

West Bengal University of Technology
BF-142, Salt Lake City, Kolkata-700064
Bachelor of Supply Chain Management Syllabus upto 5th Semester'2007
Syllabus of 6th Semester will be published latter

COURSE STRUCTURE

Year	Semester	Paper Code	Paper	Marks/Credits	
1 st	1 st	BBA - 101	English –I	100	4
		102	Mathematics – I	100	4
		103	Statistics – I	100	4
		104	Economics - I	100	4
		105	Indian Society & Culture	100	4
		106	Computer Applications– I	100	4
			Total	600	24
2 nd	2 nd	BBA - 201	English –II	100	4
		202	Mathematics – II	100	4
		203	Statistics – II	100	4
		204	Economics - II	100	4
		205	Psychology	100	4
		206	Computer Applications – II	100	4
			Total	600	24

Year	Semester	Paper Code	Paper	Marks/Credits	
2 nd	3 rd	BBA 301	Principles of Management	100	4
		302	Business Environment	100	4
		303	Business Regulatory Framework	100	4
		304	Business Economics	100	4
		305	Business Communication	100	4
		306	Financial Accounting	100	4
			Total	600	24
4 th	4 th	BBA 401	Production Management	100	4
		402	Materials Management	100	4
		403	Financial Management-I	100	4
		404	Marketing Management-I	100	4
		405	Human Resource Management-I	100	4
		406	Management Information Systems	100	4
			Total	600	24

Year	Semester	Paper Code	Paper	Marks/Credits	
3 rd	5 th	BSCM051	Supply Chain Practice & Procedure	100	4
		502	Facilities Management	100	4
		503	Freight Transport System	100	4
		504	Inventory Management	100	4
		505	Procurement & Quality Management	100	4
		506	Physical Distribution & Logistics	100	4
			Total	600	24

* Study Paper in any functional area
(Finance/Marketing/Human Resource
Management)

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Year	Semester	Paper Code	Paper Name	Marks	Credit
3rd	6 th	BSCM 601	Management of service operation	100	4
		BSCM 602	Project Management & Supply Chain Process Redesign	100	4
		BSCM 603	Internet Technology & Supply Chain Management	100	4
		BSCM 604	International Operations & Global Supply Chain	100	4
		BSCM 605	Social Research Method	100	4
	Sessional	BSCM 681	Study Paper and Viva Voce (50 + 50)	100	4
			Total	600	24

BBA – 104 : ECONOMICS – I

Course Contents

1. **Introduction** : Basic problems of an economy; Working of price mechanism and Resource allocation. [2 L]
2. **Elasticity of Demand** : Concept and measurement of elasticity of demand; Price, income and cross elasticities; Average revenue, marginal revenue, and elasticity of demand; Determinants of elasticity of demand. [4L]
3. **Production Function** : Law of variable proportions; Iso-quants; Economic regions and optimum factor combination; Expansion path; Returns of scale; International and external economies and diseconomies; Ridge lines. [6L]
4. **Theory of Costs**: Short-run and long-run cost curves – traditional and modern approaches. [4L]
5. **Market Structures** : Market structures and business decision; Objectives of a business firm.
 - (a) **Perfect Competition** : Profit maximization and equilibrium of firm and industry; Short-run and long run supply curves; Price and output determination. Practical applications. [4L]
 - (b) **Monopoly** : Determination of Price under monopoly; Equilibrium of a firm; Comparison between perfect competition and monopoly; Multi-plant monopoly; Price discrimination. Practical applications. [4L]

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(c) **Monopolistic Competition** : Meaning and characteristics; Price and output determination under monopolistic competition; Product differentiations; Selling costs; Comparison with perfect competition; Excess capacity under monopolistic competition. [4L]

(d) **Oligopoly** : Characteristics, indeterminate pricing and output; Classical models of oligopoly; Price leadership; Collusive oligopoly; Kinked demand curve. [4L]

6. **Factor Pricing – I** : Marginal Productivity theory and demand for factors; Nature of supply of factor inputs; Determination of wage rates under perfect competition and monopoly; Exploitation of labor; Rent – concept; Ricardian and modern theories of rent; Quasi-rent. [4L]

7. **Factor Pricing – II** : Interests – concept and theories of interest; Profit – nature, concepts, and theories of profit. [4L]

Suggested Readings

1. A. Koutsoyianni : Modern Micro-Economics, Macmillan
2. R. Dutta and K.P.M. Sundaran : Indian Economy, S. Chand
3. A.N. Agarwal : Indian Economy, Vikash
4. R.G. Lipsey : An Introduction to Positive Economics, ELBS, Oxford
5. JP Gould Jr. and E.P. Lazer : Micro-Economic Theory
6. S.Mukherjee, M. Mukherjee & A. Ghose : Microeconomics, Prentice-Hall

BBA-101 : ENGLISH – I

Course Contents

1. **Grammatical Focus** : Grammatical & Structural aspects covering Partys of Speech, Tense, Voice, Clause, Preposition, Degrees of Comparison, Synonyms & Antonyms, etc; Identifying & Analysing Grammatical Errors including errors in Spelling & Punctuation. [6 L, 8 P]
2. **Reading** : Vocabulary Building; Comprehension; Interpretation; Summarising [1 L, 5 P]
3. **Writing** : Letter Writing – Formal, Informal; Accepting & Declining Invitations; Paragraph Writing, Precise Writing, Essay Writing [2 L, 5 P]
4. **Speaking** : Interactive Communication like Introducing Self, Greetings, Conversations, etc; Pronunciation : appropriate stress, intonation, clarity [2 L, 6 P]
5. **Listening** : Understanding – Spoken English, Formal English; Exercises [5 P]

[L = Lecture Session, P = Practice Session]

Suggested Reading

1. Leo Jones, Richard Alexander : New International Business English (Communication Skills in English for Business Purposes), Cambridge University Press.
2. NCERT, Knowing about English – A Book of Grammar & Phonology

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3. NCERT, Working with English – A Workbook,
4. A.E. Augustine & K.V. Joseph : Macmillan Grammar – A Handbook, Macmillan
5. Krishna Mohan & N.P. Singh : Speaking English Effectively, Macmillan

BBA – 105 : INDIAN SOCIETY & CULTURE

Course Contents

1. **Demographic Profile** : Characteristics of Indian Population, Population Growth, Age, Sex, Religion, Language, Occupations, National Policy on Population [8 L]
2. **Indian Society** : Society and its types, Features of Tribal Society, Agrarian Society, Industrial Society [8 L]
3. **Social Stratification** : Caste System, Class System, Communities, Ethnic Groups, Weaker Section and Minorities, Constitutional Provisions for Scheduled Castes, Scheduled Tribes and other Backward Classes. [8 L]
4. **Socio-Economic Problems** : Poverty, Illiteracy, Unemployment, Housing, Child Labour, Migration, Occupational Diseases, Insurgency, Terrorism, Crime, Project Affected People, Social Destitute, Beggary, Aged Population, Juvenile Delinquency, Problems in Family Life. [10 L]
5. **Indian Culture** : Culture – Features, Characteristics and Diversity. Differences with Western Culture, Human Values, Values in Work Life, Value Crisis in Contemporary Indian Society. [6 L]

Suggested Readings

1. Andre Beteille : Society and Politics in India, OUP
2. Dipankar Gupta : Social Stratification, OUP
3. Ram Ahuja : Social Problems in India, Rawat Publications
4. M.N. Srinivas : Social Structure and Caste and Other Essays, OUP
5. A.N. Tripathi : Human Values, New Age International
6. NCERT : Text Book on Indian Society
7. R. Thapar (ed.) : Tribe, Caste and Religion in India, Macmillan.

BBA- 103 : STATISTICS – I

Course Contents

1. **Introduction:** Statistics as a subject; Functions, Importance and Limitations of Statistics; Planning and Execution of a statistical investigation; Census and sample investigation; Descriptive and Inferential statistics. [2L]

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2. **Collection, Editing and Presentation of Data:** Primary data and secondary data; Methods of collection; Scrutiny of data. Presentation of data: textual and tabular presentations; Construction of a table and the different components of a table. Diagrammatic representation of data: Line diagrams, Bar diagrams, Pie charts and divided-bar diagrams. [3L]
3. **Frequency Distributions:** Attribute and variable; Frequency distribution of an attribute; Discrete and continuous variables; Frequency distributions of discrete and continuous variables; Bivariate and Multivariate Frequency Distributions. Diagrammatic representation of a frequency distribution: case of an attribute; case of a discrete variable: column diagram, frequency polygon and step diagram; case of a continuous variable: histogram and ogive. [4L]
4. **Measures of Central Tendency:** Definition and utility; Characteristics of a good average; Different measures of average; Arithmetic Mean; Median; Other positional measures – quartiles, deciles, percentiles; Mode; Relation between Mean, Median and Mode; Geometric and Harmonic Mean. Choice of a suitable measure of central tendency. [6L]
5. **Measures of dispersion:** Meaning and objective of dispersion; Characteristics of a good measure of dispersion; Different measures of dispersion – Range, Quartile deviation, Mean deviation, Mean Absolute deviation, Standard deviation; Comparison of the different measures of dispersion. Measures of relative dispersion – Coefficient of Variation. Combined mean and standard deviation. Chebyshev's Theorem. Graphical measure of dispersion – Lorenz curve; Gini coefficient. [7L]
6. **Moments, Skewness and Kurtosis:** Moments; Coefficients based on moments; Sheppard's correction; Skewness; Measures of skewness; Kurtosis and its measures. [3L]
7. **Correlation and Regression:** Analysis of Bivariate data. Correlation Analysis – Meaning of correlation; Scatter Diagram; Karl Pearson's coefficient of linear correlation; Calculation of the correlation coefficient from grouped data; Properties of the correlation coefficient; Advantages and limitations of the coefficient of correlation; Idea of rank correlation; Spearman's rank correlation coefficient.

Regression Analysis – Two lines of regression; Some important results relating to regression lines; Correlation Coefficient and the two Regression Coefficients; Coefficient of determination; Concept of multiple regression. [7L]
8. **Index Numbers:** Definition, characteristic and uses of index numbers; Methods of constructing price and quantity indices (simple and aggregate); Value index; Comparison of Laspeyres' and Paasche's Index Numbers; Tests of adequacy; Chain-base index numbers; Base shifting, splicing and deflating; Consumer Price Index Numbers; Problems in the construction of index numbers. [4L]
9. **Analysis of Time Series:** Objective of time series analysis; Causes of variations in time series data; Components of a time series; Decomposition – Additive and Multiplicative Models; Determination of trend – Moving averages method and method of least squares; Measurement of secular trend; Seasonal variations; Measurement of cyclical variations; Measurement of random variations. [4L]

Suggested Readings

1. R.I. Levin & D.S. Rubin: Statistics for Management: Pearson Education
2. Amir D. Aczel & Jayavel Sounderpandian – Complete Business Statistics: Tata McGraw- Hill
3. R.S Bhardwaj, Business Statistics, Excel Books

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4. S P Gupta & M.P. Gupta: Business Statistics: Sultan Chand & Sons
5. G. C. Beri – Statistics for Management: Tata McGraw- Hill
6. A.M Goon, M.K Gupta & B, Dasgupta : Basic Statistics : World Press.
7. Hoel & Jessen: Basic Statistics for Business and Economics; John Wiley & Sons, New York.
8. Anderson, Sweeney and Williams – Statistics for Business and Economics, West Publishers

BBA- 106: COMPUTER APPLICATIONS – I

Course Contents

1. **Basic Computer Concepts** – Different generations of computer hardware; Modern taxonomy of computers; Hardware and software; Programming languages; Problem solving and algorithms; Basic computer applications; General idea of information and communication technologies; Information system development process. [3L]

2. **Computer Hardware** – Input and Output devices; Memory (or storage) devices; Central Processing Unit.

Input / Output devices: keyboard, mouse, light pen, barcode readers, scanners, MICR, OCR, voice recognition and handwriting recognition systems; visual display terminals, printers, plotters etc.

Storage devices: Primary storage – RAM, ROM, EEROM, PROM, EPROM; Secondary storage – direct access devices, serial access devices: hard disks, floppy disks, magnetic tape, CD-ROM, DVD; Cache memory and Virtual memory.

Central Processing Unit – Control Unit; Arithmetic and Logic Unit; Decoders; Registers; Machine Instructions; Stored program concept; Program execution: Fetch-Decode-Execute cycle; Arithmetic, logical and shift operations. [10L]

3. **Computer Software** – Meaning of software; broad classification of software; system software and application software; utilities.

Systems software – Operating systems: Basic idea of an OS; OS as a resource manager – memory management, input/output management, secondary storage management, processor management, program management, network management; Brief introduction to different types of operating systems like DOS, Windows, Unix, Linux etc.

Application software – System development tools, Utilities, Application packages, User-written programs. [10L]

4. **Programming languages and Algorithms** – The concept of programming; pseudocode and flowcharts; structure of programs; program development guidelines; programming languages – machine language, assembly languages, high-level languages (procedural and object-oriented languages), fourth generation languages; object code and executable codes; compilers, translators, assemblers; editing tools such as vi.

Algorithms – Basic concept; Some typical algorithms – Finding the sum of a series, solving a quadratic equation, generating Fibonacci sequence, checking whether a number is prime or not, creating an array of numbers and displaying the largest element in the list, sorting a given set of numbers, multiplying together two matrices etc. (*The algorithms may be implemented using either pseudocode or a high level programming language*). [7L]

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5. **Computer networks and Internet** – Basic concepts of computer networks; local area networks and wide area networks; switches, hubs, routers, idea of distributed systems; the Internet and the World Wide Web. [6L]
6. **Computer Applications:** Essential features of computer systems and structures required for office automation, communications, control systems, data acquisition, interactive multimedia, networking, parallel processing and neural networks. [4L]

Suggested Readings

1. Mano – Computer System Architecture; Pearson Education
2. Tanenbaum – Structured Computer Organization, Pearson Education
3. Martin & Powell – Information Systems: A Management Perspective; McGraw-Hill
4. Laudon & Laudon – Management Information Systems: Pearson Education
5. Comer: Computer Networks and the Internet: Pearson Education
6. Graham Curtis – Business Information Systems: Addison Wesley.

BBA- 102 : MATHEMATICS – I

Course Contents

Algebra

1. **The Number System** – Positive and Negative Integers, Fractions, Rational and Irrational Numbers, Real Numbers, Problems involving the concept of real numbers. [2L]
2. **Basic Algebra** – Algebraic Identities, Simple factorizations; Equations: Linear and Quadratic (in single variable and simultaneous equations). Surds and Indices Logarithms and their properties (including change of base); Problems based on logarithms. The Remainder and Factor Theorems. [3L]
3. **Set Theory** – Introduction; Representation of sets; Subsets and supersets; Universal and Null sets; Basic operations on sets; Laws of set algebra; Cardinal number of a set; Venn Diagrams; Application of set theory to the solution of problems. [2L]
4. **Ratio, Proportion and Variation** [3L]
5. **Functions and Graphs** – Elementary idea of functions; Domain and Range of a function; Discrete and Continuous functions; Composition and Inverse of functions; Classification of functions: polynomial, rational, exponential and logarithmic functions. General idea of curve sketching – graphs of straight lines, modular functions, exponential and logarithmic functions. [2L]
6. **Quadratic Functions and Theory of Quadratic Equations** – Solution of the quadratic equation $ax^2 + bx + c = 0$, $a \neq 0$; Nature of the roots of a quadratic equation; Sum and Product of roots; Relation between roots; Condition for the existence of a common root; forming quadratic

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equation with given roots.

Graph of the function $f(x) = ax^2 + bx + c$, $a \neq 0$; Sign of the expression $f(x) = ax^2 + bx + c$;

Maximum/Minimum values of a quadratic function; Solution of quadratic inequalities.

[3L]

7. **Permutations and Combinations** – Fundamental principle of counting; Factorial notation. Permutation: Permutation of n different things; of things not all different; restricted permutations; circular permutations. Combination: different formulas on combination; complementary combination; restricted combination; Division into groups. Mixed problems on permutation and combination. [5L]
8. **Mathematical Induction and the Binomial Theorem**- Principle of mathematical induction; Examples. Binomial Theorem for a positive integral index; General term; Middle term; Properties of Binomial Coefficients; the greatest term in the Binomial expansion. Binomial theorem for any index. [3L]
9. **Sequences and Series** – General idea and different types of sequences; Arithmetic and Geometric Progressions; Arithmetic and Geometric Means; Arithmetic and Geometric series – summation formulae; Sum to infinity of a GP (for $|r| < 1$); Recurring decimals as GP; Harmonic Progression; Harmonic mean of two numbers; Special sums i.e. Σn , Σn^2 , Σn^3 etc. Arithmetic-Geometric series; Method of differences. [5L]
10. **Compound Interest & Annuities** – Concept of present value and amount of a sum; Types of annuities; Present value and amount of an annuity; Continuous compounding; Valuation of simple loans and debentures. [2L]

Coordinate Geometry

1. **Fundamentals** – Rectangular Cartesian coordinates; Polar coordinates; Distance formula; Section formula (internal and external sections); expressions for the centroid and incentre of a triangle; Area of a triangle in terms of the three vertices. [2L]
2. **Locus** – Definition; Equation to the locus; Method of obtaining the equation to the locus. [1L]
3. **Straight Lines** – Definition; Gradient of a straight line; Different forms of the equation of a straight line; Distance of a point from a line; Condition of concurrence of three given straight lines. Angle between two given straight lines: Condition of parallelism and perpendicularity of two straight lines. Equations of straight lines parallel or perpendicular to a given straight line. Identical straight lines. Position of a point with respect to a given straight line. [3L]
4. **Circles** – Equation of a circle in standard form; General form of the equation of a circle; Equations of circles in some special cases; Equation of the common chord of two given circles; Position of a point with respect to a given circle. Condition for tangency: equations of tangents to a circle at a point on the circumference from an external point; Length of a tangent to a circle from an external point; finding the equation of a circle given the center and the tangent line. Equation of a normal. Equations of circles through the intersection of a given circle and a given line, through the intersection of two circles; condition for circles to cut orthogonally. [4L]

Suggested Readings

1. H. S. Hall & S. R. Knight – Higher Algebra ; Radha Publishing House
2. Sancheti & Kapoor – Business Mathematics; Sultan Chand & Company

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3. Dowling – Introduction to Mathematical Economics ; Schaum's Outline Series
4. R. S. Soni – Business Mathematics – Pitambar Publishing House
5. Holden – Mathematics for Business & Economics; Macmillan India, New Delhi.
6. R.G.D Allen – Basic Mathematics; Macmillan, New Delhi

[BBA – 201] : English - II

Course Contents

1. **Grammar – Expressing in Style** : Words often Confused; One-word substitution; Phrases; Idioms.
[4 L, 6 P]
2. **Advanced Reading** : Understanding business-related correspondences; Comprehension of factual material; Interpreting Visual Information : Tables, Graphs, Charts; Speed Reading [2L, 5 P]
3. **Effective Writing** : Business Correspondences (Letter, Fax, e-mail) for : Making Enquiries, Placing Orders, Asking & Giving Information, Registering Complaints, Handling Complaints; Drafting notices; Drafting Advertisements; Job Applications [2L, 10P]
4. **Speaking** : Business Etiquettes; Impromptu Speech; Debate; Role Play; Presentations [1L, 6P]
5. **Listening** : Business-related Conversations; Exercises [4 P]

Suggested Readings :

1. A. Ashley : A Handbook of Commercial Correspondence, OUP
2. M. Monipatty: The Craft of Business Letter Writing, Tata McGraw Hill
3. N. Gupta (Ed.) : English for All, Macmillan
4. K. Mohan & M. Banerjee : Developing Communication Skills, Macmillan
5. M. Osborn & S. Osborn : Public Speaking, AITBS Publishers
6. M.A. Rizvi : Effective Technical Communication, Tata McGraw-Hill

[BBA – 204] : Economics - II

Course Contents

1. **Monetary Economics** : Evolution of money, Functions of money, Bank and its functions, Indian money market, Commercial banks – need and functions, Reserve Bank of India – need and functions, Price indices – uses and limitations, Inflation – cost push, demand pull, causes, effects and control, Devaluation, Quantity theory of money [8 L]
2. **National Income** : Concepts and definitions, Gross National Product (GNP), Gross Domestic Product (GDP), Net National Product and Net Domestic Product, Personal Income, Disposable Income and Per Capita Income, Measurement of National Income, Factors that determine size of National Income [8 L]
3. **Public Finance** : Public Revenue, Public Expenditure, Public Debt, Fiscal Policy, Deficit Financing, Indian Public Finance – sources of central and state government revenues, importance of public expenditure in India, heads of public expenditure, budget : need and types, VAT, MODVAT

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[8 L]

4. **International Trade and Finance** : Need for international trade, International Monetary Fund (IMF), International Bank for Reconstruction and Development (IBRD), Asian Development Bank, World Bank, Balance of Payments, Exchange Rate Mechanism, Gains from international trade, India and World Trade Organisation.
[8 L]

5. **Economic Development and Welfare** : Characteristics of underdeveloped economics and developed economics, Development Planning in India, Pre and Post Liberalization Planning, The Indian Capital Market, Welfare
[8 L]

Suggested Readings :

1. R. Dornbusch & S. Fisher : Macroeconomics, McGraw-Hill
2. Dipankar Dasgupta : The Macroeconomy, OUP
3. A.N. Agarwal : Indian Economy, Vishaw Prakashan
4. R. Dutta and K.P.M. Sundaram : Indian Economy, S. Chand
5. N.G. Mankiw : Macroeconomics, Macmillan

[BBA- 206]: Computer Applications - II
Course Contents

1. **Word processing software: Microsoft Word** – The different functionalities in the Microsoft Word software; Creation of a new document; Editing an existing document; Saving and printing a file; Use of the different tools; Handling tables in MS Word. [6L]
2. **Spreadsheet software: Microsoft Excel** – Creating a new spreadsheet document and editing an existing document; Using the different tools available in MS Excel. Performing mathematical calculations using MS Excel including various types of statistical measures. Reference Operators, Functions, Typing a Function. Creating a column chart; Changing the size and position of a chart Saving a file in Microsoft Excel; Closing a Microsoft Excel worksheet. [10L]
3. **Database Management System:** Data Modeling; The Relational Model; Database design and Query Languages; File organization, indexing and hashing; Transaction Processing and Concurrency Control; Database backup and recovery.

DBMS Software: Microsoft Access - Creating New and Opening Existing Databases, Creating a database using a wizard and without using a wizard; Tables – Introduction and advanced features. Relationships - How to link multiple tables together; Forms and Reports; Creating Mail Merge Labels using a Wizard.
[10L]

4. **Presentation Software: Microsoft PowerPoint** – The different functionalities of Microsoft PowerPoint. Creating a PowerPoint presentation; Creating and inserting a new slide; Creating a title slide; Applying a design template; Creating a hierarchy, Using a two-column text; Slide Sorter view; Running the slide show; Printing the slides.
[6L]

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5. **Project Management Software: MS Project** – Getting started with a project; Developing a timeline ; Displaying and Printing the schedule; Assigning resources and costs to the tasks and resolving resource allocation problems; Finalizing and Publishing the Project Plan; Managing and Tracking the Project; Working with multiple projects, using MS Project in workgroups. [8L]

Suggested Readings

1. Introduction to Computers with MS-Office, Leon, TMH
2. A First Course in Computers 2003, Saxena, VIKAS
3. Windows '98 in easy steps, Harshad Kotecha, Wiley Dreamtech
4. Office 2000 in easy steps, Stephen Copestake, Wiley Dreamtech
5. Windows and MS Office 2000, Krishnan, SCITECH
6. Microsoft Project 2000 in 24 hours, Tim Pyron, Techmedia
7. An Introduction to Database Systems - C.J. Date, Pearson Education

[BBA- 202]: Mathematics - II
Course Contents

ALGEBRA

Determinants: Determinants of order 2 and 3; minors and cofactors; expansion of determinants; properties of determinants; Cramer's rule for solving simultaneous equations in two or three variables.

Matrices: Different types of matrices; Matrix Algebra – addition, subtraction and multiplication of matrices; Singular and non-singular matrices; adjoint and inverse of a matrix; elementary row / column operations; Solution of a system of linear equations using matrix algebra.

Vectors: Row and column vectors and their significance. [6L]

COORDINATE GEOMETRY

Idea of conics as sections of a cone; Brief ideas of Foci, Directrix, Eccentricity and Latus Rectum; Equations of parabola, ellipse, hyperbola and rectangular hyperbola in standard form.

[4L]

CALCULUS

Limits: Notation and meaning of limits; Fundamental theorems on limits; Evaluation of limits of algebraic, exponential and logarithmic functions.

Continuity: Continuity of a function at a point $x = a$ and in an interval.

Differentiation: Meaning and geometrical interpretation of differentiation; Differentiation from first principles; Standard derivatives; Rules for calculating derivatives; Logarithmic differentiation; Derivatives of composite functions, implicit functions and functions defined parametrically.

Successive differentiation: Second and higher order derivatives; forming equations with such derivatives.

Applications of differentiation: Optimization of functions; Curve sketching; Equations of tangent and normal; Derivative as a rate measurer; Sign of a derivative - increasing and decreasing functions;

Partial derivatives: Homogenous functions; Euler's Theorem;

Optimization of functions of more than one variable: unconstrained and constrained optimization; cases of two variables involving not more than one constraint.

Indefinite Integrals: Integration as the inverse of differentiation; Standard integrals; Integration by substitution, by parts and by the method of partial fractions.

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Definite Integrals: Definite integral as the limit of a sum; Properties of definite integrals; Application of definite integrals in calculating the areas under curves.

[30L]

Suggested Readings

1. Dowling – Introduction to Mathematical Economics: Schaum's Outline Series
2. N.I. Piskunov – Differential and Integral Calculus, Vol I and II
3. G.B. Thomas and R.L. Finney – Calculus and Analytic Geometry, Addison Wesley
4. Sancheti & Kapoor – Business Mathematics; Sultan Chand & Company
5. Mark Anthony and Norman Biggs – Mathematics for Economics and Finance; Cambridge University Press
6. M Raghavachari – Mathematics for Management: An Introduction - Tata McGraw Hill

[BBA-205] : Psychology

Course Contents

1. **Introduction** - Definition, Scope, Methods and Branches of Psychology (with special reference to Industrial/Organizational Psychology).
2. **Major Viewpoints** – Behaviouristic approach, Gestalt school, Psychoanalytic school (Freud)
3. **Sensation, Attention and Perception** – a) Attributes and classification of sensation, b) Attention – Determinants, shift, fluctuations, distraction, c) Perception – Definition, determinants
4. **Learning Process** – Factors of Learning, Theories – Connectionism, Classical and Operant Conditioning, Programmed Learning.
5. **Memory** – Encoding, Storage, Retrieval; STM, LTM, Other types. Forgetting – its causes.
6. **Emotion** - Reaction (types), Physiological basis.
7. **Intelligence** - Definition, Concept of IQ, Emotional Intelligence.
8. **Personality** – Definition, Types, Traits, Tests.

Suggested Readings

1. Atkinson, R.L., Atkinson, R.C., Smith, E.E. & Hilgard, ER : Introduction to Psychology , Harcourt Brace Java Publishers
2. Baron, R.A : Psychology : The Essential Science, Allyn and Bacon
3. Morgan, C.T., King, R.A., Weisz, J.R. and Schopler, J : Introduction to Psychology McGraw Hill
4. Munn, N.L., Ferland, L.D., and Ferland, P.S : Introduction to Psychology.

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Oxford, IBH Publishing

5. Woodworth, R.S., & Scholberg, H : Experimental Psychology, Oxford & IBH Publishing

[BBA- 203]: Statistics - II
Course Contents

1. **Theory of Probability:** Probability as a concept; Basic probability rules; Tree diagrams; Conditional probability; Mutually exclusive events and independent events; Bayes' Theorem or Inverse probability rule. [6L]
2. **Probability distribution of a Random Variable:** Discrete and Continuous random variables; Expectation value; Mean and Variance of a Random Variable; Theorems on expectation; Marginal and joint probability distributions. [4L]
3. **Theoretical Probability Distributions:** Probability mass function and density function; Discrete distributions – The Binomial distribution and its properties; Idea of geometrical and hypergeometric distributions. The Poisson distribution and its properties; Fitting a Binomial or Poisson distribution to an observed distribution.
Continuous distributions – Uniform, Exponential and Normal distributions; Normal approximation to Binomial and Poisson distributions; Fitting a normal curve to an observed distribution. [4L]
4. **Sampling and Sampling Distributions:** Sampling versus complete enumeration; Random and nonrandom sampling; Different types of random sampling; Sample Statistic and Population Parameter; Practical methods of drawing a random sample.
Sampling distributions – Standard error; sampling distribution of the sample mean and the sample proportion.
Sampling from normal and non-normal populations; The Central Limit Theorem.
Four Basic Distributions: Standard normal distribution; Chi-square distribution; t-distribution; F-distribution [6L]
5. **Estimation:** point and interval estimation; Criteria of a good estimator; Methods of Point Estimation – The Method of Maximum Likelihood and The Method of Moments;
Interval Estimates – Interval estimates and confidence intervals; confidence level and confidence interval; Calculating interval estimates of the mean and proportion from large samples; Finite correction factor. Interval estimates using the t distribution
Determining the sample size in Estimation [6L]
6. **Hypotheses Testing:** Concepts basic to the hypothesis testing procedure; Steps in Hypothesis testing; Type I and Type II errors; Two-tailed and one-tailed tests of hypotheses.
Hypothesis testing of means when the population standard deviation is known / not known; Power of a Hypothesis Test; Hypothesis testing of proportions; Use of the t-distribution.
Hypothesis testing for differences between means and proportions; two-tailed and one-tailed tests. [10L]
7. **Chi-Square and Analysis of Variance:** Chi-Square as a test of independence and as a test of goodness of fit.
Analysis of Variance: Calculating the variance among the samples and within the samples. The F distribution and the F hypothesis test. [4L]

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Suggested Readings

9. R.I. Levin & D.S. Rubin: Statistics for Management: Prentice Hall of India
10. Amir D. Aczel & Jayavel Sounderpandian – Complete Business Statistics: Tata McGraw- Hill
11. Freund – Mathematical Statistics
12. G. C. Beri – Business Statistics, Second Edition: Tata McGraw- Hill
13. A.M Goon, M.K Gupta & B, Dasgupta : Basic Statistics : World Press.
14. Hoel & Jessen: Basic Statistics for Business and Economics; John Wiley & Sons, New York.
15. Anderson, Sweeney and Williams – Statistics for Business and Economics, West Publishers

[BBA- 203]: Statistics - II

Course Contents

4. **Theory of Probability:** Probability as a concept; Basic probability rules; Tree diagrams; Conditional probability; Mutually exclusive events and independent events; Bayes' Theorem or Inverse probability rule. [6L]
5. **Probability distribution of a Random Variable:** Discrete and Continuous random variables; Expectation value; Mean and Variance of a Random Variable; Theorems on expectation; Marginal and joint probability distributions. [4L]
6. **Theoretical Probability Distributions:** Probability mass function and density function; Discrete distributions – The Binomial distribution and its properties; Idea of geometrical and hypergeometric distributions. The Poisson distribution and its properties; Fitting a Binomial or Poisson distribution to an observed distribution. Continuous distributions – Uniform, Exponential and Normal distributions; Normal approximation to Binomial and Poisson distributions; Fitting a normal curve to an observed distribution. [4L]
4. **Sampling and Sampling Distributions:** Sampling versus complete enumeration; Random and nonrandom sampling; Different types of random sampling; Sample Statistic and Population Parameter; Practical methods of drawing a random sample. Sampling distributions – Standard error; sampling distribution of the sample mean and the sample proportion. Sampling from normal and non-normal populations; The Central Limit Theorem. Four Basic Distributions: Standard normal distribution; Chi-square distribution; t-distribution; F-distribution [6L]
5. **Estimation:** point and interval estimation; Criteria of a good estimator; Methods of Point Estimation – The Method of Maximum Likelihood and The Method of Moments; Interval Estimates – Interval estimates and confidence intervals; confidence level and confidence interval; Calculating interval estimates of the mean and proportion from large samples; Finite correction factor. Interval estimates using the t distribution Determining the sample size in Estimation [6L]
6. **Hypotheses Testing:** Concepts basic to the hypothesis testing procedure; Steps in Hypothesis testing; Type I and Type II errors; Two-tailed and one-tailed tests of hypotheses.

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Hypothesis testing of means when the population standard deviation is known / not known; Power of a Hypothesis Test; Hypothesis testing of proportions; Use of the t-distribution.

Hypothesis testing for differences between means and proportions; two-tailed and one-tailed tests. [10L]

7. **Chi-Square and Analysis of Variance:** Chi-Square as a test of independence and as a test of goodness of fit.

Analysis of Variance: Calculating the variance among the samples and within the samples. The F distribution and the F hypothesis test. [4L]

Suggested Readings

16. R.I. Levin & D.S. Rubin: Statistics for Management: Prentice Hall of India
17. Amir D. Aczel & Jayavel Sounderpandian – Complete Business Statistics: Tata McGraw- Hill
18. Freund – Mathematical Statistics
19. G. C. Beri – Business Statistics, Second Edition: Tata McGraw- Hill
20. A.M. Goon, M.K Gupta & B, Dasgupta : Basic Statistics : World Press.
21. Hoel & Jessen: Basic Statistics for Business and Economics; John Wiley & Sons, New York.
22. Anderson, Sweeney and Williams – Statistics for Business and Economics, West Publishers

[BBA – 302] : Business Environment

Course Contents

1. **Indian Business Environment** : Concept, components and importance.
2. **Economic Trends** : Income; Savings and investment; Industry; Trade and Balance of Payments, Money ; Finance ; Prices.
3. **Problems of Growth** : Unemployment; Poverty; Regional imbalances; Social injustice; Inflation, Parallel economy; Industrial sickness.
4. **Role of Government** : Monetary and fiscal policy; Industrial licensing, Privatization; Devaluation; Export-import policy; Regulation of foreign investment; Collaborations in the light of recent changes.
5. **Industrial Policy** : Industrial Policies since Independence, New Industrial Policy and its Effect.
6. **The Current Five Year Plan** : Major policies; Resource allocation.
7. **International Environment** : International trading environment; Trends in world trade and the problems of developing countries; Foreign trade and economic growth; International economic groupings; International economic institutions – GATT, WTO, UNCTAD, World Bank, IMF; GSP; GSTP.
8. **Major Industry Associations** : FICCI, CII, ASSOCHAM, PHDCCI, Role of Industry Associations.

Suggested Readings

1. Sundaram & Black: The International Business Environment; Prentice Hall
2. P. Chidambaram: Business Environment; Vikas Publishing

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3. Dutt R and Sundharam KPM: Indian Economy; S. Chand
4. Misra SK and Puri VK: Indian Economy; Himalaya Publishing
5. Upadhyay, S: Business Environment, Asia Books
6. Chopra, BK: Business Environment in India, Everest Publishing
7. Suresh Bedi: Business Environment, Excel Books

[BBA – 306] : Financial Accounting

Course Contents

1. **Meaning and Scope of Accounting :** Need, development and definition of accounting.
2. **Accounting Principles :** GAAP; Accounting as MIS
3. **Accounting Transactions :** Accounting Cycle; Journal; Rules of debit and credit; Compound journal entry; Opening entry; Relationship between journal and ledger; Rules regarding posting; Trial Balance; Sub division of journal.
4. **Capital and Revenue :** Classification of Income; Classification of expenditure; Classification of receipts.

Accounting concept of income; Accounting concepts and income measurement; Expired cost and income measurement.

Final accounts; Manufacturing account; Trading account; Profit and Loss Account; Balance Sheet; Adjustment entries.

Rectification of errors: Classification, Location and Rectification Suspense Account; Effect on Profit.

5. **Depreciation Provisions and Reserves :** Concept of depreciation; Causes of depreciation; depletion, amortization and dilapidation; Depreciation accounting; Methods of recording depreciation; Methods for providing depreciation; Depreciation of different assets; Depreciation of replacement cost; Depreciation policy as per Accounting Standard, Provisions and reserves.

Suggested Readings

1. Gupta, RL and Radhaswamy, M : Financial Accounting ; Sultan Chand and Sons
2. Ashoke Banerjee: Financial Accounting, Excel Books
3. Maheshwari: Introduction to Accounting, Vikas Publishing
4. Monga JR, Ahuja Girish and Sehgal Ashok : Financial Accounting; Mayur Paper Back
5. Shukla, MC, Grewal TS, and Gupta, SC : Advanced Accounts; S. Chand & Co
6. Compendium of Statement and Standards of Accounting : The Institute of Chartered Accountants of India.
7. Agarwala, AN, Agarwala KN: Higher Sciences of Accountancy : Kitab Mahal
8. Anthony, RN and Reece, JS : Accounting Principles; Richard Inwin Inc
9. Ramchandran & Kakani : Financial Accounting for Managers; Tata McGraw-Hill

[BBA – 305] : Business Communication

Course Contents

1. **Introduction Business Communication :** Basic forms of communicating; Communication models and processes; Effective communication; Theories of communication; Audience Analysis.

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2. **Self-Development and Communication** : Development of positive personal attitudes; SWOT analysis; Vote's model of interdependence; Whole communication.

3. **Corporate Communication** : Formal and informal communication networks; Grapevine; Miscommunication (Barriers); Improving communication.

Practices in business communication; Group discussions; Mock interviews; Seminars; Effective listening exercises; Individual and group presentations and reports writing. Principles of Effective Communication.

4. **Writing Skills** : Planning business messages; Rewriting and edition; The first draft; Reconstructing the final draft; Business letters and memo formats Appearance request letters; Good news and bad news letters; Persuasive letters; Sales letters; Collection letters; Office memorandum.

5. **Report Writing** : Introduction to a proposal, short report and formal report, report preparation.

Oral Presentation : Principles of oral presentation, factors affecting presentation, sales presentation, training presentation, conducting surveys, speeches to motivate, effective presentations skills.

6. **Non-Verbal Communication** : Body languages : meanings

7. **Effective Listening** : Principles of effective listening; Factors affecting listening exercises.

8. **Modern Forms of Communicating** : Fax; E-mail; Video conferencing; etc.

Suggested Readings

1. Monipally: Business Communication , Tata McGraw Hill
2. Ronald E. Dulek and John S. Fielder : Principles of Business Communication; Macmillan
3. Madhukar : Business Communications; Vikas Publishing House
4. Rai & Rai: Business Communication, Himalaya Publishing
5. Kaul : Business Communication; Prentice Hall
6. Senguin J : Business Communication; Allied Publishers
7. Robinson, Netrakanti and shintre : Communicative Competence in Business English; Orient Longman

[BBA – 303] : Business Regulatory Framework

Course Contents

1. **Law of Contract** : Nature of contract; Classification; Offer and acceptance; Capacity of parties to contract; Free consent; Consideration; Legality of object; Agreement declared void; Performance of contract; Discharge of contract; Remedies for breach of contract.

2. **Special Contracts:** Indemnity; Guarantee; Bailment and pledge; Agency.

3. **Sale of Goods Act** : Formation of contracts of sale; Goods and their classification, price; conditions and warranties; Transfer of property in goods; Performance of the contract of sales; Unpaid seller and his rights, sale by auction; Hire purchase agreement.

4. **Negotiable Instrument Act** : Definition of negotiable instruments; Features; Promissory note; Bill of exchange & cheque; Holder and holder in the due course; Crossing of a cheque,. Types of crossing; Negotiation; Dishonour and discharge of negotiable instrument.

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5. **The Consumer Protection Act** : Salient features; Definition of consumer; Grievance redressal machinery.

6. **Foreign Exchange Management Act** : Definitions and main provisions.

Suggested Readings

1. Desai TR : Indian Contract Act, Sale of Goods Act and Partnership Act; SC Sarkar & Sons
2. S.S. Gulshan : Markentile Law, Excel Books
3. Pathak: Legal Aspect of Business, TMH
4. Khergamwala JS : The Negotiable Instruments Act; NM Tripathi
5. Singh Avtar : The Principles of Merchantile Law; Eastern Book Company
6. Kuchal MC : Business Law; Vikas Publishing
7. Maheshwari & Maheshwari: Business Regulatory Framework, Himalaya Publishing
8. Kapoor ND : Business Law : Sultan Chand & Sons
9. Chandha PR : Business Laws; Galgotia

[BBA – 301] : Principles of Management

Course Contents

1. **Introduction** : Concept, process and significance of management; Managerial roles; An overview of functional areas of management; Development of management thought; Classical and neo-classical systems; Contingency approaches

2. **Planning** : Concept, process and types. Decision making – concept and process; Management by objectives; Corporate planning; Environment analysis; Strategy formulation.

3. **Organizing** : Concept, nature, process and significance; Authority and responsibility relationships; Centralization and decentralization; Departmentation; Organization structure – forms and contingency factors.

4. **Directing** : Motivation – Concept & Theories – (Maslow, Alderfer, Herzberg, McClelland, Porter & Lawler, Vroom); Financial and non-financial incentives of Motivation,

Leadership – Leadership Theories, Leadership styles.

Communication – Type, process and barriers.

5. **Controlling** : Concept and process; Effective control system; Techniques of control.

6. **Management of Change** : Concept, nature and process of planned change; Resistance to change; Management in a changing environment.

Suggested Readings

1. Wehrich and Koontz, et al : Essentials of Management; Tata McGraw Hill
2. Stoner J and Freeman RE : Management; Prentice-Hall

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3. Daft, RL : Management, Thomson
4. V.S.P Rao & Hari Krishna : Management-Text & Cases, Excel Books
5. ramaswami T; Principles of Mgmt., Himalaya Publishing
5. Chandan, JS : Management – Concepts and Strategies, Vikas Publishing
6. Robbins, SP : Management, Prentice Hall

[BBA – 304] : Business Economics

Course Contents

1. **Introduction** : Concepts, Economics — Business — Management, Business Decisions.
2. **Managerial Economics** : Profit Management, Nature & Measurement of Profit; Profit Planning and Control; Policies on Profit and Maximization.
3. **Fiscal and Monetary Policies** : IS-LM Framework; Theory of Business; Cycle-Stabilization policy.
4. **Business and Economic Models** : Forecasting Methods, Regression Analysis and Model Building; Point and Interval Estimates, Non-Linear Regression Model; Game Theory, Inventory Models.
5. **Optimization**: Concept of Slope, Derivatives, Constrained Optimization.
6. **Marginal Analysis** : Break-Even analysis for managerial decision making.
7. **Economic Concepts for Managers** : Competitive Advantage; Exchange Rates; Trade Restrictions, BOP, WTO.
8. **Indian Economic Overview**

Suggested Readings

1. Adhikary, M. : Business Economics, Excel Books
2. Thomas, : Managerial Economics, Tata McGraw Hill
3. Keat, P and Philips KYK : Managerial Economics, Prentice Hall
4. Keating, B and Wilson, JH : Managerial Economics, Biztantra
5. Milgrom, & Roberts J. : Economics, Organization and Management, Prentice Hall
6. Mithani D.M: A course in Business Economics, Himalaya Publishing
7. Dubedi, Principles of Economics, Vikas Publishing

WBUT/BBA/4th Sem
(4 Credits : 40 hrs)

[BBA – 403] : Financial Management – I

Course Contents

1. **Financial Management** : Financial goals; Profit vs wealth maximization; Financial functions – investment, financing, and dividend decisions; Financial planning.

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2. **Capital Budgeting** : Nature of investment decisions, investment evaluation criteria, payback period, accounting rate of return, net present value, internal rate of return, profitability index; NPV and IRR comparison.
3. **Cost of Capital** : Significance of cost of capital; Calculating cost of debt; Preference shares, equity capital, and retained earnings; Combined (weighted) cost of capital.
4. **Operating and Financial Leverage** : Measure; Effects on profit, analyzing alternate financial plans, combined financial and operating leverage.
5. **Capital Structure** : Theories and determinants.
6. **Dividend Policies** : Issues in dividend policies; Walter's model; M.M. Hypothesis, forms of dividends and stability in dividends, determinants.
7. **Management of Working Capital** : Nature of working capital, significance of working capital, operating cycle and factors determining of working capital requirements; Management of working capital – cash, receivables, and inventories.

Suggested Readings

1. S.Bhatt: Financial Management, Excel Books
2. Van Horne, J.C. : Fundamentals of Financial Management; Prentice Hall of India.
3. Khan M.Y. and Jain P.K. : Financial Management - Text and Problems; Tata McGraw Hill.
4. Prasanna Chandra : Financial Management - Theory and Practice; Tata McGraw Hill.
5. Pandey I.M. : Financial Management : Vikas Publishing House.
6. Saha, Tapas Ranjan : Basic Financial Management, World Press

WBUT/BBA/4th Sem
(4 Credits : 40 hrs)

[BBA – 404] : Marketing Management — I

Course Contents

1. **Introduction** : Nature and scope of marketing; Importance of marketing as a business function and in the economy; Marketing concepts – traditional and modern; Selling vs. marketing; Marketing mix; Marketing environment.
2. **Consumer Behaviour and Market Segmentation** : Nature, scope and significance of consumer behaviour; Market segmentation – concepts and importance; Bases for market segmentation.
3. **Product** : Concept of product, consumer, and industrial goods; Product planning and development; Packaging – role and functions; Brand name and trade mark; After sales service; Product life cycle concept.

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Syllabus of 6th Semester will be published latter

4. **Price** : Importance of price in the marketing mix; Factors affecting price of a product/service; Discounts and rebates.
5. **Distributions Channels and Physical Distribution**: Distribution channels – concept and role; Types of distribution channels; Factors affecting choice of a distribution channel; Retailer and wholesaler; Physical distribution of goods; Transportation; Warehousing; Inventory control; Order processing.
6. **Promotion** : Methods of promotion; Optimum promotion mix; Advertising media – their relative merits and limitations; Characteristics of an effective advertisement; Personal selling; Selling as a career; Classification of a successful sales person; Functions of salesman.

Suggested Readings

1. Kotlar Philip and Armstrong Gary, Principles of Marketing; Pearson Education
2. Arun Kumar: Marketing Management, Vikas
3. Saxena, Rajan : Marketing Management, Tata McGraw Hill
4. Gandhi, J.C. : Marketing, Tata McGraw Hill
5. Tapan Panda: Marketing Management, Excel Books
6. Ramaswamy, V.S. and S. Namakumari : Marketing Management, Macmillian.
6. B. Ghosh : Fundamentals of Marketing Management, Books & Allied

WBUT/BBA/4th Sem
(4 Credits : 40 hrs)

[BBA – 406] : Management Information Systems

Course Contents

1. **Introduction** : Concept, evolution and meaning of MIS; Information system for competitive advantage; Systems approach to problem solving; Challenges in the development of MIS, MIS function in an organization.
2. **Information and Managerial Effectiveness** : Information as a corporate resource, pervasiveness of information, types of information – operational, tactical and strategic; Levels of management and information needs of management; Process of generation of information; Quality of information; information systems for finance, marketing, manufacturing, research and development and human resource areas.
3. **Information Systems** : Information systems and their role in business systems, changing role of information systems, users of information systems; Types of information systems – transaction processing systems, MIS decision support systems, executive support system; Enterprise Resource Planning (ERP) system, geographical information system, business expert system, etc; Procurement options and outsourcing information system services.
4. **System Development Life Cycle** : Sequential Process of software development; Computer Aided Software Engineering (CASE); Tools and the modular approach to software development; Information system audit.

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5. **Development and Management of Data Bases** : Relation databases; Data Base Management Systems (DBMS) and their components; Concept of entity and relationships; Data dictionary, SQL and other related concepts in DBMS; Normalisation process.
6. **Data Communication and Networking** : Uses of computer networks, types of networks, network topologies; Network media and hardware; Data communication over telephone, Intranets and collaborative processing.
7. **Implementation, Evaluation and Maintenance of System** : Methods and steps in implementation of system; Approaches and process of evaluating MIS.
8. **Security Issues Relating to Information Systems** : Threats to information systems; Vulnerability, risk and control measures.

Suggested Readings

1. Arora & Bhatia: Management Information Systems, Excel Books
2. O'Brien James : Management Information Systems, Tata-McGraw Hill
3. Kumar, Muneesh : Business Information Systems, Vikas Publishing House
4. Rajaraman, V : Analysis and Design of Information Systems for Modern Management, Prentice Hall.
5. Sadagopal, S : Management Information Systems, Prentice Hall.
6. Simkin, M.G : Introduction to computer Information System for Business, S.Chand & Co.

WBUT/BBA/4th Sem
(4 Credits : 40 hrs)

[BBA – 405] : Human Resource Management – I

Course Contents

1. **Human Resource Management – Overview** : Scope & Coverage of HRM, Development of HR Functions, Structure and Function of HR Manager, Role of Line Managers in Managing Human Resources.
2. **Human Resource Planning** : Need for HR Planning Assessment of available HR in the Organization, Work load Analysis, Manning Norms, Demand Analysis of Future Requirement of HR, HR Policy.
3. **Employment Administration** : Recruitment & Selection of HR – Methods and Processes; Training & Development of HR – Types and Techniques; Performance Appraisal – Instruments and Administration; Discipline & Grievance Handling; Wage & Salary Administration.
4. **Industrial Relations in India** : Concepts, Theory, Approaches, Context of IR; Growth and Structure of Trade Unionism, Trends in Industrial Disputes; Industrial Disputes Settlement Machinery under ID Act, Collective Bargaining; Worker's Participation in Management; Labour Welfare.

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Suggested Readings

1. V.S.P. Rao: Human Resource Management, Excel Books
2. Dwivedi: Human Resource Management, Vikas
3. C.S. Venkata Ratnam & B.K. Srivastava : Personnel Management and Industrial Relations, Tata McGraw Hill.
4. Anjali Ghanekar : Human Resource Management, Everest Publishing
5. A.M. Sheikh : Human Resource Development and Management, S.Chand
6. E.A. Ramaswamy : Managing Human Resources, Oxford University Press
7. M.S. Saiyadain : Human Resource Management, Tata McGraw Hill

WBUT/BBA/4th Sem
(4 Credits : 40 hrs)

[BBA – 402] : Materials Management

Course Contents

1. **Integrated Materials Management** : Need, scope, advantage, concept; materials requirement planning and budgeting; make or buy decision; ABC and VED analysis.
2. **Purchasing Management** : Purchase system, policy and procedure; source selection, vendor development and evaluation; legal aspects of buying.
3. **Stores Management** : Stores system and procedures; stores accounting and stock verification; disposal of surplus and scrap.
4. **Inventory Control** : Economic Ordering Quantity; inventory systems.
5. **Evaluation of Materials Management** : MIS for materials management; criteria for evaluation; inventory turnover ratio.

Suggested Readings

1. Gopalakrishnan, P. and Sunderashan, M : Handbook of Materials Management, Prentice Hall of India.
2. R. Mishra: Materials Management, Excel Books
3. Nair: Purchase and Materials Management, Vikas
4. Dutta, A.K. : Integrated Materials Management, Prentice Hall of India
5. Bhattacharya, S.C. : Modern Concepts on Materials Management
6. Dabler, D.W. & Others : Purchasing and Materials Management, McGraw Hill.

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WBUT/BBA/4th Sem
(4 Credits : 40 hrs)

[BBA – 401] : Production Management

Course Contents

1. **Production Planning and Control** : Production system, types of production, preplanning, planning and control functions, relations with other departments, efficiency of production planning and control.
2. **Plant Location and Layout** : Approaches to location, choice, selection. Plant design; plant layout – product layout, process layout, criteria for a good layout.
3. **Plant Maintenance and Materials Handling** : Types of maintenance – preventive, predictive and overhaul; selection of good materials handling equipment – gravity and powered conveyors, hoists and cranes, lifting trucks, motor transport.
4. **Work Study** : Method study; motion study; work measurement, performance rating, standard time, time study; work sampling.
5. **Inspection and Quality Control** : Types and criteria of inspection; significance of quality control, statistical quality control, control charts, acceptance sampling plans.

Suggested Readings

1. Buffa, E.S. and Sarin, R.K : Modern Production and Operations Management, John Wiley.
2. Upendra Kachru: Operations Management, Excel Books
3. Chase, R.B. and Aquilano, N.J : Production and Operations Management, Irwin
4. Charl, S.N. : Theory and Problems in Production and Operations Management
5. Lockyer, K. : Production Management
6. Barat, N : Production Management and Control

WBUT/BBA/5th Sem
(4 Credits : 40 hrs)

SUPPLY CHAIN PRACTICE & PROCEDURE
BSCM-501

- Unit: 1** Concept of supply chain, Integrated supply chain, Growth of Supply chain, Strategic decision in supply chain.
- Unit: 2** Definition of Supply Chain Management, Scope, Supply Chain Management as a Management Philosophy, Function of SCM, Why Supply Chain Management, Value chain for Supply Chain Management.

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- Unit: 3** Customer focus in Supply Chain Management, Buyers Perspective, Suppliers Perspective, Stages of Development in Supplier Relations.
- Unit: 4** Supply Chain Strategies – (i) Cycle View (ii) Push & Pull View.
Achievement of strategic fit through different steps, Obstacles to achieving Strategic Fit.
- Unit: 5** Role of Forecasting in a supply chain, Factors of Demand Forecast, Basic approach to Demand Forecasting, Role of Aggregate Planning in a Supply Chain, Problems, Planning Strategies.

Books:

1. Supply Chain Management – *Sunil Chapra & Peter Meindl, PHI*
2. Essentials of Supply Chain Management – *Dr. R.P. Mohanty & Dr. S.G. Deshmukh, Jaico Publishing House*
3. Designing & Managing The Supply Chain
David Simchi-Levi , Philip Kamiusky, Edith Simchi-Levi, TATA Mc-Graw Hill

FACILITIES MANAGEMENT
BSCM-502

- Unit: 1** Concept of Materials Handling, Handling Objectives, Basic Consideration for Handling Equipment, Principles of Materials Handling.
- Unit: 2** Materials Handling Equipment – Fork Lift Trucks, Pallet Trucks, Tow Tractor, Conveyors, Carousels. Automated & Semi Automated Handling Procedure.
- Unit: 3** Definition of Packaging, Consumer Packaging, Industrial Packaging, Importance of Packaging, Function of Packaging.
- Unit: 4** Packaging Materials- Traditional and Modern – Film based, Blanket Wrapping, Returnable containers, Intermediate Bulk Containers, Pallets Pools, Plastic Pallets, Refrigerated Pallets.
- Unit: 5** Warehouse Functionality, Warehouse Operating Principles, Classification – (1) Private, (2) Public, (3) Contract Warehouse, Planning the distribution warehouse.

Books:

1. Logistical Management-The integrated Supply Chain Process –
Donald. J. Bowersox & Donald. J. Claoss, TATA Mc-Graw Hill
2. Essentials of Supply Chain Management – *Dr. R.P. Mohanty & Dr. S.G. Deshmukh, Jaico Publishing House*

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FREIGHT TRANSPORT SYSTEM
BSCM-503

- Unit: 1** Economic Factors of Transportation, Pricing Strategy in Transportation, Rating Systems- Class Rates, Commodity Rates, Special Rate, Freight – All kind Rates.
- Unit: 2** Transport Documentation – Bill of Lading, Freight Bill, Shipping Manifest. Responsibilities of Traffic Department.
- Unit: 3** Transport Functionality- Product Movement, Product Storage, Participants in Transportation Decision – Shippers, Carriers, Government, Public.
- Unit: 4** Modes of Transport – Rail, Water, Pipeline, Air, Motor Carriers.
- Unit: 5** Transportation Formats – Common Carriers, Contact Carriers, Private Carriers, Exempt Carriers.
Suppliers of Transportation Services – Single Mode Operator, Specialized Carrier, Intermodal Operator – Piggy Back, Containership, Freight Forwards, Shippers Associations.

Books:

1. Logistical Management-The integrated Supply Chain Process –
Donald. J. Bowersox & Donald. J. Claoss, TATA Mc-Graw Hill
2. Supply Chain Management – *Sunil Chapra & Peter Meindl, PHI*

INVENTORY MANAGEMENT
BSCM-504

- Unit: 1** Definition, Importance, Function, Classification of Inventory, Inventory related Cost, Objectives of Inventory Control, Planning for Inventory Control, Types of Inventory Situations .
- Unit: 2** Selective Inventory Control Model- ABC Analysis, VED, XYZ, FSN, SOS, GOLF, EOQ Model, P & Q System, Concept of JIT.
- Unit: 3** Inventory Control Process – Perpetual Review, Periodic Review, Modified Control, Distribution Requirement Planning (DRP), Process of DRP, Benefits & limitation of DRP.
- Unit: 4** Classification of W.I.P Inventories, Factors influencing, W.I.P inventory, Problems, Controlling Method.
- Unit: 5** Factors influencing Finished Goods inventory, Requirement of inventory control Systems, Multi echelon Inventory Model, Use of Information Technology in Inventory Management.

Books:

1. Inventory Management – *K. Shridhara Bhat, Himalaya Publishing House*
2. Logistical Management-The integrated Supply Chain Process –
Donald. J. Bowersox & Donald. J. Claoss, TATA Mc-Graw Hill
3. Inventory Management – *L.C. Jhamb, Himalaya Publishing House*

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PROCUREMENT & QUALITY MANAGEMENT
BSCM-505

- Unit: 1** Definition of Quality, Quality Standard, Quality Control, Aspects of Quality Control, Quality Control of Purchased Materials in a Supply Chain.
- Unit: 2** General Problems of Vendor Quality, Suppliers Quality Survey, Model for evaluation of Suppliers Quality.
- Unit: 3** Management Action for Quality Assurance, Activities under Quality Assurance, Evaluating Product Quality, Control Chart – Mean & Range.
- Unit: 4** Element of Quality Management, Benefits, Six Sigma Quality Control, Principles, Benefits, Steps of Six Sigma.
- Unit: 5** Benefits and Risk of Outsourcing, What is E-Procurement, Framework of E-Procurement.

Books:

1. Designing & Managing The Supply Chain
– David Simchi-Levi, Philip Kaminsky, Edith Simchi Levi, Tata Mc Graw Hill
2. Essentials of Supply Chain Management –
Dr. R.P. Mohanty & Dr. S.G. Deshmukh, Jaico Publishing House
3. Production Management – L.C. Jhamb, EPH.

PHYSICAL DISTRIBUTION & LOGISTICS
BSCM-506

- Unit: 1** Definition of logistics, Decision in Logistics Management, Key Factors for efficient Logistic System, Total Logistics Cost.
- Unit: 2** Evolution of Logistics Management, Models in Logistics Management, Logistics Management to Supply Chain Management, Logistics Management Process, Competitive advantage through Logistics .
- Unit: 3** Impact of Logistics & Customer Services on Marketing, Service Driven Logistics System, Logistic Impact on Return Investment, Logistics and Share holder value.
- Unit: 4** The work of Logistics – Network Design, Information, Transportation, Inventory, Warehousing, Materials Handling & Packaging.
Integrated Logistics – Logistics Performance Cycles – Physical Distribution, Manufacturing Support, Procurement Performance.
- Unit: 5** Information Functionality and Principles of Logistics, Logistical Measurement Systems, Characteristics of an Ideal Measurement System, Logistics Value - engineering.

Books:

1. Logistics & Supply Chain Management – Cases & Concepts

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– G. Raghuram & N. Rangaraj, MACMILLAN.

2. Logistical Management –
– Donald. J. Bowersox & David J. Closs., Tata Mc Graw Hill
3. Logistics & Supply Chain Management – Martin Christopher, Pearson.

MANAGEMENT OF SERVICE OPERATION
BSCM-601

Unit-1- Customer Service – Availability, Operational Performance , Service Reliability, basic Service Platforms, and value added services.

Unit-2 – The role of cycle inventory in supply chain, Economics of Scale to exploit –Fixed cost, Quantity Discounts. The Role of Safety Stock in Supply chain. Determining the appropriate level of safety stock.

Unit-3 – The Role of Sourcing in Supply Chain, Supplier scoring & assessment, Sourcing Planning & analysis , Making Sourcing decisions in Practice

Unit-4 – The Role of Revenue Management in the Supply chain , Revenue Management for Multiple customer Segments ,Revenue Management for –Perishable Asset ,Seasonal Demand ,Bulk & Spot contracts.

Unit-5– Benchmark in Supply Chain – Product, Process, Best Practices, Strategic etc. Steps in Benchmarking .Rule of critical Success factors .Determination of what to Benchmark.

- Book :** 1. Supply Chain Management
----Sunil Chopra & Peter Meindl(PHI)
2. Essentials of Supply Chain Management
----Dr. R.P Mohanty & Dr. S.G. Deshmukh(Jaico student edition)

PROJECT MANAGEMENT & SUPPLY CHAIN PROCESS REDESIGN
BSCM-602

Unit-1- What is Project Management .Steps in Project Management ,Daming cycle for Project Management .Project Manager – Roles & Responsibilities .

Unit-2 – Project Planning –Scope, Objective, Project Feasibility Study –technical feasibility –Scope, Social Cost Benefit Analysis –steps.

Unit-3 – Types of Project Risk in Supply Chain, Risk components, Measures of Risk Sensitivity Analysis.

Unit-4 – Basic Steps in Data collection for Project Management, system & Procedure. Plan in the Project of Supply Chain management –Communication, Man Management, Material Management, and Cost management.

Unit-5– Project Control –Program/Scope, Performance, Schedule, Cost Control-Methods of Cost Control.

- Book :** Project Mammagement
--- V. C. Sontakki (Himalaya Publising Home)

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INTERNET TECHNOLOGY & SUPPLY CHAIN MANAGEMENT
BSCM 603

Unit-1- The role of IT in Supply chain .Uses of IT in inventories, transportation & facilities within a supply chain .The Supply Chain It frame Work-macro Processes

Unit-2 – The future of IT in the Supply Chain. Internal Supply Chain management, Supply relationship management, The Transaction Management Foundation .Data mining –Methods application area in supply chain

Unit-3 –Goals of Supply Chain information Technology, Standardization, information Technology infrastructure – Presentation Devises, Communication Devices .Data base, System architecture.

Unit-4- The Supply chain IT in Practice, Integrating Supply chain information Technology, Stage of Development, Implementation of ERP & DSS. Structure of DSS. Selection of Supply Chain DSS. Supply chain master Planning.

Unit-5- Supply chain information System Design –Planning , Capacity ,Performance requirement ,manufacturing requirement ,Operation , Transportation ,Inventory development .E-Business –Role in Supply chain, Framework ,Impact on Cost .

BOOKS : 1 Desiging & Managing –The Supply Chain
David Simchi Levi
Philip Kaminsky
Edit Simchi –Levi(TATA MCGRAW-HILL)

INTERNATIONAL OPERATIONS & GLOBAL SUPPLY CHAIN
BSCM - 604

Unit-1- Introduction, Forces of Global Supply Chain-Global market force, Technology force, Global cost force, Political force. Stage of International Development.

Unit-2 – Risk of Global Supply Chain- Speculative Strategies ,Hedge Strategies ,Flexible Strategies ,Requirements for Global Strategy implementation ,Advantages of Global Supply Chain. Supply Chain security.

Unit-3 – Issues in international Supply Chain Management –International Versus Regional Product, Local autonomy versus control logistics –Importing & Exporting, Main forces, barriers

Unit-4- The Global Supply Chain-Performance Cycle length, operations, system integration, Alliances, Views of Global Logistics –Importing & Exporting, Main force.

Unit-5- **Green** Supply Chain –Strategies. Green Supply Chain indicators, Strategic, tactical, Operational. Wastivity in Supply Chain.

BOOKS :

1. Supply chain Management
Sunil Chopra & PeterMeindl(PHI)
2. Logistical Management
Donald J. Bouersox
David J. closs(TATA MC GRAW HILL)
3. Essentials of Supply Chain Management .
Dr. R.P.Mohanty & Dr. S.G.Deshmukh (Jaico Student Edition)

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SOCIAL RESEARCH METHODS
BSCM-605

Unit-1- What is Research , Purpose of Research , Scientific Method , Classification of Research –Pure Research , Applied Research , Exploratory Research.

Unit-2 – Planning of Research –Process, Selection of a Problem for Research, Research Design –Essentials of a Good Research Design, Classification, Preparation of the Research Design.

Unit-3 – Methods of Data collection –Important of data , Sources of data , Methods of primary data Collection – observation , interviewing , mail survey , experimentation, Simulation , Projective technique .

Unit-4- Types of tools used in data collection, Construction of Schedules & Questionnaires, Processing of Data – Preparation for analysis, Editing, Coding & Classification and Transcriptions of Data.

Unit-5- Report Writing – Types of reports, Steps in Planning Report writing, Research Report format Principles of writing, writing the report.

Books:

O.R. Krishna Swami.

M. Ranganatham (Himalaya Publishing House)