

## Management Information System

**Pokhara University**  
**Faculty of Management Studies**

Course code.: MIS 110

Course title: **Management Information System**

Nature of the course: Theory & Practice

Year 3/2, Semester V/IV

Level: Bachelor

Program: BBA/BBA (Finance)

Full marks: 100

Pass marks: 45

Credit hours: 3.0

Total hours: 48

### 1. Course Description

This course provides an in-depth understanding of Information Systems (IS) and their role in business and technology environments. It covers key concepts of IS, the use of information technologies to support business operations, and strategic decision-making. The course integrates theoretical knowledge with practical applications, enabling students to develop skills to design, implement, and manage information systems effectively. The practical component will involve hands-on projects using contemporary IS tools and software, preparing students for real-world applications.

### 2. General Objectives

The general course objectives are to enhance the ability of students with the conceptual of fundamental knowledge about the information system and business application as well. After completing this course, the students will be able:

- To introduce students to the fundamental concepts of Management Information Systems (MIS).
- To provide an understanding of how MIS supports business operations, decision-making, and strategy.
- To equip students with the skills to analyze and design information systems in a business context.
- To explore emerging trends in information technology and their impact on business

### 3. Contents in Details

Specific Objectives	Contents
<ul style="list-style-type: none"> <li>• Understand the definition, types, and significance of Information Systems.</li> <li>• Describe the components of IS and how they interact.</li> <li>• Analyze the role of IS in supporting business operations and</li> </ul>	<p><b>Unit I: Introduction to Information Systems (IS) (4 Hours)</b></p> <p>1.1 Overview of MIS: Definition, Components, and Importance.</p> <p>1.2 Role of MIS in Business: Operations, Decision-Making, and Competitive Advantage.</p> <p>1.3 Types of Information Systems: TPS, MIS, DSS,</p>

decision-making.	<p>ESS. 1.4 Data vs. Information: Concepts and Differences</p>
<ul style="list-style-type: none"> <li>• Analyze how IS can provide a competitive advantage.</li> <li>• Understand the relationship between business strategy and IS strategy.</li> <li>• Explore frameworks like Porter's Five Forces and Value Chain Analysis in the context of IS.</li> </ul>	<p><b>Unit II: Information Technology Infrastructure (15 Hours)</b></p> <ul style="list-style-type: none"> <li>2.1 Components of a computer system (hardware, software, data, people, processes)</li> <li>2.2 Computer architecture (CPU, memory, input/output devices)</li> <li>2.3 Role of I/O devices in business innovation (New business operation models and automated mechanisms)</li> <li>2.4 Importance and role of Operating systems</li> <li>2.5 Types and selection of OS for Business needs</li> <li>2.6 Software Types and applications in business</li> <li>2.7 Small scale and large scale software's</li> <li>2.8 Analyzing networking requirements for business and network types (LAN, WAN, internet, VPN)</li> <li>2.9 Network protocols (TCP/IP, HTTP, FTP)</li> <li>2.10 Network devices (routers, switches, modems)</li> <li>2.11 Design of network for business needs</li> <li>2.12 Cloud computing (public, private, hybrid)</li> <li>2.13 Database management systems (DBMS) application in Business</li> <li>2.14 Data warehousing and data mining, KDD, Data Analytics for Business</li> <li>2.15 Case study on POS, GDS, OTA</li> </ul>
<ul style="list-style-type: none"> <li>• Manage IT at an enterprise and global level.</li> <li>• Understand outsourcing, offshoring, and IT governance.</li> </ul>	<p><b>Unit III: Business Applications of Information Systems (8 Hours)</b></p> <ul style="list-style-type: none"> <li>3.1 Enterprise Systems: ERP, CRM, SCM.</li> <li>3.2 E-Business and E-Commerce: Models, Benefits, and Challenges.</li> <li>3.3 Introduction to E-commerce architecture</li> <li>3.4 Decision Support Systems (DSS) and Business Intelligence (BI).</li> <li>3.5 Functional Information Systems: Marketing, Finance, Human Resources, and Production</li> <li>3.6 Expert Systems</li> <li>3.7 Role of Computer System in business process optimization</li> </ul>
<ul style="list-style-type: none"> <li>• Understand the project management concept of MIS.</li> <li>• Develop ethical frameworks for designing and using information systems.</li> </ul>	<p><b>Unit IV: Systems Development and Project Management (4 Hours)</b></p> <ul style="list-style-type: none"> <li>4.1 Systems Development Life Cycle (SDLC): Phases and Models.</li> <li>4.2 Agile and Traditional Methodologies.</li> <li>4.3 Business process modeling and analysis</li> <li>4.4 Case Study: Information System Project Management</li> </ul>

<ul style="list-style-type: none"> <li>• Understand the importance of cybersecurity in protecting information systems.</li> <li>• Learn about common threats, vulnerabilities, and attack vectors.</li> <li>• Develop practical skills in implementing security measures and best practices to protect IS.</li> </ul>	<p><b>Unit V: Cybersecurity, Information Assurance, and Security Management (11 Hours)</b></p> <p>5.1 Introduction to cybersecurity: Key concepts, importance, challenges.</p> <p>5.1 Types of threats: Malware, phishing, denial of service, social engineering.</p> <p>5.2 Security measures: Firewalls, IDS, encryption, MFA.</p> <p>5.3 Tools for security management: Firewalls, IDS, encryption, VPNs.</p> <p>5.4 Information assurance: Data integrity, confidentiality, availability.</p> <p>5.5 Privacy issues, computer crime, cyber law, and the current state of cyber law.</p> <p>5.6 Computer libel and censorship.</p>
<ul style="list-style-type: none"> <li>• Identify and understand emerging trends and technologies in IS.</li> <li>• Analyze the impact of these trends on businesses and society.</li> <li>• Explore the role of IS in digital transformation and innovation.</li> </ul>	<p><b>Unit VI: Emerging Trends in Information Systems (6 Hours)</b></p> <p>6.1 Cloud Computing and Virtualization.</p> <p>6.2 Artificial Intelligence and Machine Learning in Business.</p> <p>6.3 Internet of Things (IoT) and its Business Applications.</p> <p>6.4 The Future of Information Systems: Trends and Predictions.</p>

*Note: The figures in the parentheses indicate the approximate teaching hours for the respective units.*

#### 4. Methods of Instruction

Lectures, classroom discussions, experiential learning, case analysis, role play, simulations, group task and presentations.

#### 5. Evaluation System and Students' Responsibilities

##### 5.1 Evaluation System

The performance of a student in a course is evaluated on the basis of internal evaluation and semester-end examination. Fifty percent weight is given to the internal evaluation and fifty percent weight to the semester-end examination conducted by the Office of the Controller of Examinations, Pokhara University.

##### 5.1.1 Internal Evaluation

The internal evaluation is based on continuous evaluation process. The internal evaluation components and their respective weights may vary according to the nature and objectives of the course. An evaluation plan should be prepared by the faculty and should share with the students in the beginning of the course.

The internal evaluation components may consist of any combination of written test, quizzes and oral test, workshop, assignments, term paper, project work, case study analysis and discussion, open book test, class participation and any other test deemed to be suitable by the faculty.

### **5.1.2 Semester End Examinations**

There will be semester end examination at the end of the semester conducted by the Office of the Controller of Examinations, Pokhara University. It carries 50 percent weight of total evaluation.

### **5.2 Students' Responsibilities**

Each student must secure at least 45 percent marks in the internal evaluation with 80 percent attendance in the class to appear in the Semester End Examination. Failing to obtain such score will be given NOT QUALIFIED (NQ) and the student will not be eligible to appear in the Semester End Examination. Students are advised to attend all the classes and complete all the assignments within the specified time period. If a student does not attend the class(es), it is his/her sole responsibility to cover the topic(s) taught during the period. If a student fails to attend a formal exam, quiz, test, etc., there is not any provision for a re-exam.

## **6. Prescribed Books and References**

### **Text Book**

Behl, R., O'Brien, J. A., & Marakas, G. M. *Management Information Systems*. McGraw Hill Education, India

### **References**

Laudon, K.C., & Laudon, J.P., *Management Information Systems*.  
 Erl, T., Puttini R., & Mahmood, Z.. *Cloud Computing: Concepts, Technology & Architecture*.  
 Singer, P.W. & Friedman, A. *Cybersecurity and Cyberwar: What Everyone Needs to Know*.  
 Laudon, K. C. and Traver, C. G. *E-commerce 2024: Business, Technology, Society*.  
 Quinn, M. J. *Ethics for the Information Age*.