

ETHICS FOR ENGINEERS (A Review of NSPE's Code of Ethics)

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TABLE OF CONTENTS

Introduction	3
Code of Ethics: Fundamental Canons.....	3
Code of Ethics: Rules of Practice	4
Code of Ethics: Professional Obligations	7
Conclusion	11
References.....	12



INTRODUCTION

Engineering is a profession that is very important and requires extensive formal education and training. Engineers must be licensed to practice the profession in any state. While licensing standards may have variations from state to state, the code of conduct requirements are very similar in all states. Members of the engineering profession are expected to exhibit high standards of fairness, integrity, and honesty as a part of their professional duties.

CODE OF ETHICS: Fundamental Canons

As licensed professionals, engineers have common standards of conduct and professional ethics that must be followed. Violations of these ethical standards can have financial and/or legal consequences. The National Society of Professional Engineers (NSPE) created standards of conduct in the early 20th century. In 1946, the “Canon of Ethics for Engineers and Professional Conduct” was developed by NSPE. Eventually, this became known as the “Code of Ethics” and has been revised and refined over the past 50 + years. In the “Code of Ethics”, the NSPE lists six fundamental canons that engineers are expected to adhere to. The “Code of Ethics” states that:

Engineers, in the fulfillment of their professional duties, shall:

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.

CODE OF ETHICS: Rules of Practice

The “Code of Ethics” goes on to give further rules of practice about these six fundamental canons. These rules of practice expound and further elaborate upon the six canons. The “Code of Ethics” says:

1. Engineers shall hold paramount the safety, health, and welfare of the public.

- a. If engineers’ judgment is overruled under circumstances that endanger life or property, they shall notify their employer or client and such other authority as may be appropriate.
- b. Engineers shall approve only those engineering documents that are in conformity with applicable standards.
- c. Engineers shall not reveal facts, data, or information without the prior consent of the client or employer except as authorized or required by law or this Code.
- d. Engineers shall not permit the use of their name or associate in business ventures with any person or firm that they believe is engaged in fraudulent or dishonest enterprise.
- e. Engineers shall not aid or abet the unlawful practice of engineering by a person or firm.
- f. Engineers having knowledge of any alleged violation of this Code shall report thereon to appropriate professional bodies and, when relevant, also to public authorities, and cooperate with the proper authorities in furnishing such information or assistance as may be required.

2. Engineers shall perform services only in the areas of their competence.

- a. Engineers shall undertake assignments only when qualified by education or experience in the specific technical fields involved.

- b. Engineers shall not affix their signatures to any plans or documents dealing with subject matter in which they lack competence, nor to any plan or document not prepared under their direction and control.
- c. Engineers may accept assignments and assume responsibility for coordination of an entire project and sign and seal the engineering documents for the entire project, provided that each technical segment is signed and sealed only by the qualified engineers who prepared the segment.

3. Engineers shall issue public statements only in an objective and truthful manner.

- a. Engineers shall be objective and truthful in professional reports, statements, or testimony. They shall include all relevant and pertinent information in such reports, statements, or testimony, which should bear the date indicating when it was current.
- b. Engineers may express publicly technical opinions that are founded upon knowledge of the facts and competence in the subject matter.
- c. Engineers shall issue no statements, criticisms, or arguments on technical matters that are inspired or paid for by interested parties, unless they have prefaced their comments by explicitly identifying the interested parties on whose behalf they are speaking, and by revealing the existence of any interest the engineers may have in the matters.

4. Engineers shall act for each employer or client as faithful agents or trustees.

- a. Engineers shall disclose all known or potential conflicts of interest that could influence or appear to influence their judgment or the quality of their services.
- b. Engineers shall not accept compensation, financial or otherwise, from more than one party for services on the same project, or for services

pertaining to the same project, unless the circumstances are fully disclosed and agreed to by all interested parties.

- c. Engineers shall not solicit or accept financial or other valuable consideration, directly or indirectly, from outside agents in connection with the work for which they are responsible.
- d. Engineers in public service as members, advisors, or employees of a governmental or quasi-governmental body or department shall not participate in decisions with respect to services solicited or provided by them or their organizations in private or public engineering practice.
- e. Engineers shall not solicit or accept a contract from a governmental body on which a principal or officer of their organization serves as a member.

5. Engineers shall avoid deceptive acts.

- a. Engineers shall not falsify their qualifications or permit misrepresentation of their or their associates' qualifications. They shall not misrepresent or exaggerate their responsibility in or for the subject matter of prior assignments. Brochures or other presentations incident to the solicitation of employment shall not misrepresent pertinent facts concerning employers, employees, associates, joint venturers, or past accomplishments.
- b. Engineers shall not offer, give, solicit, or receive, either directly or indirectly, any contribution to influence the award of a contract by public authority, or which may be reasonably construed by the public as having the effect or intent of influencing the awarding of a contract. They shall not offer any gift or other valuable consideration in order to secure work. They shall not pay a commission, percentage, or brokerage fee in order to secure work, except to a bona fide employee or bona fide established commercial or marketing agencies retained by them.

CODE OF ETHICS: Professional Obligations

Engineers also have many professional obligations to society. Of the many obligations engineers have, the most important one is the safety, health, and welfare of the public. The following obligations are listed by NSPE as a part of the “Code of Ethics”:

1. Engineers shall be guided in all their relations by the highest standards of honesty and integrity.

- a. Engineers shall acknowledge their errors and shall not distort or alter the facts.
- b. Engineers shall advise their clients or employers when they believe a project will not be successful.
- c. Engineers shall not accept outside employment to the detriment of their regular work or interest. Before accepting any outside engineering employment, they will notify their employers.
- d. Engineers shall not attempt to attract an engineer from another employer by false or misleading pretenses.
- e. Engineers shall not promote their own interest at the expense of the dignity and integrity of the profession.

2. Engineers shall at all times strive to serve the public interest.

- a. Engineers are encouraged to participate in civic affairs; career guidance for youths; and work for the advancement of the safety, health, and well-being of their community.
- b. Engineers shall not complete, sign, or seal plans and/or specifications that are not in conformity with applicable engineering standards. If the client or employer insists on such unprofessional conduct, they shall notify the proper authorities and withdraw from further service on the project.
- c. Engineers are encouraged to extend public knowledge and appreciation of engineering and its achievements.

- d. Engineers are encouraged to adhere to the principles of sustainable development in order to protect the environment for future generations. (“Sustainable development” is the challenge of meeting human needs for natural resources, industrial products, energy, food, transportation, shelter, and effective waste management while conserving and protecting environmental quality and the natural resource base essential for future development.)
- e. Engineers shall continue their professional development throughout their careers and should keep current in their specialty fields by engaging in professional practice, participating in continuing education courses, reading in the technical literature, and attending professional meetings and seminars.

3. Engineers shall avoid all conduct or practice that deceives the public.

- a. Engineers shall avoid the use of statements containing a material misrepresentation of fact or omitting a material fact.
- b. Consistent with the foregoing, engineers may advertise for recruitment of personnel.
- c. Consistent with the foregoing, engineers may prepare articles for the lay or technical press, but such articles shall not imply credit to the author for work performed by others.

4. Engineers shall not disclose, without consent, confidential information concerning the business affairs or technical processes of any present or former client or employer, or public body on which they serve.

- a. Engineers shall not, without the consent of all interested parties, promote or arrange for new employment or practice in connection with a specific project for which the engineer has gained particular and specialized knowledge.
- b. Engineers shall not, without the consent of all interested parties, participate in or represent an adversary interest in connection with a

specific project or proceeding in which the engineer has gained particular specialized knowledge on behalf of a former client or employer.

5. Engineers shall not be influenced in their professional duties by conflicting interests.

- a. Engineers shall not accept financial or other considerations, including free engineering designs, from material or equipment suppliers for specifying their product.
- b. Engineers shall not accept commissions or allowances, directly or indirectly, from contractors or other parties dealing with clients or employers of the engineer in connection with work for which the engineer is responsible.

6. Engineers shall not attempt to obtain employment or advancement or professional engagements by untruthfully criticizing other engineers, or by other improper or questionable methods.

- a. Engineers shall not request, propose, or accept a commission on a contingent basis under circumstances in which their judgment may be compromised.
- b. 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.
- c. Engineers shall not, without consent, use equipment, supplies, laboratory, or office facilities of an employer to carry on outside private practice.

7. Engineers shall not attempt to injure, maliciously or falsely, directly or indirectly, the professional reputation, prospects, practice, or employment of other engineers. Engineers who believe others are guilty of unethical or illegal practice shall present such information to the proper authority for action.

- a. Engineers in private practice shall not review the work of another engineer for the same client, except with the knowledge of such engineer, or unless the connection of such engineer with the work has been terminated.
- b. Engineers in governmental, industrial, or educational employ are entitled to review and evaluate the work of other engineers when so required by their employment duties.
- c. Engineers in sales or industrial employ are entitled to make engineering comparisons of represented products with products of other suppliers.

8. Engineers shall accept personal responsibility for their professional activities, provided, however, that engineers may seek indemnification for services arising out of their practice for other than gross negligence, where the engineer's interests cannot otherwise be protected.

- a. Engineers shall conform with state registration laws in the practice of engineering.
- b. Engineers shall not use association with a nonengineer, a corporation, or partnership as a "cloak" for unethical acts.

9. Engineers shall give credit for engineering work to those to whom credit is due, and will recognize the proprietary interests of others.

- a. Engineers shall, whenever possible, name the person or persons who may be individually responsible for designs, inventions, writings, or other accomplishments.
- b. Engineers using designs supplied by a client recognize that the designs remain the property of the client and may not be duplicated by the engineer for others without express permission.
- c. Engineers, before undertaking work for others in connection with which the engineer may make improvements, plans, designs, inventions, or other records that may justify copyrights or patents, should enter into a positive agreement regarding ownership.

- d. Engineers' designs, data, records, and notes referring exclusively to an employer's work are the employer's property. The employer should indemnify the engineer for use of the information for any purpose other than the original purpose.

CONCLUSION

An ethical code, such as the one from NSPE, holds engineers to a higher standard than just the legal requirements needed to practice the engineering profession in society. This code promotes making decisions to first protect the public, then the engineering profession, and lastly, the engineer. The ethical code also establishes the moral obligations of an engineer. These obligations include having respect for people and being fair and just to others. They also involve meeting commitments, respecting the rights of others, and not causing any unnecessary harm by being dishonest, cruel, or arrogant. Since engineering is considered the application of science to improve human life, having engineers with ethics definitely helps the betterment of society. These ethics promote engineering self-governance as a respected profession. Ethics also help support mutual trust with the public because they protect both the public and the profession, while allowing engineers to move forward with their efforts to improve the qualities of human life.

REFERENCES

1. The National Society of Professional Engineers (NSPE) “Code of Ethics for Engineers” (Used with permission from the National Society of Professional Engineers (NSPE) www.nspe.org). Publication retrieved on November 19, 2018 from the following link:
<https://www.nspe.org/sites/default/files/resources/pdfs/Ethics/CodeofEthics/NSPECodeofEthicsforEngineers.pdf>