



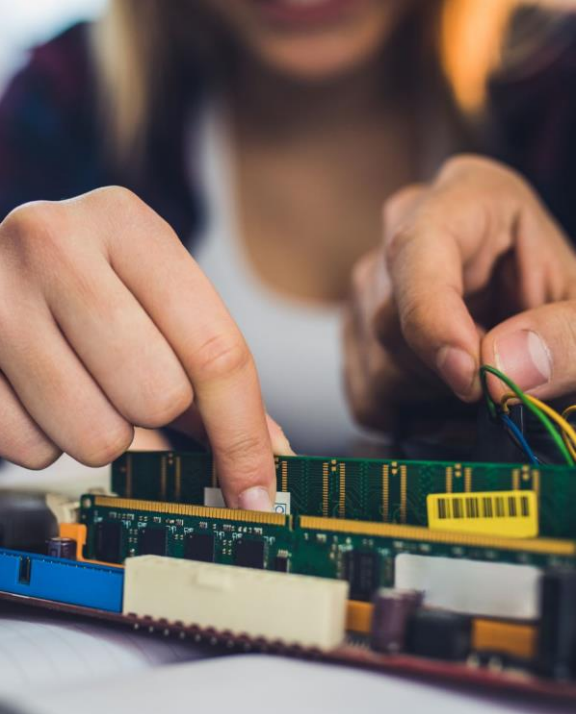
# PROFESSIONAL ETHICS

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What is expected from a  
Professional?  
Where do we start?

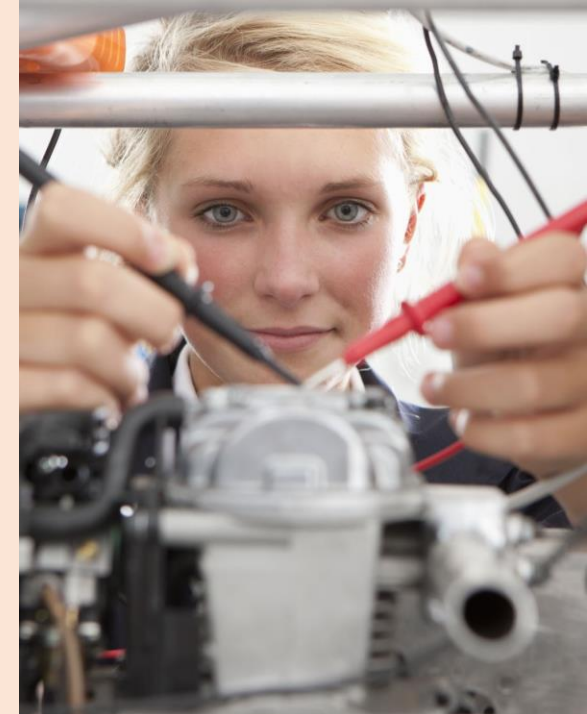






# PROFESSIONAL IDEALS/VIRTUES

- Academic Honesty
- Human Handling
- Adherence to agreements (Confidentiality of agreements)
- Avoid Conflict of Interest
- Whistle Blowing
- Professional Accountability



# Academic Honesty

- Honesty as an engineer begins with honesty in studying to become an engineer.
- Academic dishonesty among students takes several forms:
- Cheating:
- Fabrication: intentionally falsifying or inventing information, for example, by faking the results of an experiment.
- Plagiarism: intentionally or negligently submitting others' work as one's own.

# Academic Honesty

- Facilitating academic dishonesty
- Misrepresentation
- Failure to contribute to a collaborative project.
- Sabotage
- Theft

# Research Integrity

- Plagiarism
- Misrepresenting credentials: “Professionals must be careful not to misrepresent their credentials.”
- Misleading listing of authorship
- Reporting Misconduct.

# Research Integrity

- “As a graduate student, you have worked closely with a professor and her post-doc on a project studying experimental techniques in microfluidics. The project is going very well and you’ve even published some of your initial results. You will be graduating this spring with your master’s degree. Your advisor is now writing a subsequent paper with a colleague who is developing a theory that accounts for your results. You see a draft of the paper and notice that you are not listed as one of the four authors of the paper, who are the professors and their senior post-docs. However, the paper is directly based on the work that you did, and includes a new experimental plot that you created in addition to the theoretical calculations.
- What should you do?”

# Academic Honesty

- “Robert is a third-year engineering student who has been placed on probation for a low grade point average, even though he knows he is doing the best work he can. A concerned friend offers to help him by sitting next to him and “sharing” his answers during the next exam. Robert has never cheated on an exam before, but this time he is desperate. What should he do?”



# Academic Honesty

- “A student gives Elaine a copy of a professor’s midterm exam from last year. (a) Is it all right for her to accept the exam, without asking any questions? (b) Elaine decides to ask about how the exam was obtained. She learns that the professor had required all copies of the exam sheet to be returned but had inadvertently missed this copy, which a student then circulated to selected other students. She decides to decline the exam, but does she have any additional responsibilities?”



# Human Handling/dealings

- To value and respect 'Humanity'
- To treat and look upon people above all kinds of differences e.g. regional, lingual, racial, religious, sectarian etc.
- To respect the sanctity of 'Human' dignity above and beyond any other status/rank/designation
- To be fair and just to all
- "To treat others as you would like to be treated by others"
- To be mindful of your responsibilities to humankind beyond and above geographical boundaries/religious and cultural connections etc.
- Manners/etiquettes

# Adherence to Agreements

- “The only chains you should wear in life are the chains of commitment.” — **Shannon L. Alder**
- Once you enter into an agreement, it's both your legal as well as moral responsibility to honor that agreement.



# Avoid Conflict of Interest

- The Conflict or Clash between the professional's Interests of the 'Duty' and his 'Personal' Interests.
- In situations of 'Conflict of Interests', Professional Ethics demand the professional to prefer the 'Interests of the Duty' over his 'Personal Interests'.
- Professional conflicts of interest are situations where professionals have an interest that, if pursued, might keep them from meeting their obligations to their employers or clients.

# Avoid Conflict of Interest

- Conflicts of interest can arise in many ways.
- We will look into only a few of the more common situations involving:
  - gifts, bribes, and kickbacks
  - interests in other companies, and
  - insider information.



# Avoid Conflict of Interest

- “A professor of electrical engineering at a West Coast university was found to have used \$144,000 in grant funds to purchase electronic equipment from a company he owned in part. He had not revealed his ownership to the university, he had priced the equipment much higher than market value, and some of the purchased items were never received. The Supplier Information Form had been submitted as required but with falsified content.”

# Avoid Conflict of Interest

- **Which of the following situations is an example of a conflict of interest?**
- “Jones wants to inform the public about a health risk caused by a subcontractor that she works with, but from a legal point of view she is required to keep this information confidential.
- Jones is designing the wheels for a new model of train, and she is trying to weigh the values of safety versus passenger comfort within the design.
- Jones has determined that her company has exceeded the pollution limits set by law, and on behalf of the company she wishes to compensate those who have been affected.”

# Conflict of Interest Case Study

- “Dave is employed by a radio broadcast equipment manufacturer as a sales representative. In addition, Dave works as an independent consultant for organizations in the radio broadcast field. This work can include analyzing their technical problems and, when required, recommending any radio broadcast equipment that they might need. In some cases, Dave recommends the use of broadcast equipment manufactured by his employer. Is it a case of conflict of interest? should Dave continue both the jobs or should he resign one of his positions?”

# Conflict of Interest Case Study

- “You are a graduate student at a large university in the final months of your dissertation research on novel photonic materials. You are invited for an interview for a tenure-track appointment at your undergraduate university. In the interview, the department chair asks for detailed information about the novel material-preparation technique developed in your graduate research, and used extensively in your experiments. Your group is working on a patent application and its members have agreed not to provide details until a paper currently being prepared is submitted for publication. You answer that you and your colleagues are in the process of writing it up for publication and a patent application, and you would be glad to send them an early preprint when it is available.
- After the seminar, in your private interview with the Chair, he pushes harder for this information, remarking that the Department seeks team players, willing to share information with department colleagues. What should you do?”

# Conflict of Interest Case Study

- Who are the stakeholders/key players?
- What are the interests of the various players?
- Where are there conflicts of interest?
- What are your options?



# Whistle Blowing

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- The act of organization members, either former or current, disclosing information on illegal and unethical practices within the organization to parties internal or external to the organization, who can take action.
- A whistle Blower serves as a nightwatchman or lifeguard, putting his career/life in danger to disclose/report to authorities a practice that is likely to endanger human life, property and welfare.



# Moral Guidelines

- When are professionals justified in whistle-blowing?
- When are they morally permitted, and when are they morally obligated, to do so?
- It is permissible to whistle-blow when the following conditions have been met.
  - The actual or potential harm reported is serious.
  - The harm has been adequately documented.
  - The concerns have been reported to immediate superiors.
  - Regular channels within the organization have been used to reach up to the highest levels of management.
  - There is reasonable hope that whistle-blowing can help prevent or remedy the harm.

# Illegal dumping and whistleblowing Case Study

- Steps for writing response to Moral Dilemma:
  1. Consider the different stakeholders who are going to be affected by the decision
  2. Discuss the competing interests of each of the different stakeholder groups.
  3. What are the different options available for John?
  4. What are the pros and cons of the different alternatives?
  5. Risks associated with being a Whistleblower and the ethical obligation employees and individuals must consider when confronted with an obvious ethical violation on the job.





## PROFESSIONAL ACCOUNTABILITY

- “answerable to oneself and others for one's own actions.”
- A professional is answerable at various levels for every action and decision that he/she takes while performing his/her professional undertakings



# References

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