# Accounting Information Systems (AIS) & ERP Fundamentals

This is a detailed 5-day curriculum designed for accounting, finance, and IT professionals who need to understand the systems that process financial data.

**Course Title: Accounting Information Systems (AIS) & ERP Fundamentals**

- **Duration:** 5 Days (approximately 35-40 instructional hours)
- **Course Goal:** To provide accounting, finance, and IT professionals with a foundational understanding of the concepts, components, processes, controls, and strategic role of Accounting Information Systems (AIS) and Enterprise Resource Planning (ERP) systems in a modern organization.
- **Core Focus:** Understanding how financial data is captured, processed, controlled, and reported through integrated systems.

**Learning Objectives:**

Upon successful completion of this workshop, participants will be able to:

- **Define** an AIS and explain its key functions and components.
- **Understand** how AIS supports key business processes and transaction cycles (e.g., Procure-to-Pay, Order-to-Cash).
- **Explain** the concept of an Enterprise Resource Planning (ERP) system and its benefits.
- **Identify** the core modules of a typical ERP system (e.g., Finance, HR, Supply Chain).
- **Understand** the principles of database design and data modeling as they apply to accounting.
- **Identify** and assess key risks and internal controls within an AIS/ERP environment (e.g., access controls, application controls).
- **Map** business process controls to system configurations.
- **Understand** the key phases of an AIS/ERP implementation project.
- **Evaluate** the role of AIS/ERP in financial reporting and business intelligence.
- **Recognize** emerging trends in accounting technology, such as cloud ERP and automation.

**Target Audience:**

- Accountants and finance professionals who need to better understand the systems they use.
- Internal and IT Auditors.
- IT Business Analysts and Systems Analysts.
- Professionals involved in the selection or implementation of new accounting or ERP software.
- Finance and IT managers.

**Prerequisites:**

- A solid understanding of basic accounting principles is essential.
- Familiarity with business processes.

**Teaching Methodology:**

This is an interactive workshop blending concepts with practical application. The methodology includes:

- **Interactive Lectures & Case Studies:** Explaining technical concepts with real-world examples.
- **System Demonstrations:** Using a sandbox or demo version of an ERP system (or a sophisticated accounting package) to illustrate concepts.
- **Process Mapping Workshops:** Participants will map business processes and identify key system touchpoints and controls.
- **Group Discussions:** Exploring challenges in system implementation and data management.
- **Guest Speaker (optional):** An ERP implementation consultant or an internal systems manager.

**Materials Provided:**

- Comprehensive digital or printed workbook with key concepts, frameworks, and best practices.
- Templates for a process flowchart, a system control matrix, and a requirements gathering checklist.
- Case study documents for a company considering an ERP implementation.
- A glossary of AIS and ERP terminology.

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- Certificate of Completion.

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**Detailed Day-by-Day Curriculum**

**Day 1: Foundations of Accounting Information Systems**

- **Module 1: What is an Accounting Information System (AIS)? (Approx. 2.5 hours)**
    - Welcome, introductions, and course objectives.
    - Defining AIS: The people, processes, and technology that capture, process, and report financial information.
    - The key functions of an AIS: Data collection, processing, management, control, and reporting.
    - The relationship between data, information, and decision-making.
    - The strategic role of AIS in a modern business.
- **Module 2: Business Processes & Transaction Cycles (Approx. 3 hours)**
    - How AIS supports core business processes.
    - Deep dive into key transaction cycles:
        - **Revenue Cycle:** (Order-to-Cash)
        - **Expenditure Cycle:** (Procure-to-Pay)
        - **Production Cycle.**
        - **HR/Payroll Cycle.**
        - **Financing Cycle.**
    - **Workshop:** Participants map the key steps and data flows for the Revenue Cycle in a case study.
- **Module 3: Data & Database Fundamentals for AIS (Approx. 2 hours)**
    - The importance of structured data in accounting.
    - Relational Database concepts (tables, keys, relationships).
    - Data Dictionaries and the importance of metadata.
    - How databases ensure data integrity.
    - **End of Day 1 Recap & Q&A.**

**Day 2: Internal Controls in an AIS Environment**

- **Module 4: The COSO Framework & IT Controls (Approx. 2.5 hours)**
    - Recap of the COSO Internal Control Framework.
    - Applying COSO principles in an automated AIS environment.
    - Introduction to IT General Controls (ITGCs) and Application Controls.
- **Module 5: IT General Controls (ITGCs) (Approx. 2.5 hours)**
    - **Logical Access Controls:** User authentication, authorization, and provisioning.
    - **Change Management Controls:** The process for managing changes to systems and applications.
    - **System Operations Controls:** Batch processing, backup, and recovery.
    - **Physical Security.**
- **Module 6: Application Controls in Business Processes (Approx. 2.5 hours)**
    - Controls embedded within the software to ensure transactions are complete, accurate, and valid.
    - **Input Controls:** Data validation, field checks.
    - **Processing Controls:** Reconciliations, transaction logs.
    - **Output Controls:** Report distribution, error logs.
    - **Workshop:** For the Revenue Cycle map from Day 1, participants identify key points where application controls are needed.

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- **End of Day 2 Recap & Q&A.**

**Day 3: Introduction to Enterprise Resource Planning (ERP) Systems**

- **Module 7: What is an ERP System? (Approx. 2 hours)**
  - The evolution from standalone systems to integrated ERP.
  - Defining ERP: A single, integrated software suite that manages core business processes.
  - The benefits of ERP (single source of truth, process efficiency, better reporting).
  - The challenges of ERP (cost, complexity, change management).
  - Leading ERP vendors (SAP, Oracle, Microsoft Dynamics - overview).
- **Module 8: Core ERP Modules & Integration (Approx. 3 hours)**
  - A tour of the main ERP modules and their functions:
    - **Financials (FI/CO):** General Ledger, AP, AR, Asset Accounting.
    - **Human Capital Management (HCM):** Payroll, HR admin.
    - **Supply Chain Management (SCM):** Inventory, Purchasing, Order Management.
    - **Manufacturing / Production Planning (PP).**
    - **Customer Relationship Management (CRM).**
  - The power of integration: How a transaction in one module automatically updates others.
  - **System Demonstration:** A live walkthrough of a few core processes in a demo ERP system.
- **Module 9: Controls & Security in an ERP Environment (Approx. 2.5 hours)**
  - The importance of Segregation of Duties (SoD) in an integrated system.
  - Role-based access control (RBAC).
  - Auditing and monitoring user activity in an ERP.
  - Configurable vs. non-configurable controls.
  - **Case Study:** Analyzing an SoD conflict matrix and identifying risks.
  - **End of Day 3 Recap & Q&A.**

**Day 4: The AIS/ERP Implementation Lifecycle**

- **Module 10: Planning & Selecting an AIS/ERP System (Approx. 2.5 hours)**
  - The system development lifecycle (SDLC) for an AIS/ERP project.
  - Business process re-engineering (BPR): Should you change your process or customize the system?
  - Gathering business requirements.
  - The Request for Proposal (RFP) and vendor selection process.
  - Cloud vs. On-Premise deployment models.
- **Module 11: Implementing the AIS/ERP System (Approx. 3 hours)**
  - Key phases of implementation: Design, Configuration, Testing, Deployment.
  - The critical role of **Data Migration**.
  - Testing strategies (unit, integration, user acceptance testing - UAT).
  - "Go-live" strategies (big bang vs. phased).
  - The importance of a strong project management and governance structure.
- **Module 12: Change Management in System Implementations (Approx. 2 hours)**
  - Why change management is the #1 success factor.
  - Stakeholder communication and engagement.
  - User training and support.
  - Managing resistance and building buy-in.

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- **Workshop:** Developing a high-level change management plan for the case study company.
- **End of Day 4 Recap & Q&A.**

**Day 5: AIS/ERP for Reporting & The Future**

- **Module 13: Financial Reporting & Business Intelligence (BI) with AIS/ERP (Approx. 3 hours)**
  - How AIS/ERP systems are the primary source for financial reporting.
  - Standard reports vs. ad-hoc queries.
  - The role of the Data Warehouse and BI tools in analyzing ERP data.
  - Creating management dashboards from ERP data.
  - **Demonstration:** Showing how a BI tool like Power BI or Tableau can connect to ERP data to create powerful visualizations.
- **Module 14: Auditing AIS & ERP Systems (Approx. 2 hours)**
  - The auditor's approach to an ERP environment.
  - Testing ITGCs and application controls.
  - Using Computer-Assisted Audit Techniques (CAATs) to analyze data from the system.
  - Reviewing system configurations and security settings.
- **Module 15: Emerging Trends in Accounting Technology (Approx. 1.5 hours)**
  - **Cloud ERP:** Benefits and risks.
  - **Robotic Process Automation (RPA):** Automating routine accounting tasks.
  - **Artificial Intelligence (AI) & Machine Learning:** Applications in fraud detection, forecasting, and process optimization.
  - **Blockchain & Distributed Ledgers:** Potential impact on accounting and auditing.
- **Module 16: Course Review & Action Planning (Approx. 1 hour)**
  - Review of key concepts in AIS, ERP, and internal controls.
  - Open Q&A.
  - Participants create a personal action plan to apply their new systems knowledge.
  - Course evaluation and closing.

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