MANGALORE UNIVERSITY

MANGALAGANGOTRI

Revised Syllabus

Bachelor of Commerce

(BCOM Business Data Analytics)

As per the resolutions of BOS in Commercefrom the Academic Year 2025-26

Department of Studies in Commerce
(Faculty of Commerce)
Mangalore University
Mangalagangotri

PROGRAM: B.COM (BUSINESS DATA ANALYTICS)

1. *Preamble:*

Business Analytics are the skills, technologies, and practices for continuous iterative exploration and investigation of past business performance. This helps the concerned to gain insight and drive business planning through proper decision. Using data analytics is a very effective way to have influence in an organization. Business analytics focuses on developing newinsightsandunderstandingofbusinessperformancebasedondataandstatisticalmethods, which facilitate the decision-making process. It is also a powerful tool into day's market place. Across industries, organizations generate vast amount of data which, in turn, has heightened the need for professionals who are data literate and know how to interpret and analyze that information.

According to a recent study by MicroStrategy, around 60% of companies world wide are using data to boost process and cost efficiency, drive strategy and change, and monitor and improve financial performance. Over the next three years and beyond, 71 percent of global enterprises predict the reinvestments in analytics will accelerate stupendously. In the light of this trend, gaining an in-depth understanding of business analytics can be a way to advance one's career and make better decisions in the workplace. The benefits of business analytics include more informed decision-making, greater revenue, and improved operational efficiency. Over and above, analytics can be used to fine-tune business operations. Taking a data-driven approach business can come with tremendous upside, but many companies report that the numbers of skilledemployeesinanalyticsrolesareinshortsupply.LinkedInlistsbusinessanalysisasone of the skills companies need most in 2019, and the Bureau of Labor Statistics projects operationsresearchanalystjobstogrowby27percentthrough2026,itwillshootupto70%.As such there is a plethora of career opportunities for the skilled human resources having formal education in Data Analytics. Business analytics course is intended to empower professionals employed in the areas of Finance, Marketing, Economics, Statistics, Computer Science, Mathematics, IT, Research, Commodity markets and soon.

There are various methods of business analysis: and they are descriptive, diagnostic, predictive, and prescriptive. Data Analytics is an emerging trend and moves rapidly, but it lacks qualified professionals, hence greater demand for them. In a bid to bridge the gap between demand and supply of professional in data science, many programs are in the pipe line at various levels and one such program is B.COM in Business Data Analytics.

TheB.COMprogramforadurationof4Yearshelpaspirantstolearntheconceptsandmethods of business analytics, model to solve decision problems in different settings, identify appropriate courses of action for a given managerial situation, viable solutions to decision making problems, aptitude for business improvement, collaborative learning, techniques of database design, administration and implementation data collection capabilities and decision- support systems, relationship between price and cost business intelligence capabilities, construct data models and proto types to gain stakeholder support or achieve business objectives, organize big data sets into a structures, articulate assumptions, analyses, and interpretations of data in an oral format, RDBMS and SQL queries and software system to manage finance, human resources operations, R Programming, data ware housing and mining etc.

The program is an embodiment of UG and PG with multidisciplinary holistic education. The National Education Policy (2019) has stressed that the apt skills are imperative need to cope with challenges of 21st Century and resolved to develop specialized knowledge with disciplinary rigor. It is to bring equity, efficiency and academic excellence in the higher education system of the country. This includes innovation, improvement in course-curricula, and paradigm shift in learning, teaching pedagogy, evaluation and education system. Learner- centric, flexibility and mobility with the fragrance of professionalism and contemporary skills empower them to operate efficiently in their sphere. The rigorous activities in the specialized field will help creating qualified professionals in Business data Analytics. The program with Business Data Analytics and regulations of the program are in conformity with notification of Mangalore University and common curriculum notified by Karnataka State Higher Education Council. The program is revolving around discipline courses, discipline specific courses, skill enhancement courses, vocational courses; courses under open elective, and the courses to enrich value based and skill based to inculcate community development for sustainability. B.COM Business Data Analytics program offers extraordinary job opportunities in diverse sectors.

2. *Program:*

B.COM Business Data Analytics

2(a)Program objectives

TheobjectivesofB.COM Business Data Analytics are:

- To recognize, understand and apply the language, theory and models of the field of business analytics
- To foster an ability to critically analyze, synthesize and solve complex unstructured business problems
- To encourage an aptitude for business improvement, innovation and entrepreneurial action
- To share experiences to enhance the benefits of collaborative learning
- Toinstillasenseofethicaldecision-makingandacommitmenttothelong-run welfare of both organizations and the communities they serve

- To gain in sight and drive business planning through proper decision.
- To use data analytics very effectively there by to influence in an organization.
- Tofocusondevelopingnewinsightsandunderstandingofbusinessperformanc e based on data and statistical methods.
- To derive meaning from data, there by to make informed business decisions

2(b)ProgramOutcomes (PO):

Afterstudyingtheprogram,theGraduateswill beattributed to;

- Criticallyapplytheconceptsandmethodsofbusiness analytics
- Identify,modelandsolve decisionproblems indifferentsettings
- Interpretresults/solutions and identify appropriate courses of action for a given managerial situation whether a problem or an opportunity
- Create viable solutions to decision making problems
- Getacquainted withFinancialSecuritiesAnalytics
- Plan theimplementationof aBIsystem.

2(c)ProgramSpecificOutcomes(PSO):

After completion oftheprogram, theGraduateswillbeattributed to;

- **PSO1**: Equip with the tools necessary to effectively meet the challenges of human resources in ever-changing business climate.
- **PSO2**:Maintain interpersonal skills and develop leadership qualities to work in and with teams in organizations.
- **PSO3**:Drawthefundamentalelementsofrelationaldatabasemanagementsystems
- **PSO4**:Applythebasicconceptsofrelationaldatamodel,entity-relationshipmodel, relational database design, relational algebra and SQL.
- **PSO5**:ConverttheER-modeltorelationaltables,populaterelationaldatabaseand formulate SQL queries on data.
- **PSO6**:Differentiatesupervisedmachinelearningfromunsupervisedmachi n e learning
- **PSO7**:Applyregression,classificationandclusteringtechniques of Machine learning.
- **PSO8**:DiscoverbasicsofdeepLearning,specializedfieldofmachinelearning , artificial intelligence(AI)
- **POS9**:Implementtheconceptofvirtualizationforthedevelopmentof Clou d Computing
- **POS10**:Exploresomeimportantcloudcomputingdriven commercial systems.
- **POS11**:CreateandeditvisualizationswithR
- **POS12**:Demonstratetheuseofmathematicalsoftwareandsolvesimpl e mathematical problems

3. *Definitions:*

a. Title of the program :B.COM Business Data Analytics
b. Nature: :Skill/Vocational based(SEP-2024)
c. Period of Study :3 years
d. Scheme :Semester– (6 semesters)
e. Credit System :Credit based as per the SEP-2024
f. Domain Subject :Business Data Analytics(BDA)
g. Mode of Teaching Learning :Face to Face and Online Mode
h. Admission Cycle :June and January
i. Scheme of Instruction :English

Revised Syllabus of BCom (Business Data Analytics) 2025-26 batch onwards

Semester I								
Sl. No.	Course Code	Title of the Course	Category of Courses	Teaching Hours per Week	SEE	IA	Total Marks	Credits
1		Language–I	Lang	4	80	20	100	3
2		Language–II	Lang	4	80	20	100	3
3	BCom 1.1	Quantitative Techniques – I	Core	5	80	20	100	5
4	BCom 1.2	Foundation of Commerce-I	Core	5	80	20	100	5
5	BCom 1.3	Financial Accounting – I	Core	5	80	20	100	5
6.	BCom 1.4	Fundamentals of Computers	Optional	4	80	20	100	3
7		Constitutional Values	Compulsory	3	40	10	50	2
Sub–Total				30				26

Semester II								
Sl. No.	Course Code	Title of the Course	Category of Courses	Teaching Hours per Week	SEE	IA	Total Marks	Credits
1		Language–I	Lang	4	80	20	100	3
2		Language–II	Lang	4	80	20	100	3
3	BCom 2.1	Quantitative Techniques – II	Core	5	80	20	100	5
4	BCom 2.2	Foundation of Commerce-II	Core	5	80	20	100	5
5	BCom 2.3	Financial Accounting – II	Core	5	80	20	100	5
6.	BCom 2.4	Business Intelligence and Artificial Intelligence	Optional	4	80	20	100	3
7		Environmental Studies	Compulsory	3	40	10	50	2
Sub–Total				30				26

ISemester B.Com:

Course content:

1.1: Quantitative Techniques – I
1.2: Foundation of Commerce – I (HR, Marketing & Finance)
1.3: Financial Accounting – I
1.4: Fundamentals of Computers

QUANTITATIVE TECHNIQUES-I

5 Hours per week **60 Hours**

COURSE OUTCOMES:

After completing the course, the student will be able to

1. Study concerning metrics of dispersion, mean, median, and mode.
2. Connect a formal quantitative approach to problem solving and decision-making.
3. Utilize the idea of index numbers to comprehend current market conditions
4. Compute the ratios, proportions, discounts, and percentages that are utilized in business.

COURSE CONTENTS:

Module	Particulars	No of hrs
Module 1	**Introduction and Basic Concepts** Introduction to Statistics: Meaning and Definitions (Singular and Plural), Types of Data and Variables, Measures of Central Tendency-Arithmetic Mean-Properties (Combined Mean Included), Median and Mode.	**12**
Module 2	**Descriptive Statistics of Univariate Distribution** Measures of dispersion, Absolute and Relative Measures, Types-Range, Quartile deviation, Mean deviation, Standard Deviation. Coefficient of Variation and Variance	**12**
Module 3	**Index Numbers** Meaning and Uses of Index Numbers, Steps in the Construction of Index Numbers, Construction of Index Numbers: Simple and Weighted Average of Price Relatives, Weighted Aggregative Method: Laspeyres's, Paasche's, and Fisher's Index Numbers Tests of consistency of index number, time reversal, and factor reversal. Consumer Price Index Number: Aggregative Expenditure Method and Family Budget Method.	**12**
	Number System and Indices Introduction- Natural Numbers, Whole Numbers, Integers-Prime	**12**

Module 4	numbers -Rational and Irrational Numbers (simple Problems on sum of Natural numbers…….)Real Number- HCF and LCM calculations. Indices and Laws of Indices: Problems	
Module 5	**Commercial Arithmetic** Concept of Percentages- problems on Profit/Loss,, Simple Interest, Compound Interest, Nominal and Effective Rate of Interest, Cash Discount and Trade Discount.	**12**

Skill Development Activities

1. Visit the college office and collect data regarding student strength, results, etc. and analyze the same using statistical techniques.
2. Visit any Commercial Bank in your area and collect the information about types of loans and the rates of interest on loans
3. Use consumer price data to create and interpret index values in order to analyze inflation and economic trends.
4. Any other Activities which are relevant to the course

Books for Reference:

1. Business Statistics- S.C. Gupta
2. Business Mathematics- D.C. Sanchete& V.K. Kapoor, Sulthan Chand and sons
3. Business Statistics- S.P. Gupta, S.E. Gupta, B.N. Gupta
4. Business Mathematics-Madappa and Sridhara Rao, Shubhash Publications
5. Business Mathematics, S. N Doraira, United Publication
6. Financial Mathematics, A Lenin Jyothi, Himalaya Publications,Mumbai
7. Business Statistics & Mathematics, Vittal
8. Business Mathematics – S.P Gupta
9. Business Mathematics – Dr. Amarnath Dikshit &Dr.Jinendra Kumar Jain, Himalaya Publications
10. Business Mathematics – Kashyap Trivedi, Chirag Trivedi, Pearson Publications
11. Comprehensive Statistical Methods – P.N. Arora, Sumeet Arora &S.Arora, Chand Publications

Foundation of Commerce – I

5 Hours per week **60 Hours**

COURSE OUTCOMES:

After completing the course, the student will be able to

1. Create awareness of how HR works in organization and its role and functions.
2. Understand the basic concepts of Marketing, Marketing Management and Market Segmentation
3. Understand the basic concepts of Financial Management and the decisions involved in finance

COURSECONTENTS:

Module	Particulars	Noof Hrs
Module 1	**Introduction to Human Resource Management** Introduction, concept and meaning of Human Resource, Human Resource Management –Meaning - Characteristics, Objectives and scope, Significance of HRM, Personnel Management V/s. HRM, Paradigm shift in HRM, Significance of HRM, Human Resource Manager –Qualities of HR manager - changing role of HR manager, Human Resource Information System – Benefits of HRIS.	**12**
Module 2	**Dimensions of Human Resource Management** Human Resource Planning – meaning, characteristics and importance, Job Analysis – meaning and objectives, Recruitment and Selection –meaning, features and objectives, Training and Development – meaning, features and importance, Leadership - meaning, objectives and importance, Communication - meaning, objective and importance, Motivation - meaning, objectives and importance.	**12**
Module 3	**Introduction to Marketing** Introduction, Meaning and Definition of Market, Marketing, Nature/ Features of Marketing , Scope of Marketing/ Marketing Entities, Importance of Marketing, Core Concepts of Marketing , Approaches to the study of Marketing, Marketing Philosophies, Marketing Management – Meaning, features, importance	**12**
Module 4	**Market Segmentation** Meaning and Definition, Need, Criteria of Effective Segmentation, Bases, Target Market Selection-Positioning Concept (STP Model) –Importance, Product Differentiation vs.	**12**

	Market Segmentation. Marketing Mix- Meaning, Elements (4 Ps/ 7 Ps/ 4 Cs)	
Module 5	**Fundamentals of Financial Management** Meaning of Business Finance – Meaning and definition of Financial Management - Objectives of Financial management: Profit maximization and wealth maximization –Financial Decisions: Financing decision, Investment decisions and Dividend decisions – Organisation of Structure of Finance Department - Functions of a Finance Manager	**12**

Skill Development Activities:

1. Visit the nearby industry or startup and evaluate the hiring process and make study on relevance of human resource in the organisation.
2. Analyze the marketing environment of your locality and identify need, wants & purchasing power of customers.
3. Students can collect and present the organization chart of Finance Section of any business firm.

Books for Reference:

1. Human Resource Management by P.Subba Rao, Himalaya Publishing house, Mumbai.
2. Personnel management by P.Subba Rao, Himalaya Publishing house, Mumbai.
3. Human Resource Management by K Ashwathappa, Mc Graw Hill Publication
4. Human Resource Management by Suman Shetty N and Ravi M.N., Professional Books Publishers, Hyderabad.
5. Philip Kotler (2015), Principles of Marketing. 13th edition.Pearson Education.
6. SaxenaRajan, (2017) Marketing Management, Tata McGraw-Hill Publishing Company Ltd., New Delhi. Fifth Edition.
7. Kumar Arun &MeenakshiN (2016), Marketing Management, Vikas Publishing House Pvt. Ltd., New Delhi. Third Edition
8. Panda Tapan (2008), Marketing Management, Excel books, New Delhi, Second Edition.
9. Michael, J. Etzel, Bruce J. Walker, William J Stanton and Ajay Pandit. Marketing: Concepts and Cases. (Special Indian Edition)., McGraw Hill Education
10. William D. Perreault, and McCarthy, E. Jerome., Basic Marketing. Pearson Education.
11. Chhabra, T.N., and S. K. Grover. Marketing Management.Fourth Edition. Note: Latest edition of text books may be used.
12. Financial Management: Text, Problems and Cases" by M.Y. Khan and P.K. Jain.
13. Financial Management: I.M.Pandey
14. Financial Management Theory and Practice: ShashiK.Gupta and R.K.Sharma
15. Financial Management: Ravi M Kishore.

Financial Accounting - I

5 Hours per week **60 Hours**

COURSE OUTCOMES:

After completing the course, the student will be able to

1. Understand the need of maintaining proper books of records of financial nature for an organisation.
2. Prepare financial statements of a sole trader to assess the financial position and results.
3. Understand the meaning and financial records of a non-trading concerns.

COURSE CONTENTS:

Module	Particulars	No of Hrs
Module 1	**Introduction to Accounting:** Meaning of Accounting – Basic Terms in Accounting – Entity, Business Transaction, Capital, Drawings, Assets, Liability, Debtor, Creditor, Stock, Purchases and Sales.Accounting Concepts – Meaning – Types (Business Entity, Money Measurement, Going Concern, Accounting Period, Cost, Dual Aspect, Revenue Recognition, Matching, Accrual, Objective Evidence) Accounting Conventions – Conservatism, Consistency, Full Disclosure and Materiality. Basis of Accounting – Cash & Accrual, Systems of Accounting – Single & Double Entry. Rules of Debit & Credit as per American Approach - Accounting Equation Accounting Cycle – Journal, Ledger & Trial Balance	**12**
Module 2	**Depreciation Accounting:** Meaning of depreciation and amortisation, Causes, Factors determining economic life of the asset – Methods of charging depreciation Accounting treatment for charging depreciation under Straight Line Method & Written Down Value Method - Change in Method of Depreciation	**12**
Module 3	**Final Accounts of Sole Trading Concerns:** Preparation of Trading & Profit & Loss Account and Balance Sheet of a Sole Trader. Adjustments – Closing Stock, Outstanding & Prepaid Expenses, Accrued Incomes & Incomes Received in Advance, Bad Debts & Provisions for Doubtful Debts, Provision for discount on Debtors, Depreciation, Interest on Capital & Drawings, Manager's Commission, Goods Sent on Sale or Return basis, Treatment of deferred revenue expenditure.	**12**
	Final Accounts of Not for Profit Organisations: Meaning & Characteristics of Non- Profit Organisations	

Module 4	Meaning of Capital & Revenue Income & Expenditure – Deferred Revenue Expenditure Meaning of Receipts & Payment Account, Income & Expenditure Account and Balance Sheet. Differences between Income & Expenditure Account and Receipt and Payments Account. Preparation of Income & Expenditure and Balance Sheet when Receipts & Payment Account is given with adjustments for existing and new organisations.	**12**
Module 5	**Bank Reconciliation Statement:** Meaning & Reasons for difference between Cash book and Pass book Balance Problems on preparation of BRS (problems when cash book and pass extract is given to be included)	**12**

Skill Development:

1. Visit minimum three Sole Trading Concern and examine its accounting practices.
2. Identify a non-trading concern and assist them in preparing its financial statements.
3. Apply deprecation methods to real life scenarios.
   Develop numerical, analytical and decision-making abilities

Books for Reference:

1. ICAI Study Materials on Principles & Practice of Accounting, Accounting and Advanced Accounting
2. SP Iyengar, Advanced Accounting, Sultan Chand & Sons, Vol. 1
3. Advanced Accounting Shukla M.C., Grewal T.S., S Chand, Vol. 1
4. Advanced Accounting, Gupta R.L., Sultan Chand & Sons, Vol. 1
5. Advanced Accounting Jain & Narang, Kalyani Publishers, Vol. 1
6. S.N. Maheshwari, and. S. K. Maheshwari. Financial Accounting. Vikas Publishing House, New Delhi.
7. B.S. Raman, Financial Accounting Vol. I & II, United Publishers & Distributors.

Note: Latest edition of text books may be used.

Group I **Course-1** **Theory/Week: 4 Hrs** **Credits: 3**	**BCom 1.4 : Fundamentals of Computers**	**56 hours** *I.A: 20* Exam: 80
Learning Objective: To impart the knowledge about the evolution of computers, classification, various peripherals of computers, types of software's etc. **Learning Outcome:** Able to identify various devices and their working principles.		
UNIT I		
	Computer Basics: Introduction, Characteristics computers, Evolution computers, Generation of computers, Classification of computers, the computer system, Application of computers. **Computer Architecture:** Introduction, Central processing unit- ALU, Registers, Control unit, system bus, main memory unit, cache memory, communication between various units of a computer system. **Components inside a computer system** – Motherboard, BIOS, Ports and Interfaces, Memory chips, Processors.	12hrs
UNIT II		
	Computer memory and storage: Introduction, memory representation, memory hierarchy, Random access memory, Types of RAMS, read-only memory, Types of ROM, RAM, ROM and CPU interaction. **Secondary Storage**: Types of secondary storage device - Magnetic tape, magnetic disk, Floppy disk, Hard disk, Advantages and disadvantages of magnetic disk, Optical disk, Types- CD, DVD,	12hrs
UNIT III		
	Input devices: Introduction, Types of input devices, Keyboard, Mouse, Track ball, Joystick, Light pen, Touch screen and track pad. Speech recognition, digital camera, webcam, flatbed scanner **Output devices:** Types of output, Classification of output devices, Printers– Dot matrix, Ink-jet, Laser, Hydra, Plotter, Monitor – CRT, LCD, Differences between LCD and CRT.	12hrs
UNIT IV		
	Computer programming languages: Introduction, Developing a program, Program development cycle, Types of programming languages, generation of programming languages, Features of a good programming language. **Computer software:** Introduction, software definition, relationship between software and hardware	12hrs
UNIT V		

	MS-Office : Introduction, Office user interface, Microsoft office Components **MS-Word**: Introduction, Starting MS-Word, Microsoft word Environment working with word documents, **MS Excel**, Microsoft Excel environment, working with Excel workbook, working with worksheet – Entering data, Excel formatting tips and Techniques, **Presentation software**: Introduction, PowerPoint environment, creating a new presentation.	12hrs

Text Book:

1. ITL Education Solution Limited, **Introduction to Information Technology**, Pearson- Second Edition.
2. How to Solve it by Computer, R G Dromey, Prentice Hall
3. M. Morris Mano, Digital Logic and Computer design, PHI, 2015

Reference Books:

1. A K SHARMA, Computer Fundamentals and Programming in C, Universities Press, 2nd edition, 2018
2. Peter Norton, **Introduction to Computers**, 7th edition, Tata McGraw Hill Publication, 2011
3. Anita Goel, **Computer Fundamentals**, Pearson Education, 2011.
4. Pradeep K. Sinha and Priti Sinha, Computer Fundamentals, Sixth Edition,BPB Publication.
5. David Riley and Kenny Hunt, Computational thinking for modern solver,Chapman & Hall/CRC.
6. J. Glenn Brookshear, Computer Science: An Overview, Twelfth Edition,Addison- Wesley

II Semester BCom:

Course content:

1.1: Quantitative Techniques – II
1.2: Foundation of Commerce – II (Insurance, Banking & Finance)
1.3: Financial Accounting – II
1.4: Business Intelligence and Artificial Intelligence

QUANTITATIVE TECHNIQUES – II

5 Hours per week **60 Hours**

COURSE OUTCOMES:

After completing the course, the student will be able to

1. Establish relationships between variables in real-world situations by using methods like regression and correlation.
2. Use the ideas from probability distributions to solve practical issues.
3. Predict future results using time series
4. Recognise the relationship between two variables and how to use ratios and proportions to express it.

COURSE CONTENTS:

Module	Particulars	No of hrs
Module 1	**Descriptive Analysis of Bivariate Data:** Correlation- Meaning and Definition, Linear and Non-linear correlation, Correlation and causation, Scatter Diagram, Karl Pearson's Co-efficient of Correlation, Calculation and Spearman's Rank Correlation.	**12**
Module 2	**Regression Analysis:** Regression Analysis- Principle of Least Squares and Regression lines, Regression equations and estimation. Properties of Regression Coefficients.	**12**
Module 3	**Time Series Analysis md Theory of Probability:** Meaning and uses of Time Series, Various components of Time series, determination of Trend using Moving Average and Least square method Theory of Probability: Some important concepts, Addition Theorem of probability for two non-mutually and mutually exclusive events - Multiplication theorem of probability for dependent and independent events. Simple problems	**12**
Module 4	**Ratios and Proportions and Theory of Equations:** Definition- Equality of Ratio- Simple Problems. Proportion- definition- Direct Proportion-Inverse Proportion- Continued Proportion- Problems on proportions Equations: Definition - Degree of Equation. Types of Equation - Linear	**12**

	equations and its solution-Simultaneous linear equations-Quadratic equation-Solution by method of factorisation and formula method.	
Module 5	**Permutation and Combinations:** Factorial Notations- permutations of n different things-Circular permutations-Permutation of things not all different- Restricted Permutation-Simple problems. Combinations- Simple problems based on formula.	**12**

Skill Development Activities

1. Determine the strength and direction of the relationship between advertisement expenditure and sales income by computing the correlation coefficient.
2. Use historical sales data to create a simple linear regression model to predict future sales based on advertisement expenditure.
3. Utilize a time series model to analyze monthly sales data to identify trends and seasonal patterns and generate a forecast for the upcoming year.
4. Instruct the students to use their knowledge of ratios to determine how much of each ingredient they would require to make the recipe for exactly the number of people in the group
5. The task involves resolving a shelf arrangement issue to maximize visibility by utilizing permutations and combinations to explore various arrangements

Books for Reference:

1. Business Statistics- S.C. Gupta
2. Business Mathematics- D.C. Sancheti& V.K. Kapoor, Sulthan Chand and sons
3. Business Statistics- S.P. Gupta, S.E. Gupta, B.N. Gupta
4. Business Mathematics-Madappa and Sridhara Rao, Shubhash Publications
5. Business Mathematics, S. N Dorairaj, United Publication
6. Financial Mathematics, A Lenin Jyothi, Himalaya Publications, Mumbai
7. Business Mathematics – S.P Gupta
8. Business Mathematics – Dr. Amarnath Dikshit &Dr.Jinendra Kumar Jain, Himalaya Publications
9. Business Mathematics – Kashyap Trivedi, Chirag Trivedi, Pearson Publications
10. Comprehensive Statistical Methods – P.N. Arora, Sumeet Arora &S.Arora, Chand Publications

Foundation of Commerce – II

5 Hours per week **60 Hours**

COURSE OUTCOMES:

After completing the course, the student will be able to

1. Understand the concepts of Insurance, Banking and Finance.
2. Apply Fundamental conceptual knowledge to analyse and interpret relevant areas in Insurance,Banking and Finance.
3. Learnnew reforms and technology in Insurance and Banking sector.
4. Evaluate the investment opportunities using risk and return

COURSE CONTENTS:

Module	Particulars	Noof Hrs
Module 1	**Basics of Insurance:** Concept of Risk,Assurance and Insurance – Meaning – Definition – Functions – Need and Importance, Principles of Insurance Contract – Insurance Industry in India – IRDAI- Insurance Sector reforms – Bankassurance. Claims management – Claim settlement – legal frame- work –Third Party Administration.	**12**
Module 2	**Types of Insurance**: Life Insurance – Features – Principles – Life Issuance Products – Policy Conditions – Application and Acceptance – Assignment – Nomination – Surrender – Re-Insurance in life Insurance. Marine Insurance – Features – Policy Conditions – Clauses and covers. Fire Insurance – Motor vehicle Insurance.Health Insurance – Clauses – Health Insurance Frauds – Personal accident Insurance – Group Insurance.	**12**
Module 3	**Basics of Banking:** Origin – Evolution of banking – Definition of term bank and banking –Commercial Banks.Functions – Primary and subsidiary functions.Co-operative Banking – Primary – Central and State Co-operatives. Banks – Functions and Features.Principles of Investment Policy- Basic and allied principles. Financial Inclusion-Meaning, need and Importance. Cheques - Meaning and definition - features - Types and Crossing of Cheques. Paying Banker and Collecting	**12**

	Banker (Meaning only) Dishonour of Cheques-Reasons for Dishonour.	
Module 4	**Innovative and Digital Banking:** ATM – Debit Cards – Credit Cards – Smart Cards – Internet Banking – Mobile Banking – Wallet Banking – Digital Cash – Core Banking System – NEFT – RTGS – IFSC – UPI – IMPS – AEPS - CIBIL-CTS – ECS – MICR.	**12**
Module 5	**Basic Financial concepts:** Introduction to Risk & Return: Meaning of Risk and Return, Measurement of return- Return on Investment, Types of Risk-systematic & unsystematic risk, Risk analysis- Expected return, Standard deviation and Coefficient of Variation. Risk -Return trade off.	**12**

Skill development activities:

1. Learners should collect data from the company reports and analyse the risk and return
2. Learners can enhance knowledge by collecting Banking product details by visiting the bank.
3. Learners can understand Risk assessment, policy analysis and interpretations by taking a print of any insurance policy.
4. Learners can have ideas on technology usage in banking by using their mobile.

Reference Books:

1. Principles and practice of Life Insurance – P Perya Swamy.
2. Insurance Principles and Practice – Mishra M N.
3. Insurance and Risk Management – P K Gupta.
4. A Text Book on principles and Practice of life Insurance – G Krishna Swamy.
5. Financial Management: Text, Problems and Cases" by M.Y. Khan and P.K. Jain.
6. Indian Banking by R Parmeshwaram.
7. Banking Theory and Practice by P N Varshney.
8. Banking Theory, Law and Practice by KPM Sundharam and P N Varshney.
9. Principles and Practice of Banks by Indian Institute of Banking and Finance.
10. Digital Banking by Indian Institute of Banking and Finance.

Financial Accounting - II

5 Hours per week **60 Hours**

COURSE OUTCOMES:

After completing the course, the student will be able to

1. Learn about Accounting Standards and Indian Accounting standards.
2. Understand the recent developments in the field of financial accounting.
3. Learn to deal with special transactions and situations while preparing financial statements.

COURSE CONTENTS:

Module	Particulars	No of Hrs
Module 1	**Accounting Standards and Recent Developments in Accounting:** Accounting Standards - Meaning, Procedure to issue – Applicability Indian Accounting Standards – Meaning – Applicability Recent Trends in Accounting –Computerised Accounting - Big data Analytics, Cloud Computing in Accounting, Accounting with drones.	**12**
Module 2	**Conversion of Single Entry into Double Entry System:** Introduction – Meaning – Limitation of Single-Entry System – Differences between Single Entry & Double Entry System Problems on Conversion of Single Entry into Double Entry (preparing Opening Statement of Affairs, Cash Book, Total Debtors Account, Total Creditors Account, Trading & Profit & Loss Account and Balance Sheet).	**12**
Module 3	**Hire Purchase Accounting:** Introduction, Meaning of Hire Purchase, Features Terms used – Hire Purchaser, Hire Vendor, Cash Price, Hire Purchase Price, Total Interest, Down Payment & Net Cash Price Accounting for Hire Purchase transactions in the books of Hire Purchaser (when Cash Price and Rate of Interest is given) under Accrual System only. Repossession – Complete & Partial	**12**
Module 4	**Departmental Accounts:** Meaning, Types of Departments, Advantages, Basis of Allocation of common expenses and income among various departments Departmental Accounts – Columnar Trading & Profit & Loss Account, General Profit & Loss Account and Consolidated Balance Sheet Treatment of Inter Departmental Transfers at Cost and Selling Price.	**12**
	Royalty Accounts:	

Module 5	Meaning – Types of Royalty. Terminologies – Lessor, Lessor, Minimum Rent, Short working – Recoupment of Short working. Accounting Treatment in the books of Lessee with opening Minimum Rent Account.	**12**

Skill Development:

1. Collect a copy of Hire Purchase agreement and examine the various terminologies.
2. Identify a business where royalty accounting is applied.
3. Learn to prepare financial statement with incomplete records using imaginary figure.
4. Know the differences between Accounting Standards and Indian Accounting Standards.

Books for Reference:

1. ICAI Study Materials on Principles & Practice of Accounting, Accounting and Advanced Accounting.
2. SP Iyengar, Advanced Accounting, Sultan Chand & Sons, Vol. 1
3. Advanced Accounting Shukla M.C., Grewal T.S., S Chand, Vol. 1
4. Advanced Accounting, Gupta R.L., Sultan Chand & Sons, Vol. 1
5. Advanced Accounting Jain & Narang, Kalyani Publishers, Vol. 1
6. S.N. Maheshwari, and. S. K. Maheshwari. Financial Accounting. Vikas Publishing House, New Delhi.
7. B.S. Raman, Financial Accounting Vol. I & II, United Publishers & Distributors.

Note: Latest edition of text books may be used.

Group I **Course-1** **Theory/Week: 4 Hrs** **Credits: 3**	**BCom 2.4 : Business Intelligence and Artificial Intelligence**	**56 hours** *I.A: 20* Exam: 80
Learning Outcomes :Familiarizes the student with the areas application of artificial and business intelligence.		
UNIT I		
	Business Intelligence an Introduction : Introduction , Definition , History and Evolution ,Business Intelligence Segments , Difference between Information and Intelligence , Defining Business Intelligence Value Chain , Factors of Business Intelligence System, Real time Business Intelligence , Business Intelligence Applications	12hrs
UNIT II		
	Introduction-What is Artificial Intelligence, Foundations of AI, Types of AI, Categories of AI Systems Based on Thinking and Acting, History and Evolution of AI. **Applications of AI** - Natural Language Processing(NLP), Text Classification and Information Retrieval, Speech Recognition ,Image processing and computer vision, Robotics	12hrs
UNIT III		
	Introduction– What is Machine Learning?, Difference between AI and Machine Learning(ML), Forms/Types of Learning- Supervised Learning, Unsupervised learning, Semi-supervised learning, Reinforcement Learning, Applications of ML.	12hrs
UNIT IV		
	Introduction to Cyber Security: Defining Cyberspace and Cyber security, Standards of Good Practice for Information Security, Common Cyber Threats and Attacks- Virus, Worm, Trojan Horse (Trojan), Phishing, Ransomware, Denial of Service (DoS) Attack, SQL Injection, Man-in-the-Middle (MitM) Attack.	12hrs
UNIT V		
	Introduction to power BI Introduction to Power BI, Power BI – Advantages ,disadvantages , Key Components of Power BI Architecture. Scalable Options, Power BI Architecture and Data Access.	12hrs

Text Books:

1. Rajiv Sabherwal, Irma Becerra-Fernandez:" Business Intelligence: Practices, Technologies, and Management", 2nd Wiley & Sons, 2011
2. Stuart Russel, Peter Norvig: Artificial Intelligence A Modern Approach, 2nd Edition, Pearson Education, 2003
3. William Stallings, Effective Cyber Security: A Guide to Using Best Practices and Standards, Addison-Wesley Professional, ISBN-13: 978-0134772806.
4. Kumar, U.D. :Business Analytics – The Science of Data – Driven Decision Making, Wiley.

5. Dr Anil Maheshwari, Data Analytics Made Accessible, Publisher: Amazon.com

References

1. Cindi Howson, "Successful Business Intelligence" ,2nd McGraw-Hill & Osborne Media, 2007
2. Tom Mitchell, "Machine Learning", 1st Edition, McGraw-Hill,2017
3. Elaine Rich, Kevin Knight, Shivashankar B Nair: Artificial Intelligence, Tata McGraw Hill 3rd edition.
4. Nina Godbole & Sunit Belapure, Cyber Security, Wiley India, 2012, ISBN: 9788126521791.
5.Gert, H.N., Thorlund, L. and Thorlund, J :Business Analytics for Managers – Taking Business Intelligence Beyond Reporting, Wiley.
6. Data Analytics: Principles, Tools, and Practices: A Complete Guide for Advanced Data Analytics Using the Latest Trends, Tools, and Technologies by Dr. Gaurav Aroraa (Author), Chitra Lele (Author),

Notes:

1. Semester End Exams will be for 3 hours duration and for 80 marks.
2. Two internal Assessment exams of 1 hour duration for 30 marks each must be conducted.
3. Internal Assessment will be for 20 marks. It encompasses 10 marks for two internal assessment exams (5 marks each), 5 marks for Assignment/Projects& 5 marks for Class Test/Course Activity/Quizzes/Workshops, etc.
4. Wherever possible, the teacher must be able to focus more on practical insights rather than just theoretical foundation alone.
5. All the above courses must enhance student productivity and encourage them to take up either fruitful employment or entrepreneurship or higher education of their choice.

Question Paper Pattern

Internal Exams

Total Marks: 30
Time: 1 hour

Section A

Answer any one of the following 4 * 1= 4

1. XXXX
2. XXXX
3. XXXX

Section B

Answer any one of the following 10 * 1 = 10

4. XXXX
5. XXXX
6. XXXX

Section C

Answer any one of the following 16* 1 = 16

7. XXXX
8. XXXX

Question Paper Pattern

Semester End Exams

Total Marks: 80
Time: 3 hours

Section A

Answer any four of the following 4*4 =16

1. XXXX
2. XXXX
3. XXXX
4. XXXX
5. XXXX
6. XXXX

Section B

Answer any four of the following 8* 4 = 32

7. XXXX

8. XXXX

9. XXXX

10. XXXX

11. XXXX

12. XXXX

Section C

Answer any two of the following 16*2 = 32

3. XXXX

4. XXXX

5. XXXX

6. XXXX