Introduction to Engineering Professionalism

EGG101 Engineering Professionalism

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Introduction

Objective: Understand and build consensus on engineering professionalism based on in-class group discussion

Key Focus Areas:

- Ethics in engineering
- Professional responsibility
- Decision-making in ethical dilemmas

Activity Structure (1 to 1.5 Hours)

1. **Round 1 (Research - 15 min)**: Explore key resources and identify essential points.
2. **Round 2 (Group Discussion - 15 min)**: Compare findings and summarize core principles.
3. **Round 3 (Consensus and Presentation - 20 min)**: Finalize group insights and present.
4. **Reflection (10 min)**: Summarize class consensus and key takeaways.

Resources to Explore (No AI Allowed)

Engineering Codes of Ethics:

- IEEE: IEEE Code of Ethics
- ACM: ACM Code of Ethics
- NSPE: NSPE Code of Ethics
- any other

Case Studies and Guidelines:

- ABET: Engineering Accreditation Standards
- PEC: Pakistan Engineering Council Code of Conduct

Round 1: Key Questions

Students will explore the following:

- What are the top three qualities of a professional engineer?
- Why do ethical responsibilities matter in engineering?
- What should an engineer do when faced with an ethical dilemma?

Round 2: Group Discussion

Activity:

- Compare research findings within small groups.
- Identify common themes.
- Summarize key principles in a shared document.

Round 3: Consensus and Presentation

Each group will:

- Present their refined principles of professionalism.
- Discuss key agreements and disagreements.
- Arrive at a class-wide consensus.

Final Reflection and Takeaways

Key Learning Outcomes:

- Engineering professionalism includes ethics, responsibility, and continuous learning.
- Engineers must balance technical, social, and ethical duties.
- Professional behavior impacts society and industry.

Reflection: *How has your perspective on engineering professionalism changed?*