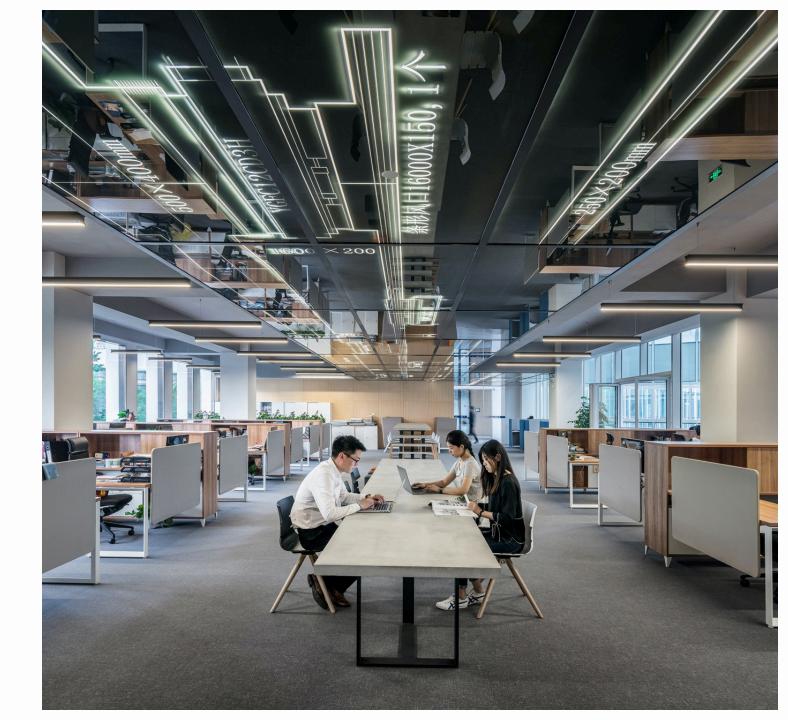# Proffesional Practices in ICT

ITC4182

Lecture 1

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The module will provide essential knowledge in professional practices in ICT and ICT-related law to develop the skills, qualities, and values required by ICT professionals

Module Learning Outcomes(MLO)

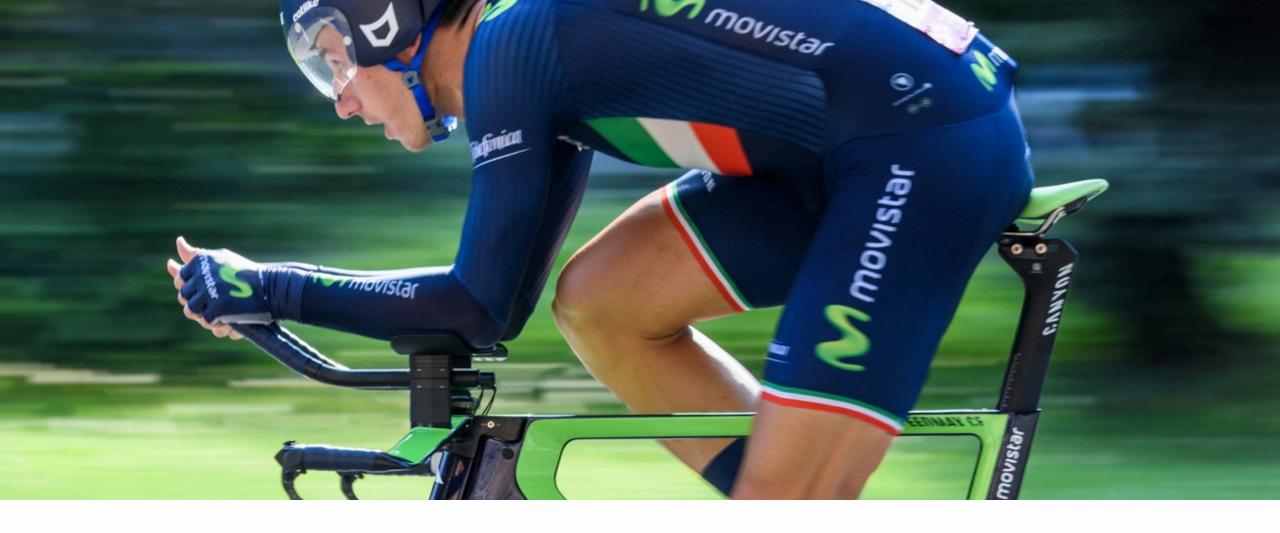On successful completion of this module, students should be able to:

MLO1   Discuss the knowledge in professional practices in ICT and ICT related law

MLO2   Apply the knowledge in professionalism in ICT, professional communication, and ICT related law in real world scenarios.

MLO3   Analyse real world scenarios based on intellectual property laws, software contracts and licences; privacy and data protection laws; and computer misuse.

Module Outline

- Professionalism in ICT

- Professional Communication and Teamwork

- Organizations in ICT

- Intellectual Property

- Software Contracts and Licenses

- Internet Issues, Privacy and Data Protection

- Computer Misuse

- Social Impact of ICT Professionals

Professionalism in ICT

This section explores the key aspects of professionalism in the dynamic field of Information and Communication Technology (ICT).

Professionalism: It's NOT the job you DO, it's HOW you DO the job

- Anonymous -

Professionalism

- Profession
  A profession is a vocation or occupation that requires specialized knowledge, skills, and training, often with strict ethical standards and self-regulation.

- Professional
  A professional is an individual who has achieved a high level of **expertise** and **competence** in a particular field, adheres to professional standards, and maintains a commitment to ethical conduct.

- Professionalism
  Professionalism in the context of ICT refers to the set of **behaviors**, **attitudes**, and **practices** that demonstrate a commitment to excellence, integrity, and responsibility in the information and communication technology industry.

Professionalism

Professional Practice

Professional practice refers to the specific application of skills, knowledge, and standards that define a particular profession. It involves adhering to established best practices, techniques, and methodologies to achieve professional goals and uphold industry standards.

Professional Ethics

Professional ethics refers to the moral principles and standards of behavior that govern a profession. These ethics are often formalized in a code of conduct and guide professionals in making ethical decisions, especially when faced with dilemmas.

Examples of Professional Practice in ICT

Following secure coding practices, conducting thorough software testing, managing projects according to established frameworks like Agile or Waterfall, and adhering to data protection regulations.

Examples of Professional Ethics in ICT

Ensuring data privacy, avoiding conflicts of interest, protecting user rights, and practicing transparency when errors occur or limitations exist in a product or service.

Professionalism in ICT

Explore behaviors and traits that define a true professional in ICT

Technological Challenges for the Legal System

Rapid technological advances in fields like biotechnology and information technology are posing ongoing challenges for the legal system. Traditional laws often struggle to keep pace with these innovations, becoming outdated quickly due to the evolving nature of technology and shifting societal values.

Regulatory Challenges in the Digital Age

Data Privacy

Regulations like GDPR aim to protect user privacy, but advancements in data analytics and AI challenge these laws, as new techniques can reveal personal information even from anonymized data.

Social Media

Laws attempt to curb misinformation on social media but struggle to keep up with the rapid spread of false information and evolving manipulation technologies like deepfakes.

Artificial Intelligence

AI algorithms in different areas like hiring and criminal justice raise transparency and bias issues that current discrimination laws don't fully address, leaving a regulatory gap.

Cybersecurity and Data Breaches

New cyber threats, like ransomware, evolve quickly, outpacing laws and leaving organizations vulnerable as regulations struggle to adapt to emerging risks.

Blockchain and Cryptocurrencies

Blockchain's decentralized nature challenges traditional financial regulations, complicating efforts to classify, tax, and protect users in the cryptocurrency space.

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Why Proffesionalism in ICT?

The Importance of Professionalism in ICT

- **Maintaining Trust and Integrity**
  ICT professionals handle sensitive information and upholding ethical standards and confidentiality is essential to maintain trust with clients, employers, and the public.

- **Ensuring Quality and Reliability**
  Professionals are expected to adhere to high standards of quality, following best practices in system design, testing, and deployment to prevent errors and ensure reliable ICT systems.

- **Promoting Ethical Behavior and Accountability**
  ICT professionals must avoid plagiarism, give proper credit, and be transparent about limitations and risks of technology, while also taking responsibility for their work.

- **Enhancing Communication and Collaboration**
  Professionalism fosters clear and effective communication with colleagues, clients, and stakeholders, and supports collaboration in interdisciplinary teams.

The Importance of Professionalism in ICT

- **Improving Career Prospects and Industry Reputation**
  Demonstrating professionalism can lead to career growth and advancement, while also contributing to the broader reputation of the ICT industry.

- **Supporting Legal and Regulatory Compliance**
  ICT professionals must understand and comply with relevant laws, regulations, and standards to reduce legal risks for both individuals and organizations.

- **Upholding a Safe and Inclusive Work Environment**
  Professionalism in ICT includes fostering a respectful and inclusive workplace, where ethical values are shared and employees are encouraged to innovate without fear of discrimination or harassment.

Traits of a Professional

- ## Integrity
  Acting ethically, being honest, and maintaining confidentiality when handling sensitive information in ICT roles.

- ## Accountability
  Taking responsibility for one's actions, meeting deadlines, and being reliable in ICT project management and support.

- ## Communication Skills
  Effectively conveying technical information to both technical and non-technical stakeholders, active listening, and collaborative problem-solving.

- ## Technical Competence
  Possessing in-depth knowledge and skills in ICT technologies, systems, and software to provide effective solutions and support.

- ## Commitment to Ongoing Learning
  Continuously updating skills and knowledge to stay current with the rapidly evolving technology landscape and industry best practices.

"Professionalism is not just a set of skills, but a way of being that commands respect and trust."