

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

Course Structure for S.Y. B.Com. BUSINESS STATISTICS (2022 Pattern)

Name of the Programme: S.Y. B.Com.

Program Code: UCBS

Class: S.Y. B.Com.

Semester: III

Paper Code	Title of Paper	No. of Credits
UCBS236(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.

SYLLABUS (CBCS) FOR S. Y. B. Com. BUSINESS STATISTICS

(w. e. from June, 2023)

Name of the Programme	: B.Com
Program Code	: UCBS
Class	: S.Y.B.Com.
Semester	: III
Course Name	: Business Statistics – III
Course Code	: UCBS236(D)
No. of Lectures	: 48
No. of Credits	: 3

A) Learning 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) Learning Outcome:

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.

TOPICS/CONTENTS:

Unit – 1 Theory of Attributes (up to order three only):

(16L)

Introduction: Classification, Notations, dichotomy, Manifold classification, 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, Independence and Association of two attributes, Yule's coefficient of association, example and problems.

Unit – 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

Unit – 3 Vital Statistics : (10L)

Introduction: Methods of collecting vital Statistics, applications of vital statistics, Mortality rates : Crude Death Rate (CDR), Age Specific Death Rate (ASDR), standardized Death Rate (STDR) (direct method), Fertility rates: Crude Birth Rate (CBR), Age Specific Fertility Rate (ASFR), Total Fertility Rate (TFR), Gross Fertility Rate (GFR), Population Growth rate: Gross Reproductive Rate (GRR) and Net Reproductive Rate (NRR), example and problems.

Unit – 4 Life Table: (08L)

Introduction: Construction of life table, applications of life tables, functions ($l_x, d_x, p_x, q_x, L_x, T_x, e_x^0$) and their interpretation, Expectation of life, example and problems.

List of Practicals for Business Statistics for Sem-III

Practical No.	Name of Practical
1	Fitting of Multiple Regression using Excel
2	Vital Statistics using Excel
3	Life Table using Excel

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				
CO2	2				2
CO3	2				
CO4	2				
CO5	2				
CO6	3			3	
CO7	3				

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

Justifications:

PO1 Knowledge and Critical Thinking:

CO1: Learn techniques & applications of Statistical Methods with real-life situations.

(Weightage: 3): This CO is strongly related to PO1 as it requires critical thinking to understand and apply statistical methods in real-life situations. Knowledge about statistical techniques is essential for critical thinking in various scenarios.

CO2: Learn business situations with real-life situations.

(Weightage: 2): This CO is moderately related to PO1. While critical thinking is required to analyze business situations, the emphasis is more on practical application and understanding of business scenarios.

CO3: Learn vital rates for real-life situations.

(Weightage: 2): This CO is moderately related to PO1 as understanding vital rates involves critical thinking, especially when interpreting and analyzing data related to vital statistics in real-life situations.

CO4: Learn preparation of life tables for real-life situations.

(Weightage: 2): This CO is moderately related to PO1 as critical thinking is necessary for the preparation and interpretation of life tables in different real-life contexts.

CO5: Application of Statistical Computations using statistical software.

(Weightage: 2): This CO is moderately related to PO1 as it involves critical thinking when applying statistical computations using software in real-life scenarios.

CO6: Apply vital Statistics and life table technique in insurance companies and government policies.

(Weightage: 3): This CO is strongly related to PO1 as it requires critical thinking in the application of vital statistics and life table techniques to formulate policies for insurance companies and government.

CO7 :Apply multiple regression in various areas.

(Weightage: 3): This CO is strongly related to PO1 as it involves critical thinking when applying multiple regression in diverse areas.

PO2 Communication Skill:

All COs are related to communication skills as effective communication is essential in conveying statistical findings and insights. However, no specific weightage is assigned as communication is a shared aspect across all.

PO3 Independent Learning:

All COs are related to independent learning as statistical methods and their applications often require self-directed learning. However, no specific weightage is assigned as independent learning is a shared aspect across all.

PO4 Leadership Quality:

CO6:Apply vital Statistics and life table technique in insurance companies and government policies.
(Weightage: 3): This CO is strongly related to PO4 as it involves leadership qualities in making decisions related to vital statistics and life table techniques in the context of insurance companies and government policies.

PO5 Teamwork:

CO2 :Learn business situations with real-life situations.

(Weightage: 2): This CO is moderately related to PO5, as teamwork is often required to analyze and solve business situations collectively.