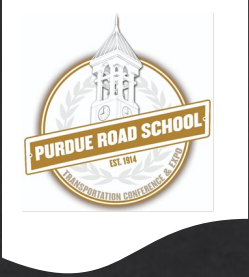


Ethics in the Practice of Professional Engineering

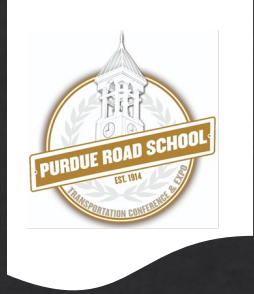
March 2023



Tim Jensen, PE, LEED AP, CPESC



- Civil Engineering, Purdue University – 2000
- Owner/President – Veridus Group, Inc. – 2011
- Indiana State Board of Registration for Professional Engineers – 2021
- Liaison to the Attorney General's office



DISCLAIMER

The speaker is expressing his own views and opinions on the matters being discussed and does not represent the official views of the State Board of Registration for Professional Engineers, the Indiana Society of Professional Engineers, or Purdue University.

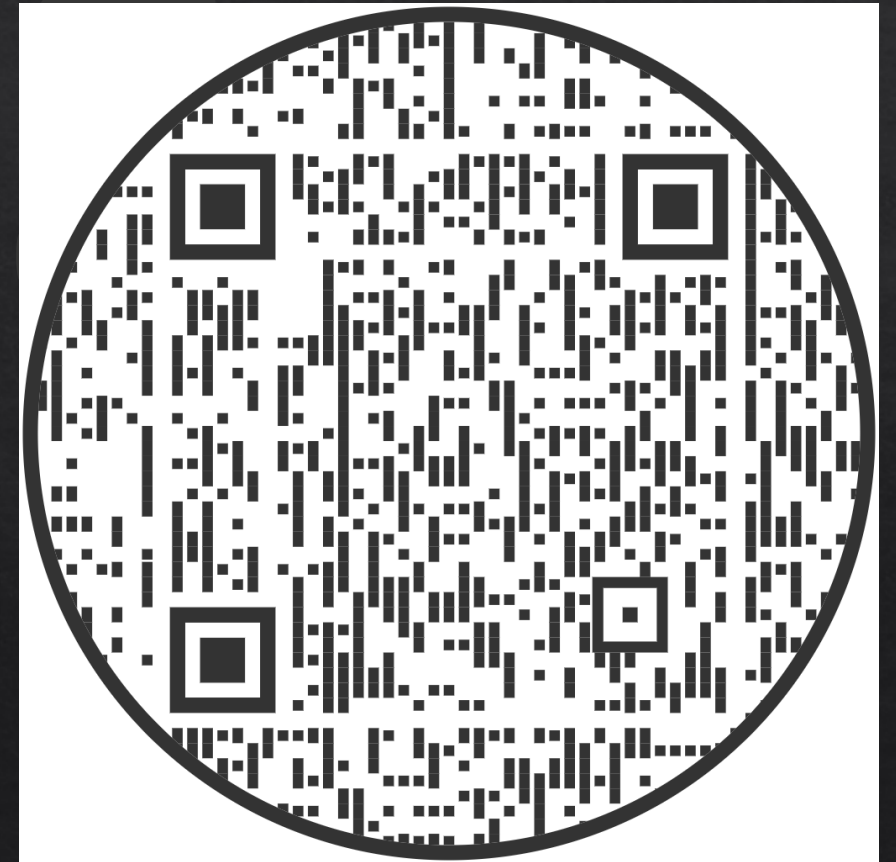


QUIZ DETAILS

You may complete the quiz as we progress through the course.

It is digital and will be used to:

- Confirm your attendance at the session
- Confirm you paid just enough attention to pass the quiz





- Why Ethics Training?
- What are Ethics?
- Common Ethical Violations
- Ethics Survey





Why Ethics Training?

ETHICS

THIS MEANS WAR!	THE INTERNET	WHAT A MONTH!	AMERICANA	PHYS ED	DOUBLE TALK
	\$200	\$200		\$200	\$200
\$400	\$400	\$400	\$400	\$400	\$400
\$600	\$600		\$600		\$600
\$800	\$800		\$800	\$800	
	\$1000	\$1000	\$1000	\$1000	\$1000



\$1000 \$1000 \$1000 \$1000 \$1000
 \$800 \$800 \$800 \$800 \$800
 \$600 \$600 \$600 \$600 \$600
 \$400 \$400 \$400 \$400 \$400
 \$200 \$200 \$200 \$200 \$200



@PURDUESPORTS

BIG TEN PLAYER OF THE YEAR AWARDS

PURDUE BOILERMAKERS

2019-2020
PURDUE BOILERMAKERS
BIG TEN PLAYER OF THE YEAR AWARDS

19 32 26 43 42

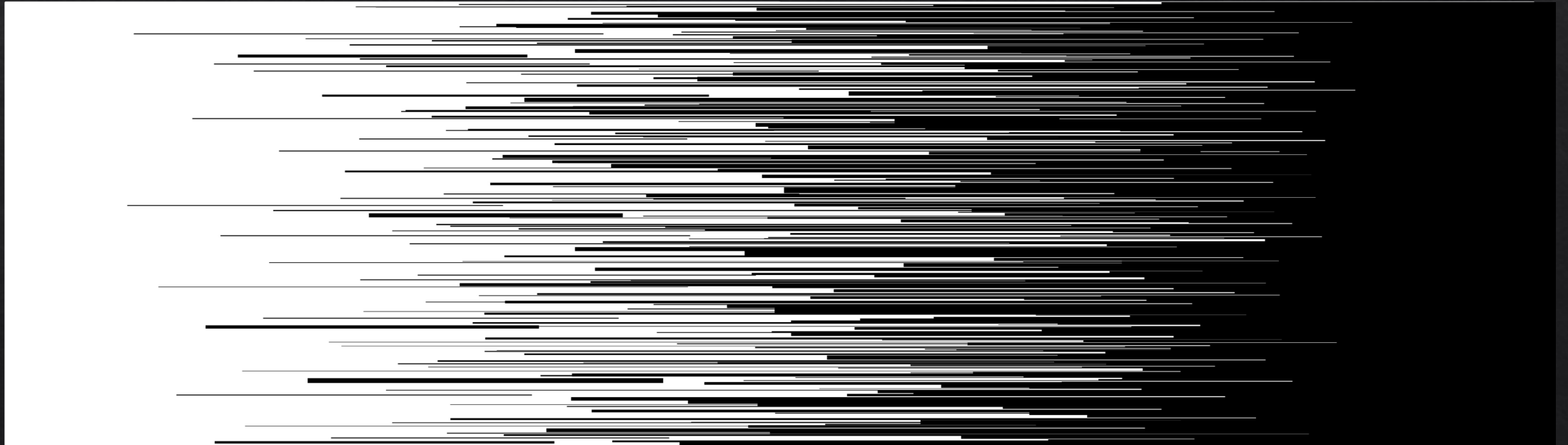
1932

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50
---	---	---	---	---	---	---	---	---	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----



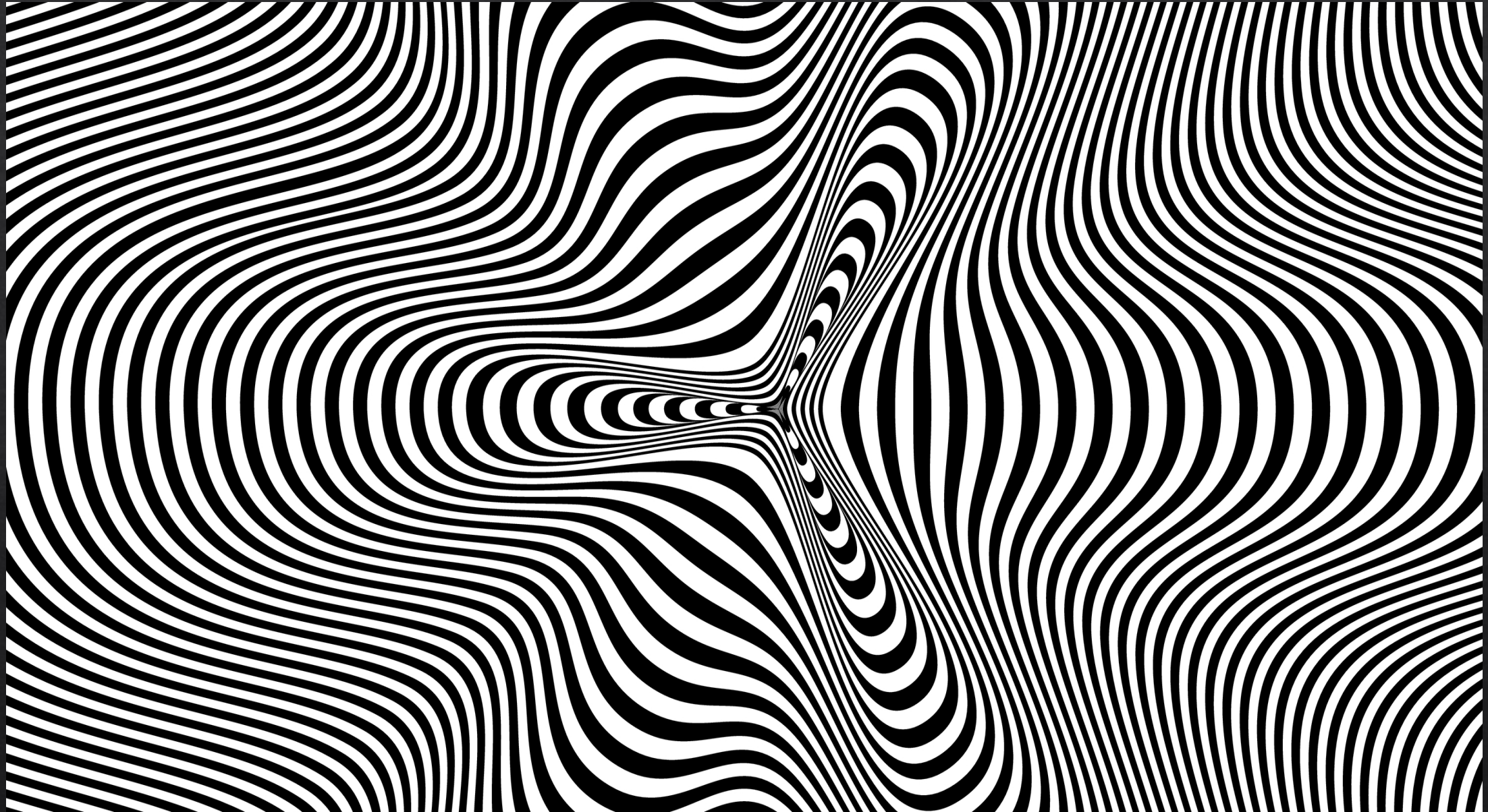
What are Ethics?

ETHICS





What are Ethics?





Oxford's Dictionary Definition...Ethics are:

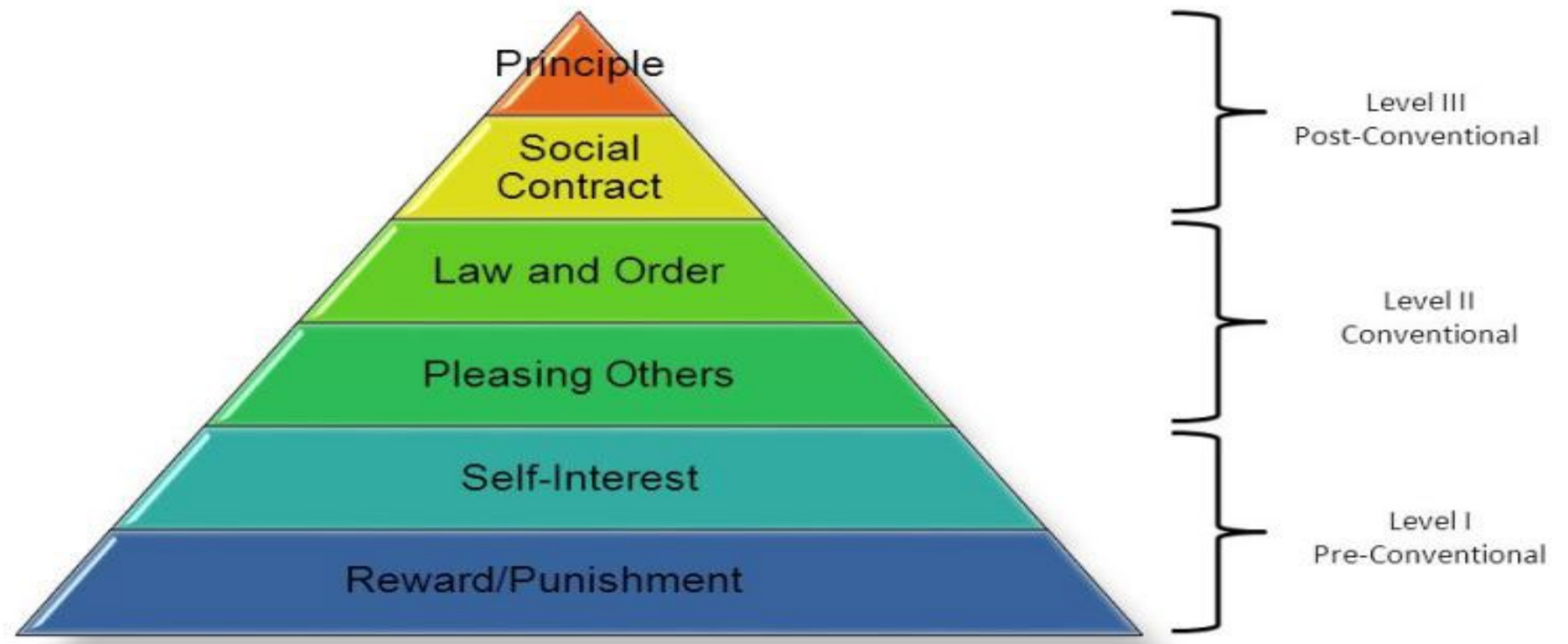
1. Moral principles that govern a person's behavior or the conducting of an activity.
2. The branch of knowledge that deals with moral principles.

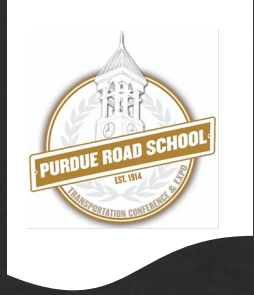
“Ethics is a set of morally-permissible standards of conduct all members of a group want each other to follow.”

- Michael Davis, Illinois Institute of Technology



Kohlberg's Pyramid of Stages





Difference between Ethics and Morals

Morals refer to an individual's own principles regarding right and wrong.

Ethics refer to rules provided by an external source, e.g. codes of conduct in workplaces or principles in religions.



ETHICS

External Rules
May Vary
between
Environments

Right
and
Wrong
Conduct

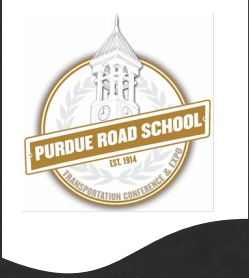
MORALS

Personal
Principles
Rarely
Change



Ethics by the Numbers...(December of 2022)

- Almost 160,000,000 working adults in the US
- 30% of employees have personally observed ethical misconduct in the last 12 months
- Unethical behavior accounts for an estimated \$1.228 trillion economic toll annually

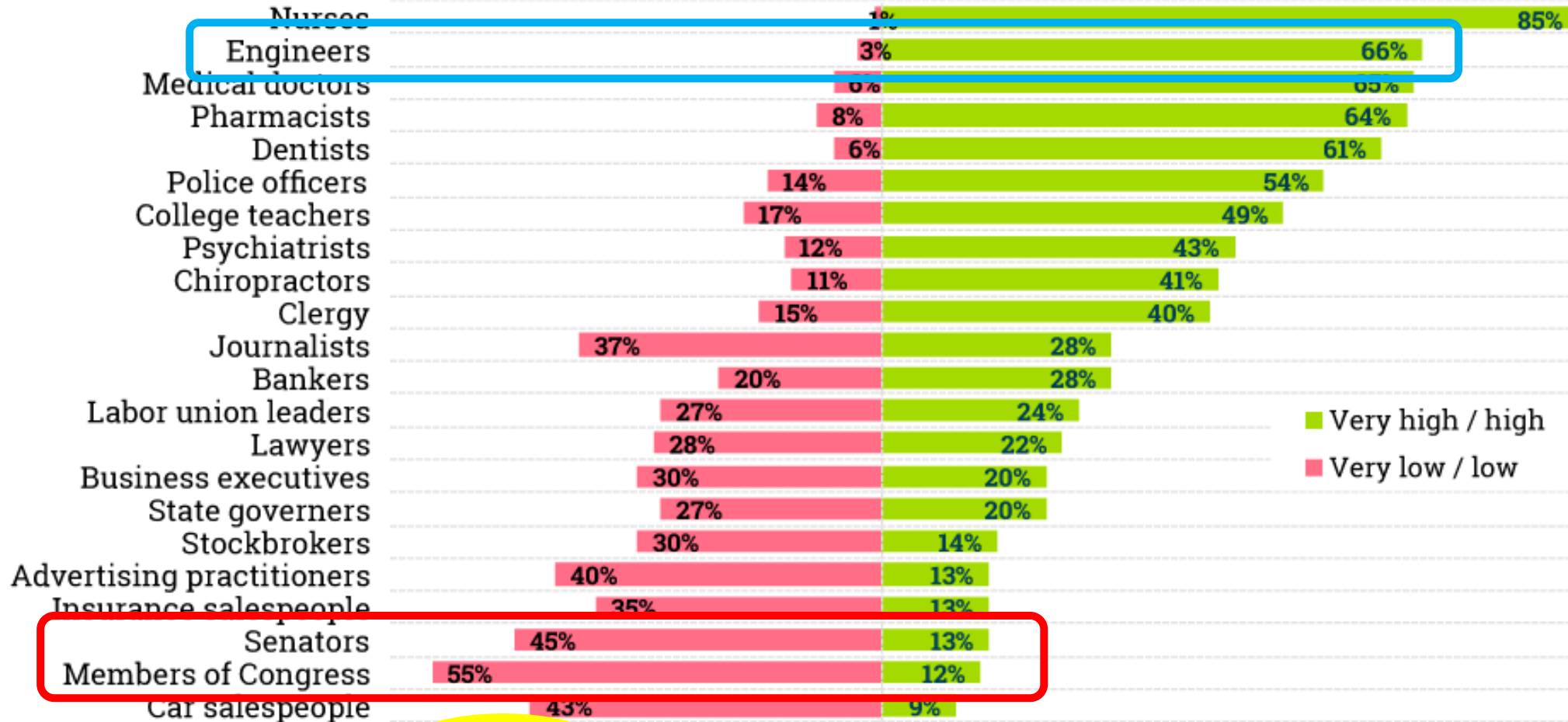


Top Ethical Issues in the Workplace:

- Unethical Leadership
- Toxic Workplace Culture
- Discrimination and Harassment
- Time Management
- Use of Company Technology



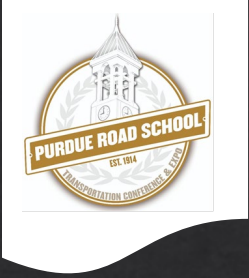
Views of Honesty & Ethical Standards in Professions



Published on MarketingCharts.com in January 2020 | Data Source: Gallup

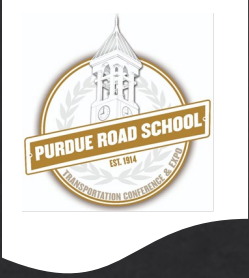
Based on telephone surveys conducted among 1,025 US adults (18+) | Remaining respondents answered "Average" or "No opinion"

Q: "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?"



References or Codes Available for Engineers:

- ASCE Code of Ethics
- NSPE Code of Ethics
- NCEES Model Rules for Ethics
- Rules of Professional Conduct in 864 IAC Rule 11
- Other Industry-specific Codes



References or Codes Available for Engineers:

- ASCE Code of Ethics
- NSPE Code of Ethics
- NCEES Model Rules for Ethics
- Rules of Professional Conduct in 864 IAC Rule 11
- Other Industry-specific Codes



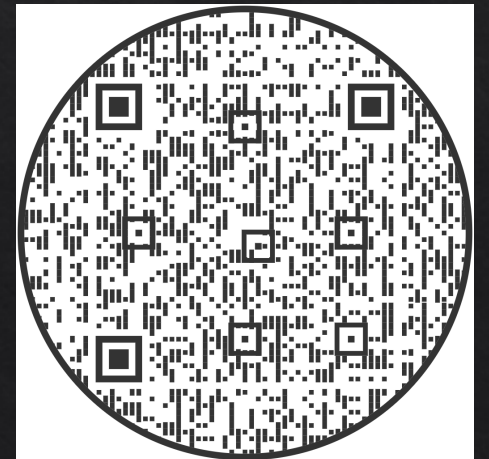
ASCE Code of Ethics

- Five Sections

Society / Natural and Built Environment / Profession /
Clients and Employees / Peers

**Code of
Ethics**

THE AMERICAN SOCIETY OF CIVIL ENGINEERS



Scan or Click the code above



NSPE Code of Ethics

- Fundamental Cannons (6)
- Rules of Practice (5)
- Professional Obligations (9)

Code of Ethics for Engineers



Preamble

Engineering is an important and learned profession. As members of this profession, engineers are expected to exhibit the highest standards of honesty and integrity. Engineering has a direct and vital impact on the quality of life for all people. Accordingly, the services provided by engineers require honesty, impartiality, fairness, and equity, and must be dedicated to the protection of the public health, safety, and welfare. Engineers must conduct themselves in a manner consistent with the principles of ethical conduct.

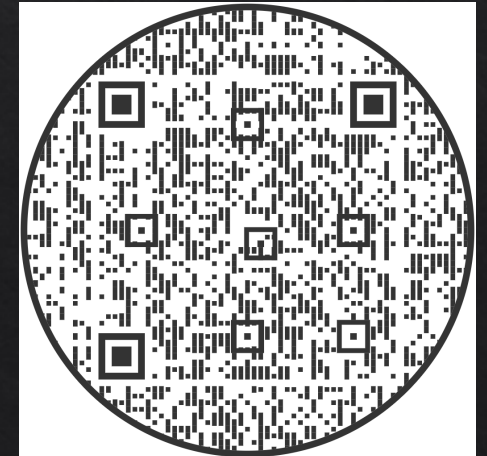
3. Engineers shall issue public statements only in an objective and truthful manner.

- 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 and time of the current.

III. Professional Obligations

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

- Engineers shall not misrepresent pertinent facts concerning employers, employees, associates, joint venturers, or past accomplishments.
- 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.



Scan or Click the code above



864 IAC Rule 11

864 IAC 1.1-10-1 Engineer's temporary permit; purpose; application; use of seal (Repealed)
Sec. 1. (Repealed by State Board of Registration for Professional Engineers; filed Oct 17, 1986, 2:20 pm: 10 IR 444)

Rule 11. Rules of Professional Conduct

- [864 IAC 1.1-11-1](#)
- [864 IAC 1.1-11-2](#)
- [864 IAC 1.1-11-3](#)
- [864 IAC 1.1-11-4](#)
- [864 IAC 1.1-11-5](#)
- [864 IAC 1.1-11-6](#)
- [864 IAC 1.1-11-7](#)
- [864 IAC 1.1-11-8](#)
- [864 IAC 1.1-11-9](#)
- [864 IAC 1.1-11-10](#)
- [864 IAC 1.1-11-11](#)
- [864 IAC 1.1-11-12](#)
- [864 IAC 1.1-11-13](#)
- [864 IAC 1.1-11-14](#)
- [864 IAC 1.1-11-15](#)
- [864 IAC 1.1-11-16](#)
- [864 IAC 1.1-11-17](#)
- [864 IAC 1.1-11-18](#)
- [864 IAC 1.1-11-19](#)
- [864 IAC 1.1-11-20](#)

Ethical, economic, and legal principles; professional incompetence
 Agreement to abide by act and rules
 Privilege to practice; responses to board pertaining to professional conduct
 Public safety, health, and welfare
 Qualification to undertake assignment
 Restricted services for assignment outside field of competence
 Use of seal restricted
 Competence examination (Repealed)
 Professional reports, statements, and testimony
 Expert opinion testimony
 Public policy statements, criticisms, or arguments
 Conflicts of interest
 Disclosure of conflict of interest
 Compensation from more than one party for same project
 Gratuities prohibited
 Financial or other considerations from suppliers prohibited
 Public service position; conflict of interest
 Public contracts; conflict of interest
 Payment of consideration to secure work prohibited; exception
 Employment on basis of qualification and competence

Indiana Administrative Code

- [864 IAC 1.1-11-21](#)
- [864 IAC 1.1-11-22](#)
- [864 IAC 1.1-11-23](#)
- [864 IAC 1.1-11-24](#)
- [864 IAC 1.1-11-25](#)

ADMINISTRATION; GENERAL REQUIREMENTS

Misrepresentation of qualifications prohibited
 Use of name in fraudulent or dishonest venture
 Reporting violations
 Conviction of a crime; effect
 Discipline of license in another jurisdiction; effect

864 IAC 1.1-11-1 Ethical, economic, and legal principles; professional incompetence
 Authority: [IC 25-31-1-7](#); [IC 25-31-1-8](#)
 Affected: [IC 25-31-1-1](#)

Sec. 1. (a) This rule establishes requirements concerning ethical, economic, and legal principles and unprofessional conduct in the practice of engineering.
 (b) The failure of a registered professional engineer to comply with the provisions of this rule constitutes professional incompetence. (State Board of Registration for Professional Engineers; Rule 11, Sec 1; filed Feb 29, 1980, 3:40 p.m.: 3 IR 634; filed Jun 21, 1988, 4:05 p.m.: 11 IR 3908; filed Sep 24, 1992, 9:00 a.m.: 16 IR 731; readopted filed Jun 21, 2001, 9:01 a.m.: 24 IR 3824; readopted filed Jul 19, 2007, 12:56 p.m.: [20070808-IR-864070063RFA](#); readopted filed Jul 29, 2013, 1:25 p.m.: [20130828-IR-864130228RFA](#); readopted filed Nov 22, 2016, 12:27 p.m.: [20161221-IR-864160321RFA](#); readopted filed Jul 20, 2022, 8:12 a.m.: [20220817-IR-864220189RFA](#))

864 IAC 1.1-11-2 Agreement to abide by act and rules
 Authority: [IC 25-31-1-7](#); [IC 25-31-1-8](#)
 Affected: [IC 25-31-1-1](#)

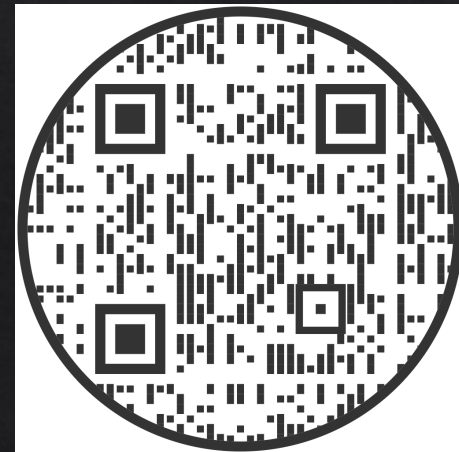
Sec. 2. Each applicant shall certify on the application that the applicant has read and agrees to abide by the Act and the rules of the board in force at the time. (State Board of Registration for Professional Engineers; Rule 11, Sec 2; filed Feb 29, 1980, 3:40 p.m.: 3 IR 634; filed Jun 21, 1988, 4:05 p.m.: 11 IR 3908; filed Sep 24, 1992, 9:00 a.m.: 16 IR 731; readopted filed Jun 21, 2001, 9:01 a.m.: 24 IR 3824; readopted filed Jul 19, 2007, 12:56 p.m.: [20070808-IR-864070063RFA](#); readopted filed Jul 29, 2013, 1:25 p.m.: [20130828-IR-864130228RFA](#); readopted filed Nov 22, 2016, 12:27 p.m.: [20161221-IR-864160321RFA](#); readopted filed Jul 20, 2022, 8:12 a.m.: [20220817-IR-864220189RFA](#))

864 IAC 1.1-11-3 Privilege to practice; responses to board
 Authority: [IC 25-31-1-7](#); [IC 25-31-1-8](#)
 Affected: [IC 25-31-1-1](#)

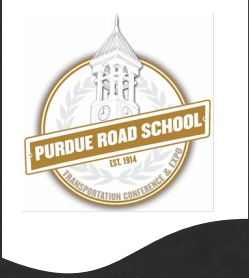


864 IAC Rule 11

1. Ethical, economic and legal principles; professional competence
2. Agreement to abide by act and rules
3. Privilege to practice; responses to board pertaining to profession conduct
4. Public safety, health and welfare
5. Qualification to undertake assignment
6. Restricted services for assignment outside of field of comp.
7. Use of seal restricted
8. Competence examination (*repealed*)

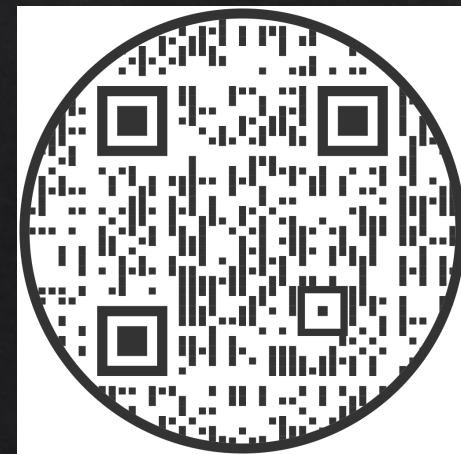


Scan or Click the code above



864 IAC Rule 11

9. Professional reports, statements, and testimony
10. Expert opinion testimony
11. Public policy statements, criticisms, or arguments
12. Conflicts of interest
13. Disclosure of conflict of interest
14. Compensation from more than one party for same project
15. Gratuities prohibited
16. Financial or other consideration from suppliers prohibited

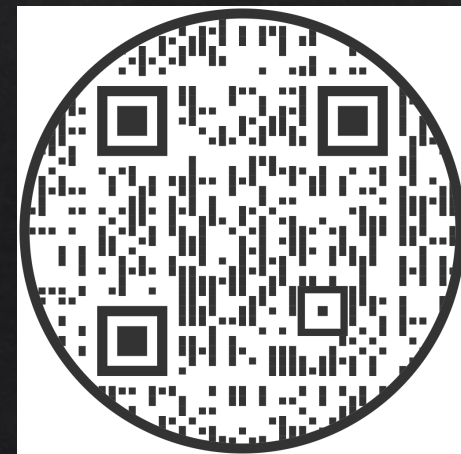


Scan or Click the code above

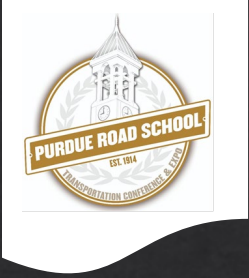


864 IAC Rule 11

17. Public service position, conflict of interest
18. Public contracts; conflict of interest
19. Payment of consideration to secure work prohibited; exception
20. Employment on basis of qualification and competence
21. Misrepresentation of qualifications prohibited
22. Use of name in fraudulent or dishonest venture
23. Reporting violations
24. Conviction of a crime; effect
25. Discipline of license in another jurisdiction



Scan or Click the code above



Most Common Violations Reported for 864 IAC Rule 11

- Rule 11-4 Public safety, health and welfare
- Rule 11-5 Qualification to undertake an assignment
- Rule 11-6 Restricted services for assignment outside field of competence
- Rule 11-7 Use of seal restricted
- Rule 11-9 Professional reports, statements, and testimony
- Rule 11-12 Conflicts of interest
- Rule 11-21 Misrepresentation of qualifications prohibited
- Rule 11-24 Conviction of a crime; effect



ETHICS

CASE STUDIES



Case Study 1

A small city has been notified by the State's environmental agency that its water system is not compliant with drinking water standards and the city must resolve its non-compliant issues. The city decides to hire an engineering firm for assistance and, subsequently, advertises a Request for Qualifications (RFQ) for engineering firms to respond. Services required include Preliminary Engineering to evaluate alternatives for solution of the non-compliance, and Design and Construction Engineering for the selected alternative. The RFQ requests specific information from the engineering firms that respond.

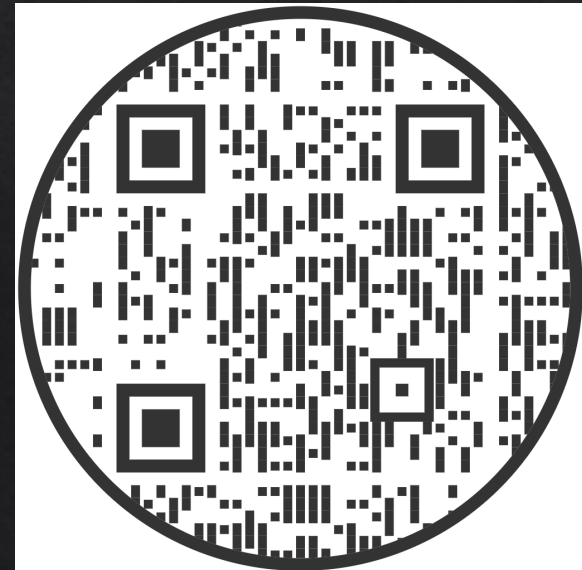
Engineer A, in an effort to improve its chances of being selected by the city, offers to provide free Preliminary Engineering. The RFQ did **not** request any information regarding fees or engineering costs.



Case Study 1:

Was the offer by Engineer A for free Preliminary Engineering ethical?

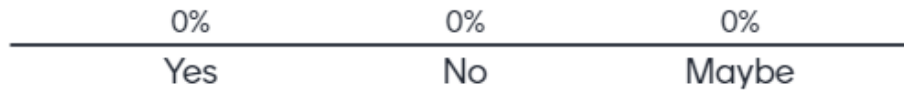
VOTE HERE

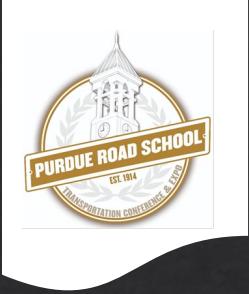




Go to www.menti.com and use the code ✨

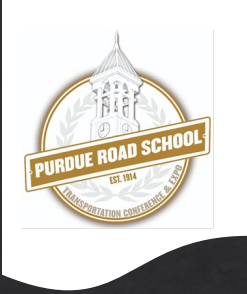
Was the offer by Engineer A for free Preliminary Engineering Ethical?





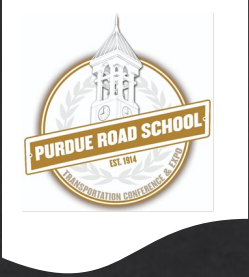
NSPE Conclusion:

The offer by Engineer A for free Preliminary Engineering *should* be considered a gift or valuable consideration in order to secure work and *provided an unfair advantage* over other firms. Therefore, the offer *was unethical*. Furthermore, if this matter occurs in a state in which Qualification-Based Selection (QBS) is required, the action of Engineer A is *both unethical and potentially illegal*.



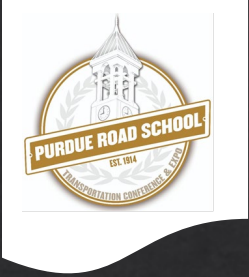
Case Study 2

The City hires Consulting Firm A to prepare rehabilitation plans for underground utility lines owned by the City. Engineer A at Firm A is qualified to do the design. Agency B's engineering staff reviewed the existing conditions and relevant data for the utilities and performed the design by recommending the rehabilitation methods for each segment of the utility. The City provided the recommendations to Firm A (the condition data was requested but not provided to Firm A) and Firm A's licensed engineers prepared the CAD drawings for the work based on the City's recommendations, including making any revisions directed by the City. The drawings are based on as-built plans and GIS mapping also provided by the City. Engineer A reviews the drawings prior to submitting to the City and the City ultimately approves the design and the drawings produced by Firm A.



Case Study 2

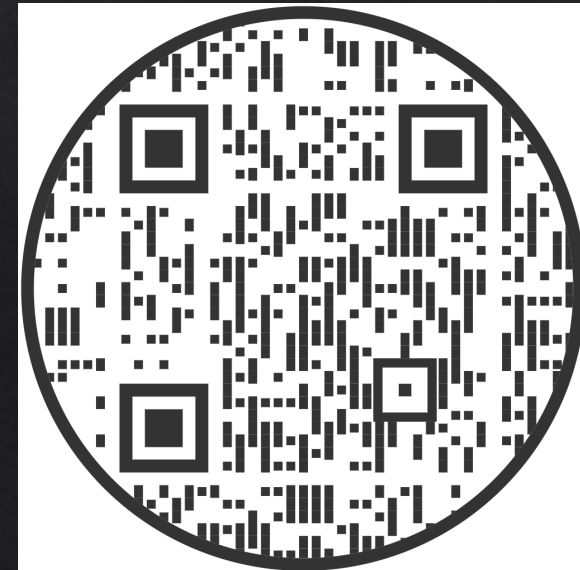
The City is now ready to bid the work and requests that Firm A affix a PE seal to the drawings. Engineer A informs the City that since Engineer A and Firm A did not make any engineering decisions on the project and only provided drafting of the drawings, it is not appropriate for Engineer A to seal the drawings. The City believes that since Engineer A prepared the documents and reviewed them prior to submitting to the City, that is enough to seal the drawings.



Case Study 2:

Should Engineer A stamp and certify the plans?

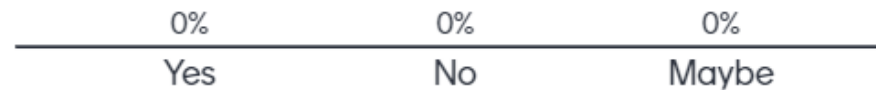
VOTE HERE

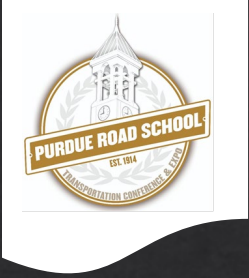




Go to www.menti.com and use the code ✨

Should Engineer A stamp and certify the plans?





NSPE Conclusion:

It would be *unethical* for Engineer A to sign and seal the drawings for the City.



Case Study 3

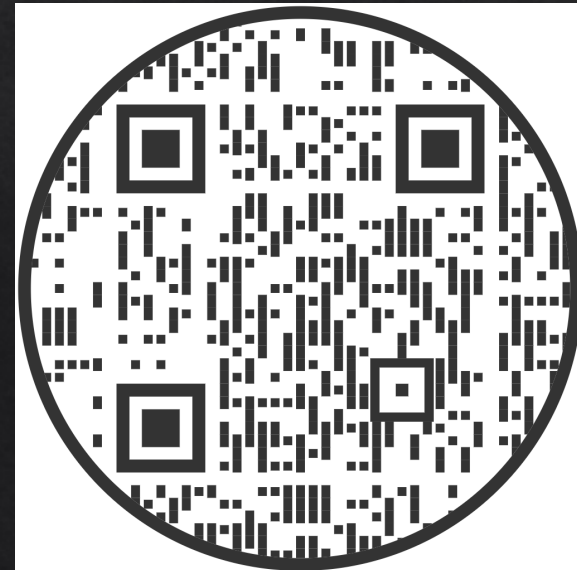
A state department of transportation is seeking a design-build contractor to prequalify for a specialized engineered construction project. Engineer A possesses unique expertise in this type of specialized engineered construction and has been contacted by three competing design-build contractors for the project, Contractor X, Contractor Y and Contractor Z, each of which will prepare a proposal for consideration by the DOT.



Case Study 3:

Would it be ethical for Engineer A to participate with multiple design-build contractors in response to the DOT's RFP?

VOTE HERE



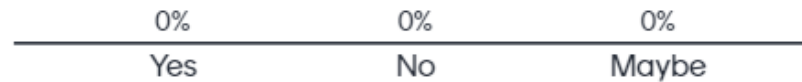


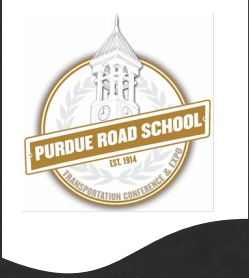
Go to www.menti.com and use the code 75 78 15 6

Is it ethical for Engineer A to participate with design-build contractors in response to the DOT's RFP?

Lost contact with audience
Press [Activate slide] to refresh connection.

Activate slide





NSPF Conclusion:

It would *be ethical* for Engineer A to participate with multiple design-build contractors in response to the DOT's prequalifying RFP because the award will go to *only one* of the three contractors. Engineer A will perform work only for the contractor that wins the award.



Case Study 4

Engineer A is a professional engineer and owner of ABC Engineering. Engineer A recently learned that Engineer B, a former employee of ABC who recently started his own firm (EFG Engineering), is claiming “extensive project experience.” The EFG Engineering website references a list of “past clients” and “past projects.” In fact, Engineer B was the Engineer of Record but it was Engineer A’s company (ABC Engineering) that was responsible for the design of the “past projects” referenced for “past clients.”



Case Study 4

Only on two of the projects Engineer B lists on the EFG website was Engineer B the Engineer of Record. Engineer B was an engineer-intern for most of Engineer B's tenure with ABC Engineering. While Engineer B performed tasks for the referenced clients and on "past projects," Engineer B's role changed for each project.



Case Study 4:

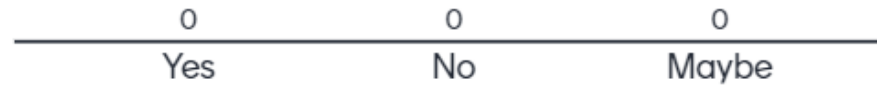
Is it ethical for Engineer B to claim this work as their own?

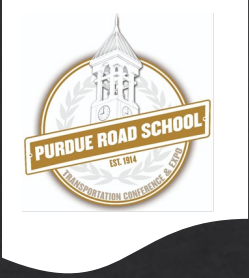
ETHICS



Go to www.menti.com and use the code ✨

Is it ethical for Engineer B to claim this work?





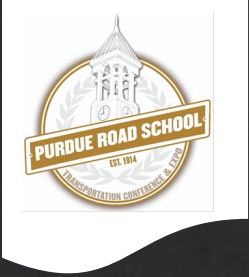
NSPE Conclusion:

It would *be unethical* for Engineer B to claim the projects on which they had responsible charge as their own without giving Company ABC proper credit. Projects on which they were a junior staff member could not be claimed.



Case Study 5

Engineer A, a structural engineer, is retained by Contractor B on a project to design a building for Client C. Engineer A prepares drawings, plans, and specifications and delivers them to Contractor B. The plans are filed with the building department and approved. Engineer A is never paid by Contractor B. Contractor B is removed from the project by Client C. Engineer A seeks to rescind the building department's approval of the drawings, plans, and specifications because he was not paid.



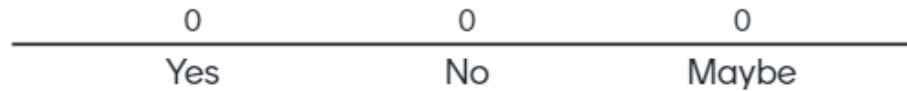
Case Study 5:

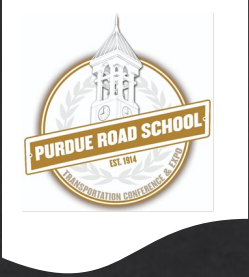
Was it ethical for Engineer A to seek to rescind the building department's approval of the drawings, plans and specifications because he was not paid?



Go to www.menti.com and use the code 75 78 15 6

Was it ethical for Engineer A to seek to rescind the approvals?





NSPE Conclusion:

It was *not ethical* for Engineer A to seek to rescind the building department's approval of the drawings, plans, and specifications because he was not paid.



ETHICS

- refer to rules provided by an external source, e.g. codes of conduct in professions
- Need to be exercised, practiced and thought out



Ethics in the Practice of Professional Engineering



Tim Jensen, PE,

Questions?