COMPLEX
PROBLEMS FOR
MANAGERIAL
DECISION MAKING

**FAMILIARISE WITH
VARIOUS STATISTICAL
TOOLS FOR BUSINESS
DECISION-MAKING**

SREE KRISHNA COLLEGE GURUVAYOOR
DEPARTMENT OF COMMERCE
CERTIFICATE COURSE 2023-2024
CERSKCCOM (5)

Introduction to Probability and Statistics for Decision-making

Item	Description of Module
Subject Name	Certificate Course in Commerce
Paper Name	Introduction to Probability and Statistics for Decision-making
Course Code	CERSKCCOM(5)
Objectives	To apprise students about the relevance of Statistics and Probability in business decision-making.
Hours	30

Learning Outcome:

After completing this module, the students will be able to understand:

- The course involves systematic and scientific methods for solving complex problems for taking effective business decisions.
- The students will understand the relevance of statistics in business decision making
- The students will be familiar with various tools available for business decision-making.

Syllabus

MODULE 1. Basic of Business Statistics- descriptive and inferential statistics. Data classification, tabulation and presentation 5 hours

MODULE 2 Measures of Central tendency- Mean, median, mode- Measures of dispersion- variance and standard deviation 5 hours

MODULE 3- Probability & probability distributions- discrete probability distributions- continuous probability distributions 7 hours

MODULE 4- Sampling and Sampling Distributions 3 hours

MODULE 5 - Estimation theory- Hypothesis Testing and decision making- Z test, T-Test, Paired t test, Independent sample t-test, Chi square test, F-tests 10 hours

References:

1. Introduction to Probability, Second Edition- Joseph K. Blitzstein
2. Introduction to Probability-Dimitri P. Bertsekas,
3. Business Statistics-Gupta & Gupta

Jisha.

Head of the Department of Commerce,
Sree Krishna College,
Guruvayoor.



SREEKRISHNA COLLEGE, GURUVAYUR
DEPARTMENT OF COMMERCE
CERTIFICATE COURSE – CERSKCCOM 5:
Introduction To Probability and Statistics For Decision-Making
MARCH 2024

DURATION: 1 ½ hrs

Maximum Marks: 40

Section A

Answer any 5 questions. Each question carries 2 marks

1. What is a null hypothesis?
2. Define data tabulation in statistics
3. Define standard deviation.
4. What is variance in a dataset?
5. What is sampling error?

(5x2=10 marks)

Section B

Answer any 4 questions. Each question carries 5 marks

7. Differentiate between descriptive statistics and inferential statistics.
8. Define mean, median, and mode. Give a situation where each measure is appropriate.
9. What is the difference between discrete probability distributions and continuous probability distributions? Provide examples.
10. Explain the importance of sampling in statistics. Mention two types of sampling techniques.
11. Define hypothesis testing and explain the importance of a null hypothesis.

(4x5=20 marks)

Section C

Answer any one question. One question carries 10 marks

12. Given the following data:
Scores: 5, 8, 10, 10, 15, 20, 25, 30
 - a. Calculate the mean and median of the data.
 - b. Calculate the standard deviation of the data.
13. Explain with an example how probability distributions are used in business decision-making. Use either a binomial or normal distribution for your explanation.

(1x10=10 marks)

Fisha.

Head of the Department of Commerce,
Sree Krishna College,
Guruvayoor.



Report on Certificate Course: "Introduction to Probability and Statistics for Decision-making"

The Department of Commerce offered a Certificate Course titled "**Introduction to Probability and Statistics for Decision-making**" for students at Sree Krishna College, Guruvayur. This course aimed to equip students with essential theoretical and practical knowledge of Introduction to Probability and Statistics for Decision-making, aligning with their academic pursuits in finance and commerce. The course provided students with a solid foundation for understanding fundamentals of probability theories and Statistics for decision making, which is crucial for those interested in careers in Business finance and Data Science & Analytics. The course spanned 30 hours, conducted over a period of six weeks, and was held from 3:30 PM to 4:30 PM. At the end of the course, an examination was conducted to assess the students' understanding of the subject matter. The assessment criteria included a combination of the final examination, internal assessments, attendance, and submission of assignments, which were mandatory for all participants. Based on these factors, final grading was assigned, and certificates were awarded to successful candidates. The course has been well-received, with students expressing appreciation for the practical insights and knowledge gained regarding the Probability theories and statistics for decision making. Overall, the Certificate Course in Basics of Probability and Statistics has been a significant addition to the curriculum, fostering students' interests in Data science and Analysis in finance preparing them for future academic and professional endeavors.

Jisha.

Head of the Department of Commerce,
Sree Krishna College,
Guruvayoor.

