PROFESSION AND PROFESSIONALISM IN ENGINEERING

Lecture 5 – Engineering Ethics

LEARNING OBJECTIVES

- Define Profession and Professionalism
- Understand the models of professional engineers
- Explore professional virtues and ideals
- Analyze how professionalism supports ethical behavior in engineering

WHAT IS A PROFESSION?

- A job or occupation pursued to earn a living
- Key Characteristics: Advanced expertise, Self-regulation, Service to public good

ADVANCED EXPERTISE

- Requires sound knowledge in technical and liberal arts domains
- Continuous learning and upskilling are essential

SELF-REGULATION

- Governed by admission standards and codes of ethics
- Public and governmental representation

SERVING THE PUBLIC GOOD

- Ethical conduct contributes to societal welfare
- High standards in practice benefit individuals and communities

WHO IS A PROFESSIONAL?

- Engages in a profession for livelihood and legal/moral duties
- Robert Whitelaw: Freedom from coercion
- Samuel Florman: Laws > conscience
- Martin & Schinzinger: Moral responsibility to stakeholders

MODELS OF PROFESSIONAL ENGINEERS

- Savior
- Guardian
- Bureaucratic Servant
- Social Servant
- Social Enabler/Catalyst
- Game Player

SAVIOR

- Rescues systems from technical threats
- Example: Engineers solving Y2K crisis

GUARDIAN

- Foresees future tech directions
- Provides guidance for sustainable growth

BUREAUCRATIC SERVANT

- Loyal, skilled problem-solver
- Trusted with decisions and leadership during crises

SOCIAL SERVANT

- Works for societal good without self-interest
- Fulfills government-mandated tasks

SOCIAL ENABLER / CATALYST

- Connects company and society
- Helps both recognize and achieve shared goals

GAME PLAYER

- Operates within business rules
- Balances services with economic realities

WHAT IS PROFESSIONALISM?

- Covers skills, ethical conduct, and decision-making
- Doing the right thing regardless of feelings

PROFESSIONAL IDEALS & VIRTUES

- Public-Spirited Virtues
- Proficiency Virtues
- Teamwork Virtues
- Self-Governance Virtues
- Supported by motives, attitudes, and emotions

PUBLIC-SPIRITED VIRTUES

- Focus on public welfare and avoid harm
- Promote safety, community engagement, and justice

PROFICIENCY VIRTUES

- Competence – effective performance
- Diligence – alertness and care
- Creativity – innovation in tasks

TEAMWORK VIRTUES

- Cooperation and loyalty to peers and org
- Motivate team toward shared goals

SELF-GOVERNANCE VIRTUES

- Integrity, courage, perseverance, self-respect
- Truthfulness and trustworthiness

RESPONSIBLE PROFESSIONALISM

- Integration of all virtues in practice
- Foundation for ethical engineering conduct

SUMMARY

- Profession demands commitment beyond skill
- Professionalism is rooted in ethical virtue
- Engineers must be role models in society

DISCUSSION / REFLECTION

- How can an engineer balance economic interest with social duty?
- Which professional model do you relate to most, and why?