PROFESSIONAL ETHICS

Engr. Madeha Mushtaq

Ethics

- Ethics – “synonyms for morally correct or justified - set of justified moral principles of obligation, rights, and ideals.”
- Ethics – “the philosophical study of what is right or wrong in human conduct and what rules or principles should govern it.”
- Ethics – “area of study or inquiry - an activity of understanding moral values, resolving moral issues, and justifying moral judgments.”

What are Moral Values? What is Morality?

- Moral standards deal with matters that can seriously injure or benefit humans.
- Moral standards are not established or changed by authoritative bodies.
- Moral standards, we feel, should be preferred to other values, including self interest.

What are Moral Values? What is Morality?

- The ultimate aim of ethics is to develop a body of moral standards that we feel are reasonable to hold.
- Ethics is a normative study of ethics/morality, the social sciences engage in a descriptive study of ethics.
- A normative study is an investigation that attempts to reach normative conclusions.
- A descriptive study is one that does not try to reach any conclusion about what things are truly good or bad or right or wrong.

Personal Ethics vs Professional Ethics

- Personal ethics is a foundation of professional ethics.
- There is a difference between professional ethics and personal ethics.
- “Professional Ethics is the ethical identity, codes and practices of particular professions, such as the professions followed by nurses, doctors, lawyers or engineers.”
- Professional ethics has to do with the ethical standards accepted by a professional community.

Personal Ethics vs Professional Ethics

- *Personal Ethics*

  is the set of ones own ethical commitments.

- *Common Morality*

  is the set of moral ideals shared by most members of a culture or society.

- *Professional Ethics*

  is the set of standards adopted by professionals in so far as they see themselves acting as professionals. It can be different from personal ethics and common morality.

Professional Ethics

- The following examples shows some of the possible relationships between professional, personal, and common morality.

- “An engineer refuses to design military hardware because she believes war is im-moral.
  - This refusal is based on personal morality.
- A civil engineer refuses to design a project he believes will be contrary to the principles of sustainable (maintain) development.
  - This refusal is based on personal morality and professional code of ethics.”

Ethics and Professional Ethics

- Why is ethics an integral part of professional life, and in particular the life of an engineering professional?
- Broadly speaking there is agreement on common characteristics shared by all professions.

Ethics and Professional Ethics

- **A professional:**

  - has specialised skills and knowledge
  - continues to maintain and update them through professional life
  - has, as a result of this specialised expertise, significant power to affect individual clients and wider society.
  - belongs to a professional body which regulates their practice.
  - Follows the ethical principles which the professional body oversees.

Ethics and Professional Ethics

- The expertise of professionals give them power to improve people's wellbeing, or to cause significant harm.
- In the case of doctors, whose actions can save lives or cause death.
- While the actions of a medical professional typically affect individual patients directly, the "**decisions of engineering professionals have the potential to impact on the wellbeing of many hundreds or thousands of people.**"

Ethics and Professional Ethics

- As a result of the power their skills bring, society places great trust in professionals to exercise those skills wisely.
- Thus common to all professions is a commitment to use expertise in **pursuit of the public good.**
- This creates a critical role for ethics, as the professional's adherence to ethical principles is a central part of the exercise of good professional judgement.

Developing a Well-Reasoned Response to a Moral Dilemma

- Moral dilemmas are situations in which two or more moral obligations, duties, rights, goods, or ideals come into conflict with one another.
  - How does one decide whether a response is well-reasoned?
  - What criteria apply?
  - Can we reliably judge?

Case Studies

- Ivermectin
  - The story of a drug in treating, “River Blindness”.
- Moral Standards
  - B.F. Goodrich Case
- Florida court cigarette manufacturing company case.

Professional Ethics

- **Principles,**
  Morale,
  Believes,
  Standards,
  …etc

- **Engineering Ethics**: is about
  - how we have to act and live as an engineer,
  - what we have to consider when making decisions,
  - according to what standards are these actions right or wrong.

  Shortly Engineering ethics is how engineers morally act as an Engineer. This is professional ethics NOT personal ethics.

Ethics and Professional Ethics

- Engineers invent the future and their work affects the lives of millions of people, for better or worse.
- That raises enormous ethical issues in every branch of engineering, from computing through biotechnology and energy to civil and aeronautical.

Case Study Example 1

- “Mary discovers that her plant (factory) is discharging a substance into the river that is not regulated by the government. She decides to do some reading about the substance and finds that some of the studies suggest that it is carcinogen. As an engineer, she believes she has an obligation to protect the public, but she also wants to be a loyal employee. The substance will probably be very expensive to remove, and her boss advises, “Forget about it until the government makes us do something. Then all the other plants will have to spend money too, and we will not be at a competitive disadvantage.” ***What should Mary do?*** “

Case Study Example 2

“Tom is designing a new chemical plant. One of his responsibilities is to identify the valves to be used in a certain portion of the plant. Before he makes his final decision, a salesperson for one of the firms that manufactures valves invites Tom to a golf game at the local country club. ***Should Tom accept the offer?”***

Ethics and the law

- While there is clearly a close relation between ethics and the law – many laws are implemented to enforce the ethical judgments of our society – the two are not identical.
- A course of action might be legal, but it may still strike the engineer as unethical.
- It is clear that thinking through the ethical contours of a situation tells you nothing directly about the laws that apply to that situation in a particular jurisdiction.

Practical skills

- Moral awareness: Proficiency in recognizing moral problems and issues in engineering
- Cogent moral reasoning:
- Moral coherence: Forming consistent and comprehensive viewpoints based on consideration of relevant facts
- Moral imagination: Discerning alternative responses to moral issues and finding creative solutions for practical difficulties
- Moral communication: A skill needed to express and support one's moral views adequately to others

Practical skills

- Moral reasonableness: The willingness and ability to be morally reasonable.
- Respect for persons: Concern for the well-being of others as well as oneself.
- Tolerance of diversity: Respect for ethnic and religious differences.
- Integrity: Maintaining moral integrity

Class Task

- “Identify the moral values, issues, and dilemmas, if any, involved in the following example, and explain why you consider them moral values and dilemmas.
- An engineer notified his firm that for a relatively minor cost a flashlight could be made to last several years longer by using a more reliable bulb. The firm decides that it would be in its interests not to use the new bulb, both to keep costs lower and to have the added advantage of “built-in obsolescence” so that consumers would need to purchase new flashlights more often.”

References

- Mike Martin and Ronald Schinzinger, “Introduction To Engineering Ethics”, McGraw Hill, New York, 2010
- Miscellaneous Journals and Internet Resources.