

SEMESTER- IV

Business Statistics
BCH: DSC- 4.1

Objective: The course aims to develop amongst the learners the ability to summarise, analyse and interpret quantitative information for business decision making.

Learning Outcomes: After completion of the course, learners will be able to:

1. examine and understand the various descriptive properties of statistical data.
2. compare probability rules and concepts relating to discrete and continuous random variables to answer questions within a business context.
3. analyse the underlying relationships between the variables to use simple regression models.
4. analyse the trends and tendencies over a period of time through time series analysis.
5. examine and apply index numbers to real life situations.

Course Contents:

Unit	Unit wise weightage of marks (in %)	C&K*	A&A**
Unit 1: Descriptive Statistics	20	√	√
Unit 2: Probability and Probability Distributions	30	√	√
Unit 3: Simple Correlation and Regression Analysis	25	√	√
Unit 4: Analysis of Time Series	15	√	√
Unit 5: Index Numbers	10	√	√

*C&K- Comprehension & Knowledge

**A&A – Analysis & Application

Unit 1: Descriptive Statistics

Measures of Central Tendency: Concept and properties of averages including Arithmetic mean, Median and Mode.

Measures of Dispersion: An overview of Range, Quartile Deviation and Mean Deviation;

Standard deviation; Variance and Coefficient of variation.

Moments: Computation and significance; Skewness; Kurtosis.

Unit 2: Probability and Probability Distributions

Theory and approaches to probability; Probability Theorems: Addition and Multiplication; Conditional probability and Bayes' Theorem.

Expectation and variance of a random variable.

Discrete Probability distributions: Binomial and Poisson (Properties and Applications).

Normal distribution: Properties of Normal curve; Computation of Probabilities and Applications.

Unit 3: Simple Correlation and Regression Analysis

Correlation Analysis: Meaning and types of Correlation; Correlation Vs Causation; Pearson's coefficient of correlation (computation and properties); Probable and standard errors; Rank correlation.

Regression Analysis: Principle of least squares and regression lines; Regression equations and estimation; Properties of regression coefficients; Relationship between Correlation and Regression coefficients; Standard Error of Estimate.

Unit 4: Time Series Analysis

Time Series Data; Components of time series; Additive and Multiplicative models.

Trend analysis; Fitting of trend using principle of least squares – linear and second-degree parabola.

Shifting of Origin and Conversion of annual linear trend equation to quarterly/monthly basis and vice-versa.

Unit 5: Index Numbers

Meaning and uses of index numbers.

Construction of Index numbers: Methods of Laspeyres, Paasche and Fisher's Ideal index.

Construction and Utility of Consumer Price Indices; BSE SENSEX, and NSE NIFTY.

Practical Exercises:

The learners are encouraged to:

1. Observe and apply the concepts learned in real life situations.
2. Practice basic calculations in statistics using spreadsheets/ statistical packages/ open source ware such as R/ Python and try to use it for solving subject related assignments.
3. Do small primary research/survey in groups and analyse the data using statistical tools discussed in the class (Examples: Buying Behaviour, Motivation, Stress, Brand aspects, Sales Projections, Impact of advertisements etc).

Assessment Criteria

The Assessment for this paper would include a theory exam of 50 marks, Practical Exam of 25 marks and Internal assessment of 25 marks. Internal assessment will include 20 marks for class tests/assignments, and 5 marks for attendance. There shall be 3 Credit Hrs. for Lectures + one Credit Hr. (Two Practical Periods per week per batch) for practicals. Use of a simple calculator is allowed

Suggested Readings:

- Anderson, D. R. Statistics for learners of Economics and Business. Boston: Cengage Learning.
- Douglas A. Lind, Robert D. Mason, William G. Marchal. Basic Statistics for Business and Economics. Mc-Graw-Hill international editions.
- Gupta, S. C. & Gupta, I. Business Statistics, Mumbai: Himalaya Publishing House.
- Gupta, S. P., & Gupta, A. Business Statistics: Statistical Methods. New Delhi: S. Chand Publishing.
- Hazarika, P. A. Textbook of Business Statistics. New Delhi: S. Chand Publishing.
- Levine, D. M., Krehbiel, C., Berenson, L., Viswanathan. Business Statistics – A First Course. Pearson Education.
- Levin R., Rubin D. S., Rastogi S., & Siddqui M. H. Statistics for Management. London: Pearson Education.
- Mark L. Berenson, Bernard M. Baruch, David M. Levine, Kathryn A. Szabat, David F. Stephen. Basic Business Statistics. Pearson.
- Murray R. Spiegel, Larry J. Stephens. Statistics. Tata McGraw Hill edition.
- Siegel, O. F. Practical Business Statistics. Cambridge: Academic Press.
- Thukral, J. K. Business Statistics, New Delhi: Taxman Publication.
- Tulsian, P.C., Jhunjhunwala Bharat. Business statistics. S. Chand publishing.
- Vohra, N. D. Business Statistics, New Delhi: McGraw-Hill Education India.

Note: Learners are advised to use the latest edition of readings.

Cost Accounting

BCH: DSC- 4.2

Objective: The course aims to develop understanding among learners about contemporary cost concepts and rational approach towards cost systems and cost ascertainment. The course also aims to provide knowledge about various methods of cost determination under specific situations and to acquire the ability to use information determined through cost accounting for decision making purposes.

Learning Outcomes: After completion of the course, learners will be able to:

1. examine and analyse the different cost concepts.
2. determine various components of cost of production.
3. classify unit cost and total cost by preparing a cost statement.
4. compute employee cost, employee productivity and employee turnover.
5. compare cost for different industries using job costing, process costing, contract costing and service costing.

Course Contents:

Unit	Unit wise weightage of marks (in %)	C&K*	A&A**
Unit 1: Introduction	25	√	√
Unit 2: Elements of Cost : Material and Employee Cost	20	√	√
Unit 3: Elements of Cost: Overheads	20	√	√
Unit 4: Methods of Costing	20	√	√
Unit 5: Cost Accounting Book-Keepering Systems	15	√	√

*C&K- Comprehension & Knowledge

**A&A – Analysis & Application

Unit 1: Introduction

Meaning, scope, objectives and advantages of cost accounting; Difference between financial and cost accounting. Cost concepts and classifications, Overview of elements of cost and preparation of Cost Sheet for manufacturing sector. Role of a cost accountant in an organisation. Cost Accounting Standards (CAS – 4 on Cost of Production / Acquisition / Supply of Goods / Provision of Services) and (CAS – 22 on Manufacturing Cost) as amended from time to time.

Unit 2: Elements of Cost : Material and Employee Cost

- (a) Materials: Accounting and control of purchases, storage and issue of materials. Techniques of inventory control, Periodic and perpetual systems of maintaining inventory records, an overview of methods of pricing of materials issues — FIFO, LIFO and Weighted Average price method, Valuation of materials as per CAS – 6 on Material Cost, Accounting treatment of losses— Wastage, scrap, spoilage and defectives
- (b) Employee (Labour) Cost: Accounting and Control of employee cost. Time-keeping and time-booking. Employee turnover: meaning, methods of measurement and accounting treatment. Concept and treatment of idle time and overtime. Methods of wage payment and Incentive schemes- Halsey, Rowan, Taylor's differential piece wage.

Unit 3: Elements of Cost: Overheads

Classification, allocation, apportionment and absorption of overheads, Under and over-absorption of overheads; Capacity Levels and Costs; Treatments of certain items in costing like interest and financing charges, packing expenses, bad debts, research and development costs.

Unit 4: Methods of Costing

Job costing, Contract costing, Process costing (including process losses, valuation of work-in-progress). Service costing (only transport)

Unit 5: Cost Accounting Book-Keeping Systems

An overview of integral and non-integral systems; Reconciliation of cost accounting profit with financial profits.

Notes :

1. Treatment of various items of cost should be as per the relevant cost Accounting Standards (CAS) issued by Institute of Cost Accountant of India.
2. Use of spreadsheet software should be encouraged for the basic calculation.

Practical Exercises:

The learners are required to:

1. prepare a cost statement for manufacturing and/ or service organisation.
2. identify the items to be included and excluded in the cost system.
3. visit industries to understand process costing and prepare a cost statement for any process industry.
4. visit a factory and compute the employee cost of the firm.
5. suggest a suitable cost system for different types of services organisation.
6. analyse research & development cost in pharmaceutical & similar industry.

Suggested Readings:

- Arora, M.N. Cost Accounting-principles and practice. Vikas Publishing House, New Delhi.
- Goel, Rajiv Kumar & Ishaan Goel. Concept Building Approach to Cost Accounting for B.Com (Hons.)/B.Com., Cengage,
- Gupta, Shruti, Reeta & Rao, R. Prabhakar. Cost Accounting for B.Com., Sultan Chand.
- Maheshwari, S. N., &S. N. Mittal. Cost Accounting. Theory and Problems. Shri Mahaveer Book Depot, New Delhi.
- Maheshwari, S. N., Maheshwari, S. K., Mittal, S.N. *Cost Accounting: Principles & Practice*. Shree Mahaveer Book Depot, New Delhi.
- Maheshwari, S. N., Maheshwari, S. K., Mittal, S.N. *Elements of Cost Accounting*. Shree Mahaveer Book Depot, New Delhi.
- Mitra(2018). Cost and Management accounting.Oxford University Press.
- Nigam,B.M.Lal & Jain,I.C. Cost Accounting: Principles and Practice PHI Learning
- Singh, S. Fundamentals of Cost Accounting. Kitab Mahal, Allahabad/New Delhi.
- Tulsian, P.C. Cost Accounting. S.Chand, New Delhi.

Additional Resources:

- Drury,Colin. Management and Cost Accounting. Thomson Learning.
- Horngren, Charles T., George Foster and Srikant M. Dattar. Cost Accounting: A Managerial Emphasis. Prentice Hall of India Ltd., New Delhi.
- Jain, S.P., and Narang, K.L. Cost Accounting: Principles and Methods. Kalyani Publishers, Jalandhar.

Note: Learners are advised to use the latest edition of readings.

International Business

BCH: DSC- 4.3

Objective: The course aims to impart the core body of knowledge in international business to the students. The course would introduce students to the international trading and investment environment and also create awareness about emerging issues such as outsourcing and sustainable development in the context of international business.

Learning Outcomes: After completion of the course, learners will be able to:

1. analyse the process of globalization and its impact on growth of international business.
2. evaluate the changing dynamics of the diverse international business environment.
3. analyse the theoretical dimensions of international trade as well as intervention measures adopted.
4. analyse the significance of different forms of regional economic integration and the role played by various international economic organisations.
5. summarize the concept and components of the Balance of Payments statement.
6. evaluate the forms of foreign direct investment and analyse benefits and costs of FDI.
7. create awareness about emerging issues in international business such as outsourcing and sustainable development.

Course Contents:

Unit	Unit wise weightage of marks (in %)	C&K*	A&A**
Unit 1: Introduction to International Business	15	√	√
Unit 2: International Business Environment	25	√	√
Unit 3: International Trade and BOP	20	√	√
Unit 4: Regional Economic Integration and International Economic Organisations	20	√	√
Unit 5: International Finance and Contemporary Issues in IB	20	√	√

*C&K- Comprehension & Knowledge

**A&A – Analysis & Application

Unit 1: Introduction to International Business

Globalization - concept, significance and impact on international business; international business contrasted with domestic business; complexities of international business; internationalization stages and orientations; modes of entry into international businesses.

Unit 2: International Business Environment

Role of political and legal systems in international business; cultural environment of international business (including Hofstede's dimensions of culture); implications of economic environment for international business.

Unit 3: International Trade and BOP

Theories of international trade – Theory of Absolute Advantage theory, Theory of Comparative Advantage, Factor Proportions theory and Leontief paradox, Product Life Cycle theory, Theory of National Competitive Advantage; Instruments of trade control.

Balance of payments (BOP) statement and its components

Unit 4: Regional Economic Integration and International Economic Organisations

Forms of regional economic integration; Integration efforts amongst countries in Europe, North America and Asia: EU, USMCA, SAARC and ASEAN; Cost and benefits of regional economic integration.

International Economic Organisations: WTO- functions, structure and scope; World Bank and IMF.

Unit 5: International finance and contemporary issues in IB

Types of FDI - Greenfield investment, Mergers & Acquisition, strategic alliances; benefits and drawbacks of FDI.

Overview of exchange rate systems.

Contemporary issues in international business: Outsourcing and its potential for India; international business and sustainable development.

Practical Exercises:

The learners are required to:

1. demonstrate through case studies the suitability of each mode of entry in international business.
2. conduct a comparative analysis of countries which are different in terms of political/legal/economic/cultural environment to understand the impact of these dimensions on international business.
3. analyse data on trade of select countries to examine if trade patterns conform to different trade theories.
4. conduct an in-depth study of a regional economic arrangement and evaluate its costs and benefits by applying the theoretical knowledge gained during the course
5. make presentations on developments in contemporary issues affecting international business such as sustainable development.

Suggested Readings:

- Bennett, R. International Business, Delhi: Pearson
- Cavusgil, S. T., Knight, G. & Riesenberger. International Business: Strategy, Management and the New Realities. Pearson India.
- Chaturvedi, D. D., Jindal, D. & Kaur R. International Business. Scholar Tech Press, Delhi.
- Charles, W L Hill & Jain, A. K. International Business, New Delhi: Tata McGraw Hill.
- Cherunilam, F. International Business: Text and Cases, 6th ed. PHI learning
- Daniels, J. D., Radenbaugh, L. H. & Sullivan, D. P. International Business, Pearson Education.

- Griffin, R. W & Pustay, M. W. International Business - A Managerial Perspective. Prentice Hall.
- Joshi RM,(2009). International Business.Oxford University Press.
- Menipaz, E., Menipaz A. and Tripathi S.S. International Business : Theory and Practice. New Delhi. Sage Publications India Pvt. Ltd.

Additional Resources

- Economic Survey, various issues.
- RBI Report on Currency & Finance, various issues.
- World Investment Reports, UNCTAD
- Websites: RBI, IMF, World Bank, WTO.
- WTO Annual Reports

Note: Learners are advised to use the latest edition of readings.