Insight XIII Workshop – Professional Ethics
Breakout 1 notes

1. What skills do we need to develop in students to help them be ethical professionals?

- We start with vocabulary: **How** we talk about ethics.
- Students need to be able to recognize **when** there is an ethical dilemma, and **what** ethical dilemmas are.
    - For example, cheating, the tension between profits and society, encountering tempting perks,
- Students need an understanding of **why** ethics are important. This can include concepts/theories/frameworks in values, ethics, and ethical decision making.
    - Codes of ethics and discipline specific examples can be used.
    - Discussion can included how different backgrounds/cultures/etc may influence our values
- Students need critical thinking and reflective skills
    - Emotional intelligence, Empathy
    - Intentionality
    - Reflective, Self-awareness/metacognition
    - How to battle against **perfection/vulnerability**/willing to learn from being wrong. **Understanding failure/resilience -** Unethical traits arising from failure.
    - Being true to your word/**trustworthiness**
    - **Courage/Agency:** When to speak up and speak out - especially with power dynamics. There is power in followership - how to act appropriately/ professionally. (These issues come up in professional interviews.)
    - How to navigate gray areas/**challenge authority**
    - **Proactivity:** When one needs to act vs react.
- Students need to be able to **evaluate**/explore ethical dilemmas/situations
    - Question implications/impacts of what they do - how to think through long-term implications from the start (i.e., AI data-collection, projects that may contribute to climate change, a voice recognition system, who will have access to that data in the future, and what do the users actually want / why are you collecting that data in the first place).
    - Understand POV of multi user groups.
- An understanding of the "workplace/profession"
    - Informational interviews, how to know what the culture is like at a company you may be applying to work at.
    - **Understanding roles:** Who within groups are responsible.
    - **Assessing ethical leadership:** Types of traits for ethical and unethical leadership.
    - Who and where to go for guidance if they don't know how to respond.
    - Conflict resolution, weighing obligations
    - Difference between meeting legal requirement and ethical requirement

2. What else should we teach about professional ethics?

- While there was a lot of overlap with question one, there were several mentions of empathy, impacts/implications, and of using exemplars in teaching.
    - Tell more stories about people doing the ethical thing

- Fewer stories of heroism
- Positive case studies when things go right
- How professors have dealt with **poor ethical decisions** in the past

3. **What big themes/concepts/values do engineering students need to know about so they can refer to them in challenging situations?**

Reflective/Critical Thinking skills

- Intentionality
- Empathy, Emotional Intelligence
- Reflection/self-awareness/metacognition
- How to challenge authority
- Trustworthiness
- Transparency
- Values
    - People are not equivalent to jobs; your identity is bigger than your job. Even if you get fired for doing the right thing, it'll be ok.
    - Students should be clear on their own values; is this company a good fit for me. Helping students pick companies that fit their values.
    - Helping students question their values so they are clear on what matters to them. Values often remain consistent over time.
    - Thought framework for being in touch with your own values - have you even thought about or tested your values? - examples: rate 1-5 priorities, integrity, work-life balance, working on the edge; students could be directed to a career values assessment survey

Skills related to working with others

- Conflict management
- Understanding dysfunctional teams
- Receiving/giving proper feedback
- Good practice with communications

Ethical frameworks/theories/codes

- Exposure to ethical theory - engineering Hippocratic oath
- Examples of things that went well (not just examples of failures).
- Noon Pi (noonpi.com) - sell PE license training programs, but have case studies and quizzes. Ethics and professionalism is central theme.

Problem assessment

- Know resources and steps you can take - problem solving process
- Global assessment (multiple breakdowns)
- Responsibility - prompt students to ask themselves what their responsibility is (social, financial, safety)

Knowledge of corporations/legal systems

- How to find out about company culture - informational interviews.
- Legal protections that exist.
- Protections afforded to whistleblowers

4. **Are there discipline-specific topics or concepts that students should know about?**

- Yes, several examples were brought up:
    - Biomedical – FDA, Clinical Trials, Human research
    - Materials and Chemical – ethical sourcing of materials; waste and environmental concerns
    - IEMS - Precision Scheduled Railroading
    - Interdisciplinary - AI, Facial recognition, data collection – should data be collected, used?
    - Codes of ethics: IEEE, ACM, AIChE, NSPE, Canada – Order of the Engineer
- But there are some things that can be discipline specific, but that should be in all disciplines
    - Ethics should be part of the design process; User-centered focus (what are values of user).
    - Guidelines and code of ethics for engineering research
    - Consideration of vulnerable populations
    - Cultural sensitivities
    - Job application ethics
- And there are some questions that remained in this discussion
    - Do we allow students to choose to not do project over ethical concerns? (For example: Military contractors?)
    - How do you embed this discussion / how do you make room in a course, ex DTC, stop long enough to actually engage. The faculty must be qualified and engaged to encourage the students, particularly in a project class
    - 25-30% of McCormick students go to grad school - what role do ethics play there?