

Engineering Ethics (Wikipedia)

- Engineering ethics is the field that examines and sets standards for an Engineers' obligations to:
 - the public,
 - their clients,
 - employers,
 - and the profession.
 - In the US, the Engineers that provide consulting to clients are *usually* licensed Professional Engineers (PE)
 - Engineers working in industry are governed by various laws including “whistleblowing” and product liability laws
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Engineering Ethics

- Engineering does not have a single uniform system of ethical conduct across the entire profession
 - Look at your discipline specific professional societies
 - IEEE
 - ASME
 - ASCE
 - AiChE
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Code of Ethics

In your groups, begin to create a code of ethics by listing at least 4 things you believe belong in a code.

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- Do your own work (don't plagiarize, steal)
 - Act for the benefit of others
 - Don't discriminate
 - Be punctual
 - Protecting health and safety of others
 - Respect confidentiality
 - Do no harm to anyone
 - Reject bribery
 - Equal standards
 - Adhere to environmental standards
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- Question established standards

Code of Ethics (IEEE)

- To accept **responsibility** in making **engineering decisions** consistent with the **safety, health and welfare** of the public, and to **disclose promptly** factors that might **endanger** the public or the environment;
 - To **avoid real or perceived conflicts of interest** whenever possible, and to disclose them to affected parties when they do exist;
 - To be **honest** and realistic in **stating claims** or estimates based on available data;
 - To **reject bribery** in all its forms;
 - To **improve the understanding of technology**, its appropriate application, and potential consequences;
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Codes of Ethics (IEEE -- continued)

- To maintain and **improve our technical competence** and to **undertake technological tasks** for others **only if qualified** by training or experience, or after full disclosure of pertinent limitations;
 - To seek, accept, and **offer honest criticism of technical work**, to acknowledge and correct errors, and to **credit properly the contributions** of others;
 - To **treat fairly** all persons regardless of such factors as race, religion, gender, disability, age, or national origin;
 - To **avoid injuring others**, their property, reputation, or employment by false or malicious action;
 - To **assist colleagues** and co-workers in their **professional development** and to support them in following this code of ethics.
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Ethical Issues

- Quality
 - Safety
 - Ensuring legal compliance
 - Conflict of interest
 - Bribery
 - Relationships with clients, consultants, competitors, and contractors
 - Gifts, meals, services, and entertainment
 - Treatment of confidential or proprietary information
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Guidelines for Engineers Reporting Unethical Behavior

- **Establish a clear technical foundation**
 - **Keep your arguments professional**
 - **Try to catch problems early and work with the lowest managerial level possible**
 - **Make sure that the issue is sufficiently important**
 - **Use organizational dispute resolution mechanisms**
 - **Keep records and collect paper**
 - **Resigning**
 - **Use Outside Resources**
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Whistleblowing

(www.onlineethics.org)

- A basic ethical dilemma exists when an Engineer takes a concern to their organization and the concern is not satisfactorily addressed.
 - A whistle-blower is a person who takes a concern **outside the organization** in which the abuse is occurring and with which the whistle blower is affiliated.
 - Regulatory agencies exist to perform oversight and to which whistle-blowers can go **anonymously**. Going to those charged with oversight is usually seen as much less adversarial than, say, going to the media.
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Ethical Scenario

In your groups, write a scenario that illustrates an ethical issue and explain the options available to your engineer(s) for resolving the ethical issue. Refer *specifically* to the IEEE Code of Ethics when discussing how your group would attempt to resolve the issue. In grading the scenario, consideration will be given for the group's ability to highlight an issue that has an unclear path for resolution.
