TICT 3142 Social and Professional Issues in IT

Lesson 02 **Ethics for IT Professionals and IT Users**

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Learning Outcomes

🎯 Upon successful completion of this lesson, students will be able to:

1. Understand the importance of ethics in the IT profession.

2. Distinguish between ethical and legal responsibilities.

3. Recognize professional codes of ethics (e.g., ACM, IEEE).

4. Identify common ethical challenges in ICT practices.

5. Apply ethical principles in real-world IT situations.

Profession

- **A Profession is a disciplined group of individuals who adhere to ethical standards and who hold themselves out as**

CUSTOMER SERVICE   POLICE   COOK

TEACHER   NANNY   STUDENT

WHITE-COLLAR WORKER   COURIER   NURSE

IT Professionals

- **Profession is a calling that requires**

1. Specialized knowledge

2. Long and intensive academic preparation

Are IT Workers Professionals?

Partial list of IT specialists

- Programmers

- Systems analysts

- Software engineers

- Database administrators

- Local area network (LAN) administrators

- Chief information officers (CIOs)

Are IT Workers Professionals?

Legal perspective

- IT workers are not recognized as professionals

- Not licensed

- IT workers are not liable for malpractice

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Professional Relationships That Must Be Managed

IT professionals have many different relationships with:

- Employers

- Clients

- Suppliers

- Other professionals

- IT users

- Society at large
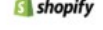
Relationships Between IT Professionals and Employers

- IT professionals must set an example and enforce policies regarding the ethical use of IT

- Software piracy is the act of illegally making copies of software or enabling others to access software to which they are not entitled

- Software piracy is an area in which IT professionals can be tempted to violate laws and policies

- The Business Software Alliance (BSA) is a trade group that represents the world's largest software and hardware manufacturers

   -Its mission is to stop the unauthorized copying of software produced by its members

Members of Business Software Alliance

BSA GLOBAL MEMBERS

https://www.bsa.org/membership

Relationships Between IT Professionals and Employers

- **Trade secret**

  ✓ Information used in business

  ✓ Generally unknown to the public

  ✓ Company has taken strong measures to keep confidential

- **Whistle-blowing**

  ✓ Whistleblowing is the act of a person, often an employee, revealing information about illegal, unethical, or unsafe activities within an organization.

Relationships Between IT Professionals and Clients

- **IT professional provides**

✓ Hardware, software, or services at a certain cost and within a given time frame

- **Client provides**

✓ $$ Compensation

✓ Access to key contacts

✓ Work space

- **Relationship is usually documented in contractual terms**

Relationships Between IT Professionals and Clients

- **Ethical problems arise if a company recommends its own products and services to remedy problems they have detected**

- ✓ A company is unable to provide full and accurate reporting of a project's status

Legal Overview:
Fraud, Misrepresentation, and Breach of Contract

- **Fraud**

- Crime of obtaining goods, services, or property through deception or trickery

- Fraud is proven in court

- **Breach of contract**

- One party fails to meet the terms of a contract

IT projects are joint efforts in which vendors and customers work together

- Difficult to assign blame

Relationships Between IT Professionals and Suppliers

- **Develop good relationships with suppliers**

  - Deal fairly with them

  - Do not make unreasonable demands

- **Bribery**

  - Providing money, property, or favors to someone in business or government to obtain a business advantage

  - U.S. Foreign Corrupt Practices Act (FCPA) makes it a crime to bribe a foreign official, a foreign political party official, or a candidate for foreign political office

Relationships Between IT Professionals and Suppliers

- **Bribery**

  - At what point does a gift become a bribe?

  - No gift should be hidden

  - Perceptions of donor and recipient can differ

  - Eaton Example: Flowers, lunch @ IBM, Jack Davis, Graphical OOP tools

Distinguishing Between a Bribe and a Gift

Bribe	Gift
To gain an advantage	To build relationships and show appreciation
Expectation of a reciprocal favor, gift, influence	No expectation of return
Given in secret	Given openly/publicly
Excessively high value	Appropriately priced to the occasion
Given around a time beneficial to giver	Given around holidays project completion, or as marketing tool

Relationships Between IT Professionals and Other Professionals

- **Professionals owe each other adherence to a profession's code of conduct**

- Ethical problems between members of the IT profession

    - Resume inflation

    Eaton example: 2 instructor applications Fall 08

    - Inappropriate sharing of corporate information

Relationships Between IT Professionals and Other IT Users

- **IT user is a person for whom a hardware or software product is designed**

- **IT professionals' duty**

  - Understand users' needs and capabilities

  - Deliver products and services that best meet those needs

  - Establish an environment that supports ethical behavior by users

Relationships Between IT Professionals and Other Society

IT professionals play a vital role in society beyond serving individual clients. They are responsible for:

•**Promoting the public good** by ensuring technology is safe, secure, and beneficial.

•**Acting ethically** by protecting privacy, preventing misuse, and being transparent.

•**Supporting digital inclusion** by creating accessible technologies and improving digital literacy.

•**Complying with laws and norms** to ensure responsible and legal use of technology.

•**Driving innovation** that solves social challenges and improves quality of life.

The Ethical Behavior of IT Professionals

Key ethical principles include:

•**Honesty and Integrity** – Being truthful and transparent in all actions.

•**Confidentiality** – Protecting user data and respecting privacy.

•**Respect for Intellectual Property** – Using and crediting software and content legally.

•**Professional Competence** – Accepting only tasks within their skill set and updating their knowledge.

•**Avoiding Harm** – Ensuring their work does not exploit, deceive, or hurt others.

•**Fairness** – Promoting inclusivity and preventing discrimination in technology.

Professional Codes of Ethics

- **A professional code of ethics states the principles and core values that are essential to the work of a particular occupational group**

- **Main parts:**

- Outlines what the professional organization aspires to become

- Lists rules and principles by which members of the organization are expected to abide

Professional Codes of Ethics

- **Benefits for individual, profession, and society**

  - Improves ethical decision making

  - Promotes high standards of practice and ethical behavior

  - Enhances trust and respect from the general public

  - Provides an evaluation benchmark

Professional Bodies For IT Professionals

- **Professional Bodies For Each Profession in IT**

1. Software Engineers Profession: IEEE-CS, CSE, BCS, ACS, CSSL

2. Business Analyst Profession: IIBA

3. Quality Assurance Engineers Profession: ISTQB

4. Network Engineers Profession: ACM

5. Project Managers Profession: PMI

6. Software Architects Profession: IASA

Common IT industry certifications

Category	Certification	Certifying organization
Security	CompTIA Security+	Computer Technology Industry Association
Security	Certified Security Analyst	International Council of E-commerce Consultants (EC)
Forensics	Certified Computer Examiner	The International Society of Forensic Computer Examiners
Governance	Certified in the Governance of Enterprise IT	ISACA
Project management	Project Management Professional	Project Management Institute

Certification

- **Indicates a professional possesses a particular set of skills, knowledge, or abilities in the opinion of a certifying organization**

- **Can also apply to products**

- **Generally voluntary**

- **Carries no requirement to adhere to a code of ethics-**

Certification

- **Vendor certifications**

- Some certifications substantially improve IT workers' salaries and career prospects

- Relevant for narrowly defined roles Or certain aspects of broader roles

- Require passing a written exam

- Workers are commonly recertified as newer technologies become available

Certification

- **Industry association certifications**

- Require a certain level of experience and a broader perspective than vendor certifications

- Lag in developing tests that cover new technologies

Examples:-

CompTIA (Computing Technology Industry Association):

GIAC (Global Information Assurance Certification):

ISACA (Information Systems Audit and Control Association):

Cisco Certified Network Associate (CCNA):

AWS Certified Solutions Architect:

Project Management Institute (PMI) certifications:

Government Licensing

- **it is a government issues permission to engage in an activity or to operate Business**

- **Case for licensing IT professionals**

  - Encourage IT professionals to follow the highest standards of the profession

  - Practice a code of ethics

  - Violators would be punished

Government Licensing

- **Issues associated with government licensing of IT professionals**

    - There are few international or national licensing programs for IT professionals

    - No universally accepted core body of knowledge

    - Unclear who should manage content and administration of licensing exams

    - No administrative body to accredit professional education programs

    - No administrative body to assess and ensure competence of individual professionals

IT Professional Malpractice

- **Negligence has been defined as not doing something that a reasonable man would do, or doing something that a reasonable man would not do**

- Duty of care refers to the obligation to protect people against any unreasonable harm or risk

- Courts consistently reject attempts to sue individual parties for computer-related malpractice

IT Users

- **Employees' ethical use of IT is an area of growing concern**

Common Ethical Issues for IT Users

- **Software piracy**

- **Inappropriate use of computing resources**

- **Inappropriate sharing of information**

  - Private data

  - Confidential information

Supporting the Ethical Practice of IT Users

- **Policies that protect against abuses:**

- Establish boundaries of acceptable and unacceptable behavior

- Enable management to punish violators

- **Policy components include:**

 - Defining and limiting the appropriate use of IT resources

 - Establishing guidelines for use of company software

 - Structuring information systems to protect data and information

 - Installing and maintaining a corporate firewall

Manager's Checklist of items to consider when Establishing an IT Usage Policy

TABLE 3-6 Manager's checklist for assessing an organization's readiness to prevent and respond to a cyberattack

Question
Has a risk assessment been performed to identify investments in time and resources that can protect the organization from its most likely and most serious threats?
Have senior management and employees involved in implementing security measures been educated about the concept of reasonable assurance?
Has a security policy been formulated and broadly shared throughout the organization?
Have automated systems policies been implemented that mirror written policies?
Does the security policy address the following? • Email with executable file attachments • Wireless networks and devices • Use of smartphones deployed as part of corporate rollouts as well as those purchased by end users
Is there an effective security education program for employees and contract workers?

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Has a multi-layered CIA security strategy been implemented?

Has a firewall been installed?

Is antivirus software installed on all personal computers?

Is the antivirus software frequently updated?

Have precautions been taken to limit the impact of malicious insiders?

Are the accounts, passwords, and login IDs of former employees promptly deleted?

Are employee responsibilities adequately defined and separated?

Are individual roles defined so that users have authority to perform their responsibilities and nothing more?

Is it a requirement to review at least quarterly the most critical Internet security threats and implement safeguards against them?

Has it been verified that backup processes for critical software and databases work correctly?

Has an intrusion detection system been implemented to catch intruders in the act—both in the network and on critical computers on the network?

Are periodic IT security audits conducted?

Are periodic IT security audits conducted?

Has a comprehensive incident response plan been developed?

Has the security plan been reviewed and approved by legal and senior management?

Does the plan address all of the following areas?

- Incident notification
- Protection of evidence and activity logs
- Incident containment
- Eradication
- Incident follow-up

Summary

- **A professional from a legal standpoint**

- Has passed the state licensing requirements

- Has earned the right to practice there

- **IT professionals have many different relationships**

- Each with its own set of ethical issues and potential problems

- **Professional code of ethics**

- States the principles and core values essential to the work of an occupational group

Summary

- **Licensing and certification of IT professionals**

- Many people feel that certification will increase the reliability and effectiveness of information systems

- Raises many issues

- **IT-related professional organizations have developed a code of ethics**

- **IT usage policy defines appropriate and inappropriate IT user behavior**

END