School of Computing & Informatics

CSC452 – Information Systems Control and Audit

Learning Outcomes

At the end of the course, learners will be able to:

1. Demonstrate a detailed understanding of the fundamental issues involved in and the potential pitfalls of the development, installation, operation, and maintenance of information systems
2. Acquire in-depth understanding of relevant issues of IS audit and its importance in different systems
3. Understand IS audit training, working, accreditation, and IS audit professional bodies
4. Apply the acquired knowledge to secure and protect the information assets of an organization

Delivery Methodology

- Lectures
- Case Studies
- Group Projects

Course Content

1. Introduction
   - What is Audit and IS Audit
   - Why IS Audit?
   - Elements of IS Auditing

2. Conducting an IS Audit
   - Nature of controls
   - Dealing with complexity
   - Audit risks
   - Types of audit procedures
   - Overview of steps in an audit

3. Top Management Controls
   - Evaluating the planning function
   - Evaluating the organizing function
   - Evaluating the leading function
   - Evaluating the control function

4. System development management controls
   - Approaches to auditing systems development
   - Normative models of system development
   - Evaluating the major phases of system development
   - Programming management controls
   - Data resource management controls
   - Security management controls

5. Operation management controls
   - Computer operations
   - Network operations
   - Data preparation and entry
   - Production control
   - Quality assurance management controls

6. The application control framework
    - Boundary controls
    - Input controls
    - Communication controls
    - Output controls

7. Obtaining Evidence
    - Audit software
    - Concurrent audit techniques
    - Interviews, questionnaires
    - Performance measuring

8. Evaluating Evidence
    - Evaluating asset safeguarding and data integrity
    - Evaluating system effectiveness
    - Evaluating system efficiency

9. Developing a career in IS audit
    - IS audit as a profession-what it entails and what it takes

10. IS Audit management
    - Planning
    - Organizing
    - Staffing
    - Leading
    - Controlling

11. Standards and guidelines for IS Auditing
    - COBIT Framework
    - ISACA IT Standards, Guidelines, and Tools and Techniques for Audit and Assurance and Control Professionals
    - ISO 27000, 27002 series of standards

12. IS Audit reporting, communication & Follow up
    - Effective communication
    - Audit report

Course Evaluation

The course will be assessed by group projects (40%); test (10%) and a 2 hour written exam at end of the semester (50%).

Reference

Information Systems Control and Audit, 2/E, by Ron A. Weber and Rodger Jamieson

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