Texas Board of Professional Engineers Professional Practice Update / Ethics

Lance Kinney, Ph.D., P.E.
Executive Director

http://engineers.texas.gov/outreachsurvey

Agenda

- About the Board
- Core Functions
  - Licensing
  - Enforcement
- Law and Rules
- Board Activities

TBPE
Texas Board *of* Professional Engineers

Website and Social Media

http://engineers.texas.gov

- Facebook: Texas Board of Professional Engineers
- Twitter: TBPE_Exec
- LinkedIn: Texas Board of Professional Engineers
- RSS Feed on our website: http://engineers.texas.gov
- YouTube: https://www.youtube.com/channel/UCm0YTnjR3StveBxWhCT4MiA

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Texas Board of Professional Engineers

Nine Members - Appointed by Governor

- 6 Licensed Professional Engineers
- 3 Public Members
- Standard term is 6 years

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Daniel O. Wong, PhD, PE	**Houston - Chairman**
Kyle Womack, PE	Midland- Vice Chair
Catherine Norwood, PE	Midland - Secretary
Edward Summers, PhD (public member)	Austin - Treasurer
Lamberto “Bobby” Balli, PE	San Antonio
Sina K. Nejad, D.Eng, PE, PEng	Beaumont
Elvira Reyna (public member)	Denton County
Sockalingam “Sam” Kannappan, PE	Baytown
Albert Cheng (public member)	Houston

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TBPE Staff

31 Staff members, Austin

Lance Kinney, PhD, PE - Executive Director

David Howell, PE – Deputy Executive Director

Michael Sims, PE - Compliance & Enforcement

Rick Strong, PE - Licensing

Janet Sobieski - Operations

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TBPE Mission

Public Safety

Our mission is to protect the health, safety and welfare of the people of Texas by regulating and advancing the practice of engineering through licensure of qualified individuals, compliance with the laws and rules, and education about professional engineering.

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History of TBPE

- Created by Texas Legislature (45R) in 1937
- New London School Explosion
  - 300 students and teachers killed
  - Result of improperly designed mechanical and electrical devices
- Established a Board to regulate the practice of engineering through licensing and rules of practice

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1937

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Board Primary Functions

Since 1937 -

- **License** Qualified Engineers
- **Enforce** Engineering Practice Act

Since 2003 –Requiring Firm Registration

Since 2005 -Requiring Continuing Education

Now

- **Educate** – PEs, Officials, Potential PEs, Public

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TBPE Licensing History

867 individuals registered on 1st roster published 02/12/1938

Over 131,000 Texas licenses granted since then.

Currently over 65,700 licenses

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Professional Licensing

- Protection of the Public
- Ethical expectations
- Competence
  - Initial Qualifications
    - Education, Experience, Examinations
  - Staying Current
    - Continuing Education
- Professionalism

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Professional Licensing

Fields that are regulated and licensed vary among individual states. Among regulated fields are health care professionals (medical doctors, nurses); psychologists; lawyers; teachers; engineers; …- *Wikipedia*

- Most of these fields impact the public one person at a time.
- The work done by engineers generally has the potential to affect ***many.***

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Professional Licensing

System to Protect the Public:

- Sets the minimum standards for licensure as a Professional Engineer
- Sets continuing practice and competence standards
- Sets ethical and professional standards
- Compliance with these standards of professional practice
- Standards for indicating competence (titles, seals, etc.)
- Prevents unqualified individuals from offering or practicing where it could endanger the public

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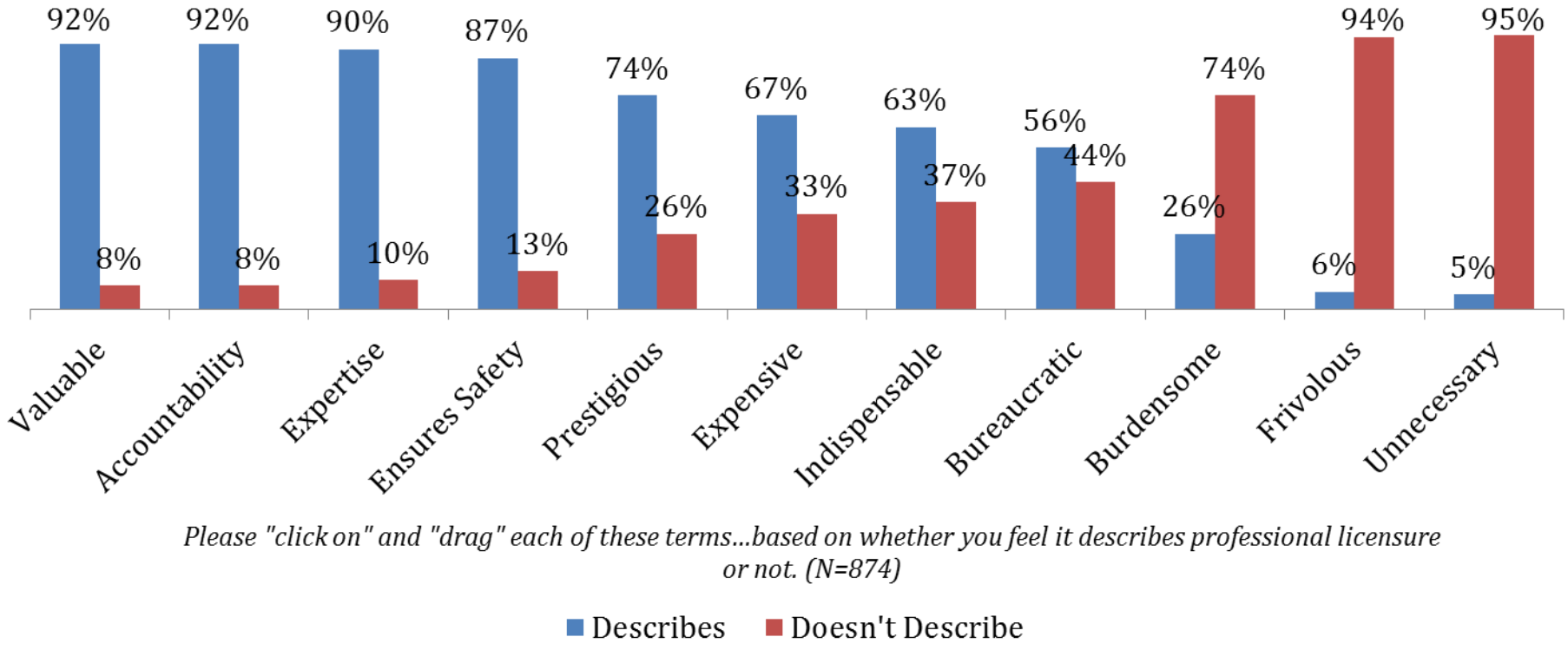
Public Perception - Licensure



Survey by McKinley Advisors

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Public Perception of Engineers

"What three words first come to your mind when you think of engineers?" (N=500)

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Public Perception of Engineers

Please tell me how you would rate the honesty and ethical standards of people in these different fields -- very high, high, average, low or very low? (Gallup 2016)

Profession	% Very High / High
Nurses	84%
Military Officers	71%
Pharmacists	67%
Engineers	**65%**
Medical Doctors	65%
Police Officers	58%

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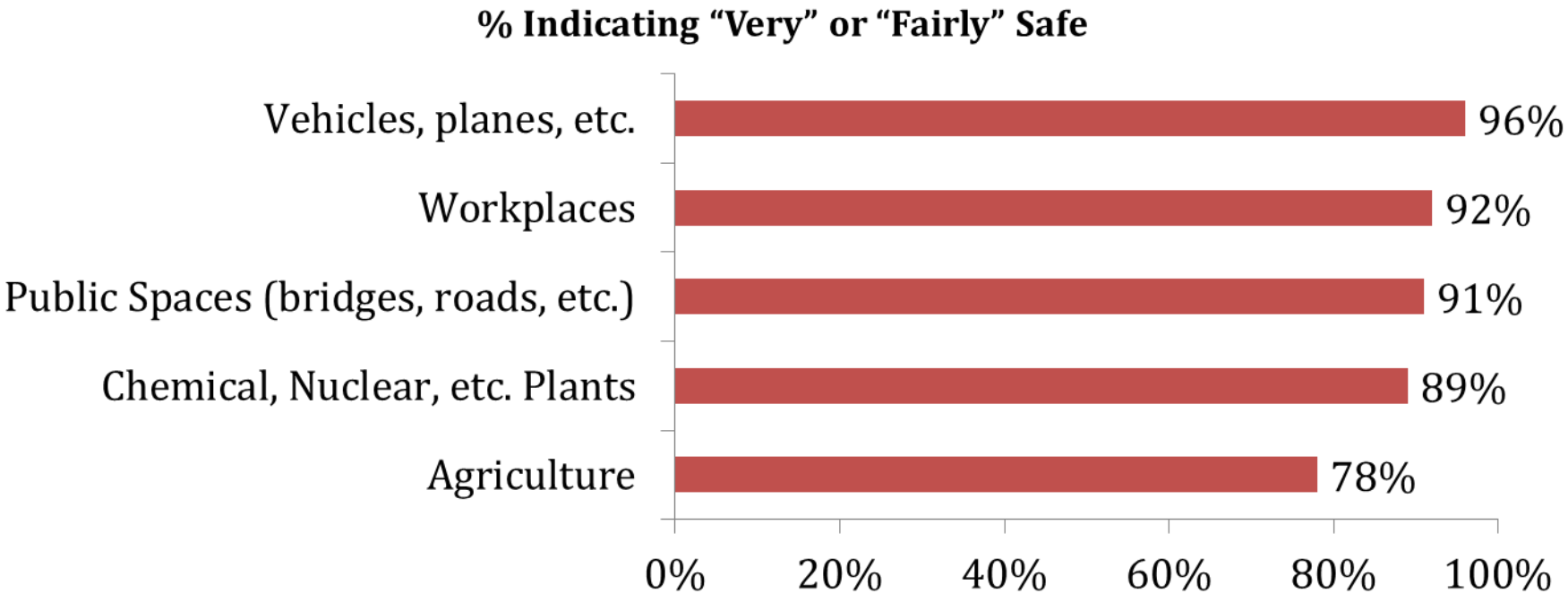
Public Perception - Safety



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Licensing Competence

- Competence is gained by Education **and** Experience; Measured by FE and PE examinations
- Texas uses nationally accepted standards, but considers each application independently.
- Texas does not license by discipline, but Professional Engineers must not practice outside of their competence.
  - §137.59(a) Engineers shall practice only in their areas of competence.

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Engineering Ethics

- Protection of Public Health, Safety, Welfare
- Ethical responsibilities and expectations
  - Avoid Conflicts of Interest
  - Be a Faithful Agent
  - Be prepared to have a dissenting opinion, if necessary
  - Obligation to be aware of violations of the Act.

How does this protect the public?

  - We are expected to know the right thing to do and to do the right thing in the practice of engineering.

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Professionalism

- Protection of Public Health, Safety, Welfare
- Communication
  - Honesty
  - Clarity (not misleading)
  - Respectful of all parties
  - Maintain Public Trust
  - Timely communication with the TBPE

How does this protect the public?

- We are expected to be complete and correct in the practice of engineering.

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Licensing
Ethics / Professionalism

- Multiple reference statements from other licensed engineers to vouch for character and engineering experience claimed.
- Exam on Texas Law and Rules
- Fingerprint-based CHRC
- Continuing Education related to Ethics after licensure

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COMPLIANCE & ENFORCEMENT

Technical / Ethical / Professional

Approximately 600 Cases opened last year

– 65,770 licensed PEs (07/2018)

- About 65% resolved with Voluntary Compliance
- Board action includes range of action up to revocation
- Less than 10% Dismissed

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Enforcement - Filing A Complaint

- Mail, email, phone, facsimile – all are acceptable for initial contact
  - Anonymous complaints are accepted
- A complaint form or detailed letter/email is needed to cover all the bases
  - Forms can be found Online
- Provide specific instances of violation
- Provide evidence to show probable cause

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Professionalism

scenario

Factors considered in each case review:

4) efforts or resistance to efforts to correct the violations;
5) the economic harm to property or the environment caused by the violation; and
6) any other matters impacting justice and public welfare, including any economic benefit gained through the violations.

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Board Actions

- Reprimands (Formal and Informal)
- Suspension (possible probation)
- Refuse to Renew
- Revocation
- $5,000 per violation per day
- Cease and Desist Orders
- Emergency Suspension

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Additional Enforcement Options

- Ethics Courses
  - National Institute for Engineering Ethics (Texas Tech)
- Technical Courses
- Restitution
- Practice limitations
- Civil or Criminal cases
  - Assisting Jurisdictional Authorities

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Enforcement

By law, all violations, except informal reprimands, must be published

- On TBPE website by Board Meeting Date
- Added to NCEES Enforcement Exchange (national database)
- Published in the newsletter which is mailed at least annually and quarterly E-newsletter emails

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Preventing Complaints

- CLEAR:
  - Communication (between all parties)
  - Contract (expectations and responsibilities)
  - Calculations and designs (be prepared to support)
- Keep your Documentation

Most importantly – know the law, and contact us if you have a question!

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Professionalism

scenario

A P.E. was hired by a property owner to prepare a site plan for a rental property. After attempting to access the property, the renters refused to work with the engineer.

The P.E. discussed the issue with his client.

The client (not an engineer) provided his own version of the site plan to the PE.

The P.E. then signed and sealed the plans on the spot and gave them back to the client.

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Professionalism
scenario

This was a violation of:

A. **§137.33(b)** - License holders shall only seal work done by them or performed under their direct supervision.

B. **§137.57(b)(3)** - The issuance of oral or written assertions in the practice of engineering shall not be: misleading or shall not in any manner whatsoever tend to create a misleading impression.

C. **§137.63(a)** - Engineers shall engage in professional and business activities in an honest and ethical manner…

D. **All of the above.**

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Professionalism
scenario

Answer: All of these

A. **§137.33(b)** – It is not enough to review and seal the work of another person. A PE can only seal work that he or she has personally generated or work that was generated under his or her direct supervision.

B. **§137.57(b)(3)** – By sealing work that is not his or hers, a PE is giving a misleading impression to the public

C. **§137.63(a)** – Passing off another person's work as your own would be considered dishonest.

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Professionalism

scenario

Board Actions may differ

Factors considered in each case review:

1) the seriousness of the violation, including the nature, circumstances, extent, and gravity of the prohibited act and the hazard or potential hazard created to the health, safety, or economic welfare of the public;
2) the history of prior violations of the respondent;
3) the severity of penalty necessary to deter future violations;

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Responsibility

Engineer A – Licensed PE, practices engineering for a registered Firm in Texas

Engineer B – Licensed PE, chief engineer in the Firm, supervisor of engineering for the Firm.

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Responsibility

Engineer A designs a structure under the supervision of Engineer B. Engineer B properly signs and seals the plans and provides them to the client.

During construction, the contractor recognizes a potential cost saving if the design can be altered by using a different connection type.

The contractor approaches the design firm about the change. They want a response as soon as possible.

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Responsibility

Since Engineer A was the original designer, he gets the modification request. The proposed modification is not something he has seen before. Since other staff is unavailable, he runs the calculations and model as best he can.

He asks other staff to review it, but no one else has time.

He sends the modified design to Engineer B who signs and seals the revisions and gives them to the client and contractor.

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Responsibility

During construction, there was a failure of the modified connection. After analysis, it was determined that Engineer A miscalculated the loads and the structure was underdesigned.

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Responsibility

Who is responsible?

A. Engineer A – He is a licensed PE
B. Engineer B – He is a licensed PE who signed and sealed the plans.
C. Neither. The Firm will be held responsible.
D. Both
E. None of the above.

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Responsibility

Best Answer: D

Although Engineer A did not sign and seal the final drawings, he is a licensed PE and expected to be competent. **Board Rule 137.59**

Engineer B signed and sealed the documents, so he is ultimately responsible for work under his supervision. **Board Rule 137.33**

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Obligations

Which of the following are required by the Texas Engineering Practice Act and Board Rules for all licensed engineers offering engineering in Texas:

A. Obtain a seal using the format prescribed by Rule.
B. Obtain Errors & Omissions / Liability Insurance.
C. Register as an Engineering Firm or be associated with an existing Firm.
D. Register with the Texas Secretary of State.
E. All of the above.

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Obligations

A. **Obtain a seal using the format prescribed by Rule.**
B. Obtain E&O Insurance.
C. **Register as an Engineering Firm or be associated with an existing Firm.**
D. Register with the Texas Secretary of State.

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Obligations

Although it is often a good idea based on the practice, professional liability insurance is not required by the Texas Engineering Practice Act or Board Rules.

All PEs offering or performing engineering in Texas must have a registered firm (even as an individual.

Secretary of State registration may be required, but not in all cases.

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Sealing

A licensed PE works for a registered engineering firm. After going through the Qualifications Based Selection process, the firm is selected to provide engineering designs for a new municipal building. As part of its permitting process, the city requires plan submittals at several design stages (30%, 70% and final).
The city requires a PE seal on all plans submitted.

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Sealing

True or False?
The City is in violation of Board Rules by asking for a seal on a preliminary document.

False

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Sealing

Under Section 1001.402 of the Act, "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.

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Sealing

How do you do it?
Board Rule **137.33(e)**
Preliminary documents released from the PE's control must be clearly marked as such, identifying the purpose of the document, the PE's name, number and date and including a statement such as *"This document is released for the purpose of (interim review, permitting, etc.) and It is not intended for (Construction, bidding, etc.)"*

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Educate

PEs, Officials, Potential PEs, Public

- What is a P.E.? / What do they do?
- Public Perception
- The Value of Licensure
- How does the TBPE fit in?

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Educate

- Engagement
- Outreach
  - Presentations, webinars, publications
- Advisory Groups
  - Working with customer groups directly
  - Government, Academia, Industry, Future Engineers

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Engagement –
Professional and Technical Organizations

- ***Rule 137.63(a) – [Engineers] should attempt to enhance society's awareness of engineers' responsibilities to the public and encourage the communication of these principles of ethical conduct among engineers.***
- Training and Continuing Education
- Engineering Policy
- Latest Technical Information
- Engineering Networking / Mentoring / References

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Outreach Publications

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Continuing Education

- 15 hours
  - Must include 1 hour of Ethics
  - May include up to 5 hours of self-study
  - May include up to 3 hours of **Educational Outreach**
- Random audits ongoing
- Keep documentation for 3 years
- Fines as high as $5,000; separate violations for claiming Continuing Ed without documentation or not responding to Board.

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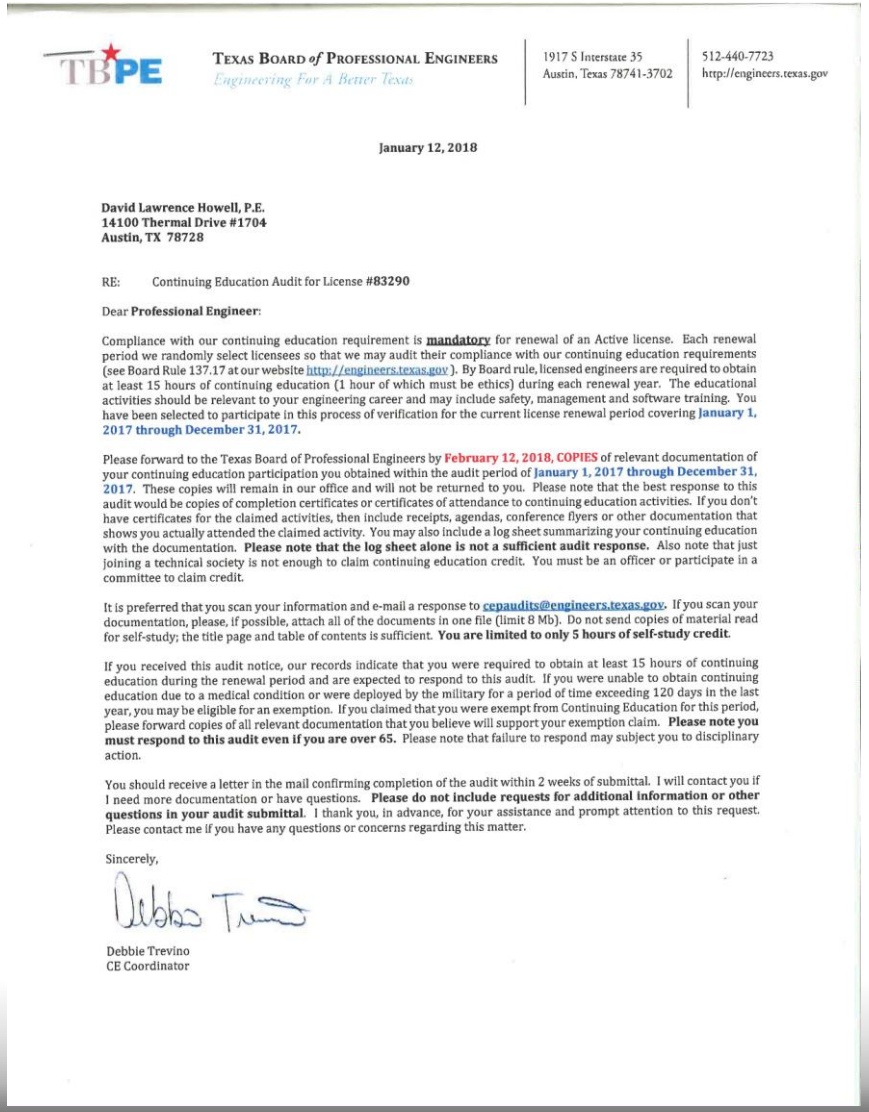
Continuing Education



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TEXAS BOARD *of* PROFESSIONAL ENGINEERS
Engineering For A Better Texas

1917 S Interstate 35
Austin, Texas 78741-3702

512-440-7723
http://engineers.texas.gov

January 12, 2018

David Lawrence Howell, P.E.
14100 Thermal Drive #1704
Austin, TX 78728

RE: Continuing Education Audit for License **#83290**

Dear **Professional Engineer**:

Compliance with our continuing education requirement is **mandatory** for renewal of an Active license. Each renewal period we randomly select licensees so that we may audit their compliance with our continuing education requirements (see Board Rule 137.17 at our website http://engineers.texas.gov). By Board rule, licensed engineers are required to obtain at least 15 hours of continuing education (1 hour of which must be ethics) during each renewal year. The educational activities should be relevant to your engineering career and may include safety, management and software training. You have been selected to participate in this process of verification for the current license renewal period covering **January 1, 2017 through December 31, 2017.**

Please forward to the Texas Board of Professional Engineers by **February 12, 2018, COPIES** of relevant documentation of your continuing education participation you obtained within the audit period of **January 1, 2017 through December 31, 2017**. These copies will remain in our office and will not be returned to you. Please note that the best response to this audit would be copies of completion certificates or certificates of attendance to continuing education activities. If you don't have certificates for the claimed activities, then include receipts, agendas, conference flyers or other documentation that shows you actually attended the claimed activity. You may also include a log sheet summarizing your continuing education with the documentation. **Please note that the log sheet alone is not a sufficient audit response.** Also note that just joining a technical society is not enough to claim continuing education credit. You must be an officer or participate in a committee to claim credit.

It is preferred that you scan your information and e-mail a response to **cepaudits@engineers.texas.gov**. If you scan your documentation, please, if possible, attach all of the documents in one file (limit 8 Mb). Do not send copies of material read for self-study; the title page and table of contents is sufficient. **You are limited to only 5 hours of self-study credit**.

If you received this audit notice, our records indicate that you were required to obtain at least 15 hours of continuing education during the renewal period and are expected to respond to this audit. If you were unable to obtain continuing education due to a medical condition or were deployed by the military for a period of time exceeding 120 days in the last year, you may be eligible for an exemption. If you claimed that you were exempt from Continuing Education for this period, please forward copies of all relevant documentation that you believe will support your exemption claim. **Please note you must respond to this audit even if you are over 65.** Please note that failure to respond may subject you to disciplinary action.

You should receive a letter in the mail confirming completion of the audit within 2 weeks of submittal. I will contact you if I need more documentation or have questions. **Please do not include requests for additional information or other questions in your audit submittal**. I thank you, in advance, for your assistance and prompt attention to this request. Please contact me if you have any questions or concerns regarding this matter.

Sincerely,

Debbie Trevino
CE Coordinator

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Continuing Education

Exemptions - must be claimed when you renew

- 1st renewal if PE exam was within a year of licensure
- Active duty military deployment
- Disability
- Inactive status

- *Being over 65 is not an exemption for Continuing Ed*

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Continuing Education

- New NCEES system for Continuing Professional Competence (CPC) tracking and reporting
  - No fee to register and create an account
  - Upload documentation
  - Report as needed for different Boards

– http://ncees.org/cpc/

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NCEES CPC

- Storage
- User specified reporting
  - By date
  - By State
- Accepted for Continuing Education Audit Purposes.

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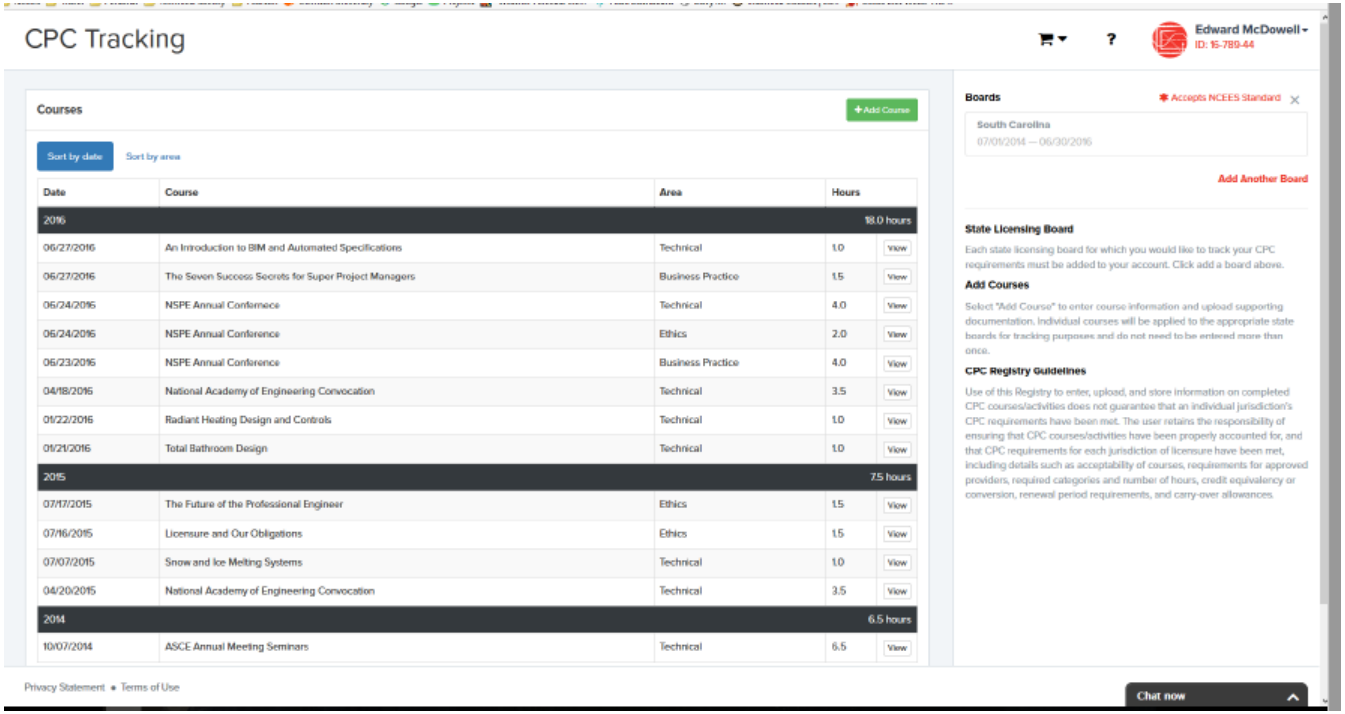
NCEES CPC



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Continuing Education

A Texas PE who practices in the Mechanical field sees an ad for an OSHA course and wants to know if he can claim credit.

A. He can claim it if it is from an Approved Course Provider.
B. He can claim it if it relates to his practice.
C. He should call the Board and ask.
D. None of the above

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Continuing Education

Best Answer B

- Texas Board rules do not require courses from an Approved Provider list.
- TBPE staff does not pre-approve courses.
- A Texas PE decides if a course is related to his or her practice and has “educational, technical, ethical, or managerial content”
- Keep in mind the goal of the Continuing Education program
- Think about Continuing Education throughout the year

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Continuing Education

The course he wants to take is online.

A. He can claim it if he gets formal documentation showing the date, duration and course title from the provider.
B. He can claim it as self-study hours even if he doesn't get formal documentation.
C. He can't use online courses under Texas rules.
D. He can only claim up to 5 hours of online courses.

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Continuing Education

Best Answer A and B

- Texas rules allow the use of online courses. If documentation is provided, it is treated the same as classroom hours.
- Documentation is ideally completion certificates, but could also include “self-certification forms, sign-in sheets, receipts, agendas, conference flyers or other documentation that shows you actually attended the claimed activity”.
- Self-study hours are for any educational activity that does not have complete documentation (limited to 5 hours per year).

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Licensing

Did you know???

- Only about 20% of US engineers are licensed.

Bureau of Labor Statistics (2016)

- 146,400 engineers in Texas
  - Civil – 26,500
  - Petroleum - 18,000
  - Industrial – 16,000

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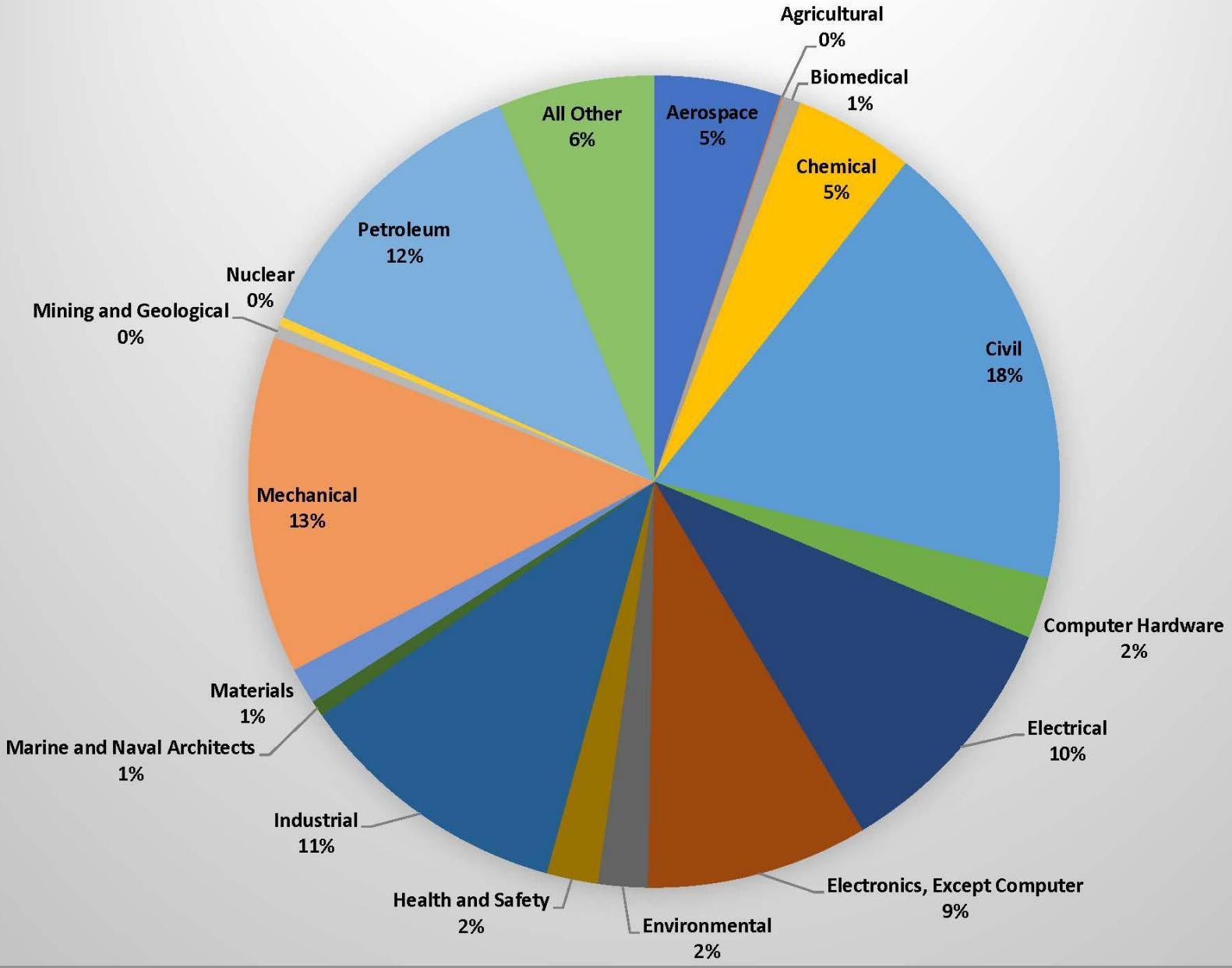
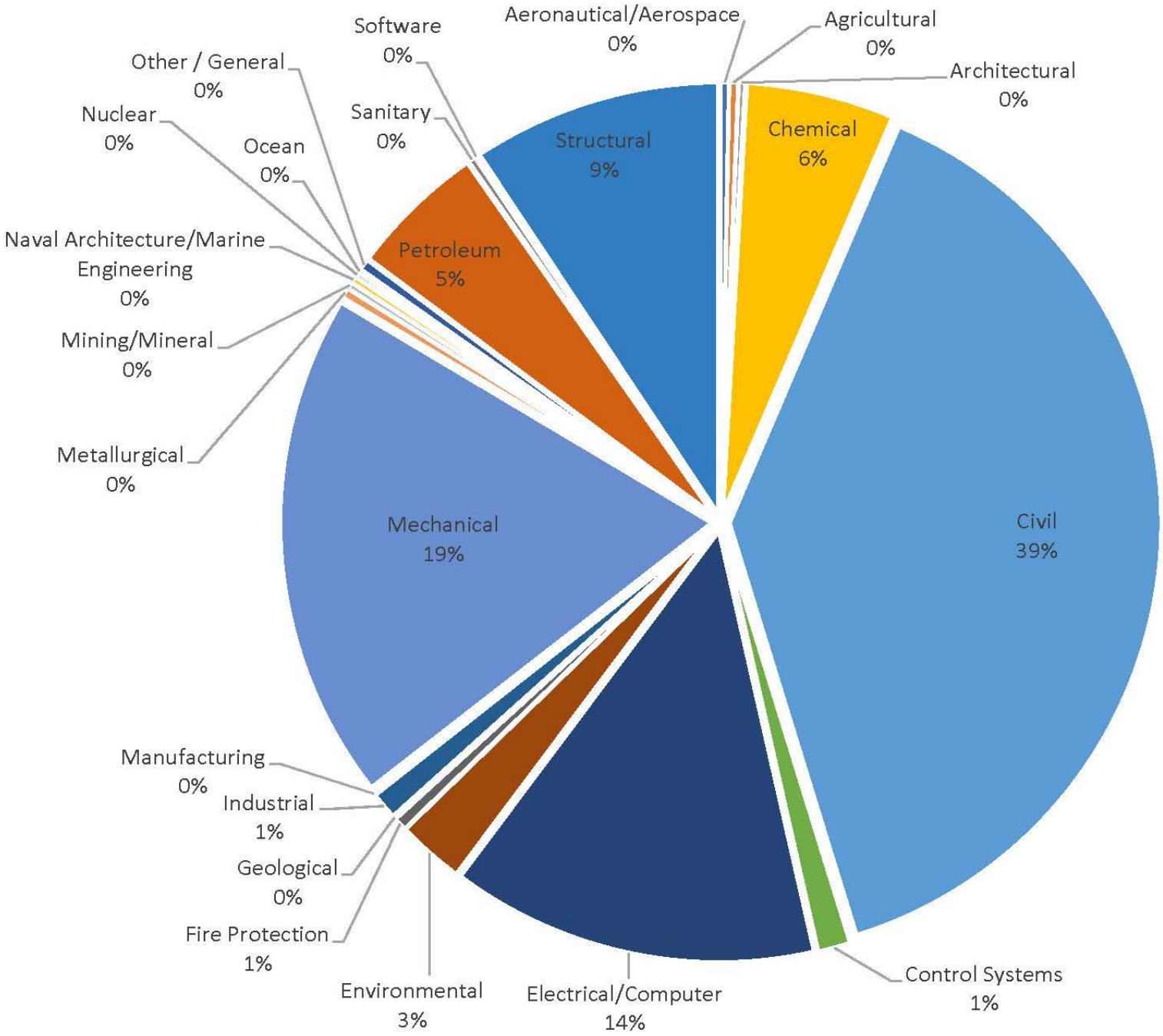
Engineers In Texas 2016



TEXAS PEs - 64,970



Law and Rules

- Board is authorized by the Texas Engineering Practice Act
- Board interprets and implements the statute to create Rules
- Other statutes and rules also apply to engineering (PSPA, Windstorm, Architectural Barriers/ADA, etc.)
- Texas Professional Engineers are expected to know the Act, Board Rules, applicable state laws and local codes.

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Policy Advisory Opinions

- Provision Added to TEPA in 2003
- Allows Board to develop formal written interpretations of law and rules for specific or hypothetical 'Gray Areas'
- Over 40 interpretations for a variety of subjects
  - http://engineers.texas.gov/policy.htm
- How to submit PAO Request / Forms at:
  - http://engineers.texas.gov/Policy_Advisory.htm

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Legislative News and Rulemaking

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Legislation 86th Session (2019)

- Bill filing begins November 12, 2018
- Session starts January 8, 2019
- Last filing date March 8, 2019
- Regular session adjournment May 27, 2019
- TBPE tracks filing and activity
- Will post any bills affecting the engineering community on its website.

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Rules - Decoupling

May 2016

- Allows PE exam to be taken while experience is being obtained. Must be a Texas EIT.
- Increased flexibility for applicants
- Does not reduce licensing requirements.
- October 2016 PE Exam is the first affected
- April 2017 registrations were approximately twice the number from April 2016

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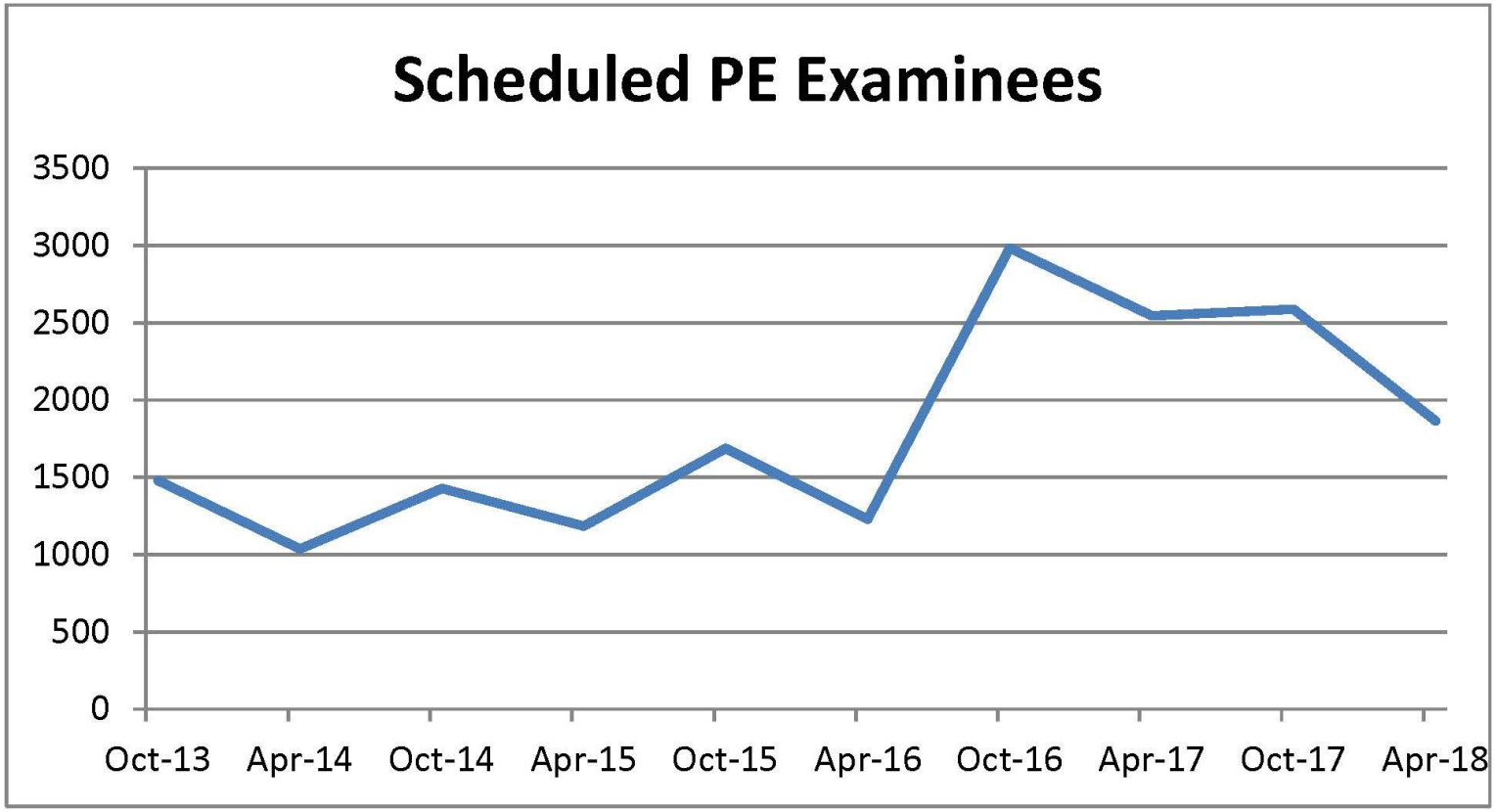
Decoupling



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NCEES

- CPC activity tracking system
- CBT – Computer Based Testing
  - Fundamentals of Engineering exam 2014
  - 6 Hour Exam / year-round starting in 2016
  - PE exams to be converted over the next five years starting in 2018
    - **Chemical** January 2018 (continuous)
    - **Nuclear** October 2018 (single day)
    - **Environmental** 2019
    - **Petroleum** 2019
    - Mechanical, Fire Protection, Industrial – 2020

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Engagement - Webinars

- PE Ethics
  - March, June, September, December
  - Sign up online
- FE Exam / Why become a PE? (Students)
- How to Apply (EITs)

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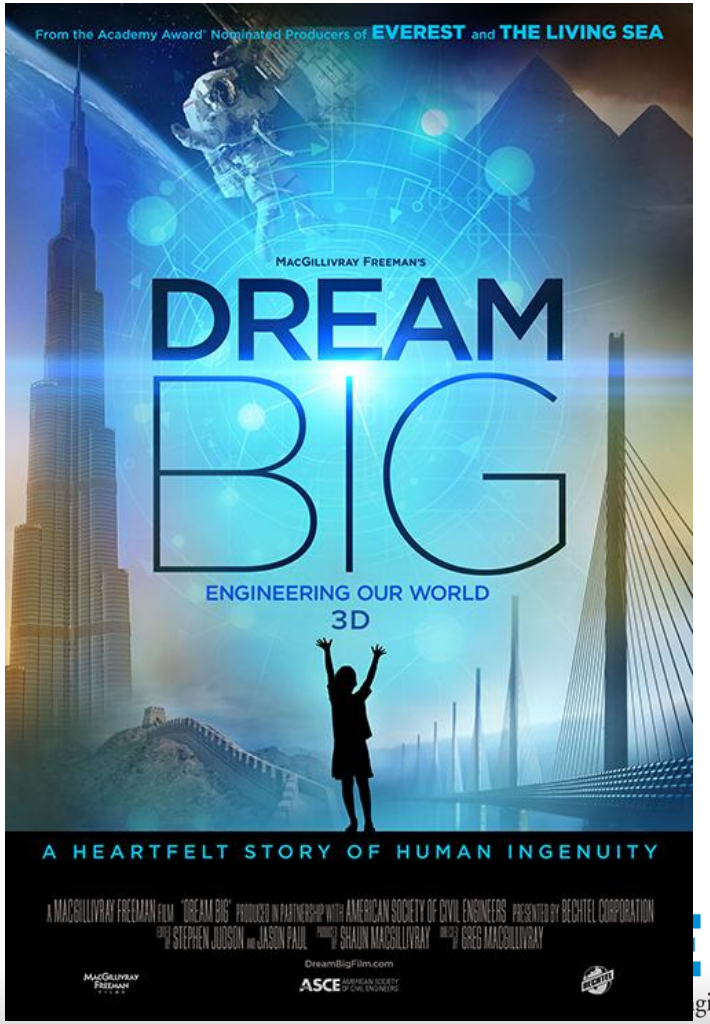
Engagement



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Outreach

Fiscal Year	Attendees	Presentations
2014	14,866	155
2015	19,751	150
2016	19,429	138
2017	23,004	150
2018	22,954	161

- Quarterly Webinars
- Includes K-12 / E-Week

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Thank You

1917 S Interstate 35, Austin, TX 78741
Phone: 512-440-3054
Lance.kinney@engineers.texas.gov

http://engineers.texas.gov/outreachsurvey

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