

Engineering Ethics



Member Code of Conduct



Engineering as a Profession

- Professions

- **Profession** is a field of work involving

- (),
 - (), and
 - ().

- Systematic, advanced expertise:

- Self-regulation:

- Commitment to the public good:

Self-Regulation

- Professional Organizations



Society of Automotive Engineers

- Engineer in Training (EIT)** (Fundamentals of Engineering (FE) Exam) and **Professional Engineer (PE)** (Principles and Practices of Engineering Exam)

Certification of Engineer in Training (EIT)

Professional Engineer (P.E.) License

Commitment to the Public Good

- Engineers impact people.
- Public:
- Engineer's role
- The rules of engineers' roles

NSPE Code of Ethics

Sec 1 (the **Fundamental Canons**):

- Sec 2 (**Rules of Practice**):

- Sec 3 (**Professional Obligations**):

- Fundamentals of Canons

While fulfilling professional duties, engineers shall

1. Hold paramount the safety, health, and welfare of the ().
2. Perform services only in the areas of their ().
3. Issue public statements only in an () and truthful manner.
4. Act for each employer or client as () agents or trustees.
5. Avoid () acts.
6. Conduct themselves honorably, responsibly, ethically, and lawfully so as to enhance the (), reputation, and usefulness of the profession

- Rules of Practice (partial list)
 1. Hold paramount the safety, health, and welfare of the public
 - a. If engineers' judgment is overruled under circumstances that endanger life or property, they shall () their employer or client and such other () as may be appropriate
 - b. Engineers having knowledge of any alleged violation of this Code shall () thereon to appropriate professional bodies and, when relevant, also to public authorities, and () with the proper authorities in furnishing such information or assistance as may be required.

- Rules of Practice (partial list)
 3. Issue public statements only in an objective and truthful manner.
 - a. Engineers shall issue no statements, criticism, or arguments on technical matters that are inspired or () for by interested parties, unless they have prefaced their comments by () identifying the interested parties on whose behalf they are speaking, and by revealing the existence of any () the engineers may have in the matters.

- Rules of Practice (partial list)

4. Act for each employer or client as faithful agents or trustees

- a. Engineers shall disclose all known or potential () of interest that could influence or appear to influence their judgment or the quality of their services
- b. Engineers shall not solicit or () financial or other valuable consideration, directly or indirectly, from outside agents in connection with the work for which they are responsible.

5. Avoid deceptive acts

- a. Engineers shall not offer, give, solicit, or receive, either directly or indirectly, any contribution to () the award of a contract.

Howard University Academic Code of Student Conduct

HOWARD UNIVERSITY

Search or A-Z Directories

Students • Faculty / Staff • Pa

<https://www.howard.edu/policy/academic/student-conduct.htm>

Academic Code of Student Conduct

[<< Index of Academic Policies & Procedures](#)

(Revised 2010)

Approved by the Board of Trustees, June 29, 2010

Howard University is a community of scholars composed of faculty and students both of whom must hold the pursuit of learning and search for truth in the highest regard. Such regard requires adherence to the goal of unquestionable integrity and honesty in the discharge of teaching and learning responsibilities. Such regard allows no place for academic dishonesty. To better assure the realization of this goal any student enrolled for study at the University may be disciplined for the academic infractions defined below.

Definitions of Academic Infractions

1. **Academic Cheating**—any intentional act(s) of dishonesty in the fulfillment of academic course or program requirements. This offense shall include (but is not limited to) utilization of the assistance of any additional individual(s), organization, document, or other aid not specifically and expressly authorized by the instructor or department involved. (Note: This infraction assumes that with the exception of authorized group assignment or group take-home assignments, all course or program assignments shall be completed by an individual student only without any consultation or collaboration with any other individual, organization, or aid.)
2. **Plagiarism**—to take and pass off intentionally as one's own the ideas, writings, etc. of another without attribution (without acknowledging the author).
3. **Copy Infringement**—Copy infringement occurs when a copyrighted work is reproduced, distributed, performed, publicly displayed, or made into a derivative work without the permission of the copyright owner.

Howard University Academic Code of Student Conduct

- HU is a community of scholars composed of faculty and ()
- Both must hold the pursuit of () and search for () in the highest regard
- Such regard requires adherence to the goal of unquestionable () and () in the discharge of teaching and () responsibilities.
- Such regard allows no place for academic ().
- Academic infractions:
 - **Academic cheating:**
 - **Plagiarism:**
 - **Copy infringement:**

Technical Essay on Ethics – Subject

- Consequences of unethical behavior in Takata Airbag Scandal

WHAT IS THE TAKATA AIRBAG RECALL?

Defective Takata airbags were installed in millions of vehicles. The defect stems from the Japanese parts maker using ammonium nitrate as a propellant in its inflators without a drying agent. As a result, the ammonium nitrate degrades when exposed to moisture leading to explosions.

THE NUMBERS:

- 37 million vehicles are under recall.
- 50 million Takata airbags have been recalled.
- Fewer than 41 million Takata airbags have been replaced.

COMMON INJURIES FROM DEFECTIVE TAKATA AIRBAGS

- Blindness
- Severe Lacerations
- Skull fractures
- Brain bleeds
- Torn or shredded arteries

DAMAGES YOU MAY RECOVER:

- Medical bills
- Lost wages
- Pain and suffering
- Wrongful death

VEHICLE MAKES WITH TAKATA AIRBAGS

• Acura	• Jaguar/Land Rover	• Tesla
• Audi	• Lexus	• Toyota
• BMW	• Mazda	• Volkswagen
• Chrysler	• Mercedes-Benz	
• Ferrari	• Mitsubishi	
• Ford/Lincoln	• Nissan	
• General Motors	• Subaru	
• Honda		
• Infiniti		

The Carlson Law Firm 1-800-359-5690 - carlsonattorneys.com

**Don't Risk It,
Fix It!**



Until your airbag is fixed, you're putting yourself, your spouse, your child, your best friend, or whoever's in your vehicle, in danger every time you drive. Because this isn't just a recall. **It's a public safety crisis.**

The Takata Airbag Recall Handout ...
toyotapartsandservice.com



- Relevant sources/resources
 - <https://www.bloomberg.com/news/features/2016-06-02/sixty-million-car-bombs-inside-takata-s-air-bag-crisis>
 - <http://www.autonews.com/article/20160718/OEM11/160719854/honda-audit-finds-takata-engineers-manipulated-airbag-test-data>
 - <https://www.nytimes.com/2014/11/07/business/airbag-maker-takata-is-said-to-have-conducted-secret-tests.html>
 - <https://insight.ieeeusa.org/articles/backscatter-ethics-and-airbags/>

Technical Essay on Ethics – Individual Assignment

- **Technical Essay Subject:** “Consequences of unethical behavior – Takata Airbag Scandal”
- Essay should answer the following questions
 1. What and when did this scandal happen?
 2. What was root cause of the scandal?
 3. What specific NSPE code of ethics (of fundamental canons) was violated?
 4. What’s the consequence of the unethical behavior?
 5. How would you do if you’re working for the company as an engineer?

Technical Essay on Ethics – Individual Activity

- “Consequences of unethical behavior - Takata airbag scandal”
- Link: **How to write technical essay well (mandatory)**
 - Importance of the first paragraph [50] (F) – **Should answer all the questions summarily.**
 - Importance of the expansion and details in the main body [50] (M) – **Expanded description on the questions and answers.**
 - Similarity Score [0.0 – 1.0] (S) – **Write your own words. Do not quote.**
 - Final Essay Score[100] = $F + M - 50 * S$
- Submission File Naming: EthicsEssay_LastName.xxx (docx, txt, but no pdf)
- **Due:** Check the accompanying Essay Assignment for more details