Principles of Management Syllabus

Course Code: IMS-C-111

Semester: 1 (Common for Integrated MS in General Commerce, Data Analytics in Commerce, and Fintech)

Credits: 4

Total Hours: 60 hours (4 units, 15 hours each)

Program Outcomes (PO)

Upon completion of the Integrated MS program, students will be able to:

- **PO1**: Demonstrate advanced knowledge in commerce, finance, and technology to address industry challenges.

- **PO2**: Apply analytical and critical thinking to solve complex business problems using theoretical and practical approaches.

- **PO3**: Exhibit ethical decision-making and leadership in professional and societal contexts.

- **PO4**: Develop innovative solutions by integrating tools like data analytics, fintech, and management principles.

- **PO5**: Communicate effectively and collaborate in interdisciplinary teams to achieve organizational goals.

- **PO6**: Pursue lifelong learning and adapt to emerging trends in commerce, data analytics, and fintech.

Program-Specific Outcomes (PSO)

Upon completion of the Integrated MS program with specializations in General Commerce, Data Analytics in Commerce, and Fintech, students will:

- **PSO1**: Acquire specialized knowledge in commerce, data analytics, or fintech for roles such as financial analysts, data scientists, or fintech consultants.

- **PSO2**: Apply advanced tools (e.g., Python, blockchain, AI) to solve real-world problems in commerce and finance.

- **PSO3**: Integrate management principles with data-driven and technology-enabled decision-making.

- **PSO4**: Develop entrepreneurial and research-oriented skills to innovate in commerce, analytics, and fintech.

Course Outcomes (CO)

Upon completion of the Principles of Management course, students will be able to:

- **CO1**: Explain the evolution, functions, and roles of management and apply them in commerce, data analytics, and fintech contexts.

- **CO2**: Formulate effective plans and decision-making strategies using forecasting and analytical tools.

- **CO3**: Design organizational structures and apply leadership and coordination techniques to enhance team performance.

- **CO4**: Evaluate control mechanisms, change management strategies, and contemporary ethical and technological issues in management.

Mapping of Program Outcomes (PO) to Course Outcomes (CO)

The following table maps the Program Outcomes to the Course Outcomes to demonstrate alignment with the Integrated MS program objectives:

Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6
CO1: Explain management concepts and evolution	Strong	Moderate	-	Moderate	-	Strong

CO2: Formulate planning and decision-making strategies	Moderate	Strong	-	Strong	Moderate	Moderate
CO3: Design organizational structures and leadership approaches	Moderate	Moderate	Strong	Moderate	Strong	-
CO4: Evaluate control, change management, and ethical issues	Moderate	Strong	Strong	Strong	Moderate	Strong

Mapping Key:

- **Strong**: Direct and significant contribution to the program outcome.

- **Moderate**: Partial contribution to the program outcome.

- **-**: No significant contribution.

Prerequisites

- Basic understanding of business and commerce concepts (typically from undergraduate studies).

- Familiarity with organizational and managerial terminologies.

Co-requisites

- None, as this is a foundational course for first-semester students.

Syllabus Outline

The course is structured into four units, each covering 15 hours, tailored for relevance to commerce, data analytics, and fintech.

Unit 1: Foundations of Management (15 Hours)

Objective: To introduce the concept, evolution, and roles of management in modern organizations.
Topics:

- Management as an emerging profession: definition, nature, scope, purpose, and characteristics.

- Functions of management: planning, organizing, staffing, directing, controlling.

- Roles and skills of an effective manager (technical, human, conceptual).

- Evolution of management thought: Classical theory (Scientific Management, Administrative Management, Bureaucracy), Behavioural Science Approach, Quantitative Approach, Systems Approach, Contingency Approach, Operational Approach.

- Relevance to commerce, data analytics, and fintech: Managerial roles in tech-driven and data-centric organizations.

Learning Activities:

- Case study: Managerial roles in a fintech startup (e.g., digital payment platforms).

- Group discussion: Relevance of Scientific Management in data analytics firms.

Unit 2: Planning and Decision-Making (15 Hours)

Objective: To develop skills in strategic planning, forecasting, and decision-making.
Topics:

- Types of plans (strategic, tactical, operational); planning process; introduction to strategic management; types of strategies.

- Environmental appraisal: Porter's Model of Competitive Advantage, industry analysis, organizational resources, and capabilities.

- Forecasting: components, determinants, benefits, techniques (qualitative and quantitative), limitations; forecasting in fintech and data analytics (e.g., predictive analytics for market trends).

- Decision-making: components, process, types (programmed, non-programmed); group decision-making; creativity in problem-solving; decision-making tools (e.g., decision trees, data-driven models).

Learning Activities:

- Workshop: Conducting Porter's Five Forces analysis for a commerce or fintech company.

- Simulation: Forecasting market demand using data analytics tools.

Unit 3: Organizing, Leadership, and Coordination (15 Hours)

Objective: To understand organizational design, leadership styles, and coordination mechanisms.

Topics:

- Management by Objectives (MBO): core concepts, characteristics, process, benefits, limitations; management styles (American, Japanese, Indian).

- Organizing: organizational design, hierarchical systems, types of structures (functional, divisional, matrix, flat); span of control; centralization vs. decentralization; authority, responsibility, delegation; fostering innovation and performance culture.

- Staffing and coordination: Human Resource Management (HRM), recent trends (e.g., technology in HRM, workforce diversity); concept, need, importance, principles, and types of coordination; coordination process and techniques.

Learning Activities:

- Case study: Analyzing MBO in a data analytics firm.

- Role-play: Coordinating a cross-functional team in a fintech project.

Unit 4: Leadership, Communication, and Contemporary Issues (15 Hours)

Objective: To explore leadership, communication, change management, and contemporary challenges in management.
Topics:

- Career development strategy: concept, elements, significance, objectives, types of programs, career anchors, career planning process.

- Leadership styles: concept, nature, importance, attributes; role of leaders in globalization, culture, gender diversity, conflict resolution, and negotiations.

- Organizational communication: importance, communication process, barriers, use of tone, language, and styles; role of perception and culture in communication.

- Change management: concept, causes (social, economic, technological, organizational), learning organizations; contemporary challenges: ethics, corporate social responsibility (CSR), environmental issues; management in fintech and data analytics (e.g., AI, blockchain, ESG frameworks).

Learning Activities:

- Project: Designing a career development plan for fintech professionals.

- Seminar: Impact of AI and blockchain on change management in commerce.

Teaching Pedagogy

The course employs interactive and student-centric methods to achieve the course outcomes:

- **Lectures**: To deliver theoretical concepts (30% of class time).

- **Case Studies**: To apply management principles to commerce, fintech, and data analytics scenarios (20%).

- **Group Discussions**: To foster critical thinking and collaboration (15%).

- **Workshops and Simulations**: To develop hands-on planning and decision-making skills (15%).

- **Projects and Presentations**: To encourage research and communication (15%).

- **Seminars and Guest Lectures**: To provide industry insights (5%).

Mapping of Course Outcomes to Teaching Pedagogy

Course Outcome	Teaching Pedagogy
CO1: Explain management concepts and evolution	Lectures, case studies, group discussions
CO2: Formulate planning and decision-making strategies	Workshops, simulations, case studies
CO3: Design organizational structures and leadership approaches	Case studies, role-plays, group discussions
CO4: Evaluate control, change management, and ethical issues	Projects, seminars, case studies

Reference Books

1. Robbins, S.P., & DeCenzo, D.A. (2016). *Fundamentals of Management* (9th ed.). Pearson Education.

2. Koontz, H., O'Donnell, C., & Weihrich, H. (2012). *Essentials of Management* (9th ed.). Tata McGraw Hill.

3. Lussier, R.N. (2014). *Management Fundamentals: Concepts, Applications, & Skill Development* (6th ed.). Sage.

4. Daft, R.L. (2009). *Principles of Management.* Cengage Learning.

5. Robbins, S.P. (2008). *Management* (9th ed.). Pearson Education.

6. Griffin, R.W. (2020). *Management* (12th ed.). Cengage Learning.

7. Drucker, P.F. (2008). *Management: Tasks, Responsibilities, Practices*. Harper Business.

8. Stoner, J.A.F., Freeman, R.E., & Gilbert, D.R. (2011). *Management* (6th ed.). Pearson Education.

9. Certo, S.C., & Certo, S.T. (2018). *Modern Management: Concepts and Skills* (15th ed.). Pearson Education.

10. Hill, C.W.L., & Jones, G.R. (2019). *Strategic Management: An Integrated Approach* (13th ed.). Cengage Learning.

MOOC Links

1. **Swayam**: *Principles of Management* by IIT Kharagpur

   o Link: https://onlinecourses.nptel.ac.in/noc21_mg30/preview

   o Focus: Comprehensive coverage of management principles with practical applications.

2. **Coursera**: *Introduction to Management* by University of London

   o Link: https://www.coursera.org/learn/management-skills

   o Focus: Foundational management concepts and leadership skills.

3. **edX**: *Principles of Management* by IIM Bangalore

   o Link: https://www.edx.org/course/principles-of-management

   o Focus: Practical management applications in business.

4. **FutureLearn**: *Management and Leadership: Growing as a Manager* by The Open University

   o Link: https://www.futurelearn.com/courses/management-and-leadership-growing-as-a-manager

   o Focus: Leadership and organizational behavior.

5. **Alison**: *Fundamentals of Business Management*

- o Link: https://alison.com/course/fundamentals-of-business-management

- o Focus: Free course on planning, organizing, and controlling.

Assessment Methods

- **Internal Assessment (50%)**:

  - o Assignments and quizzes: 15%

  - o Case study analysis and presentations: 20%

  - o Project on management applications in fintech/data analytics: 15%

- **External Assessment (50%)**:

  - o End-semester written exam covering theoretical and applied questions from all units.

Indian Financial System Syllabus

Course Code: IMS-C-112

Semester: 1 (Common for Integrated MS in General Commerce, Data Analytics in Commerce, and Fintech)

Credits: 4

Total Hours: 60 hours (4 units, 15 hours each)

Program Outcomes (PO)

Upon completion of the Integrated MS program, students will be able to:

- **PO1**: Demonstrate advanced knowledge in commerce, finance, and technology to address industry challenges.

- **PO2**: Apply analytical and critical thinking to solve complex business problems using theoretical and practical approaches.

- **PO3**: Exhibit ethical decision-making and leadership in professional and societal contexts.

- **PO4**: Develop innovative solutions by integrating tools like data analytics, fintech, and management principles.

- **PO5**: Communicate effectively and collaborate in interdisciplinary teams to achieve organizational goals.

- **PO6**: Pursue lifelong learning and adapt to emerging trends in commerce, data analytics, and fintech.

Program-Specific Outcomes (PSO)

Upon completion of the Integrated MS program with specializations in General Commerce, Data Analytics in Commerce, and Fintech, students will:

- **PSO1**: Acquire specialized knowledge in commerce, data analytics, or fintech for roles such as financial analysts, data scientists, or fintech consultants.

- **PSO2**: Apply advanced tools (e.g., Python, blockchain, AI) to solve real-world problems in commerce and finance.

- **PSO3**: Integrate management principles with data-driven and technology-enabled decision-making.

- **PSO4**: Develop entrepreneurial and research-oriented skills to innovate in commerce, analytics, and fintech.

Course Outcomes (CO)

Upon completion of the Indian Financial System course, students will be able to:

- **CO1**: Explain the structure, components, and evolution of the Indian financial system, including recent reforms and digital transformations.

- **CO2**: Analyze the functioning of financial markets (money, capital, debt, commodity, and derivatives) and their role in commerce and fintech.

- **CO3**: Evaluate the roles and functions of financial institutions, including regulatory bodies, banks, and new-age fintech entities.

- **CO4**: Assess the characteristics and applications of traditional and modern financial instruments, including digital instruments, in the Indian context.

Mapping of Program Outcomes (PO) to Course Outcomes (CO)

The following table maps the Program Outcomes to the Course Outcomes to demonstrate alignment with the Integrated MS program objectives:

Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6
CO1: Explain structure and evolution	Strong	Moderate	Moderate	Moderate	-	Strong

of Indian financial system						
CO2: Analyze financial markets	Strong	Strong	-	Strong	Moderate	Moderate
CO3: Evaluate financial institutions	Strong	Moderate	Strong	Moderate	Moderate	Moderate
CO4: Assess financial instruments	Strong	Strong	Moderate	Strong	-	Strong

Mapping Key:

- **Strong**: Direct and significant contribution to the program outcome.

- **Moderate**: Partial contribution to the program outcome.

- **-**: No significant contribution.

Prerequisites

- Basic understanding of financial and economic concepts (typically from undergraduate commerce or business studies).

- Familiarity with general financial terminologies.

Co-requisites

- None, as this is a foundational course for first-semester students.

Syllabus Outline

The course is structured into four units, each covering 15 hours, tailored for relevance to commerce, data analytics, and fintech.

Unit 1: Overview of the Indian Financial System (15 Hours)

Objective: To introduce the structure, evolution, and role of the Indian financial system in modern contexts.

Topics:

- Overview of the Indian financial system: definition, scope, and importance.

- Pre- and post-liberalization overview: organizational structure, key milestones.

- Recent reforms and digital transformation: impact of technology (e.g., UPI, digital banking).

- Major components: financial markets, financial institutions, intermediaries, financial instruments.

- Functions and role of the financial system in commerce, data analytics, and fintech industries.

Learning Activities:

- Case study: Impact of 1991 liberalization on the Indian financial system.

- Group discussion: Role of digital transformation in fintech growth (e.g., UPI adoption).

Unit 2: Financial Markets (15 Hours)

Objective: To analyze the structure and functioning of various financial markets in India.

Topics:

- Money market: meaning, constituents (call money, treasury bills, commercial papers, certificates of deposit).

- Capital market:

- o Primary market: meaning, types of issues (public, rights, preferential placement), issue mechanism.

- o Secondary market: stock exchanges (BSE, NSE), other participants (brokers, depositories).

- Debt market: structure and significance.

- Commodity market and derivatives market: basic introduction, role in risk management.

- Relevance to fintech and data analytics: market data analysis, algorithmic trading.

Learning Activities:

- Workshop: Analyzing a recent IPO in the Indian primary market.

- Simulation: Trading on a virtual stock exchange platform (e.g., NSE simulation tools).

Unit 3: Financial Institutions (15 Hours)

Objective: To evaluate the roles and functions of financial institutions in India.

Topics:

- Reserve Bank of India (RBI): roles, functions, and monetary policy.

- Regulatory institutions: SEBI (Securities and Exchange Board of India), IRDAI (Insurance Regulatory and Development Authority), PFRDA (Pension Fund Regulatory and Development Authority).

- Insurance institutions: Life Insurance Corporation (LIC), General Insurance Corporation (GIC), private insurance companies.

- Mutual funds: concept, advantages, and role in wealth creation.

- Commercial banks: types, functions, recent trends (e.g., digital banking).

- Development financial institutions: NABARD, SIDBI, EXIM Bank.

- Non-Banking Financial Companies (NBFCs): role and importance.

- New-age institutions: Payments Banks, Small Finance Banks, Fintech companies.

Learning Activities:

- Case study: Role of RBI in promoting digital payments in India.

- Role-play: Regulatory compliance scenario involving SEBI and a fintech firm.

Unit 4: Financial Instruments (15 Hours)

Objective: To assess traditional and modern financial instruments, with a focus on digital innovations.

Topics:

- Traditional instruments: equity, preference shares, debentures, bonds.

- Modern instruments: mutual funds, Exchange Traded Funds (ETFs), Real Estate Investment Trusts (REITs), derivatives (basic introduction).

- Government securities and sovereign gold bonds: features and significance.

- Digital financial instruments: Unified Payments Interface (UPI), digital wallets, prepaid payment instruments.

- Relevance to fintech and data analytics: data-driven investment strategies, blockchain-based instruments.

Learning Activities:

- Project: Designing a portfolio using mutual funds and ETFs for a fintech client.

- Seminar: Impact of UPI and digital wallets on financial inclusion in India.

Teaching Pedagogy

The course employs interactive and student-centric methods to achieve the course outcomes:

- **Lectures**: To deliver theoretical concepts (30% of class time).

- **Case Studies**: To apply financial system concepts to commerce, fintech, and data analytics scenarios (20%).

- **Group Discussions**: To foster critical thinking and collaboration (15%).

- **Workshops and Simulations**: To develop hands-on skills in market analysis and financial operations (15%).

- **Projects and Presentations**: To encourage research and communication (15%).

- **Seminars and Guest Lectures**: To provide industry insights from financial and fintech experts (5%).

Mapping of Course Outcomes to Teaching Pedagogy

Course Outcome	Teaching Pedagogy
CO1: Explain structure and evolution of Indian financial system	Lectures, case studies, group discussions
CO2: Analyze financial markets	Workshops, simulations, case studies
CO3: Evaluate financial institutions	Case studies, role-plays, group discussions
CO4: Assess financial instruments	Projects, seminars, case studies

Reference Books

1. Bhole, L.M., & Mahakud, J. (2017). *Financial Institutions and Markets: Structure, Growth and Innovations* (6th ed.). Tata McGraw Hill.

2. Pathak, B.V. (2021). *Indian Financial System* (5th ed.). Pearson Education.

3. Khan, M.Y. (2019). *Indian Financial System* (10th ed.). Tata McGraw Hill.

4. Saunders, A., & Cornett, M.M. (2018). *Financial Markets and Institutions* (7th ed.). McGraw Hill Education.

5. Madura, J. (2020). *Financial Markets and Institutions* (12th ed.). Cengage Learning.

6. Mishkin, F.S., & Eakins, S.G. (2018). *Financial Markets and Institutions* (9th ed.). Pearson Education.

7. Varshney, P.N. (2014). *Indian Financial System and Markets*. Sultan Chand & Sons.

8. Gurusamy, S. (2018). *Indian Financial System* (4th ed.). Tata McGraw Hill.

9. Machiraju, H.R. (2019). *Indian Financial System* (5th ed.). Vikas Publishing House.

10. Reserve Bank of India Publications. *Handbook of Statistics on Indian Economy* (Latest Edition). RBI.

MOOC Links

1. **Swayam**: *Financial Markets and Institutions* by IIT Kharagpur

   o Link: https://onlinecourses.nptel.ac.in/noc20_mg10/preview#:~:text=The%20course%20provides%20a%20comprehensive,stock%2C%20derivatives%20and%20exchange%20rate.&text=Category%20%3A,Management%20Studies

   o Focus: Comprehensive coverage of financial markets and institutions in India.

2. **Coursera**: *Financial Markets* by Yale University

   o Link: https://www.coursera.org/learn/financial-markets-global

- Focus: Global and Indian financial markets, instruments, and institutions.

3. **edX**: *Introduction to Financial Markets* by IIM Bangalore

   - Link: https://www.edx.org/course/introduction-to-financial-markets

   - Focus: Practical applications of financial market concepts.

4. **FutureLearn**: *Understanding Financial Markets* by University of Geneva

   - Link: https://www.futurelearn.com/courses/understanding-financial-markets

   - Focus: Structure and functioning of financial markets.

5. **Alison**: *Introduction to the Indian Financial System*

   - Link: https://alison.com/course/introduction-to-the-indian-financial-system

   - Focus: Free course on financial system components and regulations.

Assessment Methods

- **Internal Assessment (50%)**:

  - Assignments and quizzes: 15%

  - Case study analysis and presentations: 20%

  - Project on financial system applications in fintech/data analytics: 15%

- **External Assessment (50%)**:

  - End-semester written exam covering theoretical and applied questions from all units.

<p style="text-align:center">Corporate Accounting Syllabus</p>

<p style="text-align:center">Course Code: IMS-M-113</p>

<p style="text-align:center">Semester: 1 (Common for Integrated MS in General Commerce, Data Analytics in Commerce, and Fintech)</p>

<p style="text-align:center">Credits: 4</p>

<p style="text-align:center">Total Hours: 60 hours (4 units, 15 hours each)</p>

Program Outcomes (PO)

Upon completion of the Integrated MS program, students will be able to:

- **PO1**: Demonstrate advanced knowledge in commerce, finance, and technology to address industry challenges.

- **PO2**: Apply analytical and critical thinking to solve complex business problems using theoretical and practical approaches.

- **PO3**: Exhibit ethical decision-making and leadership in professional and societal contexts.

- **PO4**: Develop innovative solutions by integrating tools like data analytics, fintech, and management principles.

- **PO5**: Communicate effectively and collaborate in interdisciplinary teams to achieve organizational goals.

- **PO6**: Pursue lifelong learning and adapt to emerging trends in commerce, data analytics, and fintech.

Program-Specific Outcomes (PSO)

Upon completion of the Integrated MS program with specializations in General Commerce, Data Analytics in Commerce, and Fintech, students will:

- **PSO1**: Acquire specialized knowledge in commerce, data analytics, or fintech for roles such as financial analysts, data scientists, or fintech consultants.

- **PSO2**: Apply advanced tools (e.g., Python, blockchain, AI) to solve real-world problems in commerce and finance.

- **PSO3**: Integrate management principles with data-driven and technology-enabled decision-making.
- **PSO4**: Develop entrepreneurial and research-oriented skills to innovate in commerce, analytics, and fintech.

Course Outcomes (CO)

Upon completion of the Corporate Accounting course, students will be able to:

- **CO1**: Explain the role and applicability of accounting standards, including IFRS and Ind AS, and their relevance to commerce, data analytics, and fintech industries.
- **CO2**: Apply accounting principles for share capital transactions, including issue, forfeiture, reissue, buyback, and bonus shares, in corporate financial reporting.
- **CO3**: Analyze and record transactions related to the issue and redemption of debentures, including complex scenarios like conversion and collateral security, with appropriate accounting treatments.
- **CO4**: Evaluate financial statements using ratio analysis and other analytical tools to assess corporate performance, with applications in data analytics and fintech contexts.

Mapping of Program Outcomes (PO) to Course Outcomes (CO)

The following table maps the Program Outcomes to the Course Outcomes to demonstrate alignment with the Integrated MS program objectives:

Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6
CO1: Explain accounting standards	Strong	Moderate	-	Moderate	-	Strong

and their relevance						
CO2: Apply accounting for share capital transactions	Strong	Strong	Moderate	Moderate	Moderate	-
CO3: Analyze and record debenture transactions	Strong	Strong	Moderate	Moderate	Moderate	-
CO4: Evaluate financial statements using ratio analysis	Moderate	Strong	Strong	Strong	Strong	Moderate

Mapping Key:

- **Strong**: Direct and significant contribution to the program outcome.

- **Moderate**: Partial contribution to the program outcome.

- **-**: No significant contribution.

Prerequisites

- Basic understanding of financial accounting principles (typically from undergraduate studies).

- Familiarity with corporate financial terminologies and basic bookkeeping.

Co-requisites

- None, as this is a foundational course for first-semester students.

Syllabus Outline

The course is structured into four units, each covering 15 hours, tailored for relevance to commerce, data analytics, and fintech.

Unit 1: Accounting Standards and Global Convergence (15 Hours)

Objective: To understand the role, applicability, and convergence of accounting standards in corporate financial reporting.
Topics:

- Introduction to Accounting Standards: Definition, need, and importance.

- Accounting Standards issued by ICAI: List, applicability, and overview.

- Need for convergence with global standards: IFRS as a global standard, benefits, and challenges.

- Convergence of Indian Accounting Standards (Ind AS) with IFRS in India: Applicability and roadmap.

- Comparison: IFRS vs. Indian GAAP (IGAAP) vs. Ind AS.

- Relevance to commerce, data analytics, and fintech: Role of standardized reporting in financial analysis and technology-driven solutions (e.g., automated compliance systems).

Learning Activities:

- Case study: Impact of Ind AS adoption on a fintech company's financial reporting.

- Group discussion: Challenges of IFRS convergence in data-driven financial systems.

Unit 2: Accounting for Share Capital (15 Hours)

Objective: To develop skills in recording and managing share capital transactions in corporate accounting.
Topics:

- Share Capital: Meaning, types (equity and preference), and disclosure in financial statements.

- Issue of Shares: At par, premium, and discount; subscription process; calls-in-advance; calls-in-arrear.

- Issue of Shares for consideration other than cash.

- Forfeiture and reissue of shares; buyback of shares; issue of bonus shares; employee stock option scheme (ESOS); sweat equity shares; rights shares.

- Relevance to fintech: Accounting for ESOS in tech startups and share buybacks in listed companies.

Learning Activities:

- Problem-solving: Journal entries for issue, forfeiture, and reissue of shares in a fintech firm.

- Simulation: Designing an ESOS plan for a data analytics company.

Unit 3: Issue and Redemption of Debentures (15 Hours)

Objective: To analyze and record transactions related to the issue and redemption of debentures.
Topics:

- Issue of Debentures: At par, premium, and discount; issue for consideration other than cash; debentures as collateral security.

- Debenture Interest: Accounting treatment.

- Accounting for discount/loss on issue of debentures: Writing off over time.

- Redemption of Debentures: In lump sum, by installments, by conversion, in the open market; purchase of debentures before interest payment date; redemption at par, premium, or discount.

- Relevance to fintech: Debenture issuance for funding blockchain-based projects.

Learning Activities:

- Case study: Accounting for debenture redemption in a commerce company using data analytics for cash flow forecasting.

- Workshop: Preparing journal entries for debenture issuance and redemption scenarios.

Unit 4: Financial Statement Analysis (15 Hours)

Objective: To evaluate financial statements using analytical tools for better decision-making in corporate contexts.

Topics:

- Characteristics of good financial statements and their relevance for reporting.

- Usage and features of ratio analysis: Financial ratios, liquidity ratios, leverage ratios, turnover ratios, profitability ratios.

- DuPont Analysis: Breaking down return on equity (ROE).

- Reading and interpretation of financial statements: Balance sheet, income statement, and cash flow statement.

- Relevance to data analytics and fintech: Using ratio analysis for predictive modeling and financial decision-making in tech-driven firms.

Learning Activities:

- Project: Conducting ratio analysis for a fintech company using data analytics tools.

- Seminar: Application of DuPont Analysis in evaluating commerce startups.

Teaching Pedagogy

The course employs interactive and student-centric methods to achieve the course outcomes:

- **Lectures**: To deliver theoretical concepts (30% of class time).

- **Case Studies**: To apply accounting principles to commerce, fintech, and data analytics scenarios (20%).

- **Group Discussions**: To foster critical thinking and collaboration (15%).

- **Workshops and Simulations**: To develop hands-on accounting and analytical skills (15%).

- **Projects and Presentations**: To encourage research and communication (15%).

- **Guest Lectures**: To provide industry insights on accounting standards and financial analysis (5%).

Mapping of Course Outcomes to Teaching Pedagogy

Course Outcome	Teaching Pedagogy
CO1: Explain accounting standards and their relevance	Lectures, case studies, group discussions
CO2: Apply accounting for share capital transactions	Workshops, simulations, case studies
CO3: Analyze and record debenture transactions	Case studies, workshops, group discussions
CO4: Evaluate financial statements using ratio analysis	Projects, seminars, case studies

Reference Books

1. Narayanaswamy, R. (2020). *Financial Accounting: A Managerial Perspective* (7th ed.). PHI Learning.

2. Tulsian, P.C., & Tulsian, B. (2019). *Corporate Accounting* (3rd ed.). S Chand Publishing.

3. Maheshwari, S.N., Maheshwari, S.K., & Maheshwari, S.K. (2021). *Corporate Accounting* (6th ed.). Vikas Publishing House.

4. Shukla, M.C., Grewal, T.S., & Gupta, S.C. (2018). *Advanced Accounts* (19th ed.). S Chand Publishing.

5. Jain, S.P., & Narang, K.L. (2020). *Corporate Accounting* (22nd ed.). Kalyani Publishers.

6. Hanif, M., & Mukherjee, A. (2019). *Corporate Accounting* (3rd ed.). Tata McGraw Hill.

7. ICAI Study Material. *Accounting Standards and Ind AS*. Institute of Chartered Accountants of India.

8. Khan, M.Y., & Jain, P.K. (2020). *Financial Management* (8th ed.). Tata McGraw Hill.

9. Anthony, R.N., Hawkins, D.F., & Merchant, K.A. (2019). *Accounting: Text and Cases* (13th ed.). McGraw Hill Education.

10.   Kieso, D.E., Weygandt, J.J., & Warfield, T.D. (2021). *Intermediate Accounting: IFRS Edition* (4th ed.). Wiley.

MOOC Links

1. **Swayam: Financial Accounting and Analysis by IIT Madras**

    o Link: https://onlinecourses.nptel.ac.in/noc21_mg31/preview

    o Focus: Corporate accounting principles and financial statement analysis.

2. **Coursera: Introduction to Financial Accounting by University of Pennsylvania**

    o Link: https://www.coursera.org/learn/wharton-accounting

    o Focus: Foundational corporate accounting and IFRS concepts.

3. **edX: Financial Accounting by IIM Bangalore**

   o Link: https://www.edx.org/course/financial-accounting

   o Focus: Practical applications of accounting standards and financial analysis.

4. **FutureLearn: Understanding Financial Statements by The Open University**

   o Link: https://www.futurelearn.com/courses/understanding-financial-statements

   o Focus: Reading and interpreting financial statements.

5. **Alison: Fundamentals of Corporate Accounting**

   o Link: https://alison.com/course/fundamentals-of-corporate-accounting

   o Focus: Free course on share capital and debenture accounting.

Assessment Methods

- **Internal Assessment (50%)**:

  o Assignments and quizzes: 15%

  o Case study analysis and presentations: 20%

  o Project on accounting applications in fintech/data analytics: 15%

- **External Assessment (50%)**:

  o End-semester written exam covering theoretical and applied questions (including problem-solving) from all units.

Course Code: IMS-MDS-114

Semester: 1 (Common for Integrated MS in General Commerce, Data Analytics in Commerce, and Fintech)

Credits: 4

Total Hours: 60 hours (4 units, 15 hours each)

Program Outcomes (PO)

Upon completion of the Integrated MS program, students will be able to:

- **PO1**: Demonstrate advanced knowledge in commerce, finance, and technology to address industry challenges.

- **PO2**: Apply analytical and critical thinking to solve complex business problems using theoretical and practical approaches.

- **PO3**: Exhibit ethical decision-making and leadership in professional and societal contexts.

- **PO4**: Develop innovative solutions by integrating tools like data analytics, fintech, and management principles.

- **PO5**: Communicate effectively and collaborate in interdisciplinary teams to achieve organizational goals.

- **PO6**: Pursue lifelong learning and adapt to emerging trends in commerce, data analytics, and fintech.

Program-Specific Outcomes (PSO)

Upon completion of the Integrated MS program with specializations in General Commerce, Data Analytics in Commerce, and Fintech, students will:

- **PSO1**: Acquire specialized knowledge in commerce, data analytics, or fintech for roles such as financial analysts, data scientists, or fintech consultants.

- **PSO2**: Apply advanced tools (e.g., Python, blockchain, AI) to solve real-world problems in commerce and finance.

- **PSO3**: Integrate management principles with data-driven and technology-enabled decision-making.

- **PSO4**: Develop entrepreneurial and research-oriented skills to innovate in commerce, analytics, and fintech.

Course Outcomes (CO)

Upon completion of the Business Statistics course, students will be able to:

- **CO1**: Explain the role, scope, and limitations of statistics and apply data collection techniques for business decisions in commerce, data analytics, and fintech contexts.

- **CO2**: Analyze and summarize financial and business data using descriptive statistics and bivariate analysis tools, including measures of central tendency, dispersion, correlation, and regression.

- **CO3**: Conduct statistical inference and hypothesis testing to support data-driven decision-making in business scenarios.

- **CO4**: Apply statistical tools and techniques to interpret and predict business outcomes, leveraging data analytics for fintech and commerce applications.

- **CO5**: Design and implement data collection and sampling strategies to address real-world business problems in tech-driven environments.

Mapping of Program Outcomes (PO) to Course Outcomes (CO)

The following table maps the Program Outcomes to the Course Outcomes to demonstrate alignment with the Integrated MS program objectives:

Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PSO 1	PSO 2	PSO 3	PSO 4
CO1: Expla	Strong	Moderate	-	Moderate	Moderate	Strong	Moderate	Moderate	Strong	-

in role and scope of statistics, apply data collection										
CO2: Analyze data using descriptive and bivariate statistics	Strong	Strong	-	Strong	Moderate	Moderate	Strong	Strong	Moderate	Moderate
CO3: Conduct statistical inference and hypot	Moderate	Strong	Moderate	Strong	-	Moderate	Strong	Moderate	Strong	-

hesis testing									
CO4: Apply statistical tools for business outcomes	Moderate	Strong	Moderate	Strong	Moderate	Strong	Strong	Strong	Moderate	Strong
CO5: Design data collection and sampling strategies	Strong	Strong	-	Strong	Strong	Moderate	Moderate	Strong	Strong	Moderate

Mapping Key:

- **Strong**: Direct and significant contribution to the program outcome.

- **Moderate**: Partial contribution to the program outcome.

- **-**: No significant contribution.

Prerequisites

- Basic understanding of mathematics and business concepts (typically from undergraduate studies).

- Familiarity with basic data handling and business terminologies.

Co-requisites

- None, as this is a foundational course for first-semester students.

Syllabus Outline

The course is structured into four units, each covering 15 hours, tailored for relevance to commerce, data analytics, and fintech.

Unit 1: Introduction to Statistics (15 Hours)

Objective: To introduce the role, scope, and methods of statistics in business decision-making.

Topics:

- Origin and development of statistics: Definition, importance, scope, and limitations.

- Business statistics and applications in business decisions: Relevance to commerce, data analytics, and fintech.

- Data and information: Meaning, types (qualitative, quantitative), classification (primary, secondary, tertiary).

- Data collection processes: Methods for primary and secondary data, tools (interview schedule, observation tools, questionnaire, Google Forms).

- Identification of target respondents for questionnaires.

- Overview of sampling: Concepts and techniques (probability and non-probability sampling).

- Relevance to fintech and data analytics: Data collection for predictive modeling and risk analysis.

Learning Activities:

- Case study: Application of statistical tools in a fintech startup (e.g., customer segmentation for digital payments).

- Workshop: Designing a Google Form questionnaire for market research in commerce.

Unit 2: Descriptive Statistics - Univariate Analysis (15 Hours)

Objective: To develop skills in summarizing and analyzing data using descriptive statistics.

Topics:

- Measures of central tendency: Arithmetic Mean (A.M.), Geometric Mean (G.M.), Harmonic Mean (H.M.), Weighted Mean, Combined Mean, Mode, Median, Partition Values (Quartiles, Deciles, Percentiles).

- Measurement scales: Nominal, Ordinal, Interval, Ratio.

- Measures of dispersion: Range, Mean Deviation, Mean Square Deviation, Variance, Standard Deviation, Combined Variance (for two groups), Quartile Deviation, Coefficient of Variation.

- Measures of skewness: Karl Pearson's, Bowley's, Kelly's coefficients.

- Measures of kurtosis: Mesokurtic, Platykurtic, Leptokurtic.

- Frequency distributions: Raw data, discrete, and continuous.

- Visualization: Box plots, percentile ranks.

- Relevance to data analytics: Summarizing financial data for predictive models in fintech.

Learning Activities:

- Problem-solving: Calculating measures of central tendency and dispersion for financial datasets.

- Case study: Analyzing stock market data using box plots and skewness measures.

Unit 3: Bivariate Analysis (15 Hours)

Objective: To analyze relationships between two variables using correlation and regression techniques.

Topics:

- Correlation and causation: Significance, types (positive, negative, zero).

- Correlation analysis: Scatter Diagram, Karl Pearson's Coefficient of Correlation, Spearman's Rank Correlation, Probable Error, Interpretation.

- Difference between correlation and regression.

- Simple linear regression: Method of Least Squares, Curve of Best Fit.

- Non-linear regression and linear transformations.

- Relevance to fintech: Predicting financial trends using regression models in data analytics.

Learning Activities:

- Simulation: Using regression to predict customer spending in a fintech platform.

- Case study: Correlation analysis of sales and advertising expenditure in a commerce firm.

Unit 4: Basics of Statistical Inference (15 Hours)

Objective: To apply statistical inference and hypothesis testing for business decision-making.

Topics:

- Statistical inference: Parameter vs. statistic, point and interval estimation, confidence level, confidence interval, level of significance.

- Hypothesis testing: Null and alternate hypotheses, Type I and Type II errors, one-tailed and two-tailed tests, power of the test.

- Probability distributions: Binomial, Poisson, Normal; properties of Normal Distribution and applications in hypothesis testing.

- Large and small sample tests.

- Relevance to data analytics and fintech: Hypothesis testing for risk assessment and customer behavior analysis.

Learning Activities:

- Workshop: Conducting hypothesis testing for a fintech case (e.g., loan default rates).

- Project: Applying Normal Distribution to analyze financial market volatility.

Teaching Pedagogy

The course employs interactive and student-centric methods to achieve the course outcomes:

- **Lectures**: To deliver theoretical concepts (30% of class time).

- **Case Studies**: To apply statistical tools to commerce, fintech, and data analytics scenarios (20%).

- **Workshops and Simulations**: To develop hands-on skills in data analysis using Excel, R, or Python (20%).

- **Group Discussions**: To foster critical thinking and collaboration (15%).

- **Projects and Presentations**: To encourage research and communication (10%).

- **Guest Lectures**: To provide industry insights on statistical applications in fintech and data analytics (5%).

Mapping of Course Outcomes to Teaching Pedagogy

Course Outcome	Teaching Pedagogy
CO1: Explain role and scope of statistics, apply data collection	Lectures, case studies, workshops

CO2: Analyze data using descriptive and bivariate statistics	Case studies, workshops, simulations
CO3: Conduct statistical inference and hypothesis testing	Workshops, projects, case studies
CO4: Apply statistical tools for business outcomes	Projects, seminars, simulations
CO5: Design data collection and sampling strategies	Workshops, case studies, group discussions

Reference Books

1. Anderson, D. R., Sweeney, D. J., & Williams, T. A. (2020). *Statistics for Business and Economics*. Cengage Learning.

2. Levine, D. M., Szabat, K. A., & Stephan, D. F. (2021). *Business Statistics: A First Course*. Pearson.

3. Hull, J. C. (2018). *Risk Management and Financial Institutions*. Wiley.

4. Chishti, S., & Barberis, J. (2016). *The FinTech Book: The Financial Technology Handbook for Investors, Entrepreneurs and Visionaries*. Wiley.

5. Nirmala, M., & Raghunatha Reddy, S. (2021). *Business Statistics*. Jayvee International Publications, Bangalore.

6. Gupta, S. P., & Gupta, M. P. (2014). *Business Statistics* (18th ed.). Sultan Chand & Sons.

7. Medhi, J. (1992). *Statistical Methods: An Introductory Text*. New Age International.

8. Sharma, J. K. (2007). *Business Statistics*. Pearson Education India.

9. Sharma, K. V. K. *Statistics Made Simple: Do it Yourself on PC*. PHI Publication.

10.   Gupta, S. C., & Kapoor, V. K. (2001). *Fundamentals of Mathematical Statistics*. Sultan Chand & Sons.

11.   Mood, A. M., Graybill, F. A., & Boes, D. C. *Introduction to the Theory of Statistics*. McGraw Hill.

12.   Levin, R. I., & Rubin, D. S. *Statistics for Management*. Pearson.

13.   Gupta, S. C. *Fundamentals of Statistics*. Himalaya Publishing House.

14.   Nadar, E. N. *Statistics*. PHI Learning.

15.   Thukral, J. K. *Business Statistics*. Taxmann Publications.

16.   Alagar, K. *Business Statistics*. Tata McGraw Hill.

17.   Aggarwal, S. L., & Bhardwaj, S. L. *Business Statistics*. Kalyani Publications.

18.   Kapoor, V. K. *Statistics: Problems and Solutions*. S. Chand.

19.   Sancheti, D. C., & Kapoor, V. K. *Statistics: Theory, Methods and Applications*. New Age International Publishers.

MOOC Links

1. **Swayam: Business Statistics by IIT Roorkee**

   o Link: https://onlinecourses.nptel.ac.in/noc21_mg32/preview

   o Focus: Statistical methods for business applications, aligning with fintech and data analytics.

2. **Coursera: Business Statistics and Analysis Specialization by Rice University**

   o Link: https://www.coursera.org/specializations/business-statistics-analysis

   o Focus: Foundational and advanced statistical techniques for business decisions.

3. **edX: Statistics and Probability in Data Science by Harvard University**

   o Link: https://www.edx.org/course/statistics-and-probability-in-data-science-using-python

   o Focus: Statistical inference and data analysis for tech-driven industries.

4. **FutureLearn: Practical Statistics for Business by University of Leicester**

   o Link: https://www.futurelearn.com/courses/practical-statistics-for-business

   o Focus: Descriptive statistics and regression for business applications.

5. **Khan Academy: Statistics and Probability**

   o Link: https://www.khanacademy.org/math/statistics-probability

   o Focus: Free resource for basics of statistics and probability.

Assessment Methods

- **Internal Assessment (50%)**:

   o Assignments on descriptive statistics, correlation, and hypothesis testing: 15%

   o Case study analysis and presentations: 20%

   o Project on statistical applications in fintech or data analytics: 15%

- **External Assessment (50%)**:

   o End-semester written exam covering theoretical and applied questions (including problem-solving) from all units.

Suggested Extracurricular Activities

1. **Guest Lectures**: Invite data scientists or fintech professionals to discuss statistical applications in risk management and predictive analytics.

2. **Statistics Workshop**: Conduct hands-on sessions using Excel, R, or Python for statistical analysis of business data.

3. **Industry Case Study Competition**: Analyze real-world datasets from fintech or commerce firms to solve business problems using statistical tools.

Course Code: IMS-AEC-115

Semester: 1 (Common for Integrated MS in General Commerce, Data Analytics in Commerce, and Fintech)

Credits: 2

Total Hours: 30 hours (2 units, 15 hours each)

Program Outcomes (PO)

Upon completion of the Integrated MS program, students will be able to:

- **PO1**: Demonstrate advanced knowledge in commerce, finance, and technology to address industry challenges.

- **PO2**: Apply analytical and critical thinking to solve complex business problems using theoretical and practical approaches.

- **PO3**: Exhibit ethical decision-making and leadership in professional and societal contexts.

- **PO4**: Develop innovative solutions by integrating tools like data analytics, fintech, and management principles.

- **PO5**: Communicate effectively and collaborate in interdisciplinary teams to achieve organizational goals.

- **PO6**: Pursue lifelong learning and adapt to emerging trends in commerce, data analytics, and fintech.

Program-Specific Outcomes (PSO)

Upon completion of the Integrated MS program with specializations in General Commerce, Data Analytics in Commerce, and Fintech, students will:

- **PSO1**: Acquire specialized knowledge in commerce, data analytics, or fintech for roles such as financial analysts, data scientists, or fintech consultants.

- **PSO2**: Apply advanced tools (e.g., Python, blockchain, AI) to solve real-world problems in commerce and finance.

- **PSO3**: Integrate management principles with data-driven and technology-enabled decision-making.

- **PSO4**: Develop entrepreneurial and research-oriented skills to innovate in commerce, analytics, and fintech.

Course Outcomes (CO)

Upon completion of the Business Communication course, students will be able to:

- **CO1**: Understand and apply the principles of effective communication, including meta-communication and essential skills, in professional contexts relevant to commerce, data analytics, and fintech.

- **CO2**: Develop professional writing skills for business correspondence, reports, and persuasive communication, ensuring clarity and managerial appropriateness.

- **CO3**: Demonstrate effective oral communication and presentation skills, overcoming barriers like glossophobia, to deliver professional presentations.

- **CO4**: Apply interpersonal communication skills, considering behavior and personality, to foster collaboration in diverse business environments.

Mapping of Program Outcomes (PO) to Course Outcomes (CO)

The following table maps the Program Outcomes to the Course Outcomes to demonstrate alignment with the Integrated MS program objectives:

Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6
CO1: Understand	Moderate	-	Moderate	-	Strong	Moderate

and apply communication principles						
CO2: Develop professional writing skills	Moderate	Moderate	Moderate	Moderate	Strong	Moderate
CO3: Demonstrate oral and presentation skills	-	-	Strong	Moderate	Strong	Moderate
CO4: Apply interpersonal communication skills	-	Moderate	Strong	Moderate	Strong	Moderate

Mapping Key:

- **Strong**: Direct and significant contribution to the program outcome.
- **Moderate**: Partial contribution to the program outcome.
- **-**: No significant contribution.

Prerequisites

- Basic proficiency in written and spoken English (typically from undergraduate studies).
- Familiarity with basic business terminologies.

Co-requisites

- None, as this is a foundational course for first-semester students.

Syllabus Outline

The course is structured into two units, each covering 15 hours, tailored for relevance to commerce, data analytics, and fintech.

Unit 1: Foundations of Business Communication (15 Hours)

Objective: To develop an understanding of communication processes and essential skills for professional settings.
Topics:

- Overview of communication: definition, process, and importance in business.

- Meta-communication: understanding non-verbal and contextual communication.

- Essential communication skills: listening, clarity, empathy, and feedback.

- Effectiveness of communication: barriers, strategies for improvement.

- Professional writing basics: principles of written business communication, managerial appropriateness, writing clear and concise messages.

- Relevance to commerce, data analytics, and fintech: effective communication in tech-driven and data-centric organizations (e.g., presenting data insights, client interactions in fintech).

Learning Activities:

- Case study: Analyzing communication failures in a fintech startup.

- Group discussion: Role of meta-communication in client meetings for data analytics projects.

Unit 2: Advanced Communication Skills (15 Hours)

Objective: To enhance professional writing, oral communication, presentation, and interpersonal skills for business applications.
Topics:

- Professional writing applications: business correspondence (emails, memos, letters), reports, summaries, informative and persuasive communication.

- Oral communication: fundamentals, overcoming glossophobia and lack of confidence.

- Presentations: planning, preparing, practicing, and performing professional presentations.

- Interpersonal communication: introduction, role of behavior and personality in communication, fostering collaboration in diverse teams.

- Relevance to fintech and data analytics: presenting data-driven insights, negotiating with stakeholders, and building team synergy in tech environments.

Learning Activities:

- Workshop: Drafting a professional business report for a fintech project.

- Role-play: Delivering a presentation on data analytics findings to a corporate audience.

- Simulation: Practicing interpersonal communication in a cross-functional fintech team scenario.

Teaching Pedagogy

The course employs interactive and student-centric methods to achieve the course outcomes:

- **Lectures**: To deliver theoretical concepts (30% of class time).

- **Case Studies**: To apply communication principles to commerce, fintech, and data analytics scenarios (20%).

- **Group Discussions**: To foster critical thinking and collaboration (15%).

- **Workshops and Simulations**: To develop hands-on writing, presentation, and interpersonal skills (20%).

- **Projects and Presentations**: To encourage research and practical application (10%).

- **Seminars and Guest Lectures**: To provide industry insights from communication experts in commerce and fintech (5%).

Mapping of Course Outcomes to Teaching Pedagogy

Course Outcome	Teaching Pedagogy
CO1: Understand and apply communication principles	Lectures, case studies, group discussions
CO2: Develop professional writing skills	Workshops, case studies, projects
CO3: Demonstrate oral and presentation skills	Workshops, simulations, presentations
CO4: Apply interpersonal communication skills	Role-plays, group discussions, simulations

Reference Books

1. Bovee, C.L., & Thill, J.V. (2020). *Business Communication Today* (15th ed.). Pearson Education.

2. Lesikar, R.V., Flatley, M.E., & Rentz, K. (2018). *Business Communication: Connecting in a Digital World* (14th ed.). McGraw Hill Education.

3. Guffey, M.E., & Loewy, D. (2019). *Essentials of Business Communication* (11th ed.). Cengage Learning.

4. Locker, K.O., & Kaczmarek, S.K. (2016). *Business Communication: Building Critical Skills* (6th ed.). McGraw Hill Education.

5. Shwom, B.L., & Snyder, L.G. (2018). *Business Communication: Polishing Your Professional Presence* (4th ed.). Pearson Education.

6. Ober, S. (2017). *Contemporary Business Communication* (8th ed.). Cengage Learning.

7. Oza, P. (2023) International Business Communication, Atlantic Publishers, New Delhi

8. Krizan, A.C., Merrier, P., Logan, J.P., & Williams, K.S. (2019). *Business Communication* (9th ed.). Cengage Learning.

9. Cardon, P.W. (2020). *Business Communication: Developing Leaders for a Networked World* (3rd ed.). McGraw Hill Education.

10. Raman, M., & Singh, P. (2019). *Business Communication* (3rd ed.). Oxford University Press.

MOOC Links

1. **Swayam**: *Business Communication* by IIT Kharagpur

   o Link: https://onlinecourses.swayam2.ac.in/imb19_mg14/preview

   o Focus: Comprehensive coverage of business communication skills with practical applications.

2. **Coursera**: *Business English Communication Skills* by University of Washington

   o Link: https://www.coursera.org/specializations/business-english

   o Focus: Written and oral communication skills for professional settings.

3. **edX**: *Communication Skills for Business* by IIM Bangalore

   o Link: https://www.edx.org/course/communication-skills-for-business

   o Focus: Practical applications of communication in business contexts.

4. **FutureLearn**: *Business Communication: Writing and Speaking* by University of Leeds

   o Link: https://www.futurelearn.com/courses/business-communication-writing-and-speaking

   o Focus: Developing effective writing and presentation skills.

5. **Alison**: *Fundamentals of Business Communication*

   o Link: https://alison.com/course/fundamentals-of-business-communication

   o Focus: Free course on written, oral, and interpersonal communication.

Assessment Methods

- **Internal Assessment (50%)**:

  o Assignments and quizzes: 15%

  o Case study analysis and business correspondence tasks: 20%

  o Presentation or project on communication applications in fintech/data analytics: 15%

- **External Assessment (50%)**:

  o End-semester written exam covering theoretical and applied questions from all units.

Indian Knowledge System Syllabus

Course Code: IMS-VAC-116

Semester: 1 (Common for Integrated MS in General Commerce, Data Analytics in Commerce, and Fintech)

Credits: 2

Total Hours: 30 hours (2 units, 15 hours each)

Program Outcomes (PO)

Upon completion of the Integrated MS program, students will be able to:

- **PO1**: Demonstrate advanced knowledge in commerce, finance, and technology to address industry challenges.

- **PO2**: Apply analytical and critical thinking to solve complex business problems using theoretical and practical approaches.

- **PO3**: Exhibit ethical decision-making and leadership in professional and societal contexts.

- **PO4**: Develop innovative solutions by integrating tools like data analytics, fintech, and management principles.

- **PO5**: Communicate effectively and collaborate in interdisciplinary teams to achieve organizational goals.

- **PO6**: Pursue lifelong learning and adapt to emerging trends in commerce, data analytics, and fintech.

Program-Specific Outcomes (PSO)

Upon completion of the Integrated MS program with specializations in General Commerce, Data Analytics in Commerce, and Fintech, students will:

- **PSO1**: Acquire specialized knowledge in commerce, data analytics, or fintech for roles such as financial analysts, data scientists, or fintech consultants.

- **PSO2**: Apply advanced tools (e.g., Python, blockchain, AI) to solve real-world problems in commerce and finance.

- **PSO3**: Integrate management principles with data-driven and technology-enabled decision-making.

- **PSO4**: Develop entrepreneurial and research-oriented skills to innovate in commerce, analytics, and fintech.

Course Outcomes (CO)

Upon completion of the Indian Knowledge System course, students will be able to:

- **CO1**: Explain the significance, foundational literature, and educational philosophy of Indian Knowledge Systems, with relevance to modern contexts like commerce and fintech.

- **CO2**: Analyze the contributions of Indian Knowledge Systems in mathematics, astronomy, life sciences, metal technology, architecture, Ayurveda, and cultural traditions, and their applications in contemporary fields.

- **CO3**: Evaluate the scientific and philosophical underpinnings of Indian traditions and their relevance to data analytics and technology-driven industries.

- **CO4**: Apply insights from Indian Knowledge Systems to foster innovation and ethical practices in professional and societal contexts.

Mapping of Program Outcomes (PO) to Course Outcomes (CO)

The following table maps the Program Outcomes to the Course Outcomes to demonstrate alignment with the Integrated MS program objectives:

Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6
CO1: Explain significance	Strong	Moderate	Moderate	Moderate	Moderate	Strong

and philosophy of IKS						
CO2: Analyze contributions of IKS	Strong	Strong	-	Strong	-	Strong
CO3: Evaluate scientific and philosophical underpinnings	Moderate	Strong	Moderate	Strong	-	Moderate
CO4: Apply IKS insights for innovation and ethics	Moderate	Moderate	Strong	Strong	Moderate	Strong

Mapping Key:

- **Strong**: Direct and significant contribution to the program outcome.

- **Moderate**: Partial contribution to the program outcome.

- **-**: No significant contribution.

Prerequisites

- Basic understanding of Indian history and culture (typically from school or undergraduate studies).

- Interest in exploring traditional knowledge systems and their modern applications.

Co-requisites

- None, as this is a foundational course for first-semester students.

Syllabus Outline

The course is structured into two units, each covering 15 hours, tailored for relevance to commerce, data analytics, and fintech.

Unit 1: Introduction to Indian Knowledge System (15 Hours)

Objective: To understand the significance, foundational literature, and educational philosophy of Indian Knowledge Systems.
Topics:

- Introduction to IKS: definition, importance, and various systems (e.g., Vedic, Jain, Buddhist).

- Shashtra – Foundational Literature of Bharatvarsha: definition, importance, classification (Vaidic: Vedas, Upanishads, Aranyakas; Avaidic: Puranas, Smritis, Mahabharata, Ramayana).

- Base of IKS proliferation: Bhartiya Education System (BES) and its philosophy; history of BES from ancient (Gurukul, Pathshala) to modern (Vidyalay, Vishvavidyalay).

- Relevance to commerce, data analytics, and fintech: applying IKS principles (e.g., holistic thinking, ethics) to modern business and technology contexts.

Learning Activities:

- Case study: Role of Gurukul system in fostering interdisciplinary learning applicable to fintech innovation.

- Group discussion: Relevance of Vedic principles in ethical decision-making for data analytics.

Unit 2: Contributions of Indian Knowledge System (15 Hours)

Objective: To analyze the contributions of IKS in various domains and their relevance to modern fields.

Topics:

- Mathematics and Astronomy: number system (decimal, zero), algebra, arithmetic, geometry, trigonometry, planetary system, speed of light, eclipse calculations.

- Life Sciences: physics (e.g., optics in ancient texts), chemistry (e.g., Rasashastra), botany (e.g., medicinal plants in Ayurveda).

- Metal Technology: mining techniques, types of metals, tools and techniques for metal smelting (e.g., Wootz steel).

- Town Planning and Temple Architecture: indigenous tools and technologies, science of architecture (Vastu Shastra), examples (Lothal, Mohenjo-Daro, Dholavira, Angkor Wat, Lepakshi Temple, Jagannath Puri Temple, Thanjavur Temple, Modhera and Konark Sun Temples, Hampi).

- Ayurveda: definition, branches, key books (Charaka Samhita, Sushruta Samhita), pioneers; concept of Tri-Dosha and balance; tools and technologies in Indic medical science.

- Art and Traditions: history and origin, 64 Kala (traditional arts and skills), science behind traditions and rituals (e.g., ecological and psychological significance).

- Relevance to fintech and data analytics: applying IKS concepts (e.g., precision in astronomy, holistic health in Ayurveda) to data-driven solutions and sustainable practices.

Learning Activities:

- Project: Analyzing the application of Vastu Shastra principles in modern fintech office designs.

- Seminar: Exploring the mathematical precision of ancient Indian astronomy for data analytics applications.

Teaching Pedagogy

The course employs interactive and student-centric methods to achieve the course outcomes:

- **Lectures**: To deliver theoretical concepts and historical context (30% of class time).

- **Case Studies**: To apply IKS principles to commerce, fintech, and data analytics scenarios (20%).

- **Group Discussions**: To foster critical thinking and interdisciplinary connections (15%).

- **Workshops and Simulations**: To explore practical applications of IKS concepts (20%).

- **Projects and Presentations**: To encourage research and application of IKS in modern contexts (10%).

- **Seminars and Guest Lectures**: To provide insights from experts in Indian knowledge systems and their applications (5%).

Mapping of Course Outcomes to Teaching Pedagogy

Course Outcome	Teaching Pedagogy
CO1: Explain significance and philosophy of IKS	Lectures, case studies, group discussions
CO2: Analyze contributions of IKS	Lectures, case studies, workshops
CO3: Evaluate scientific and philosophical underpinnings	Case studies, seminars, group discussions
CO4: Apply IKS insights for innovation and ethics	Projects, workshops, presentations

Reference Books

1. Frawley, D. (2015). *Vedic Yoga: The Path of the Rishi.* Lotus Press.

2. Sharma, R.K., & Dash, B. (2016). *Charaka Samhita* (English Translation). Chowkhamba Sanskrit Series.

3. Subbarayappa, B.V. (2013). *Indian Science and Technology in the Ancient and Medieval Periods*. Orient BlackSwan.

4. Rao, S.R. (2014). *Lothal and the Indus Civilization*. Asia Publishing House.

5. Kak, S. (2000). *The Astronomical Code of the Rgveda*. Munshiram Manoharlal Publishers.

6. Datta, B., & Singh, A.N. (2019). *History of Hindu Mathematics*. Bharatiya Kala Prakashan.

7. Havell, E.B. (2017). *The Ancient and Medieval Architecture of India: A Study of Indo-Aryan Civilization*. Aryan Books International.

8. Sen, S.N. (2018). *A Concise History of Science in India*. Indian National Science Academy.

9. Chattopadhyaya, D. (2012). *Science and Society in Ancient India*. Primus Books.

10. Bag, A.K. (2016). *History of Technology in India*. Indian National Science Academy.

MOOC Links

1. **Swayam**: *Indian Knowledge Systems* by IIT Kharagpur

   o Link: https://onlinecourses.swayam2.ac.in/arp21_ap01/preview

   o Focus: Comprehensive exploration of Indian knowledge traditions and their applications.

2. **Coursera**: *Indian Philosophy and Culture* by University of Mumbai

   o Link: https://www.coursera.org/learn/indian-philosophy

   o Focus: Philosophical and cultural foundations of IKS.

3. **edX**: *Introduction to Indian Knowledge Systems* by IIT Madras

   o Link: https://www.edx.org/course/introduction-to-indian-knowledge-systems

   o Focus: Overview of IKS in science, mathematics, and architecture.

4. **FutureLearn**: *Exploring Indian Culture and Heritage* by University of London

   o Link: https://www.futurelearn.com/courses/indian-culture

   o Focus: Cultural and traditional aspects of IKS.

5. **Alison**: *Introduction to Ayurveda and Indian Knowledge Systems*

   o Link: https://alison.com/course/introduction-to-ayurveda-and-indian-knowledge-systems

   o Focus: Free course on Ayurveda and traditional knowledge.

Assessment Methods

- **Internal Assessment (50%)**:

  o Assignments and quizzes: 15%

  o Case study analysis and presentations on IKS applications: 20%

  o Project on applying IKS to fintech/data analytics (e.g., Vastu in office design, Ayurveda in wellness tech): 15%

- **External Assessment (50%)**:

  o End-semester written exam covering theoretical and applied questions from all units.

Course Code: IMS-SEC-117

Semester: 1 (Common for Integrated MS in General Commerce, Data Analytics in Commerce, and Fintech)

Credits: 2

Total Hours: 30 hours (2 units, 15 hours each)

Level:

Program Outcomes (PO)

Upon completion of the Integrated MS program, students will be able to:

- **PO1**: Demonstrate advanced knowledge in commerce, finance, and technology to address industry challenges.

- **PO2**: Apply analytical and critical thinking to solve complex business problems using theoretical and practical approaches.

- **PO3**: Exhibit ethical decision-making and leadership in professional and societal contexts.

- **PO4**: Develop innovative solutions by integrating tools like data analytics, fintech, and management principles.

- **PO5**: Communicate effectively and collaborate in interdisciplinary teams to achieve organizational goals.

- **PO6**: Pursue lifelong learning and adapt to emerging trends in commerce, data analytics, and fintech.

Program-Specific Outcomes (PSO)

Upon completion of the Integrated MS program with specializations in General Commerce, Data Analytics in Commerce, and Fintech, students will:

- **PSO1**: Acquire specialized knowledge in commerce, data analytics, or fintech for roles such as financial analysts, data scientists, or fintech consultants.

- **PSO2**: Apply advanced tools (e.g., Python, blockchain, AI) to solve real-world problems in commerce and finance.

- **PSO3**: Integrate management principles with data-driven and technology-enabled decision-making.

- **PSO4**: Develop entrepreneurial and research-oriented skills to innovate in commerce, analytics, and fintech.

Course Outcomes (CO)

Upon completion of the Advanced MS Office and AI Tools and Techniques course, students will be able to:

- **CO1**: Utilize advanced features of MS Office tools (Excel, Word, PowerPoint) to create professional documents, analyze data, and deliver presentations relevant to commerce, data analytics, and fintech.

- **CO2**: Apply AI tools and techniques (e.g., generative AI, automation tools) to enhance productivity, data analysis, and decision-making in business contexts.

- **CO3**: Integrate MS Office and AI tools to solve real-world problems in commerce, fintech, and data analytics (e.g., financial modeling, predictive analytics).

- **CO4**: Evaluate ethical considerations and best practices in using AI tools and MS Office for professional applications in technology-driven industries.

Mapping of Program Outcomes (PO) to Course Outcomes (CO)

The following table maps the Program Outcomes to the Course Outcomes to demonstrate alignment with the Integrated MS program objectives:

Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6

CO1: Utilize advanced MS Office tools	Strong	Moderate	-	Moderate	Strong	Moderate
CO2: Apply AI tools and techniques	Strong	Strong	-	Strong	Moderate	Strong
CO3: Integrate MS Office and AI tools	Strong	Strong	Moderate	Strong	Strong	Moderate
CO4: Evaluate ethical considerations	Moderate	Moderate	Strong	Moderate	Moderate	Strong

Mapping Key:

- **Strong**: Direct and significant contribution to the program outcome.

- **Moderate**: Partial contribution to the program outcome.

- **-**: No significant contribution.

Prerequisites

- Basic proficiency in MS Office tools (Excel, Word, PowerPoint) from school or undergraduate studies.

- Familiarity with basic computer operations and internet usage.

- Basic understanding of business or data-related terminologies (helpful but not mandatory).

Co-requisites

- None, as this is a foundational course for first-semester students.

Syllabus Outline

The course is structured into two units, each covering 15 hours, tailored for relevance to commerce, data analytics, and fintech.

Unit 1: Advanced MS Office Applications (15 Hours)

Objective: To develop proficiency in advanced MS Office tools for professional applications in business environments.
Topics:

- Advanced MS Excel: Data analysis, financial modeling, data visualization (charts, dashboards).

- Advanced MS Word: Professional document creation (templates, mail merge, advanced formatting), collaborative editing, referencing tools for reports.

- Advanced MS PowerPoint: Designing impactful presentations (slide transitions, animations, data-driven visuals), storytelling for business pitches.

- Integration of MS Office tools: Combining Excel, Word, and PowerPoint for comprehensive business solutions.

  Learning Activities:

- Workshop: Building a financial dashboard in Excel for a fintech company.

- Case study: Designing a professional report in Word for a commerce client.

- Simulation: Creating a pitch deck in PowerPoint for a data analytics project.

Unit 2: AI Tools and Techniques (15 Hours)

Objective: To explore AI tools and techniques for enhancing productivity and decision-making in business contexts.
Topics:

- Introduction to AI tools: Generative AI (e.g., ChatGPT, Copilot), automation tools (e.g., Power Automate), AI-driven analytics platforms.

- Applications of AI in business: Tools Used for different purposes

- AI tools for data analysis: Using AI platform like Powerdrill

- Ethical considerations: Bias in AI, data privacy, responsible use of AI in fintech and commerce.

Learning Activities:

- Project: Using AI tools to automate a financial report generation process for a fintech firm.

- Workshop: Analyzing a dataset with Power BI's AI features for a commerce scenario.

- Seminar: Discussing ethical challenges of AI in fintech and data analytics.

Teaching Pedagogy

The course employs interactive and student-centric methods to achieve the course outcomes:

- **Lectures**: To deliver theoretical concepts and tool functionalities (30% of class time).

- **Workshops and Simulations**: To develop hands-on skills in MS Office and AI tools (30%).

- **Case Studies**: To apply tools to commerce, fintech, and data analytics scenarios (15%).

- **Projects and Presentations**: To encourage practical application and communication (15%).

- **Group Discussions**: To foster critical thinking and collaboration (5%).

- **Seminars and Guest Lectures**: To provide industry insights from experts in AI and business technology (5%).

Mapping of Course Outcomes to Teaching Pedagogy

Course Outcome	Teaching Pedagogy
CO1: Utilize advanced MS Office tools	Lectures, workshops, case studies
CO2: Apply AI tools and techniques	Workshops, simulations, projects
CO3: Integrate MS Office and AI tools	Projects, workshops, case studies
CO4: Evaluate ethical considerations	Seminars, group discussions, case studies

Reference Books

1. Walkenbach, J. (2021). *Excel 2021 Bible*. Wiley.

2. Alexander, M., & Kusleika, R. (2020). *Excel 2019 Power Programming with VBA*. Wiley.

3. Winston, W.L. (2019). *Microsoft Excel Data Analysis and Business Modeling* (6th ed.). Microsoft Press.

4. Frye, C. (2020). *Microsoft 365 Step by Step*. Microsoft Press.

5. Russell, N., & Norvig, P. (2020). *Artificial Intelligence: A Modern Approach* (4th ed.). Pearson Education.

6. Davenport, T.H., & Ronanki, R. (2019). *Artificial Intelligence for the Real World*. Harvard Business Review Press.

7. Jelen, B. (2021). *Power Pivot and Power BI: The Excel User's Guide to DAX, Power Query, Power BI & Power Pivot*. Holy Macro! Books.

8. Molnar, C. (2022). *Interpretable Machine Learning*. Leanpub.

9. Linoff, G.S., & Berry, M.J.A. (2018). *Data Mining Techniques: For Marketing, Sales, and Customer Relationship Management* (4th ed.). Wiley.

10.   Microsoft Official Academic Course. (2020). *Microsoft Office 365: Advanced*. Wiley.

MOOC Links

1. **Swayam**: *Data Analysis with Excel and Power BI* by IIT Madras

   o Link: https://onlinecourses.swayam2.ac.in/cec22_cs01/preview

   o Focus: Practical skills in Excel and AI-driven analytics tools.

2. **Coursera**: *Excel Skills for Business Specialization* by Macquarie University

   o Link: https://www.coursera.org/specializations/excel

   o Focus: Advanced Excel skills for data analysis and reporting.

3. **edX**: *Artificial Intelligence for Business* by University of British Columbia

   o Link: https://www.edx.org/course/artificial-intelligence-for-business

   o Focus: Applications of AI in business contexts.

4. **FutureLearn**: *Digital Skills: Artificial Intelligence* by Accenture

   o Link: https://www.futurelearn.com/courses/digital-skills-artificial-intelligence

   o Focus: Introduction to AI tools and their business applications.

5. **Alison**: *Microsoft Office 365 and AI Basics*

   o Link: https://alison.com/course/microsoft-office-365-and-ai-basics

   o Focus: Free course on MS Office and introductory AI tools.

Assessment Methods

- **Internal Assessment (50%)**:

- o Assignments and quizzes (e.g., Excel tasks, AI tool exercises): 15%

- o Case study analysis and tool-based tasks (e.g., financial modeling, AI-driven reports): 20%

- o Project on integrating MS Office and AI tools (e.g., automated fintech dashboard): 15%

- **External Assessment (50%)**:

  - o End-semester written and practical exam covering theoretical concepts and hands-on applications from all units.