Introduction to Engineering Ethics

School of Engineering Design, Technology and Professional Programs
What is Ethics?

- Ethics (dictionary) “the philosophy of morals or the standard of character set by any nation or race”
- Morals (dictionary) “pertaining to action with reference to right and wrong”
- Engineering ethics:
  
  “Study of Moral Values, Issues and Decisions as they relate to Engineering Practice”
- Professional Societies and Codes of Ethics: “Provide a set of guidelines of how engineers should behave with respect to clients, the profession, the public, and the law”
- “Engineers shall undertake assignments only when qualified by education or experience in the specific field involved”
- “Engineers are morally responsible for harms they intentionally [knowing and deliberately], negligently [unknowingly, but failing to exercise due care] or recklessly [aware that harm is likely to result] cause”
Personal, Common and Professional Ethics

Set of standards adopted by professionals

Moral ideals shared by most members of a culture or society

Abortion Instruments?

Set of one’s own ethical commitments usually given in early home or religious training
Professional Societies and Codes of Ethics

- Provide a common agreed-upon standard for professional conduct
- Do not provide new ethical principles but incorporate a lot of what is found in common morality
- Various Engineering Societies have their own code of ethics
- ALL STRIVE TO:

“Provide a set of guidelines of how engineers should behave with respect to clients, the profession, the public, and the law”
ASME Code: Fundamental Principles

Engineers uphold and advance the integrity, honor, and dignity of the engineering profession by:

1. Using their knowledge and skill for the enhancement of human welfare;
2. Being honest and impartial, and serving with fidelity the public, their employers and clients; and
3. Striving to increase the competence and prestige of the engineering profession.
Engineering Societies Codes of Ethics

- Subject to interpretation by different individuals arriving at different conclusions for the same ethical dilemma
- Very useful for students when applied to case studies where the students can determine what was/should have been the appropriate course of action
- Are subject to revision periodically, reflecting new attitudes in the human condition
Responsibility - Health and Safety

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Harris et al. [4]