

# CMSC 304 Computer Ethics

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*Some slides adapted from slides by Drs. desJardin, Birrane*

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## Bookkeeping

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- No reading journals for last night
  - Typical reading journals due for Thursday
- First ethical analysis due 2/18 (Friday)
- Readings assignments due 2/20
- Today: codes of conduct and ethical analysis

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## Codes of Conduct

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- What is a code of conduct?
  - Guidelines for responsible behavior of members of an organization
    - You all are held to an academic code of conduct
  - Something that **adds** to your responsibilities under the law
    - Enforced by organizations, not by governments
    - Although law could be seen as a code of conduct for membership of a governed body
- IEEE, ACM codes of conduct
  - [www.acm.org/code-of-ethics](http://www.acm.org/code-of-ethics)
  - [www.ieee.org/about/corporate/governance/p7-8.html](http://www.ieee.org/about/corporate/governance/p7-8.html)

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## A Few Types

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- Possible domains of codes:
  - **Professional Code:** Conduct from a professional association
  - **Corporate Code:** Conduct from a company or institution
- Consider three types of codes
  - Aspirational Code — express moral values
  - Advisory Code — helps determine actions in real situations
  - Disciplinary Code — cause behaviors to meet certain norms


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## Why Have Codes? Integrity and Honesty

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- Is there a difference between honesty and integrity?
  - **Integrity:** living by moral values
    - Stay well educated in your field and keep up to date.
    - Only take work for which you know you are competent.
  - **Honesty:** disclosing only true, correct information
    - Facts not manipulated. Agreements are honored.
    - You are independent and impartial.
- **Watch out for Conflicts of Interest (COI)**
  - One interest endangers/influences another.
    - Often Personal vs. Professional.
    - Ex: You own stock in a company that you also regulate.
  - COI doesn't mean there is immoral behavior, per se.
  - Conflicts do corrupt judgement and diminished trustworthiness.
    - Often a condition of employment is to avoid even the **appearance of conflict**.

Integrity is being loyal to the truth. And honesty is telling the truth to other people.




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## Professional Codes (1/2)

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- What is a profession?
  - Occupation with specific characteristics, defined by those characteristics.
    - Use of special knowledge and skills
    - Monopoly on applying those skills
    - Assessment only possible by peers
    - (Sometimes) service oriented for society
    - (Sometimes) Having like ethical standards
  - Does "Software Engineering" count as a profession?
- Why have professional codes?
  - Regulates who gets to be a part of the profession.
  - Gain public trust (a big deal after WWII)
    - Engineers should not work for those who fail to respect human rights
  - Help to establish a profession and let it grow
    - Differentiating civil, mechanical, electrical, software engineering



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### Professional Codes (2/2)

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- Examples of professionals applying a code
  - The Szilard petition
    - 69 scientists from Manhattan project about its use on civilians in Japan.
    - "If I had known that the Germans would not succeed in constructing the atom bomb, I would never have lifted a finger." –Albert Einstein.
- Common aspects of professional codes of conduct
  - Integrity and honesty
  - Obligations towards employers/clients
  - Responsibility towards the public and society.

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### Professional Codes: Employer Obligations

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- Codes necessary to make professionals employable
  - Obvious: Serve the interests of their employers
  - Less Obvious: Keep secret/confidential information from employers
- Generally
  - Act as faithful agents/trustees for clients/employers
  - Never disclose, without consent, confidential information related to
    - Business affairs
    - Technical processes
    - Related to employers/clients...
    - ...or public bodies on which they serve
  - Impartial analysis
    - Avoiding conflicts of interest



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### Professional Codes: Social Responsibilities

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- What are social issues most often addressed?
  - Safety, health, the environment, sustainable development. Public welfare.
- Responsibilities
  - Some require engineers to inform the public about aspects of technologies in which they are involved, including relevant risks and hazards
- Common statements from professional codes:
  - Engineers shall hold paramount the safety, health, and welfare of the public.
  - Engineers shall at all times strive to serve the public interest.
  - Engineers are encouraged to adhere to the principles of sustainable development in order to protect the environment for future generations.
  - Engineers shall carry out their tasks so as to prevent avoidable danger to health and safety, and prevent avoidable adverse impact on the environment.

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### Corporate Codes

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- Do we need one if we have professional codes?
  - Relatively recent in the past 50 years
- Arguments against:
  - The "invisible hand" of the market makes everyone better off
  - Only responsibility is the shareholder
    - Money spent on social responsibility belongs to the shareholder and goes against their desire to maximize profits
  - Corporate leaders do not represent society and are not elected, so how can their desires be known good for society?
  - Social responsibility is why we have governments/laws in the first place.

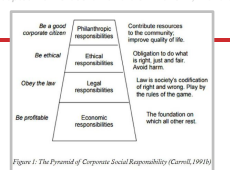


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### Corporate Codes

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- Arguments for:
  - Social action not always against shareholders or against bottom line.
  - Sometimes, ethics increases business.
  - Laws do not fully encode morality.
  - Laws often lag technology development.
  - Examples?
  - Congress questions Facebook...




	LEGAL	NOT LEGAL
ETHICAL	It is both legal and ethical to protect customer privacy when a customer makes online purchases at your e-commerce site.	It is not legal, but could be considered ethical to leak information that appeared on your employer's intranet to the media in order to stop illegal activity within the company.
NOT ETHICAL	It is legal but not considered ethical to call in sick to your company message centre when you are not really ill.	It is neither legal nor ethical to call the e-mail addresses of your customers without their permission.

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### Codes of Conduct vs. Self Interest

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- What happens when a code of conduct gets in the way?
  - Example: Google in China
  - Code of Conduct: "Do No Evil"
  - Mission Statement: Organize world's information and make it universally available.
  - Problem: Deployment in China required censorship.
  - Google Criticism: Window dressing
  - Google (and others) cyber attacked from China. Then, decided to no longer censor search results.
- Window Dressing?
  - A favorable impression that is not based on the facts.
  - Concept of a store front window; false advertising.



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## Concepts of Loyalty

- What happens when codes of conduct and person conflicts arise?
  - *Where is the loyalty? Are you required to be loyal?*
  - What is loyalty in this context?
    - Loyalty to the employer.
- Uncritical Loyalty
  - Also, "blind loyalty": follow the company line regardless of your personal or other constraints
  - The employer defines the interests and, therefore, your interests
- Critical Loyalty
  - Reasonable loyalty to your employer; constrained by
    - Professional codes
    - Personal ethics
  - Can you refuse an unlawful command?

Respect is earned.  
Honesty is appreciated.  
Trust is gained.  
Loyalty is returned.

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## Can Ethics be Codified?

- Is there a difference between the "spirit" of the law and the "letter" of the law?
  - *Yes. It's why we have judges and courts*
- What are the problems with trying to codify ethics?
  - Can ethics be discussed outside of the individual?
    - Adhering to a code is a function of avoiding consequences. Following your morality is an autonomous decision that comes from within.
  - Debate on whether codes of conduct can be morally binding.
    - Multiple arguments for and against here.
  - Can morality be codified at all?
    - Engineering is too diverse (civil, mechanical, electrical, software)
      - Hard for one code to apply. How many codes do we want to write?
    - Moral judgement also needs to consider the particulars of a situation.

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## Arguments for Why Codes Are Morally Binding?

- Codes are a contract between engineers and society
  - Helps to **enable** society. "If you are scared, find a policeman"
  - Societal contract implies you have a moral obligation to follow it
- Codes are a contract between engineers and other engineers
  - 300 years ago we didn't have as many engineering professions as we have now.
  - As new capabilities emerge, we create new branches of engineering
- They are extracts of otherwise moral responsibilities
  - They are expressions of common morality
- Do we agree?
  - Arguments concern disciplinary codes. Can you be critically loyal to a disciplinary code of conduct?
  - Keep open room for interpretation, so can't be completely binding

*\*But YMMV*

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## Can a Code of Conduct be Lived By

- Sometimes codes are difficult or impossible to apply in real life
- What happens when professional codes conflict with employer codes (particularly disciplinary codes?)
- What if your profession code says "warn public" but company wants confidentiality?
  - Confidentiality duties are a real thing
  - Protect companies, protect IP

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## Limits to Confidentiality Agreements

- In many (but not all) countries, free speech is protected.
- In some countries, laws require making certain information public.
- Sometimes there is a professional obligation
  - Worse to lose your certification or good standing than an individual job
- There is typically a public interest need
  - Sometimes held up by the courts, sometimes not

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## Global Codes?

- Big boom of "codes of conduct" in the 1990s
  - But, also, increasingly multi-national companies.
  - Can a multi-national company have a single code of conduct?
- What are the cultural differences?
  - **In the US**, strong concept of professional autonomy
    - Engineers reach their own moral conclusions by careful, clear, reasoning
  - In Japan, preference for group values and socialization – not individualism
    - The corporation serves this function

↑  
**KEEP CALM**  
AND  
**FOLLOW THE PRIME DIRECTIVE**

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## Ethical Principles for Engineers in a Global Environment

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- Public Safety: Don't hurt people with your technology.
- Human Rights: Your technology shouldn't remove fundamental human rights.
  - <http://www.un.org/en/universal-declaration-human-rights/>
- Environment/Animal Preservation: Don't hurt the place we need to live or the things that sustain it.
- Engineering Competence: Do not accept a job if you know you cannot do it.
- Scientifically Sound Judgement: Avoid conflicts stemming from extraneous factors.
- Openness and Honesty: Truthful and complete with disclosures. Keep public educated.

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## So how do we do all that?

- An ethical framework for reasoning: the **ethical analysis**
  - Consider the problem
  - Consider who is affected, and who is making decisions
  - Consider possible outcomes
  - Consider possible codes under which to evaluate
    - Ethical argumentation, codes of conduct, and laws
  - Evaluate
  - Draw conclusions

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## Resolving Conflicts

- Deliberation stage
  - Consider possible policies
  - Not case-by-case, but as a general rule
  - Throw out the unethical and unjust
- Selection stage
  - Carefully identify and analyze consequences/tradeoffs of possible (remaining) policies
  - Weigh the positives and negatives

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## A Concrete Methodology

1. Identify relevant facts (past/future, known/concluded)
2. Identify *possible* policies
  - A. Who is making the decisions?
  - B. Who are the stakeholders affected by the policies?
    - **Think broadly!**
3. Analyze each policy impartially, from a deontological **and** consequentialist point of view
  - A. Does the policy pass the tests of fairness and justice?
  - B. Are some people deprived of their rights to benefit others?
  - C. Does it make a reasonable *universal* policy?
  - D. Reject policies that are *prima facie* unethical, unfair, or unjust
    - You can do this without writing out the full analysis for each.

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## Methodology, cont.

4. Identify the principles and values that should be factored into a tradeoff analysis
  - What are the goods to be protected?
  - What are the rights of the individuals involved?
5. Identify the consequences of each policy, with respect to each group of stakeholders
  - Known or potential; positive and negative
6. Identify the laws that may govern the actions taken by the individuals in this situation.
  - Do they require or prohibit any actions?

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## Methodology, cont.

7. Identify and analyze the tradeoffs for each policy, with respect to consequences and principles that conflict
  - Analyze the "goodness/harm ratio" – how much positive benefit is created, relative to the negative consequences?
8. Analyze the ethical issues with respect to the laws
  - Are the relevant laws consistent or inconsistent with the apparent ethical tradeoffs?
9. Analyze the ethical issues with respect to the relevant professional code(s) of ethics.
  - Is the professional code consistent or inconsistent with the apparent ethical tradeoffs? With the laws?

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## Methodology, cont.

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10. Draw a conclusion!
  - What action *should* be taken, based on the policy that is the most ethical (fair/just/happiness-maximizing) of the available options?
  - If this action is inconsistent with the applicable laws, then your conclusion may include a recommendation that the law should be changed, and how.
11. Write a cogent summary of your analysis and reasoning, including the information that you collected/created during the first nine steps of the process.

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## A Case to Consider

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- Read the short paragraphs in:
  - [onlineethics.org/cases/cases-teaching-engineering-ethics/drinking-workplace](https://onlineethics.org/cases/cases-teaching-engineering-ethics/drinking-workplace)
- Apply the steps of the methodology
  - Get Ethical Analysis Worksheet (on class schedule for today)
  - Focus on item III, mandatory drug tests
- Optionally (after you finish your initial analysis):
  - Read the commentaries at the URL above
  - Did the commentators reached the same conclusions?
  - Do any of the commentaries cause you to change your analysis?

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## Post-Class Assignment

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- For Ethical Analysis 1, submit:
  - Your written group notes on the case
    - Organized by the steps of the methodology
    - Neat and grammatical
    - Does not need to be written as a full report (bullets/notes are OK)
    - Must be a PDF or Word document
- **We will work on this Thursday**
  - **Links from schedule:** Analysis topic; analysis worksheet

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