

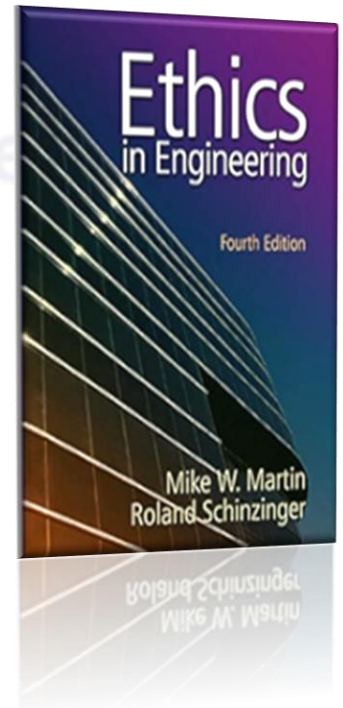
Engineering Ethics

(HSS-422)

(3+0)



Department of Computer
Software Engineering
Karachi Campus

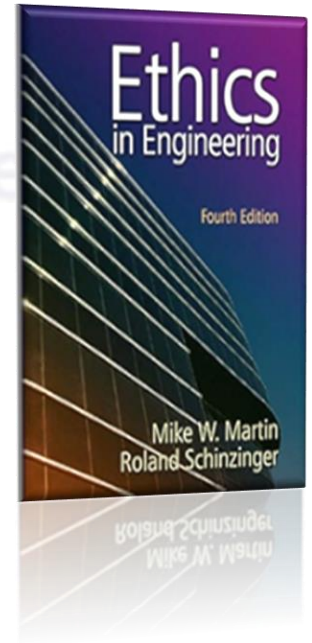


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UNDERSTANDING PROFESSIONAL ETHICS IN ENGINEERING

Lecture No 01

By Engr. Syed Rizwan Ali

Learning Outcomes

In this Lecture will cover ..

- Understand the Importance of Professional Ethics in Engineering.
- Analyze the Relationship between Engineering and Professionalism.
- Evaluate the Significance of Engineering Ethics Education
- Apply Concepts of Responsibility and Types of Ethics in Engineering.
- Critique and Propose Ethical Engineering Practices.

What is the PROFESSIONAL ETHICS



What is a Profession?

❖ Definition:

- A disciplined group of individuals adhering to ethical standards with specialized knowledge acquired through training and education, committed to serving the public's interest.

Engineering and Professionalism

❖ Definition:

- Engineering is a profession that requires a high standard of knowledge, ethics, and responsibility, focusing on public safety, welfare, and trust.

❖ Why Study Engineering Ethics?

- To ensure safety, professional responsibility, awareness of ethical issues, and guidance for decision-making.

What is ethics?

Background:

- Ethics comes from a **Greek word Ethiko** derived from **ETHOS** meaning **habit**.
- Moral principles that govern a **person's behavior** or the **conducting of an activity**.



What is ethics?

❖ Definition:

- Ethics refers to the set of moral principles that govern the behavior of individuals and groups, **determining** what is good or bad, right or wrong in human conduct.
- It encompasses the study of values, duties, and virtues, guiding decisions and actions in various aspects of life, including personal relationships, business practices, and professional responsibilities.

What is ethics?

❖ Definition:

- **Moral Principles:** Ethics encompasses the moral principles and values that guide behavior, determining what is considered right and wrong, good and bad in human actions.
- **Decision-Making Framework:** It serves as a framework for making decisions and guiding actions, helping individuals and organizations navigate moral dilemmas and choose actions that align with ethical standards.

What is ethics?

❖ Why Professionals have Special Ethical Responsibilities?:

- Professionals have clients not customers.
- Client must trust professional.
- Professional serves a public good.
- Codes of ethics: Special responsibilities of professionals. (For the safety of people)

What is ethics?

❖ Why professional ethics?:

- What makes a good engineer and good engineering?
- Engineering ethics consists of responsibilities and rights that have to be adapted/accepted by engineers, and should be aware of desirable ideals and personal commitments in engineering.
- As an engineer which engineering rules are followed.
(Right and Wrong)

Types of Ethics or Morality

- Descriptive Ethics: Study of moral beliefs.
- Normative Ethics: Criteria of right or wrong.
- Applied Ethics: Examining specific ethical issues.
- **Descriptive Ethics:**
 - Descriptive ethics involves the study of people's beliefs about morality, focusing on how individuals actually behave and what moral standards they claim to follow.
 - It aims to understand and describe the moral -

Types of Ethics or Morality

- **Descriptive Ethics:**
 - compass that guides societies and individuals without making judgments about their correctness.
- **Normative Ethics:**
 - Normative ethics seeks to determine what moral standards should govern human behavior, proposing norms or rules that dictate right and wrong actions.
 - It is concerned with setting criteria for what constitutes ethical conduct, offering guidelines on how to act morally in various situations.

Types of Ethics or Morality

- **Applied Ethics:**
- Applied ethics applies ethical theories and principles to specific practical issues, addressing moral questions in fields such as medicine, business, law, and environmental policy.
- It involves analyzing and solving moral dilemmas in real-world contexts by applying normative ethical standards.

Types of Ethics or Morality

- ❖ **Common Morality:** Is a set of moral beliefs shared by almost everyone. Such as it is wrong to murder, lie, cheat or steal, break promises, harm others physically, and so forth.
- **Characteristics of common morality are:**
- **Positive Percept:** Prevent Killing, prevent dishonesty (don't mislead), prevent cheating, promote human happiness, protect natural environment.
- **Negative Percept:** According to some moralists, common morality is designed primarily to protect individuals from various types of violations or

Types of Ethics or Morality

- **Negative Percept:** or incursions of their personhood by others.
- Common Morality makes a distinction between an evaluation of a person's actions and an evaluation of his intention.

E.g. if a driver kills a pedestrian in his automobile accidentally, he may be charged with manslaughter (or nothing) but not murder. The pedestrian is just as dead as if he had been murdered., but the driver's intention was not to kill him., and the law treats the driver differently, as long as he was not reckless.



Thanks

Any Question

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