Technological innovation and Law
an international aspect

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• The Titanic, the Concorde, the Ford Explorer and many other products involve both risk and benefit to society. Legal systems protect public safety both directly, in the form of mandatory regulations, and indirectly, in the form of imposing financial liability.
This course covers both approaches and is designed to familiarize the student with the legal constraints on the product design process by studying a series of design decisions that led to disasters and the regulations or litigation that interacted with the design decisions.

Case studies range from traditional themes, such as product safety and environmental regulations, to developing issues such as Internet regulation. The course stresses legal and ethical issues in product design, such as the legal obligations to report defective products, or dealing with clients who do not recognize the importance of issues of public concern.
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• Typical examples might be regulations dealing with image quality in telemedicine, liability implications of the man-machine interface in automatic pilots, or the use of probabilistic risk assessment in the regulation of nuclear power plants.

• Information systems are part of the entire socio legal response to technological innovation. Some problems are more focused in informatics, some problems represent the general problem of technological change and globalization,

• with effects on the informatics community.

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• The theoretical basis of the course is grounded in technico-legal revolutions; methods of root cause analysis and fundamental analysis of the differences among legal systems in the treatment of basic rights (such as Privacy).
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Blocks:
Each standard Block is 90 minutes, we will have
14 blocks 5 in day one and 2!
4 blocks in day 3

1 + 2) Introduction to the concept of Technology and Law

Discussion of course format
LAW AS MANDATORY POWER
Technological innovation and failure
Public law/private law
TITANIC

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Blocks:

3) Public and private legal controls

Sources of Law

Product Liability
Efficiency and Equity

Example Kaprun
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Block

4) Direct versus indirect regulation

Regulatory effectiveness analysis
Regulation and liability
Example: Dalkon Shield
Prevention and deterrence
Information intervention compensation and punishment

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Blocks:

5) Nature of the design process and relation to injury

Root cause analysis
Signature versus non signature (a signature is the ability to attribute direct local causation)
Technical Culture

Example: ATR 72
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**END OF FIRST DAY CLASS:**

GIVE OUT OVERNIGHT READING ASSIGNMENT FOR QUIZ IN Morning on assignment and first day material

Morning of second day short written quiz on overnight and first day

**Blocks:**

6 + 7) Development of safety regulation

Short written quiz on overnight and first day

Disaster investigation
EU and USA Regulatory structure
Example Airbus A 300
Regulatory taxonomy
Safety testing
Montblanc
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8) Effect of direct and indirect regulation on the Engineering process
   - Lancaster analysis
   - Example: Quads
   - Undefined/poorly defined problems
   - Political/technical decisions
   - Examples: DC 10 – Railcar

9) Design process failures
   - “State of the art” ≠ “Stand der Technik”?
   - Human factors in regulatory safety
   - Examples: Ford Explorer, Firestone Tires, Eschede, Maglev (Magnetschwebebahn), Audi Pedals
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Blocks:

10) Product Liability

Signature versus non signature (a signature is the ability to attribute direct local causation)

Situation USA
Situation EU
Definition of a defect (McDonalds coffee case)

END OF SECOND DAY CLASS:

This is the end of the second day; overnight assignment and Students choose topic area for final writing

Third day morning short quiz and turn in topics
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Blocks:

11) Privacy and short quiz on overnight material
turn in final topics

Invention of the concept of privacy
Creation of Privacy Laws, e.g. Data Protection Legislation
Conflict with technological innovation

12) Intellectual property

Patents
Copyright (google books)
Trade secrets
State secrets
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Blocks:

13) Problems and possibilities with new regulatory structures

Data protection controllers as an example

Soft regulation versus "strict regulation"

Self regulation:
- World Trade Center
- Ethical codes
- Required insurance
- Example Comcast

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Blocks:

14) Review of exam problem in light of second day coverage -

International trade issues

- Importers
- Exporters
- Conflicting trade standards
- Internet commerce
- Discussion of emerging issues that might make an analogy
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Blocks:

15) Internet as novel form of technology and law
Emerging issues

Telemedicine

Free speech

Green and global warming

Software safety and complexity
(example airbus)

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Final:

Wrap up and final discussion of the exam problem

Questions and answers

Students may change topics

Each student writes on own choice topic