

# Case Study Presentation

See also: [ETec 341 Syllabus](#) | [Accident Summary and Analysis](#)

## ETec 341 Engineering and Society Ethics Presentations and Cases

You are to prepare and give a presentation and a written summary on a case of an engineering failure or near miss that was enabled by ethical lapses on the part of the designers, manufacturers, and/or users. While you will need to outline the events of the case for your classmates, the purpose of the exercise is to tie the events back to the ethical guidelines (including the NSPE Code of Ethics) from class discussions. Your presentation should be approximately 10-12 minutes long. You will be graded on both the content and quality of your presentation, and you will also receive immediate feedback from your peers. Your written summary is intended to give your classmates a record of the case and the lessons to be learned from it. **Two copies of a draft** of your written summary are due at the time of your presentation. You will be given feedback on your draft, and you should bring **21 copies of your final written summary** within a week of receiving your draft back. The written summary should be 1-2 pages long (max.), and it should include your complete list of references.

## Cases

### Airplane (and related) Crashes

*R. 101* Dirigible Crash (1930)  
Hindenberg Fire (1937)  
Comet 1 Airplane Crashes (1954)  
DC-10 Cargo Door Problems (1972, 1974)  
F-14A Engine Problems (1973-1987)  
Tenerife Runway Collision (1977)  
DC-10 Engine Loss (1979)  
Galaxy Airlines Electra II Crash (1985)  
British Airtours Fire (1985)  
Japan Airlines 747 Crash (1985)  
Aloha Airlines 737 Fuselage Failure (1988)  
British Midlands 737 Crash (1989)  
Lauda Air 767 Crash (1991)  
ValueJet DC-9 Crash (1996)  
TWA 747 Crash (1996)  
Alaska Air MD-83 Crash (2000)  
Air France Concorde Crash (2000)  
American Airlines A300 Crash (2001)  
*Columbia* Accident (2003)

### Bridge Collapses

Tay Bridge Collapse (1879)  
Dee Bridge Collapse (1887)  
Quebec City Bridge Collapse (1907)  
Tacoma Narrows Bridge Collapse (1940)  
Silver Bridge ( Ohio River) Collapse (1967)  
Mianus River Bridge Collapse (1983)  
Schoharie Creek Bridge Collapse (1987)

### **Building Collapses**

Legion Field Stadium Collapse Potential (1960)  
Ronan Point Apartment Tower Collapse (1968)  
John Hancock Tower Problems (1973+)  
Hartford Civic Center Collapse (1978)  
Kemper Arena Collapse (1979)

### **Construction Accidents**

Commonwealth Ave. Apts., Boston (1970)  
Skyline Plaza (Bailey's Crossroads) Apts., VA (1973)  
Willow Island Cooling Tower, WV (1978)  
Rosemont Horizon Arena, Chicago (1979)  
Harbour Cay Condos, FL (1981)  
East Chicago Freeway Ramp, IN (1982)  
L'Ambiance Plaza, CT (1987)  
Big Blue Crane Collapse (1999)

### **Dam Collapses**

Johnstown Flood (1889)  
Vanport Flood (1948)  
Malpasset Dam Collapse (1959)  
Baldwin Hills Dam Collapse (1963)  
Banqiao and Shimantan Dam Collapses (1975)  
Teton Dam Collapse (1978)

### **Ship (and related) Explosions and Sinkings**

*U.S.S. Princeton* Explosion (1844)

*Sultana* Boiler Explosion (1865)  
*S.S. Mendi* Collision (1917)  
*Thetis* Submarine Sinking (1939)  
Texas City Fertilizer Ship Explosions (1947)  
*Thresher* Submarine Sinking (1963)  
*U.S.S. Forrestal* Fire (1967)  
*Ocean Ranger* Sinking (1982)  
*Piper Alpha* Explosion and Fire (1988)  
*Exxon Valdez* Grounding (1989)  
*Kursk* Submarine Sinking (2000)  
*Prestige* Oil Spill (2002)

### **Other Wrecks, Accidents, and Disasters**

Monongah Mine Disaster (1907)  
Triangle Shirtwaist Factory Fire (1911)  
Aisgill Train Wreck (1913)  
Chevrolet Corvair (1960s)  
Santa Barbara Oil Spill (1969)  
Ford Pinto (1970s)  
GM Truck Fuel Tanks (1970s-80s)  
Chernobyl Meltdown (1986)  
Bellingham Pipeline Explosion (1999)  
Kaprun Ski Train Fire (2000)

### **OFF LIMITS CASES**

Apollo I Fire (1967)  
Citicorp Tower (1978)  
Three Mile Island (1979)  
Hyatt Regency Walkway Collapse (1981)  
Bhopal Poison Gas Release (1984)  
*Challenger* Explosion (1986)  
Ford Explorer (on going)