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Teknik Elektro - STEI ITB

Etika Profesi Insinyur

KU1202 – Pengantar Rekayasa dan Desain

Etika Personal dan Profesi Insinyur

Apa yang disebut denga etika personal? Dan apa relasinya dengan rekayasa?

Apa itu etika profesi?

Etika Personal

- **Etika adalah standar dari perilaku manusia.**
- **Kode Etik adalah peraturan tertulis mengenai etika, mengikat dan memiliki sanksi.**
- Individu dengan kultur yang berbeda telah membentuk kesepakatan moral terhadap perilaku personal ataupun kondisi grup.
- Etika bervariasi dengan berjalannya waktu dan berbeda dari kultur yang satu dengan yang lain. Hal ini kadang menyebabkan konflik atas apa yang diterima dalam suatu kultur dan ditolak pada kultur yang lainnya.
  - Contoh: Kultur US lebih mengutamakan privacy dibandingkan Jepang. Meja seseorang dianggap sebagai perluasan dari privacy tersebut. Sedangkan di Jepang, meja seseorang dianggap sebagai domain public.

Lima Landasan dari Perilaku Etis

Berikut contoh kode etik dari etika personal:

- **Lakukan** apa yang telah diucapkan **bahwa akan dilakukan**.
- **Jangan membocorkan informasi** yang diberikan secara rahasia.
- Menerima dan **bertanggung jawaban** atas **kesalahan.**
- **Jangan pernah** terlibat dalam **penipuan.**
- **Jangan menerima gratifikasi** atas pekerjaan professional.

Ethical Situation Example

You and your roommate are both enrolled in the same engineering class. You did the homework, but your roommate did not do the homework and ask you to see it. You are afraid he/she will just copy it in as his/her own work. What are you ethically obligated to do? What are your ethical responsibilities?

a. Show your roommate the homework
b. Show the homework but ask your roommate not to copy it
c. Show the homework and tell him/her that if it copied, you will tell the professor
d. Refuse to show the homework
e. Refuse to show the homework but offer to spend time tutoring the roommate

Ethical Situation Example

Solution

- Answer to an ethics question by applying a code of ethics
- The Five Cornerstones of Ethical Behavior will be used

1. Do what you say you will do
2. Never divulge information given to you in confidence
3. Accept responsibility for your mistakes
4. Never become involved in a lie
5. Never accept gifts that compromise your ability to perform in the best interests of your organization

Top Ten Question on Ethical Decision

Top ten questions you should ask yourself when making an ethical decision:

1. Could the decision become habit forming? If so, don't do it
2. Is it legal? If it isn't, don't do it
3. Is it safe? If it isn't, don't do it
4. Is it the right thing to do? If it isn't, don't do it
5. Will this stand the test of public scrunity?
6. If something terrible happened, could I defend my actions? If you can't, don't do it
7. Is it just, balanced, and fair? If it isn't, don't do it
8. How will it make me feel about myself? If it's lousy, don't do it
9. Does this choise lead to the greatest good for the greatest number? If it doesn't, don't do it

And the #1 question you should ask yourself when making an ethical decision:

10. Would I do this in front of my mother? If you wouldn'd, don't do it

Professional Ethics (Etika Profesi)

- Personal and Professional Ethics
  - Personal Ethics (vary over time and from culture to culture)
    - Personal ethics are the standards of human behavior that individuals of different cultures have constructed to make moral judgments about personal or group situations.
  - Professional Ethics (honesty and integrity)
    - Having a code of ethics enables an engineer to resist the pressure
      - to produce substandard work
      - to allow concerns such as personal desires, greed, ideology, religion, or politics to override professional ethics.

National Society of Professional Engineers Code of Ethics

Fundamental canons

- Engineers, in the fulfillment of their professional duties, shall
  1. Hold paramount the safety, health, and welfare of the public.
  2. Perform services only in areas of their competence.
  3. Issue public statements only in an objective and truthful manner.
  4. Act for each employer or client as faithful agents or trustees.
  5. Avoid deceptive acts.
  6. Conduct themselves honorably, responsibly, ethically, and lawfully so as to enhance the honor, reputation, and usefulness of the profession.

Engineering Ethics Decision Matrix

Options → NSPE Canons ↓	Go along with the decision	Appeal to higher management	Quit your job	Write your state representative	Call a newspaper reporter
Hold paramount the safety, health and welfare of the public					
Perform services only in the area of your competence					
Issue public statements only in an objective and truthful manner					
Act for each employer or client as faithful agents or trustees					
Avoid deceptive acts					
Conduct themselves honorably					

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- **CATUR KARSA, PRINSIP-PRINSIP DASAR :**
  - Mengutamakan keluhuran budi.
  - Menggunakan pengetahuan dan kemampuannya untuk kepentingan kesejahteraan umat manusia.
  - Bekerja secara sungguh-sungguh untuk kepentingan masyarakat, sesuai dengan tugas dan tanggung jawabnya.
  - Meningkatkan kompetensi dan martabat berdasarkan keahlian profesional keinsinyuran.

- **SAPTA DHARMA, TUJUH TUNTUNAN SIKAP :**
  - Insinyur Indonesia senantiasa mengutamakan keselamatan, kesehatan dan kesejahteraan Masyarakat.
  - Insinyur Indonesia senantiasa bekerja sesuai dengan kompetensinya.
  - Insinyur Indinesia hanya menyatakan pendapat yang dapat dipertanggung jawabkan.
  - Insinyur Indonesia senantiasa menghindari terjadinya pertentangan kepentingan dalam tanggung jawab tugasnya.
  - Insinyur Indonesia senantiasa membangun reputasi profesi berdasarkan kemampuan masing-masing.
  - Insinyur Indonesia senantiasa memegang teguh kehormatan, integritas dan martabat profesi.
  - Insinyur Indonesia senantiasa mengembangkan kemampuan profesionalnya.

Engineering Disaster

- Januari 1986,
  Cape Kennedy, “Challenger disaster”

- Februari 2003,
  Texas “Columbia disaster”

- Nopember 2011,
  Jembatan “Kukar” ambruk Kalimantan Timur

- Desember 2014,
  Air Asia Flight 8501 Crash

Tugas Pekan 1

1. Jelaskan definisi Rekayasa!
2. Jelaskan perbedaan Sains dan Rekayasa!
3. Jelaskan definisi Teknologi!
4. Jelaskan perbedaan Etika dan Kode Etik!
5. Sebutkan 2 contoh kode etik profesi insinyur!
6. Anda mengerjakan sebuah engineering project yaitu pengembangan control untuk sistem lift. Pada awalnya seluruh sistem sudah terlihat berjalan dengan baik, namun anda menemukan sebuah kejanggalan pada sistem yaitu deteksi beban tidak berjalan dengan baik yang artinya pada saat kelebihan beban, lift tidak mengeluarkan alert. Deadline pengerjaan project sudah dekat. Apa yang akan anda lakukan? Gunakanlah decision matrix untuk analisisnya (slide Profesi dan Etika hal 10)!