

MIS 131: Information Systems Administration

Part V: IT Security
Section D: IT Audit

Auditing

- **In an organizational setting, it is the periodical examination and check of financial and accounting records and procedures**
- **Considered an important part of any control system**

Auditing IT

- **Looks at all potential hazards and controls in information systems**
- **Additional layer of control and considered as a deterrent to criminal actions**
- **Can be very broad and complex**
- **In most cases, geared specifically towards general controls and application controls**

Types of Auditor

- **Internal auditor**
 - Corporate employee who is not in ISD
- **External auditor**
 - Corporate outsider
 - Reviews findings of internal audit and inputs, processing, and outputs of IS
 - IT audit part of overall external audit performed usually by a CPA firm
 - Other external auditors
 - Government auditor
 - Fraud auditor

Areas of IT Audit

- **New systems development**
- **Operations and maintenance**
- **Data integrity**
- **Software application**
- **Security and privacy**
- **Business continuity plan**
- **Disaster planning and recovery**
- **Strategic IS plan**
- **Purchasing, budgets, expenditures, chargebacks, and cost control**
- **Vendor management**
- **Documentation**
- **Training**
- **Productivity**

Questions IT Auditors Attempt to Answer

- **Are there sufficient controls in the system? Which areas are not covered by controls?**
- **Which controls are not necessary?**
- **Are the controls implemented properly?**
- **Are the controls effective?**
- **Is there a clear separation of duties of the employees?**
- **Are there procedures to ensure compliance with the controls?**
- **Are there procedures to ensure reporting and corrective actions in case of violations of controls?**

Types of Audit That Answer the Questions

- **Operational Audit**
 - Determines whether ISD is working properly
- **Compliance Audit**
 - Determines whether controls are properly implemented and are adequate

The Audit Process

- **Planning of audit**
- **Preliminary review and assessment of internal control structure**
- **Evaluation and testing of controls**
- **Analytical and substantive review**
- **Audit reporting**

IT Audit Categories

- **Auditing around the computer**
- **Auditing through the computer**
- **Auditing with the computer**

Auditing Around the Computer

- **Concentrates on inputs and outputs**
- **Computer is seen as a black box**
- **Suitable if the following exist:**
 - **Processing is straightforward, uncomplicated, and low volume**
 - **Audit trail is complete and visible**
 - **Documentation is complete, updated, and readily available**
- **Fast and inexpensive but may give false results (e.g. two errors cancelling each other out)**

Auditing Through the Computer

- **Focuses on processing steps and programmed controls**
- **Some common methods include**
 - **Reviewing program logic**
 - **Test data**
 - **Controlling processing and reprocessing**

Auditing With the Computer

- **Uses the computer along with other tools (checklists, formulas, charts) to aid in performing the steps of a detailed audit program**
- **Increases auditor effectiveness and efficiency**
- **Example**
 - **Generalized Audit Software (GAS)**