

# Engineering Ethics and Professionalism

*learn the human side of engineering*

Morals and ethics relate to “right” and “wrong” conduct. While they are sometimes used interchangeably, they are different. Morals refer to an individual’s own principles regarding right and wrong. Ethics refers to rules provided by an external source.

<b><i>Comparison Chart</i></b>	<b>Morals</b>	<b>Ethics</b>
What are they?	Principles or habits with respect to right or wrong conduct. While morals also prescribe dos and don’ts, morality is ultimately a personal compass of right and wrong.	The rules of conduct recognized in respect to a particular class of human actions or a particular group or culture.
Where do they come from?	Individual – internal	Social system – external
Why we do it?	Because we believe in something being right or wrong.	Because society says it is the right thing to do.

# Morals and Ethics...cont.

So, for this class, we'll make the general distinctions:

MORALS	ETHICS
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Morals and morality reflect standards of conduct that apply to members of society at large (e.g., based on values such as honesty, keeping promises, respect, etc).

- ▶ We'll accept that there may be differences between common and personal morality.

Ethics will infer professional ethics that reflect standards of conduct which every member of a profession is expected to follow (e.g., based on values such as confidentiality, loyalty, protection of public health, safety, and welfare, etc....covering values towards customers, companies and society)

# Engineering Ethics - Defined

- ▶ *“The responsibilities and rights that ought to be endorsed by those engaged in engineering, and also of desirable ideals and personal commitments in engineering”*
- ▶ *“The study of decisions, policies, and values that are morally desirable in engineering practice and research”*

Falls into the “normative” realm of ethical thought (e.g., what is right or wrong; what ought to be done; etc)

Source: Martin and Schinzinger, 2005. *Ethics in Engineering*.



# Ethical Dilemmas

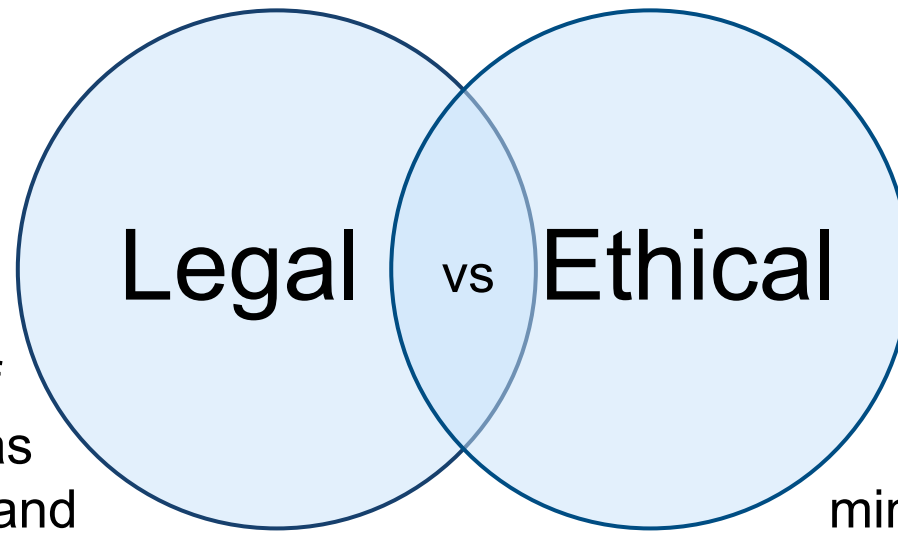
- ▶ Right vs. wrong issues are common and can produce moral temptations
- ▶ Sometimes, dilemmas involve right vs. right issues that present really tough choices

# Ethical Dilemmas

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- ▶ Sometimes, dilemmas involve right vs. right issues that present really tough choices

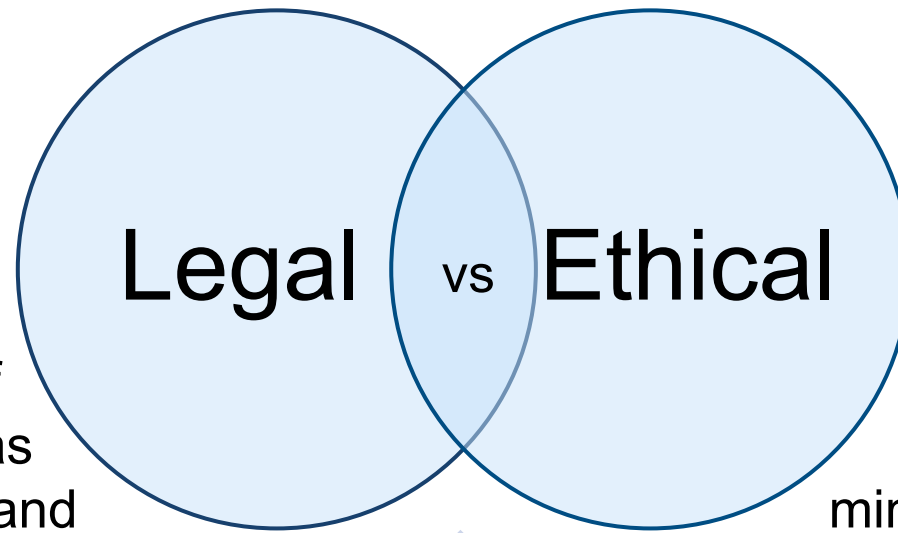
Kidder framework for examining right vs. right choices using a 4 dilemma paradigm model:

Paradigm	Conflicting Values
justice vs. mercy	fairness/equity vs. compassion/empathy
short-term vs. long-term	immediate needs vs. future goals
individual vs. community	self interests vs. interests of others
truth vs. loyalty	honesty vs. commitment, responsibility



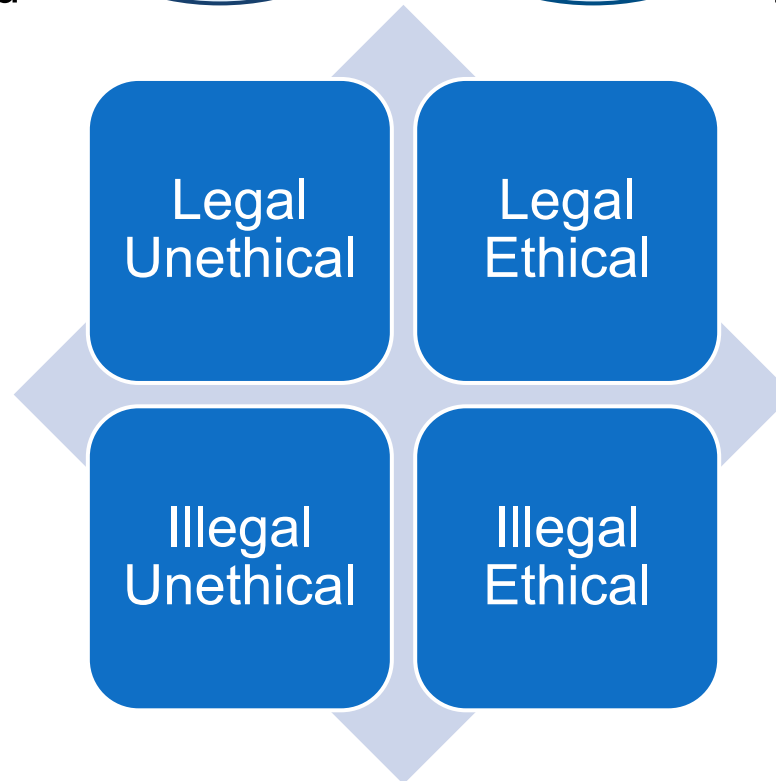
“Formalized” code of conduct prescribed as what society values and what is appropriate behavior

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Metrics	Legal Forum	Ethical Forum
violations	pretty well defined; laws/rules can change over time	harder to define; codes can change over time
procedures	fairly standard; well-established	no standard ways (until violators are prosecuted)
determinations	made by others; judgment and interpretations involved	course of action made by you (unless being prosecuted); judgment and interpretations involved
punishment	violators have to get caught; punishment fairly standardized	violators have to get caught (which may not be as readily apparent); punishment also may be fairly standardized (i.e., FBPE)

# The Reality



# The Reality



# The Reality



# References for Images Used

Slide	Source
11 - 12	<a href="https://www.barewalls.com/posters-art-prints/wrong.html">https://www.barewalls.com/posters-art-prints/wrong.html</a>