CE100
Introduction to
Civil Engineering

Ethics
Topic 9

What are professions?

❑ Not just a means to earn a living.
❑ Includes:
  ▪ Advanced expertise.
  ▪ Self-regulation.
  ▪ Public good.

Definitions

❑ Term "morals" from Latin (mores) = (عادات)
❑ Term "ethics" from Greek (ethos) = (أخلاقي)
❑ Deriving their meaning from custom (الاعراف)

❑ "Ethics" refers to the whole domain of morality and moral philosophy—both having to do with:
  · Values
  · virtues (فضيلة)
  · Practices
  · principles.

Ethics Types

Nature of Ethics (Meta – Ethics)			Normative Ethics (المعيار الاخلاقي)
Theories			Rules or Principle for right conduct based on intuition, reason, or social tradition. "Always tell the truth" "Keep your promises" "Protect innocent life
Skepticism (الشكوكية)	**Relativism** (النسبية)	**Absolutism** (حقيقي جوهري)	
Skeptics believe that ethical beliefs and standards are merely a matter of subjective personnel opinion or biased feelings, so that there really are not any justifiable, reliable ethical standards. So if you believe in this you should not be an engineer.	Claims that in some way ethical standards are relative to a society or culture. Does that means different cultures have different engineering ethics?	Claims that the same ethical standard apply to all societies and cultures	**Utilitarian** (نفعي) Promote the General welfare or benefit of all people "The greatest good for the greatest number"

The Normative of Ethics

❑ Ethics is Concerned with
- Standards, Rules or Guidelines
  - for Moral or Social Approved Conduct
    - Such as being Honest
    - or Trustworthy
    - or acting in the interest of the Society

Most people make ethical decisions based on one or more of several moral philosophies:

Egoism انانية	Natural Law	Utilitarianism مقدار النفع	Respect
a person to put self-interests above those of others. (the solution does not harms self-interests).	a person's actions be in accord with human natural law: Life Procreation Knowledge Sociability	a person to put overall human welfare as a priority above courses of action.	a person to respect the equal dignity of all human beings.

Egoism

❑ Advocates that a person to put his/her self-interests above those of others.

❑ With egoism, a person should choose the solution the best promotes or least harms his/her self-interests.

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Natural Law

❑ Advocates that a person's actions be in accord with human nature. Natural law favors four basic values:
- Life
- Procreation
- Knowledge
- Sociability.

❑ A person may not violate anyone else's needs unless his/her own needs have been violated.

❑ To be a moral decision, the act itself must be good.

❑ If there is a bad effect associated with the good deed, the bad effect must be absolutely unavoidable. The good effect can not be brought about by the bad effect, but the bad effect may only be a side effect.

❑ Also, the undesirable degree of the bad effect must be outweighed by the desirable degree of the good deed.

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Utilitarianism

❑ Advocates a person to put overall human welfare as a priority above courses of action.

❑ In utilitarianism, one asks, "Will this action produce the greater overall human well-being?" Out of any two courses of action, a person is obligated to choose the action that produces the greatest amount of utility.

❑ If the actions are equal in their amount of utility, they are equally morally acceptable.

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Ethics of Respect for Persons

❑ Advocates a person to respect the equal dignity of all human beings.

❑ An action is right if one can apply that action to all people in all situations without undermining one's own ability to act in accordance with it, and without defeating the purpose of the original action.

❑ Action can not override the freedom or well being of one's self or others.

❑ A person loses the right to be treated in such a way if he/she does not treat others with that same respect.

❑ This theory follows the general principle of doing unto others as you would have done unto yourself (the "Golden Rule").

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Religion and Ethics

❑ The "Golden Rule" is a basic tenant in almost all religions.

❑ "Do unto(نحو) others as you would have others do unto you."

Personal Ethics - everyday examples

· Software piracy
· Copying of homework or tests
· "Borrowing" nuts and bolts, office supplies from employer
· Copying of Videos or CD's
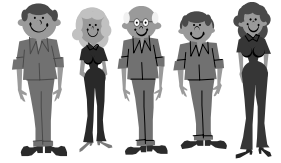· Using the copy machine at work
· Zakat

Ethics for Students

Need to develop a code of ethics for student actions. This may include such aspects as:

· respect and fair treatment of others (staff & students)

· strive for high quality of work

· no plagiarism (انتحال أفكار شخص آخر)

· no cheating or copying

· keep appointments and notify others if need to cancel

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Ethics Defined

❑ Study of human morality

❑ Determining values in human conduct

❑ Deciding the "right thing to do" - based upon a set of norms

❑ In Engineering:
  ▪ dealing with colleagues
  ▪ dealing with clients
  ▪ dealing with employees
  ▪ dealing with "users'
  ▪ dealing with public

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Ethical Issues are Seldom Black and White

Ethical standards are usually relative and personal, there is seldom an absolute standard

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Morality Examples 1

· An inspector discovered faulty construction equipment and applied and violation tag, preventing its continuous use. The inspector's supervisor, a construction manager, viewed the case as a minor infraction (خرق للقانون) of safety regulations and ordered the tag removed so that the project would not be delayed. The continued use of the equipment led to the death of a worker on a tunnel project.

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Morality Examples 2

2. A chemical plant dumped waste in a landfill. Hazardous substances found their way into the underground water table. The plant's engineers were aware of the situation but did not change the disposal method because their competitors did it the same cheap way, and no law explicitly forbade (يمنع) the practice.

Roles of Codes of Ethics

❑ Principles of responsibility that outline how to promote the public good.
❑ Key points:
  ▪ Shared standards
  ▪ Support
  ▪ Guidance
  ▪ Inspiration
  ▪ Education and mutual understanding
  ▪ Deterrence (الرادع) and discipline
  ▪ Contributing to the profession's image

Code of Ethics

❑ Engineers shall adhere to the following Eight Principles:
  1. PUBLIC
  2. CLIENT AND EMPLOYER
  3. PRODUCT
  4. JUDGMENT
  5. MANAGEMENT
  6. PROFESSION
  7. COLLEAGUES
  8. SELF

Results of the Ethics Equation

ETHICAL BEHAVIOR	UNETHICAL BEHAVIOR
❑ Quality products	❑ Shoddy (على عجل) products
❑ Conservation of resources	❑ Waste, fraud, greed
❑ Pride in work	❑ Abuse of expertise
❑ Public safety	❑ Guilt, fear
❑ Timeliness	❑ Lack of safety
❑ GOOD BUSINESS	❑ Cutting corners
	▪ poor design
	▪ rushed testing
	❑ DISASTERS!

In Conclusion
Ethics is
Describing and evaluating acts as right or wrong

from a moral standpoint.

قواعد آداب ممارسة مهنة الهندسة

تعاريف

□ المكتب الهندسي
المكتب الاستشاري
□ مكاتـب مؤهلـة لمزاولـة مهنـة الهندسـة وفقـاً للقواعد المعتمدة.

□ المشروع
□ كـل مشـروع يحتـاج إلـى خـدمات هندسـية أو استشارية سواء أثناء مرحلة تصميمه أو تنفيذه أو تشغيله أو استثماره.

□ المالك
□ المالك او من يمثله شرعاً ويحق له توقيع العقد، مـع الالتـزام بكافـة فقراتـه تمامـاً بمـا فيـه مـن مسؤوليات وواجبات.

□ المقاول
□ الشخص الذي يلتزم تجاة المالك بتقديم مواد أو إنجـاز خـدمات غيـر استشـارية أو تنفيـذ أشـغال لمشروع معين.

ما هى قواعد آداب ممارسة مهنة الهندسة؟

□ يلتزم المهندس بالسلامة والصحة والمصلحة العامة للمجتمع فـي جميـع خدماتة المهنية.

□ يقدم المهندس خدماتة في مجال اختصاصة وكفاءته فقط.

□ يحرص المهندس عند إصدارة لأية أحكامة أو بيانات عامة أن تكون بطريقة موضوعية وصادقة.

□ يتصرف المهندس في المسائل المهنية كوصي أو وكيل مخلص لكل صاحب عمل أو مالك، كما يتجنب التضارب في المصالح.

□ يبني المهندس سمعته المهنية علي كفاءة وجدارة الخدمات التي يقدمها، كما يبتعد عن منافسة الآخرين بشكل غير عادل.

□ يلتزم المهندس في تصرفاتة بالاساليب التي تدعم وتعزز من مكانـة وأمانـة وكرامة المهنة.

□ يسعي المهندس لمواصلة التطور المهني من خلال تنمية قدراتـه وكفاءتـة الشخصية، كمـا يـوفر فـرص التطـور المهنـي للمهندسـين العـاملين تحـت إشرافة.