BAKER COLLEGE
STUDENT LEARNING OUTCOMES

ACC4820 Accounting Information Systems
3 Semester Credit Hours

Student Learning Outcomes and Enabling Objectives

1. Analyze the environmental influences on the design, operation, and control of accounting information systems (AIS) applications.
    a. Discuss the different aspects of information systems.
        i. Describe the types of information used in business, the flows of information through an organization, and the relationship of AIS to other information systems components.
        ii. Outline the key elements of the general model for AIS.
        iii. Describe the effects of organizational structure on AIS.
        iv. Discuss the role of accountants as designers and auditors of AIS.
    b. Describe the importance, and components of transaction processing systems.
        i. Discuss the role of transaction processing in providing relevant information (financial reporting, management reporting, and support of day-to-day operations).
        ii. Identify the types of transactions processed by each of the three major transaction cycles and the basic accounting records used.
        iii. Describe the relationship among accounting records in forming an audit trail.
        iv. Identify the key features of the structures used to store accounting data.
        v. Compare alternative transaction processing approaches.
        vi. Describe the role of data coding schemes in transaction processing.
        vii. Identify types of coding schemes, and the advantages and disadvantages of the major types.
    c. Examine the influence of ethics, fraud, and internal control.
        i. Discuss the ethical issues related to business and the use of automated systems.
        ii. Distinguish between management fraud and employee fraud.
        iii. Describe the common types of fraud schemes.
        iv. Identify the techniques for identifying unethical and dishonest management and assessing the risk of management fraud.

v. Describe the internal control structure and activities specified in the Committee of Sponsoring Organizations (COSO) framework.

d. Review the design, operation, and control features of an AiS application.

2. Evaluate transaction cycles and business processes in relation to the AIS.
   a. Identify the major transaction cycles, and the documents and functional departments involved in each.
   b. Describe the tasks performed in each transaction cycle.
   c. Document the key features and control points of each major subsystem.
   d. Illustrate how system functionality changes under different levels of technology.
   e. Demonstrate how the internal control focus shifts as the mix between technology and manual procedures changes.
   f. Examine the risks from errors and fraud and identify the controls to mitigate these risks.
   g. Discuss the technologies and techniques used in support of manufacturing environments.
      i. Identify the basic elements, procedures, and controls in a production process.
      ii. Describe the data flows in a cost accounting system.
      iii. Compare and contrast alternative accounting methods.
   h. Compare and contrast discretionary and non-discretionary reporting systems.
      i. Describe the operational features of the general ledger system (GLS), financial reporting system (FRS), and management reporting system (MRS).
      ii. Discuss the factors that influence the design of the MRS.
      iii. Identify the elements of a responsibility accounting system.

3. Design and manage data resources.
   a. Apply the database approach to resolve the problems associated with traditional systems.
      i. Discuss the functions and relationships among the primary elements of the database environment: users, the database management systems, the database administrator, and the physical database.
      ii. Explain the characteristics of the relational database model.
      iii. Examine database design topics including data modeling, deriving relational tables, the creation of user views, and data normalization techniques.
      iv. Discuss database configurations in a distributed environment: centralized, partitioned, and replicated.
   b. Apply the resources, events, and agents (REA) model in the design of accounting information systems.

i. Define the key elements of REA.
ii. Describe the structure of a REA diagram.
iii. Create a REA diagram using view modeling and integration steps.
iv. Discuss how REA modeling can improve competitive advantage.

c. Examine the issues related to the implementation of enterprise resource planning (ERP) systems.
i. Discuss the key features and general functionality of ERP systems.
ii. Describe the ERP configurations related to servers, databases, and software.
iii. Discuss the issues related to data warehousing: data modeling, data extraction, data cleansing, data transformation, and data loading.
iv. Identify the risks associated with the implementation of an ERP system.
v. Describe the control and auditing issues related to ERPs.

d. Evaluate the exposures and risks of the e-commerce environment.
i. Identify the technologies and techniques that underlie e-commerce.
ii. Identify the major risks that can prevent an organization from conducting business.
iii. Review the security and assurance techniques that reduce risk.

4. Examine the accountant's role in the systems development process.
a. Describe the stages of the systems development life cycle (SDLC).
b. Discuss the roles of the participants involved in systems development.
c. Outline the key tasks associated with the SDLC activities: new systems development and program change procedures.
d. Apply the TELOS model to assess the feasibility of a project.
e. Describe the role of accountants in managing the SDLC.

5. Apply the Committee of Sponsoring Organizations (COSO) and Control Objectives for Information and Related Technology (COBIT) frameworks to the design and assessment of internal controls.
a. Use the COSO framework to:
i. Analyze the control environment.
ii. Assess and mitigate risk.
iii. Classify control procedures.
iv. Identify strengths and weaknesses in internal control systems.
v. Propose solutions and alternatives in the design of internal controls.

b. Examine the COBIT framework.
i. Identify the key stakeholders.
ii. Discuss the six principles for a governance system.
iii. Describe the components of the governance system.
iv. Discuss the performance management principles.

v. Identify the seven phases of the COBIT implementation approach.

c. Describe the key components of an IT audit, including auditing standards, the structure of the engagement, management assertions, and auditor responsibilities under Sarbanes-Oxley (SOX).
    i. Identify the risks, controls, and tests of controls related to IT governance.
    ii. Identify the risks, benefits, and audit issues related to IT outsourcing.
d. Describe the elements of a disaster recovery plan.
e. Discuss SOX compliance regarding security and control of operating systems, database management systems, and communication networks.
    i. Identify the threats to the operating system and the control techniques used to minimize the possibility of actual exposures.
    ii. Discuss the risks associated with database integrity and the controls used to mitigate them.
    iii. Describe the exposure that arises in connection with electronic data interchange and how they can be reduced.
f. Describe SOX compliance regarding systems development and program change procedures.

Big Ideas and Essential Questions

Big Ideas

- The Operating Environment
- Transaction Cycles and Business Processes
- Managing Data Resources
- Systems Development
- COSO and COBIT Frameworks

These SLOs are not approved for experiential credit.

Effective: Spring 2020