ENGINEERING ETHICS

OVERVIEW OF ETHICS AND PROFESSIONALISM IN ENGINEERING

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ENGINEERING ETHICS

A LITTLE BACKGROUND ….

SOMETHING NEW?


• **NSPE BOARD OF ETHICAL REVIEW FOUNDED IN 1954**
  • [https://www.nspe.org/resources/ethics/board-ethical-review](https://www.nspe.org/resources/ethics/board-ethical-review)

• **ACEC: ADOPTED IN 1980:**
  • ([http://www.acec.org/about/ethics/](http://www.acec.org/about/ethics/))
ENGINEERING ETHICS

IN OHIO …..

OHIO STATE BOARD OF REGISTRATION FOR PROFESSIONAL ENGINEERS & SURVEYORS

• 5 BOARD MEMBERS APPOINTED BY GOVERNOR, 9 FULL-TIME STAFF MEMBERS, 25 PROFESSIONAL CONSULTANTS

30,000 INDIVIDUAL PE AND PS REGISTRANTS
3,000+ ENGINEERING AND SURVEYING FIRMS
2,500+ EXAM APPLICATIONS REVIEWED
20+ FORMAL DISCIPLINARY ACTIONS

2,000 EXAMS ADMINISTERED
100+ COMPLAINTS INVESTIGATED
900+ COMITY APPLICATIONS REVIEWED

WWW.PEPS.OHIO.GOV

Courtesy of John Greenhalge, Executive Director, 2016
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BOARD’S MISSION

Protect safety, health and welfare of the public:

1. Establishing minimum qualifications for entry into the profession;
2. Adoption of rules defining and delineating unlawful and unethical conduct; and
3. Swift and effective discipline of those individuals or entities that violate laws and rules.

Dean C. Ringle, Chair
David L. Cox, Vice Chair
Walid E. Gemayel, Secretary
Bert Dawson, Member
Ferzan M. Ahmed, Member
THIS IS BORING; I NEED A THEME

• Recently …
  • Greg Hawks … Employee “Ownership Philosophy”
    • Owners bring their heart, head and hands.
    • Renters bring only hands.
    • Vandals bring division.
  • Jason Barger …. Inspiration Speaker: “Step Back From the Baggage Claim”
    • Step back, Be Still, Share Compassion, Live Gratefully. Today, travel gracefully along your path!

• How about Movies?
  • What I learned in a legal CLE…..
TOP 10 TEN MOVIES FOR LAWYERS

The Verdict
Rainmaker
To Kill a Mockingbird
A Time to Kill
12 Angry Men
A Few Good Men
My Cousin Vinny
The Paper Chase
Erin Brockovich
Philadelphia

UNDERLYING THEME:
LAWYER AS HERO .... BUT ....

LAWYERS ARE AT ROUGHLY TWICE THE RISK OF BECOMING ADDICTED TO DRUGS OR ALCOHOL AS PEOPLE IN OTHER PROFESSIONS. THEY ALSO HAVE HIGHER INCIDENCE OF DEPRESSION, ANXIETY, SUICIDE AND OTHER MENTAL HEALTH ISSUES THAN THE GENERAL POPULATION

Ethical? Professional?
TOP 10 TEN MOVIES FOR ENGINEERS

Apollo 13
The Matrix

Transformers
TRON

The Aviator

Beautiful Mind

Social Media
Iron Man

UNDERLYING THEME
COOL STUFF, SMART PEOPLE, ELEVATING TECHNOLOGY

Ethical? Professional?
I STILL NEED A THEME ....
What should an Ethical Engineer Be, or Not Be?

THAT is the Question!

& Sponge Bob Is the Answer!
• Make sure your work product is prepared under your professional’s supervision and direction; don’t just farm it out and expect that it is good enough.

• Don’t take credit for other’s work, and be closely involved in whatever work you author from inception to its completion.
Example:

• Engineer Squidward gets involved in a publication of an important engineering discovery that will revolutionize the woodwind music industry. However, he has no real knowledge of the discovery and his only contribution to the publication was to correct some typographical errors. He insists that his name should be included as one of the authors of the article.

Result:

• Squidward could be subject to discipline because his actions are at odds with academic honesty and professional integrity; he should not take credit for the work of others.
• NSPE Case # 85-1, Violation of Section III.3.c. of the NSPE Code of Ethics (www.onlineethics.org).
DON’T BE EVIL ...

No “Aiding &/Or Abetting”

- Illegally offering or providing engineering or surveying services in Ohio by an non-Ohio certified individual or firm;
- Often in conjunction with plan-stamping- sealing plans prepared by another person; and
- Aiding an unlicensed firm to practice in Ohio.

IMPROPER CONDUCT (OAC 4733-35-07)

- A PE or PS shall not knowingly associate with, or permit the use of his or her name in, a business venture by any person or firm known or believed to be engaging in business or practice of a fraudulent or dishonest nature.
**Example:**

- Engineer Plankton is a major shareholder in a company that manufactures water drainage systems. He responds to a solicitation from the Village of Bikini Bottom, and gets the job to design their downtown drainage facilities.
- Is it ethical for Plankton to recommend his company’s system?

**Result:**

- Maybe … if he performed the appropriate analysis, offered options to the Village, and disclosed that he was a part-owner of the manufacturing company.
- NSPE Case # 98-11, Violation of Section II.1.a. of the NSPE Code of Ethics. (www.onlineethics.org).
DON’T BE GREEDY …

SOLICITATION OF EMPLOYMENT
(OAC 4733-35-06)

• Do not extend/accept bribes;
• Seek employment based on your qualifications and competence;
• Do not misrepresent or falsify academic or professional qualifications;
• Do not exaggerate degree of responsibility on projects worked; and
• Advertising shall be based on fact, not fabrication.

CONFLICT OF INTEREST (OAC 4733-35-05)

• Shall not accept compensation from more than one party for services on the same project unless fully disclosed and agreed to by all interested parties
• Shall not solicit or accept gratuities from contractors or other parties dealing with his client or employer in connection with work for which he is responsible
Example:

• Engineer Eugene H. Krabs works for a design company and was involved in the design of the Pineapple Highway Expansion Project.
• Many years later, Bikini Bottom Construction Company wants to hire Mr. Krabs to help defend a lawsuit for work they did on the construction project.
• Is it ethical for Engineer Krabs to work for the construction company?

Result:

• Maybe … if he fully discloses his relationship and work done with the design firm and receives waivers from the owner of the highway project, then he may accept the work.
• NSPE Case # 98-11, Violation of Section II.4.a. of the NSPE Code of Ethics, Conflicts of Interest. (www.onlineethics.org).
PARTICIPATE IN OPPORTUNITIES FOR CONTINUING PROFESSIONAL DEVELOPMENT

BE INNOVATIVE BE A TEACHER ...

CONTINUING EDUCATION/LIFE LONG LEARNING

- Ohio Revised Code 4733.151 now requires all Ohio PE’s and PS’s to obtain 30 hours of continuing professional development (CPD) bi-annually
- CPD credits can be obtained by college courses, publications, patents, service, conferences, seminars, teaching.

- 15 hours per year (30/2)
- Must certify on bi-annual renewal that it is completed
- Must supply records when audited DO NOT SEND WITH RENEWAL (anyone?)
Example:

- Gary the Engineer is hired to do part-time quality control on a project, but soon recognizes that he does not have the time needed to perform all the work and that a full-time inspector is needed. The owner does not want to spend these extra dollars, so Gary just continues his part time efforts.

Result:

Gary could be subject to discipline because an Engineer’s primary obligation is to protect the public health, and going along with his client’s wishes was an abandonment of that obligation.
NSPE Case # 84-5, Violation of Section II.1.a. of the NSPE Code of Ethics. (www.onlineethics.org).
BE ACCEPTING OF DIVERSITY & ENDEAVOR TO PROVIDE EQUAL OPPORTUNITY

ASCE POLICY 417

ASCE supports and encourages the equitable opportunity for participation of all people within the civil engineering profession without regard to race, ethnicity, religion, age, gender, sexual orientation, nationality, or physical challenges. The Society will promulgate and implement programs designed to enhance opportunities to participate in the profession.

NOT JUST A GOOD IDEA, IT’S THE LAW …

- Non-discrimination due to sex, race, color, age, political/religious outlook. Protected by Civil Rights Act 1964
- Sexual harassment—“Unwanted imposition of sexual requirements in the context of a relationship of unequal power.”
- Affirmative action: Federal Depart of Labor Standards:
Lastly

RULE OF THUMB ...
DON’T BE DUMB ... LIKE ...

• DON’T: Improperly stamp plans.
• DO: Avoid conflicts of interest.
• DO: Protection and use your seal properly.
• DON’T: Fail to complete Continuing Education.
WHICH TYPE OF ENGINEER WILL YOU BE?
OH, AND ONE MORE THING ....
HB 236 INTENDS TO AMEND R.C. 4733.151 ....

- Sec. 4733.151. (A) For registrations expiring on the last day of December 2011, each registrant for renewal shall have completed, in calendar year 2011, at least fifteen hours of continuing professional development for professional engineers and surveyors. Thereafter, each registrant shall complete at least thirty hours of continuing professional development during the two-year period immediately preceding the biennial renewal expiration date. ****

- (C)(2) Beginning with registrations expiring on or after the last day of December 2017, a person registered as a professional engineer or professional surveyor shall complete AT LEAST TWO of the thirty hours required under division (A) of this section on PROFESSIONAL ETHICS or rules relevant to the practices of engineering or surveying.

ENGINEER’S CREED

As a Professional Engineer, I dedicate my professional knowledge and skill to the advancement and betterment of human welfare.

I pledge:

• To give the utmost of performance;
• To participate in none but honest enterprise;
• To live and work according to the laws of man and the highest standards of professional conduct; &
• To place service before profit, the honor and standing of the profession before personal advantage, and the public welfare above all other considerations.

In humility and with need for Divine Guidance, I make this pledge.

Adopted by National Society of Professional Engineers June, 1954

THANK YOU