

Social and Ethical Aspects in Engineering

IME-251

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Week13 Agenda

- Workplace Responsibilities and Rights
 - Confidentiality , Conflict of Interest, Team work

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Workplace Responsibilities and Rights

- Importance of Subject Matter
 - Story of Data General Corporation
 - "98% of the thrill comes from knowing that the thing you designed works, and works almost the way you expected it would. If that happens, part of you is in that machine."
 - What motivated people? "Ego and the Money"
 - Professionalism
 - Personal Commitments
 - Fun and Excitement

Important Words:

- Spectacularly
- Chronicle
- Unprecedented
- Frenzied
- Collegiality
- Worrisome

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Confidentiality

- Confidentiality
 - "The duty of confidentiality is the duty to keep secret all information deemed desirable to keep secret"
 - Employer and Client would like to have kept secret to compete effectively against the business rivals.
 - Confidential Information
 - Privileged Information
 - Propriety Information or trade secret
 - Design Secrets i.e. Patents verses Trade Secrets
 - Reverse Engineering is legal.

Important Words:

- Divulge

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Confidentiality

- Confidentiality and Changing Job
 - “The relationship of trust between employer and employee in regard to confidentiality continues beyond the formal period of employment unless employer gives consent.”
 - A high-level trade secret violation between GM and VW
 - B.F. Goodrich's space suit division and International Latex Corporation example
- Confidentiality and Management Policies
 - Employment contracts with special restrictions
 - Special Bonus/Benefit for that period
 - A tight control over the flow of information among the employees - however that can lead to stifle environment
 - Generate the Professional Responsibility among the employees.

Important Words:

- Barred
- Injunction
- Stifle

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Confidentiality

- Justification of Confidentiality
 - Respect the Autonomy (freedom, self-determination) of individual and corporation
 - Trust and Trustworthiness an grow
 - Confidentiality relationship within Professional contexts
- Limits of Confidentiality
 - Invocation of Confidentiality to hide misdeeds
 - False claims of secrecy of national interests

Important Words:

- Diminish
- Disperse
- Invoke
- Thwart

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Conflict of Interests

- Conflict of Interests
- “Professional conflicts of interests are the situations where professional have an interest that, if pursued, might keep them from meeting their obligations to their employers or clients”
- Conflicts of interests arise when:
 1. The professional is in relationship or role that requires exercising good judgment on behalf of the interests of an employer of client.
 2. The professional has some additional or side interest that could threaten good judgment in serving the interest of employer or client.
- Conflict of interests is not same as conflicting interests

Important Words:

- Thorny

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Conflict of Interests

- Conflict of Interests
- Situation 1: Gifts, Bribes and Kickbacks
 - “If the offer or acceptance of a particular gift could have embarrassing consequences for your company if made public, then do not accept the gift.”
- Situation 2: Interests in other companies
 - “Some conflicts of interest consist in having an interest in competitors or a subcontractor's business”
- Situation 3: Insider Information
 - “An especially sensitive conflict of interest consists in using “inside” information to gain an advantage or set up a business opportunity for oneself, one's family or one's friends.”

Important Words:

- Innumerable
- Subtlety
- Vague
- Allude
- Gratuity
- Extortion
- Blurry
- Luncheon
- Moonlight
- Exhaust
- Anti-nepotism
- Defraud

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Conflict of Interests

- Moral Status of Conflict of Interest

- “Such conflicts of interest should be avoided because they threatened to prevent one from fully meeting his obligations.”
- 1. The Professional Obligation to Employers is very important in that it overrides in the vast majority of cases any appeal to self-interest on the job.
- 2. The Professional Obligation to Employers is easily threatened by self-interest (given human nature) in a way that warrants especially strong safeguards to ensure that it is fulfilled by employees.
- Many conflicts of interest violate trust.
- They may harm corporation and, in broader context, a system.
- However some conflicts are thought to be unavoidable or even acceptable, but they are rare.

Important Words:

- Innumerable
- Subtlety
- Vague
- Allude
- Gratitude
- Extortion
- Blurry
- Luncheon
- Moonlight
- Exhaust
- Anti-nepotism
- Defraud
- Undermine
- Fiduciary
- Distort

Discussion Questions

1. Consider the following example:

Who owns your knowledge? Ken is a process engineer for Stardust Chemical Corp., and he has signed a secrecy agreement with the firm that prohibits his divulging information that the company considers proprietary.

Stardust has developed an adaptation of a standard piece of equipment that makes it highly efficient for cooling a viscous plastics slurry. (Stardust decides not to patent the idea but to keep it as a trade secret.) Eventually, Ken leaves Stardust and goes to work for a candy-processing company that is not in any way in competition. He soon realizes that a modification similar to Stardust's trade secret could be applied to a different machine used for cooling fudge and, at once, has the change made.¹⁰

Has Ken acted unethically?

Discussion Questions

2. In the following case, are the actions of Client A morally permissible?

Client A solicits competitive quotations on the design and construction of a chemical plant facility. All the bidders are required to furnish as a part of their proposals the processing scheme planned to produce the specified final products. The process generally is one which has been in common use for several years. All of the quotations are generally similar in most respects from the standpoint of technology.

Contractor X submits the highest-price quotation. He includes in his proposals, however, a unique approach to a portion of the processing scheme. Yields are indicated to be better than current practice, and quality improvement is apparent. A quick laboratory check indicates that the innovation is practicable.

Client A then calls on Contractor Z, the low bidder, and asks him to evaluate and bid on an alternate scheme conceived by Contractor X. Contractor Z is not told the source of alternative design. Client A makes no representation in his quotation request that replies will be held in confidence.¹¹

Discussion Questions

- ### 3. American Potash and Chemical Corporation advertised for a chemical engineer having industrial experience with titanium oxide. It succeeded in hiring an engineer who had formerly supervised E. I. DuPont de Nemours and Company's production of titanium oxide. DuPont went to court and succeeded in obtaining an injunction prohibiting the engineer from working on American Potash's titanium oxide projects. The reason given for the injunction was that it would be inevitable that the engineer would disclose some of DuPont's trade secrets.¹² Defend your view as to whether the court injunction was morally warranted or not.

Discussion Questions

4. Engineer Doe is employed on a full-time basis by a radio broadcast equipment manufacturer as a sales representative. In addition, Doe performs consulting engineering services to organizations in the radio broadcast field, including analysis of their technical problems and, when required, recommendation of certain radio broadcast equipment as may be needed. Doe's engineering reports to his clients are prepared in form for filing with the appropriate governmental body having jurisdiction over radio broadcast facilities. In some cases Doe's engineering reports recommend the use of broadcast equipment manufactured by his employer. Can Doe ethically provide consulting services as described?¹³

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Discussion Questions

5. Henry is in a position to influence the selection of suppliers for the large volume of equipment that his firm purchases each year. At Christmas time, he usually receives small tokens from several salesmen, ranging from inexpensive ballpoint pens to a bottle of liquor. This year, however, one salesman sends an expensive briefcase stamped with Henry's initials.¹⁴
Should Henry accept the gift? Should he take any further course of action?

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Q & A

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