

Rules of Practice for Engineers

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Abstract- This paper introduced the most important rules of practice for engineers. There are a lot of rules of practice which should be existed in every engineer. Here we will mention briefly some of them which produced by two big organizations: IEEE (Institute of Electrical and Electronics Engineers) and NSPE (National Society for Professional Engineers).

I. INTRODUCTION

Engineers play a huge part of the society improvement. A lot of people depend on them in many tasks. For example, we depend on the Civil Engineers in constructing the roads and buildings, the Electrical and Mechanical Engineers to operate the factories, the computer Engineers in building the computer networks and dealing with the software and hardware parts of the computer to satisfy some requirements and applications, and other kinds of engineers which provide different applications to the people. So, they should have some rules of ethics that ensure that they do their jobs precisely and honestly.

II. RULES OF PRACTICE

A. Rules of Practice by IEEE.

1. Accepting responsibility in making engineering decisions compatible with the safety, health and benefit of the public, and to disclose quickly factors that might endanger the public or the environment.
2. Avoiding real or perceived conflicts of interest whenever possible, and disclosing them to affected parties when they do exist.
3. Being honest and realistic in stating claims or estimates based on available data.
4. Rejecting bribery in all its forms.

5. Improving the understanding of technology, its suitable application, and potential consequences.
6. Maintaining and improvement their technical competence and to undertake technological tasks for others only if qualified by training or experience, or after full disclosure of pertinent limitations.
7. Seeking, accepting, and offering honest criticism of technical work, to acknowledge and correct errors, and crediting properly the contributions of others.
8. Treating fairly all persons regardless of such factors as race, religion, gender, disability, age, or national origin.
9. Avoiding injuring others, their property, reputation, or employment by false or malicious action.
10. Assisting colleagues and co-workers in their professional development and supporting them in following this code of ethics. [1]

B. Rules of Practice by NSPE

1. Engineers shall keep priority to the safety, health, and benefit of the public.
 - a. If engineers' judgment is overruled under situations 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 tell facts, data or information without the prior permission of the customer or employer except as authorized or required by law or this Code.
 - d. Engineers shall not allow the use of their name or associate in business ventures with any person or firm

that they believe are 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 ventures, 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 of intent to 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. [2]

III. CONCLUSION

We have listed the rules that an engineer should be aware of. As you can notice above, both organizations have similar rules of practice. When each engineer follows these rules in his job, a great benefit will come back to the company which he works at. Furthermore, the country and the society will benefit from him.

We conclude our paper by this saying: "The real engineer can not reach the top levels without having the good ethics". We mean that the knowledge and the experience are not enough.

REFERENCES

[1] <http://ef.engr.utk.edu/phil241-2007-01/exams/two-codes-handout.pdf>

[2] <http://www.nspe.org/ethics/Code-2006-Jan.pdf>