

APSC 450

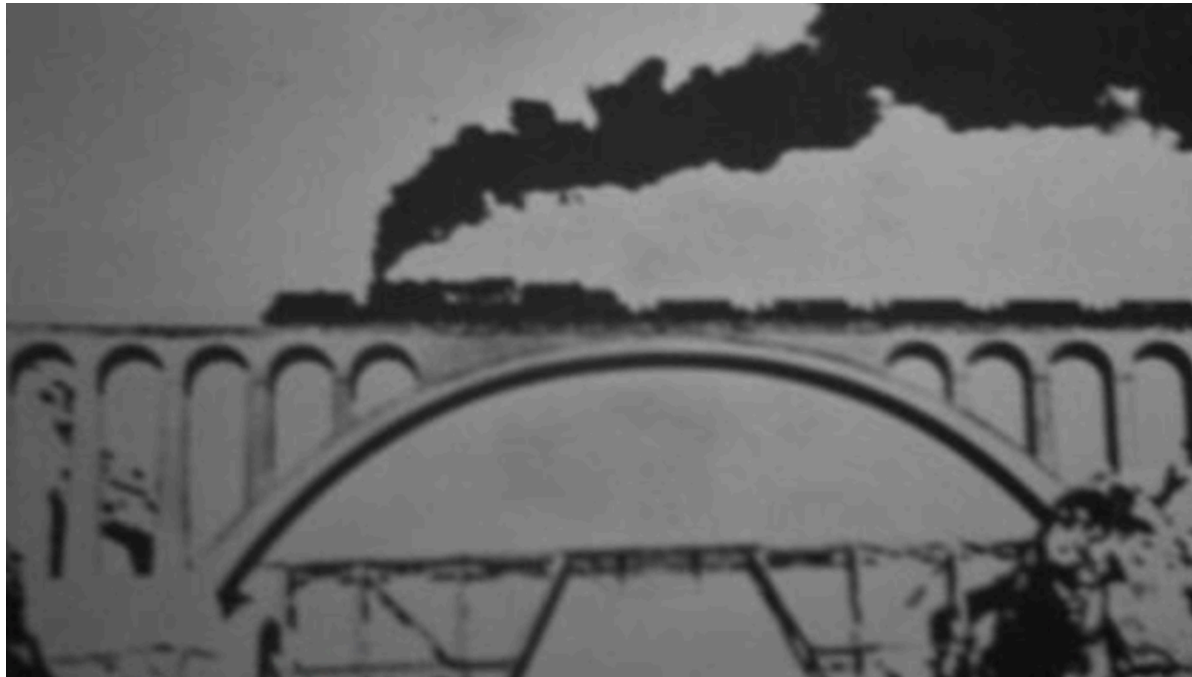
PROFESSIONAL ENGINEERING PRACTICE

INTRODUCTION



Fariborz Taghipour

What Veresk Bridge story tell us?



- Fear that the train wouldn't be able to pass!
- The engineer and his family stood under it when the first train passed!!!

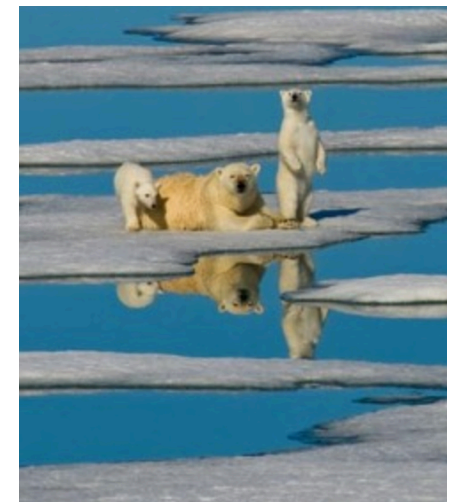
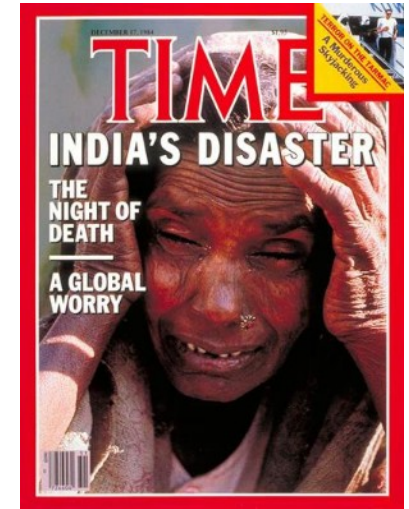
Ethics, Law, Professionalism...why needed?

- Obligations by engineers to society, to their clients, & to the profession.
- It is important to know the rules of the game



Engineering related issues

- Engineering related accidents:
 - The **Bhopal disaster**..... +
500,000 were exposed to gas 8,000
died in 2W & +8,000 later
 - **Canada:**
 - Bridge collapse QC 1907: 75 deaths
 - Ocean Ranger NF 1982: 84 deaths
- Engineering related concerns:
 - Global warming, internet & privacy,
pipeline, mining, food engineering

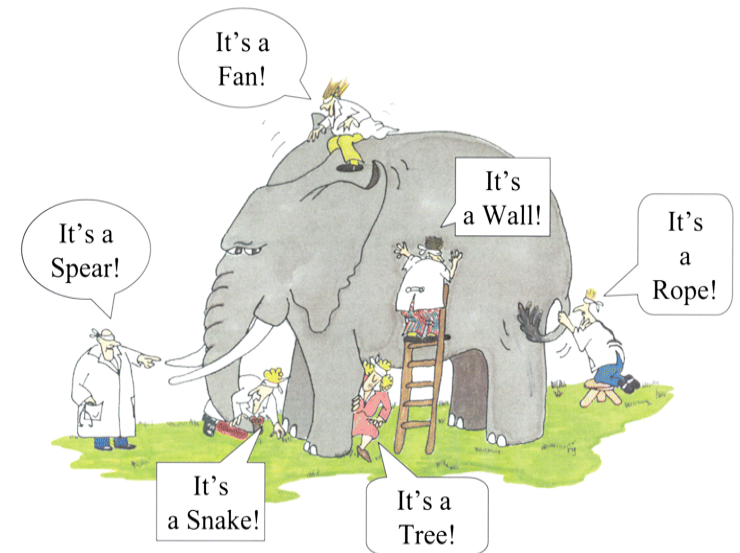


Engineering....is it all technology?

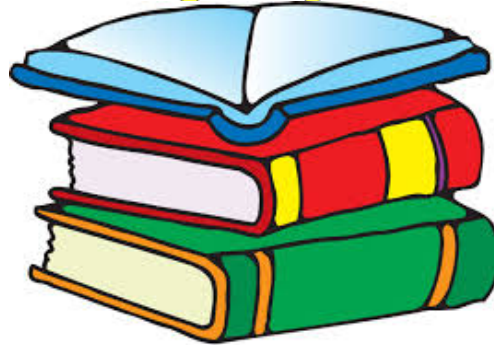
- Technology is not necessarily or always good
 - Examples: Automobile; cellphone
- There is more to Eng. than technology alone
 - elements of law, ethics, business, safety, psychology, philosophy, etc.



I AM TRYING TO
ADD MORE FRIENDS



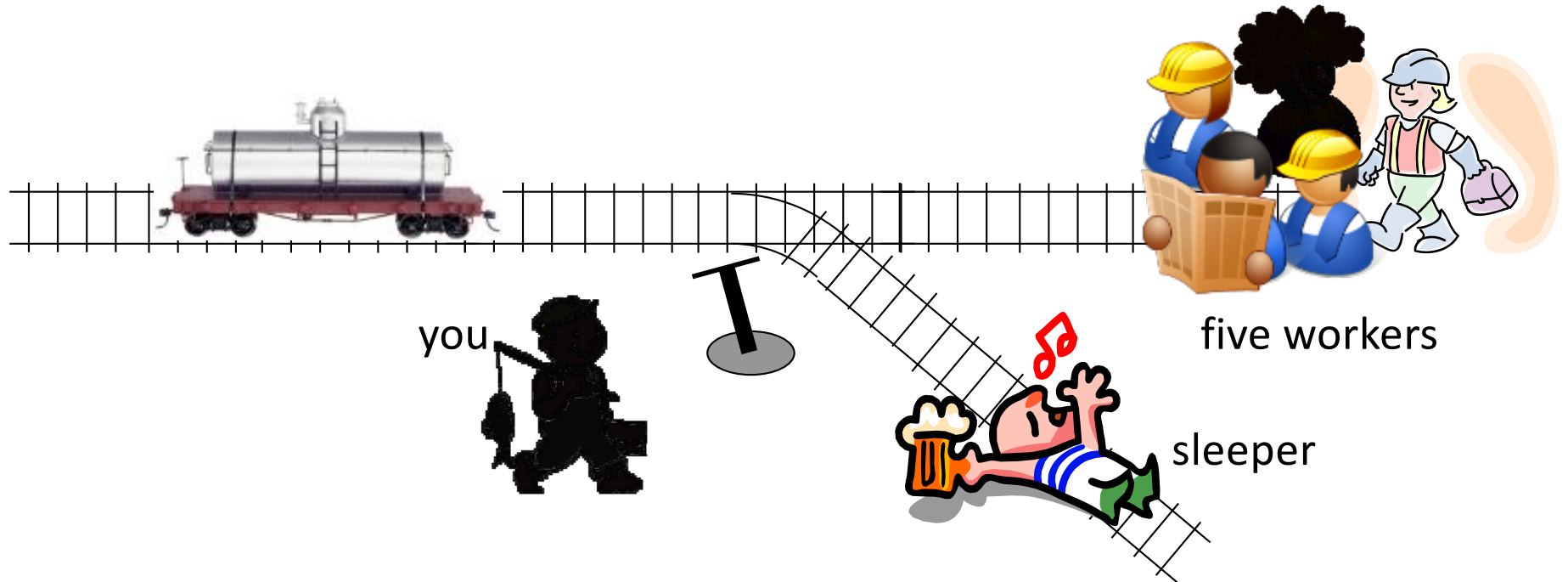
Topics



Engineering ethics, Law, Professionalism

- Ethics and Professional ethics
- What it means to be a professional
- Basics of law related to engineering:
Contract and tort law, Employment law, Environmental law,
Aboriginal law
- Entrepreneurship and the Engineering Business
- Leadership and Communications
- Various other interesting lectures

The Bystander scenario

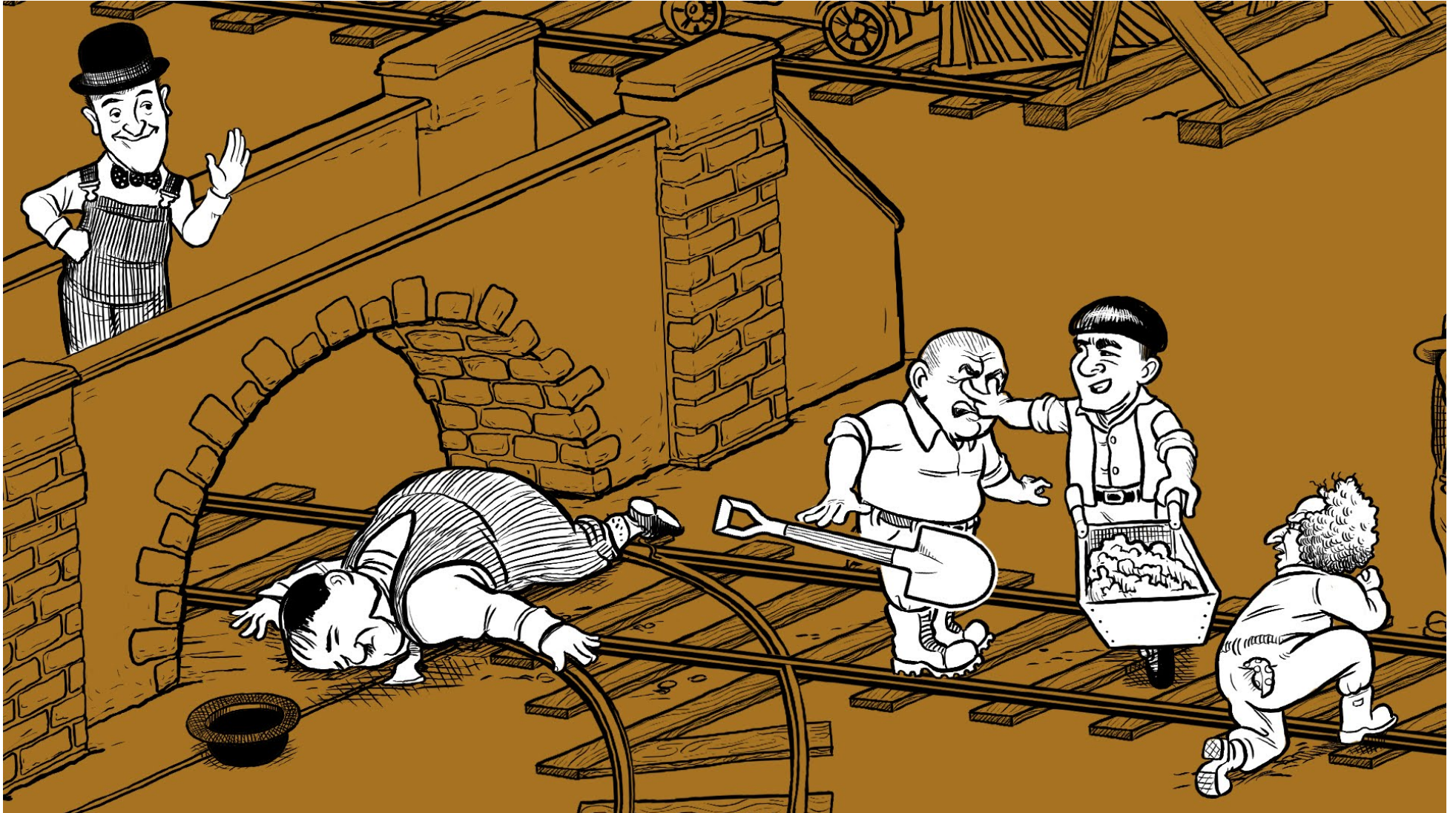


You are walking by a **railway track** and notice a tank car full of propane heading toward five workers who cannot escape an inevitable explosion.

A man is sleeping on the **siding**.

Would you **pull the lever and divert** the tank car to the siding?

The Bystander scenario



Instructor



Instructor	Fariborz Taghipour fariborz.taghipour@ubc.ca 604 822-1902 Room 219 CHBE
TAs	Karl Zimmermann karl.zimmermann@ubc.ca Marziyeh Danesh marziyeh.danesh@chbe.ubc.ca Mahbubeh Mirzaie mirzai92@mail.ubc.ca
Course	Online

Format



A series of lectures on the topic will be given by faculty or guest lecturers from industry.

Videos of the lectures have been recorded and will be made available on this web site.

The course is divided into one-week modules (0:00 Sunday morning to 24:00 Saturday).

There are typically two video lectures and a quiz each week

The weekly quiz is available anytime during the week and, once started: you have 60 minutes to complete.

Course Web Site



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APSC 450 201 > Modules

2019W2

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+ Module

Week 2 Jan 12-18

Videos and Presentations

Video lecture: Ethics - some basic concepts

Presentation: Ethics - some basic concepts

Video Lecture: The EGBC Act and Code of Ethics

Presentation: The EGBC Act and Code of Ethics.pdf

Readings and Background information

Notes on Ethics

Davis, Thinking like an Engineer

EGBC Code of Ethics

Quiz

Week 2 Quiz
18 Jan | 10 pts

Grading



Weekly quizzes (10) and a final
currently based on the following:

	Date	Weight (%)
Quizzes	weekly	50
Final exam	TBD	50
	<i>Total</i>	100

There will be a final exam on all the material in the course.

You need to pass the final to pass the course.

Whether the final exam is on paper or online is under consideration.

Expected Outcome



At the end of this course, you are expected to:

- Have general knowledge of issues in professional ethics
- General understanding of being a professional & professionalism
- Know about the main engineering-related legal topics
- Have some perspectives on business and engineering
- Be a better person 😊
- **Requests:** This is the first academic year this course has been offered this way and so it is somewhat experimental. There might be bugs and issues. Please be patient.

The height of irony is to cheat in an ethics or professional practice course

