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# Engineering Ethics: Conflicts of Interest

by

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**Introduction:**

The topic of ethics is, of course, a very broad one and includes a myriad of subsections. There are an almost unlimited set of circumstances that could come under the broad heading of “ethics”. Conflicts of interest represent one area where ethical decisions are involved.

This course is a discussion of some potential cases of conflicts of interest. While the situations described in this course are hypothetical, they are representative of situations which occur frequently in real life situations and can cause ethical dilemmas. While it is expected that no one goes into a situation with the idea that “I will act in an unethical manner today”, the failure to act decisively in a dubious situation can itself be unethical.

Perhaps nowhere is this clearer than in the determination of a conflict of interest. What one person considers a conflict of interest might not be considered a conflict by another person. However, there is an objective set of criteria by which an engineer can determine whether or not he or she can ethically act in a particular way or whether his or her behavior will constitute a conflict of interest. These are spelled out in the code of ethics which will be referred to repeatedly throughout this course. There is a school of thought that if something gives the appearance of being a conflict of interest then it should be avoided. There is perhaps some truth to this idea. For this reason, avoiding the appearance of conflicts of interest can be almost as important as avoiding the conflicts themselves. (This is because perception often becomes reality and a scandal can result from actions that are not wrong, but have the appearance of being wrong). This course will attempt to point out that some situations are straightforward, whereas others may not be so black and white. In all cases, though, there should be “right” answer that people can agree is the ethical choice to make.

The National Society of Professional Engineers (NJSPE) has published a code of ethics which are supposed to guide moral decisions made by engineers in their professional conduct and this code has been adopted by many state licensing boards.

At the very beginning of the code is a list of fundamental canons, which engineers are enjoined to fulfill in their professional duties, and which are repeated below:

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.



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Each one of these canons deserves special attention and should be in the engineer's consciousness whenever he or she has to make an ethical decision. Note that conflicts of interest are not specifically mentioned in any of these canons. However, there are echoes of them in the background of all of them. Some ways that conflicts of interest are implicit in these canons are as follows:

1. Canon #1: An engineer is not holding the welfare of the public paramount if he or she is engaging in a conflict of interest which can jeopardize the sound engineering judgement required on all projects.
2. Canon #4: Obviously, there are conflicts of interest which can seriously influence the engineer's sound judgement. Subsection 4a of the code of ethics reads: "Engineers shall disclose all known or potential conflicts of interest that could influence or appear to influence their judgement or the quality of their services."
3. Canon #5: Engaging in a conflict of interest is certainly not avoiding deceptive acts.
4. Canon #6: By engaging in a conflict of interest the engineer is not acting honorably and is, potentially, harming the honor and reputation of the profession as a whole.

So, then, what would be a conflict of interest? Some of them are actually specified in the code of ethics and others are so obvious as to need no explanation. For example, Section III5.a of the code does specify that "Engineers shall not accept financial or other considerations, ... from material or equipment suppliers for specifying their products". This really needs no explanation. The engineer should specify the material or product that best suits the project at hand (within whatever cost constraints are involved) without consideration of any financial gain to themselves. Similar to this (and also covered in the code) is the fact that engineers shall not accept commissions (i.e. "kickbacks") from contractors for recommending them. Once again, this is obvious. An engineer has to act in the client's best interest by recommending the contractor(s) that he or she feels will perform best, not based on the promise of financial gain.

Now we will consider two hypothetical scenarios and see what conflicts of interest may be involved and how they could be addressed and/or avoided. (Note that in these hypothetical scenarios any relationship to real people, either living or deceased, is purely coincidental. Only first names are used and these were taken from a list of "available dogs" at a local animal shelter.)



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**Scenario #1:**

In a hypothetical small town, the Sunrise Diner has been a local gathering place for nearly 125 years. However, it is now going out of business and its owners are selling it to the ABC Corporation, which is planning to raze the structure and construct a strip mall in its place. This is very unpopular with the townspeople and there are signs all along the main streets saying “Save the Sunrise Diner” and “No Strip Mall in our Town”.

Finn is a local civil engineer who has been hired by the ABC Corporation to design the site plan for the project. The plan will need approval from the town’s planning board. The ABC Corporation has been advised that a group of local citizens has hired an attorney to object to the application at the board meeting. In reviewing the board’s composition, Finn realizes that he may have a conflict of interest with one, or perhaps several, of the board members. A brief description of the board members and their relationship to Finn and ABC Corporation is as follows:

**Board member #1: Tess** is the mayor of the town and she sits on the planning board. She is also Finn’s sister-in-law. However, she has no professional relationship with him or with the ABC Corporation.

**Board member #2: Rory** has been a life-long friend of Finn’s, played high school football with him, and was best man at Finn’s wedding. He has no professional relationship with Finn or the ABC Corporation.

**Board member #3: Holly** is a free-lance draftsman and CAD operator. Finn occasionally hires her to do some CAD work for his firm.

**Board member #4: Donnie** is a local attorney and has no relationship either personal or professional with Finn. He does, however, (unbeknownst to Finn) have a very small minority share in the ABC Corporation.

**Board member #5: Amos** is a local contractor. He has no relationship either personal or professional with Finn or with the ABC Corporation. However, a rumor has started in the town that he is in favor of the project because he hopes to get the building contract for the new strip mall.

**Board member #6: Phoebe** is a civil engineer and has no relationship either personal or professional with Finn or with the ABC Corporation. However, about six years previously,



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before Finn began his own firm, they both worked together in a larger engineering firm in another town.

**Board member #7: Harper** owns a real estate business in the town. He has also been an outspoken critic of the project in local meetings and on social media. He often hires Finn to design septic systems and other residential improvements on properties he is selling.

As stated previously, Finn has to decide which, if any, of these board members will present him with a conflict of interest. (In this case, the conflict may be more on the board members' side but it is their relationship to Finn that he must evaluate). Obviously, there are several board members that need to either recuse themselves or, at the very least, disclose their relationship to the project and with its personnel. We will now look at each one of these in detail, keeping in mind the canons in the NSPE Code of Ethics:

**Tess:** There is really no conflict of interest between Finn and Tess. The fact that she is his sister-in-law does not prejudice her from making a non-biased decision in this case. However, to avoid the appearance of a conflict it behooves one or the other of them to make an announcement at the beginning of the public meeting disclosing their relationship. In that way, if the objecting attorney or a member of the public feels that Tess could not make an impartial decision, then she could recuse herself from the proceedings. In any case, making the relationship known would make the process transparent and “..prevent harming the honor and reputation of the profession.”

**Rory:** Very much like Tess, Rory does not have a real conflict of interest. The fact that he and Finn are friends should not prejudice his decision. However, as with Tess, it would good for Finn to make this known beforehand. Even the appearance of a conflict of interest can harm the integrity of the people involved and the engineering profession as a whole. If this personal relationship were not made known at the time of the hearing but became public after the decision had been reached it could be detrimental to all concerned.

**Holly:** There is a clear conflict of interests present here if Holly sits on the board during the application. Because she occasionally works for Finn she really cannot be considered able to make a completely unbiased decision. Prior to beginning, Finn should make this fact known and publicly request that Holly step down from this application.

**Donnie:** There can be no question that Donnie has a serious conflict of interest. However, it does not involve Finn in any way and, in fact, he is unaware of it. Therefore, it does not come into our consideration here.



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**Amos:** Amos has a decision to make as to whether he wants the appearance of impropriety to go unchecked or whether he will recuse himself. However, in either case, it does impact on Finn and does not come under our consideration.

**Phoebe:** There is absolutely no conflict of interest with Phoebe sitting in on the deliberations. The fact that she and Finn one time worked for the same firm is completely immaterial and in no way should impact her judgement.

**Harper** probably should recuse himself from the proceedings because he has been a publicly outspoken critic of the project and, as such, really cannot be expected to make an unbiased decision on the case. However, that does not affect Finn in any way. What does affect Finn is his on-going professional relationship with Harper. Because of this, it is imperative that Finn make this known publicly and allow Harper to recuse himself from the proceedings (if he has not already done so for other reasons).

The somewhat far-fetched, hypothetical example above does show that there are degrees of conflicts of interest. The best way for the engineer to protect against them is to act with honesty and integrity in all situations. In addition, he or she should be careful to avoid the appearance of impropriety and to make public any relationships that might seem suspicious if they were not disclosed.

Another type of conflict of interest can potentially occur when the engineer has an opportunity to do some “moonlighting” or work on the side. This also is specifically addressed in the NPSE Code of Ethics in a few different ways as follows:

1. Canon #4, stated above, indicates (in part) that engineers shall “act for each employer...as faithful agents and trustees.” This does not automatically proscribe an engineer from taking on extra work from another firm but it certainly means that he or she must do so in such a way that it does not harm their primary employer.
2. Section 6. States “Engineers shall not attempt to obtain employment or advancement or professional engagements by untruthfully criticizing other engineers, or buy improper or questionable methods”. This is another obvious conflict of interest. If an engineer is untruthfully criticizing other professional engineers so that he or she can be hired for a specific professional engagement, then the engineer has clearly engaged in unethical conflict.



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3. Section III6.b. states “Engineers in salaried positions shall accept part-time engineering work only to the extent consistent with policies of the employer and in accordance with ethical considerations.”
4. Section III6.c. states ”Engineers shall not, without consent, use equipment, supplies, laboratory, or office facilities of an employer to carry on outside private practice.”

Now we will turn to another hypothetical scenario that will attempt to point out some degrees of conflicts of interests that can be present when an engineer has the opportunity for part time work for someone other than his or her primary employer.

**Scenario #2:**

In this scenario we will once again follow Finn’s engineering company. He owns a small firm that provides engineering and surveying services. (Finn and one of his employees are both licensed professional engineers and land surveyors). His firm does not have a written policy on his employees taking outside work. He is presently bidding on a large scale development project for a commercial center in a neighboring town. One key member of Finn’s team has given notice and will shortly be leaving the company. In addition, a number of Finn’s employees have been given opportunities for part-time work with other firms. These are described in some detail below:

**Harold** is a licensed engineer who has a salaried position with Finn’s firm. He is also a licensed land surveyor. He sometimes will do surveying on his own. When he does this he uses surveying equipment that is owned by Finn’s firm. He has not told Finn that he is doing this because he only uses the equipment on the weekends when Finn’s company is not open for business.

**Candy** is a licensed engineer who has a salaried position with Finn’s firm. She has been asked by another firm if she is available to work on Saturdays. This other firm intends to bid on the same commercial center project that Finn’s firm is bidding on and they do not have the personnel resources to execute it without her. Candy would have a pivotal role on the project if they were awarded the contract. She has not yet decided whether she will tell Finn about this opportunity or whether she will accept the work.

**Kendal** is a licensed engineer who has a salaried position with Finn’s firm. His brother owns a diner in the town and Kendal often makes some extra money by working as a chef in the evenings, on weekends, or on holidays. He has not told Finn about this.



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**Serena** is a licensed engineer who has a salaried position with Finn's firm. She has been making extra money for the last two years by writing on-line continuing education courses for professional development hours for professional engineers. She has not told Finn about this. She never writes these courses during the hours she is employed by Finn's firm and she does not use any of his firm's resources.

**Oakley** is a licensed engineer who has a salaried position with Finn's firm. He sometimes takes extra work doing structural calculations for a firm he had worked for some years previously. He does not sign this work but simply provides calculations for the other firm's engineers to review them and sign them because the other firm does not have qualified structural engineers on staff. He has told Finn that he is doing this and Finn has told him that he does not mind as long as he confines the outside work to outside business hours.

**Tracy:** is a licensed engineer who has a salaried position with Finn's firm. She sometimes works on Saturdays at a local lumber yard. She got this job because the owners of the lumber yard told her they would hire her for part time work if she specified their products and she has routinely done this. She has told Finn that she is working at the lumber yard (but not how she got the job) and he has no problem with her working there.

**Kyle** is a licensed engineer who has a salaried position with Finn's firm. He has given notice and will be leaving the firm at the end of the month. He has applied for a position as chief engineer in another firm and is one of two finalists for the job. The other finalist for the job, Cindy, used to work with Kyle at Finn's firm. She is a very competent engineer and has virtually the same qualifications as Kyle. At his last interview, Kyle indicated to his prospective employers that Cindy was fired from Finn's firm because she was incompetent and cost the firm several large projects.

Now let us examine each of these employees and see which, if any, of them are engaging in a conflict of interest. It appears to be obvious that not all of them are dealing in an ethical manner.

**Harold:** Harold is engaging in a classic conflict of interest. He is using his employer's equipment for his own gain without his employer's knowledge or consent. This is dishonest and unethical. The fact that the employer has not actually scheduled the equipment for use on Saturdays does not affect this in any way. For Harold to correct this situation he must do one of the following:

- Stop using Finn's equipment without his knowledge.





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- Tell Finn what he has been doing and request his permission to continue to do it.

**Candy:** Candy has been offered a position that would be a classic conflict of interest and would directly harm her employer if she were to take it. Her acceptance of this work could mean that the other firm gets the large scale contract that Finn is bidding on. In order to act in an ethical manner in this regard she must do one of the following:

- Tell Finn about the offer she has received and ask his permission to accept it. (The assumption, of course, is that he would not give permission because her acceptance of the position would be detrimental to his own firm).
- Decline the opportunity.

**Kendal:** There is certainly no conflict of interest involved in this case. The fact that Kendall works at a diner in off hours cannot be construed in any way as being unfaithful to his primary employer.

**Serena:** Serena is not guilty of a conflict of interest. Her course writing work does not affect her performance in any way. (It would be completely different if she were to spend some part of her time at the office writing these courses. This would be dishonest and deceitful and would not be acting in a faithful manner towards her employer). It would probably be a good idea for Serena to inform Finn of the work she is doing simply to avoid the appearance of a conflict of interest. Since there is nothing to hide, there is no reason to hide it.

**Oakley:** Oakley's behavior does not constitute a conflict of interest but it certainly can be considered unethical. Because Finn has given specific permission for him to take the outside work there is no conflict of interest involved (as long as Harold abides by the terms that Finn has specified). However, Finn is aiding and abetting in unethical work by this other firm. Section II.2. Of the NPSE code of ethics states "Engineers shall perform services only in the areas of their competence". It goes on to say "Engineers shall not affix their signatures to any plans or documents dealing with subject matter in which they lack competence, nor to any plans or document not prepared under their direction and control." Harold is not precisely doing this, but he is aiding and abetting it. Whatever engineer in the other firm is signing and sealing the structural calculations (that have been prepared by Harold) is not competent to do so. Therefore, Harold (and the engineer in the other firm) are colluding in an unethical, dishonest manner. Since Finn has given Harold permission to do this work, this situation could be corrected if Harold would actually sign and seal the documents he has prepared.



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**Tracy:** Tracy is engaging in a classic conflict of interest and her actions are clearly unethical. The fact that she has taken a job with the lumber company does not, in and of itself, constitute a conflict. It is perfectly legitimate for her to work there, especially because she has informed Finn that she is doing so. However, she has the job by means of her specifying products that are carried by the lumber yard. This is expressly forbidden by the code under Section III5.a which was quoted in part above and is repeated here: “Engineers shall not accept financial or other considerations, ... from material or equipment suppliers for specifying their products”. Once again, this is detrimental because it interferes with her sound judgement; she is specifying particular products not because they are the best for a particular situation but because they allow her to gain (and keep) her second job.

**Kyle** is obviously engaging in unethical and dishonest behavior. By lying about his rival, Cindy, he is acting against virtually every one of the canons listed in the NPSE code of ethics. He is also acting contrary to human decency (and, very probably, opening himself up to a lawsuit). In fact, this type of behavior is exactly the type of thing that harms the integrity of the engineering profession and should be avoided at all costs.

**Conclusion:**

This brief summary has tried to show some of the complexity of the idea of conflicts of interest. There are certainly degrees of conflicts ranging from the absolutely trivial to the absolutely criminal. Any situation that could even be construed to be a conflict of interest should be made known, by the engineer, to all interested parties so that there is never a veil of secrecy clouding his or her professional conduct. It has been said that “honesty is the best policy”. However, it also been said, with perhaps somewhat more insight, that “If it is only a policy, it is not honesty”. The engineer must always act in an ethical, honest manner and must err (if he or she does err at all) on the side of caution in letting all potential conflicts of interest become generally known.

**Final Thoughts:**

In today’s society there is tendency to relativize ethical decisions and to reduce them to “situational ethics”. Even now, however, society does agree on certain basic laws. Some things are just wrong and need to be prevented. Other things are right and should be encouraged. There is no question that ethics are a difficult subject to discuss or to write about. However, it is absolutely imperative that the engineer acts in an ethical manner in all of his or her professional activities. Section III1. of the NSPE code states that “Engineers shall be guided in all their relations by the highest standards of honesty and integrity”. This is the yardstick by which each member of the profession must measure himself or herself. When looking oneself in the mirror an engineer must ask:



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1. Am I acting honestly?
2. Am I acting with integrity?
3. Am I acting faithfully toward my employer, my client, and the general public?
4. Am I avoiding deception?

If the engineer can answer all of these questions with a “yes” then there will be no conflict of interest and the engineer will be a credit to themselves and to the profession.