Ethics in a Professional Work Environment: An Introduction

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What are Ethics?
What are Ethics?

- The principles that guide our actions and behaviors based on:
  - Laws
  - Emotions
  - Personal experience
  - Upbringing
  - Religion
  - Rules placed by your field of work
Professional Ethics

- Does a working professional have a responsibility other than to produce the best product or process?
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- Why are ethics important?
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- Why are ethics important?
- What are the possible consequences of not using ethics?
Professional Ethics

- Does a working professional have a responsibility other than to produce the best product or process?
- Why are ethics important?
- What are the possible consequences of not using ethics?
  - Loss of life
  - Loss of property
  - Going out of business
  - Loss of reputation
  - ....
Being ethical – is it really this simple?

- Standards for ethical decision making
  - ABET – Accreditation Board for Engineering and Technology
  - NSPE – National Society of Professional Engineers
  - ASME – American Society of Mechanical Engineers
    - 2003 Ethics in Engineering Design, Published 2003, Print-Book, 160 pages

- These are only *guidelines*

- Ethics are achieved by following a mixture of moral, legal, and personal values.
Ethical Decision-Making

- A professional must be able to identify when an ethical issue arises

- *Rule-of-thumb: Personalize the consequences*

- Where in a design process do these issues arise?

- What else are important characteristics about these issues?
Types of Ethical Issues

○ Can be generalized into broad categories:

○ Negligence
  - Intended
  - Unintended

○ Immoral
  - Drug companies, cigarette companies
  - Research and Development

○ Unprofessional
Ethics and Law

Should ethics have to be enforced legally?
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- Legal enforcement has many characteristics:
  - Laws have to be passed and then enforced
  - Breaking of a law has to be proven
  - Decisions are often made by non-technical citizens

- Example: Privacy, 14 CFR Part 107 and unmanned aerial systems (drones)
Ethics and the Technical Workforce

- Technical workers are increasingly becoming required to foresee problems and design their solutions.

Is this fair?

- Question: How do you do it?
Ethics and the Technical Workforce

๏ Technical workers are increasingly becoming required to foresee problems and design their solutions

Is this fair?

๏ Question: How do you do it?

๏ Answer: You approach this problem like any other in technical disciplines

Gather data, analyze and make an intelligent choice
Ethical Decision Framework

- Personal Feelings
- Ethical Standards
- Legacy Data
- Morals
- Other opinions (technical / non-tech)
Homework

- Look up information on Theranos and Elizabeth Holmes
- ‘The Inventor: Out for Blood in Silicon Valley’ HBO Max
- ‘The Dropout’ Hulu
- ‘60 Minutes: Elizabeth Holmes and the Theranos Deception’ Youtube
- ‘Elizabeth Holmes: Valley of Hype’ Youtube
- Look up negative consequences of social media