Anekant Education Society's
Tuljaram Chaturchand College of Arts, Science and Commerce,Baramati

Autonomous

Course Structure for S. Y. B. Com. STATISTICS

Semester	Paper Code	Title of Paper	No. of Credits
III	**COMBS2306(D)**	Business Statistics-III	3

Program Outcomes (POs) for B.Com. Programme

PO1	**Knowledge and Critical Thinking :** Acquire skills in organising, analysing, evaluating and presenting information. Able to analysis issues logically, consider different options and viewpoints, make decisions and act with flexibility, adaptability and creativity.
PO2	**Communication Skill :** Able to communicate effectively, analyse the concepts and participate in healthy arguments and portray skill in communication and in writing. Possess skills related with banking and other business.
PO3	**Independent learning :** Demonstrate the ability to acquire knowledge and business skills, the capacity for self directed activity and the ability to work independently.
PO4	**Leadership quality :** Exhibit qualities associated with leadership such as accountability, integrity, respect, self reflection
PO5	**Teamwork:** Able to work constructively, cooperatively, effectively and respectfully as part of a team.

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S.Y. B.Com.

SEMESTER – III

PAPER - I

COMBS2306(D): Business Statistics-III
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The main objective of this course is to acquaint students with the basic concepts of concepts, techniques & applications of Statistical Methods in business.

A) Course Objectives:

1. Understand and masters the concepts, techniques & applications of Statistical Methods with real life situations.
2. To develop the skills of solving real life problems using Statistical Methods.
3. To make students to understand the art of applying statistical techniques to solve some real life problems
4. To gain knowledge of Statistical Computations using statistical software.

B) Course Outcomes:
    Students should be able to:
CO1. learn techniques & applications of Statistical Methods with real life situations.
CO2. learn business situations with real life situations.
CO3. learn vital rates for in real life situations.
CO4. learn preparation of life tables for real life situations.
CO5. application of Statistical Computations using statistical software.
CO6. apply vital Statistics and life table technique in insurance companies and government policies.
CO7. apply multiple regression in various areas.

1 Theory of Attributes (up to order three only): (14L)

Introduction Classification, Notation, dichotomy, types of classes, Order of a class, dot operator to find relation between class frequency (up to order three, Fundamental set of class frequencies, Consistency up to three attributes, Independent and Association of two attributes, Yule's Coefficient of association, example and problems.

2 Multiple Regression, Multiple and Partial Correlation: (14L)

 Introduction, Multiple Regression, Statement of equation of plane of regression of X_1 on X_2 and X_3.Standard Error of Estimate, Partial and Multiple Correlation, Advantages and limitations of multiple Correlation Analysis. example and problems

3 Vital Statistics : (10L)

Introduction, Methods of collecting vital Statistics, Mortality rates : CDR, ASDR, STDR (direct method), Fertility rates: CBR, ASFR, TFR,GFR Population Growth rate: GRR and NRR, example and problems.

4 Life Tables: (08L)

Introduction, Construction of life table, functions (lx, dx, px, qx, Lx, Tx, ex) and their interpretation, Expectation of life, example and problems.

Recommended Books :

1. S.P. Gupta - Statistical Methods

2. S.C. Gupta - Fundamentals of Statistics

3. J.S Chandran - Statistics for Business and Economic

4. S.C. Gupta and V. K. Kapoor - Fundamentals of Applied Statistics

Course Outcomes	Program Outcomes				
	PO1	PO2	PO3	PO4	PO5
CO1	3	2	3	1	1
CO2	2	3	2	2	2
CO3	2	2	2	1	1
CO4	3	2	3	1	1
CO5	3	2	3	1	2
CO6	2	2	2	2	2
CO7	3	2	2	2	2

Weight: 1 - Partially related   2 - Moderately Related   3 - Strongly related

Justification:

PO1 Knowledge and Critical Thinking:

CO1: (Weightage: 3) Strongly related as learning statistical methods with real-life situations requires critical thinking and application of knowledge.

CO2: (Weightage: 2) Moderately related as understanding business situations involves critical thinking but may not require statistical methods in all cases.

CO3: (Weightage: 2) Moderately related as vital rates in real-life situations may involve critical thinking, but the focus may be more on understanding the rates than on statistical methods.

CO4: (Weightage: 3) Strongly related as preparing life tables involves critical thinking and application of statistical techniques.

CO5: (Weightage: 3) Strongly related as applying statistical computations using software requires knowledge and critical thinking.

CO6: (Weightage: 2) Moderately related as applying vital statistics and life table techniques in insurance and government policies may involve critical thinking but may not always require statistical methods.

CO7: (Weightage: 3) Strongly related as applying multiple regression in various areas requires knowledge and critical thinking.

PO2 Communication Skill:

CO1: (Weightage: 2) Moderately related as communicating statistical methods and applications in real-life situations requires effective communication.

CO2: (Weightage: 3) Strongly related as understanding and communicating business situations often involves effective communication.

CO3: (Weightage: 2) Moderately related as communicating vital rates in real-life situations may require effective communication but may not be as complex as business situations.

CO4: (Weightage: 2) Moderately related as communicating life tables and their implications requires effective communication.

CO5: (Weightage: 2) Moderately related as communicating statistical computations using software requires clear communication.

CO6: (Weightage: 2) Moderately related as applying vital statistics and life table techniques in insurance and government policies may require effective communication.

CO7: (Weightage: 2) Moderately related as applying multiple regression in various areas requires clear communication.

PO3 Independent Learning:

CO1: (Weightage: 3) Strongly related as learning statistical methods with real-life situations encourages independent learning.

CO2: (Weightage: 2) Moderately related as understanding business situations may require some independent learning.

CO3: (Weightage: 2) Moderately related as understanding vital rates in real-life situations may involve some independent learning.

CO4: (Weightage: 3) Strongly related as preparing life tables requires independent learning.

CO5: (Weightage: 3) Strongly related as applying statistical computations using software encourages independent learning.

CO6: (Weightage: 2) Moderately related as applying vital statistics and life table techniques in insurance and government policies may involve some independent learning.

CO7: (Weightage: 2) Moderately related as applying multiple regression in various areas may require some independent learning.

PO4 Leadership Quality:

CO1: (Weightage: 1) Partially related as learning statistical methods may not directly relate to leadership qualities.

CO2: (Weightage: 2) Moderately related as understanding business situations may involve some leadership qualities.

CO3: (Weightage: 1) Partially related as understanding vital rates may not directly relate to leadership qualities.

CO4: (Weightage: 1) Partially related as preparing life tables may not directly relate to leadership qualities.

CO5: (Weightage: 1) Partially related as applying statistical computations using software may not directly relate to leadership qualities.

CO6: (Weightage: 2) Moderately related as applying vital statistics and life table techniques in insurance and government policies may involve some leadership qualities.

CO7: (Weightage: 2) Moderately related as applying multiple regression in various areas may involve some leadership qualities.

PO5 Teamwork:

CO1: (Weightage: 1) Partially related as learning statistical methods may not directly involve teamwork.

CO2: (Weightage: 2) Moderately related as understanding business situations may involve some teamwork.

CO3: (Weightage: 1) Partially related as understanding vital rates may not directly involve teamwork.

CO4: (Weightage: 1) Partially related as preparing life tables may not directly involve teamwork.

CO5: (Weightage:2) Moderately related as applying statistical computations using software may involve some teamwork.

CO6: (Weightage:2) Moderately related as applying vital statistics and life table techniques in insurance and government policies may involve some teamwork.

CO7: (Weightage:2) Moderately related as applying multiple regression in various areas may involve some teamwork.