

Engineering Ethics

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Course Structure

- 2nd Hour:
 - Codes of Ethics
 - Texas Engineering Practices Act

Codes of Ethics

- Soldiers, police, firefighters, EMTs etc.
 - High-stress situations; no time to think.
 - Training to respond in a manner to ensure high-probability of correct response.
- Code of ethics serves a similar purpose.
 - Provide guides to respond to an ethical situation in a manner to ensure a high-probability of correct response.

NSPE Code of Ethics

- Example of a code of ethics.
- Comprehensive

Preamble

- Describes the purpose of the code:
 - Safeguard life, health, property.
 - Promote the public good.
 - Maintain high integrity.

Fundamental Canons

- Describes and engineer's obligation to society.
 - Public welfare.
 - Competence.
 - Honesty.

Rules of Practice

- Expanded descriptions of the fundamental canons

Professional Obligations

- Expanded last fundamental canons.

Problems

Texas Engineering Practice Act

- Defines:
 - “practice” of engineering.
 - “licensure” qualifications.
 - “misconduct” and associated remedies.
- Purpose (1001.004):
 - Promote the public good (improve quality of life, property, economy, security of the state and the nation)

Texas Engineering Practice Act

- Section(s) 1001.## contains specific definitions and exemptions.
 - Defines a public work.
 - Sets a dollar value on projects that need licensed engineers to perform services.
- Establishes fees for various license related activities.

Texas Engineering Practice Act

- Section(s) 1001.210 establishes the continuing education program
 - the reason you are here now!

Texas Engineering Practice Act - Continuing Education

- A course sponsored by
 - an institution of higher education
 - a professional or trade organization
- A seminar, tutorial, short course, correspondence course, videotaped course, or televised course.
- participating in an in-house course sponsored by a corporation or other business entity

Texas Engineering Practice Act - Continuing Education

- Teaching a course described by Subdivisions (1)-(4)
- Publishing an article, paper, or book on the practice of engineering
- Making or attending a presentation at a meeting of a technical or engineering management society or organization or writing a paper presented at such a meeting;

Texas Engineering Practice Act - Continuing Education

- Participating in the activities of a professional society or association, including serving on a committee of the organization
- Engaging in self-directed study
 - (up to 5 hours).

Texas Engineering Practice Act - License Required

- § 1001.301. License Required
 - Practice engineering
 - Use following titles:
 - (1) "engineer"
 - (2) "professional engineer"
 - (3) "licensed engineer"
 - (4) "registered engineer"
 - (5) "registered professional engineer"
 - (6) "licensed professional engineer"
 - (7) "engineered."

Texas Engineering Practice Act - Renewal Procedure

- § 1001.353. Defines
 - Regular renewal
 - Late (grace period) and associated increase in fees.
 - Expired and retesting process (by reference to other sections of the act)

Texas Engineering Practice Act - Public Officials

- § 1001.402. Enforcement by Certain Public Officials.
 - A public official of the state or of a political subdivision of the state who is responsible for enforcing laws that affect the practice of engineering may accept a plan, specification, or other related document only if the plan, specification, or other document was prepared by an engineer, as evidenced by the engineer's seal.

Texas Engineering Practice Act - Public Works

- § 1001.407. Construction of Certain Public Works
 - The state or a political subdivision of the state may not construct a public work involving engineering in which the public health, welfare, or safety is involved, unless:
 - (1) the engineering plans, specifications, and estimates have been prepared by an engineer; and
 - (2) the engineering construction is to be performed under the direct supervision of an engineer.

Texas Engineering Practice Act

- § 131.81 Definitions
 - Defines meanings of acronyms (ABET) etc. and specific terms such as “graduate engineer” etc.
 - Gross negligence
 - Incompetence

Texas Engineering Practice Act

- § 137.17 Continuing Education Program
 - (a) Each license holder shall meet the Continuing Education Program (CEP) requirements for professional development as a condition for license renewal.
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 - (d) A minimum of 1 PDH per renewal period must be in the area of professional ethics, roles and responsibilities of professional engineering, or review of the Texas Engineering Practice Act and Board Rules.

Texas Engineering Practice Act

- § 137.37 Sealing Misconduct A license holder shall be guilty of misconduct and subject to disciplinary action if the license holder:
 - (1) knowingly signs or seals any engineering document or product if its use or implementation may endanger the health, safety, property or welfare of the public.
 - (2) signs or affixes a seal on any document or product when the license is inactive or has been revoked, suspended, or has expired.
 - (3) alters a sealed document without proper notification to the responsible license holder.

Texas Engineering Practice Act - Professional Ethics

- § 137.51 General Practice
- § 137.53 Engineer Standards of Compliance with Professional Procurement Services Act
- § 137.55 Engineers Shall Protect the Public
- § 137.57 Engineers Shall be Objective and Truthful
- § 137.59 Engineers' Actions Shall Be Competent
- § 137.61 Engineers Shall Maintain Confidentiality of Clients
- § 137.63 Engineers' Responsibility to the Profession

Texas Engineering Practice Act

Ethics Violations			
Failure to report change of address or employment	§ 137.5		Reprimand/\$500.00
Failure to respond to Board communications	§ 137.51(c)		6 month probated suspension/ \$1,000.00
Failure to engage in professional and business activities in an honest and ethical manner	§ 137.63(a)		2 year probated suspension/ \$2,500.00
Misrepresentation, issuing oral or written assertions in the practice of engineering that are fraudulent, deceitful, or misleading	§ 137.57(a), (b)		2 year suspension/\$2,500.00
Conflict of interest	§ 137.57(c), (d)		2 year suspension/\$2,500.00
Inducement to secure specific engineering work or assignment	§ 137.63(c)(4)		2 year probated suspension/ \$2,500.00
Accept compensation from more than one party for services on the same project	§ 137.63(c)(5)		2 year probated suspension/ \$2,500.00
Solicit professional employment in any false or misleading advertising	§ 137.63(c)(6)		1 year probated suspension/ \$2,500.00
Offer or practice engineering while license is expired or inactive	§§137.7(a), 137.13(g)		1 year probated suspension/ \$500.00
Failure to include "inactive" representation with title while in inactive status	§137.13(g)		Reprimand/\$500.00
Failure to act as a faithful agent to their employers or clients	§ 137.63(b)(4)		1 year probated suspension/ \$1,500.00
Reveal confidences and private information	§ 137.61(a), (b), (c)		Reprimand/\$1,500.00

Texas Engineering Practice Act

Attempt to injure the reputation of another	§ 137.63(c)(2)	1 year probated suspension/ \$1,500.00
Retaliation against a complainant	§ 137.63(c)(3)	1 year probated suspension/ \$1,500.00
Aiding and abetting unlicensed practice or other assistance	§§ 137.63(b)(3), 137.63(c)(1)	3 year probated suspension/ \$3,000.00
Failure to report violations of others	§ 137.55(c)	Reprimand/\$1,500.00
Failure to consider societal and environmental impact of actions	§ 137.55(d)	Reprimand/\$1,500.00
Failure to prevent violation of laws, codes, or ordinances	§ 137.63(b)(1), (2)	Reprimand/\$1,500.00
Failure to conduct engineering and related business in a manner that is respectful of the client, involved parties and employees	§ 137.63(b)(5)	1 year probated suspension/ \$1,500.00
Competitive bidding with governmental entity	§ 137.53	Reprimand/\$1,500.00
Expressing an opinion before a court or other public forum which is contrary to generally accepted scientific and engineering principals without fully disclosing the basis and rationale for such an opinion	§ 137.59(c)	2 year suspension/\$2,500.00
Falsifying documentation to demonstrate compliance with CEP	§ 137.17(p)(2)	2 year suspension/\$2,500.00
Action in another jurisdiction	§ 137.65(a) and (b)	Similar sanction as listed in this table if action had occurred in Texas

Problems

- NSPE Exam