

EE 590  
Scientific Research Methods  
and Ethics for Engineers

Week 4 Course Notes

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# Topics

- General writing processes
  - Developing a narrative for scholarship or research
- Writing technical reports
  - Generating and populating the outline
  - Report constituents
  - Citations
- Best practices
  - Basic considerations
  - Plagiarism

# JUST KIDDING



Source: <http://www.justkiddingcartoons.com/>

# General Writing Processes

- Writing – developing a narrative to convey stories, ideas and information
- For academic objectives, this covers writing
  - Argument papers
  - Research papers
  - Exploratory essays
  - Annotated bibliographies
  - Book reports
  - Academic proposals
  - ...

# General Writing Processes

- Developing a narrative for general purposes is usually described through a process:
  - thinking rhetorically about one's audience and purpose
  - collaborating
  - researching
  - organizing texts for readers at "global" and "local levels"
  - maintaining focus
  - practicing diverse invention strategies
  - designing one's format rhetorically
  - revising
  - editing
  - publishing
  - ...

# Writing Technical Reports

- Technical reports aim to convey information on findings
  - research findings in research papers
  - project findings in project reports
  - class assignment findings in class papers
  - ...
- The methodological way of generating technical reports involves the use of an **outline**

# Generating and Populating An Outline

- The time to write an outline is **BEFORE** writing the report
  - The outline is prepared as a nested list of discussion bits
  - It represents the line of the logical progression of the arguments to be followed in the narrative
  - It provides a global view of all the main arguments
    - to verify that all points to be made are there
    - the arguments follow the proper logical flow

# Generating and Populating An Outline

- The general form of an outline goes as follows:
  - I. The main point to be argued – the **thesis**
  - II. The first group of arguments
    - I. argument 1.1
    - II. argument 1.2
    - III. ...
  - III. The second group of arguments
    - I. argument 2.1
    - II. ...
  - IV. The last group of arguments
    - I. ...
  - V. Conclusion – a restatement of the thesis; a summary of the logical arguments; never to include new material



# Generating and Populating An Outline

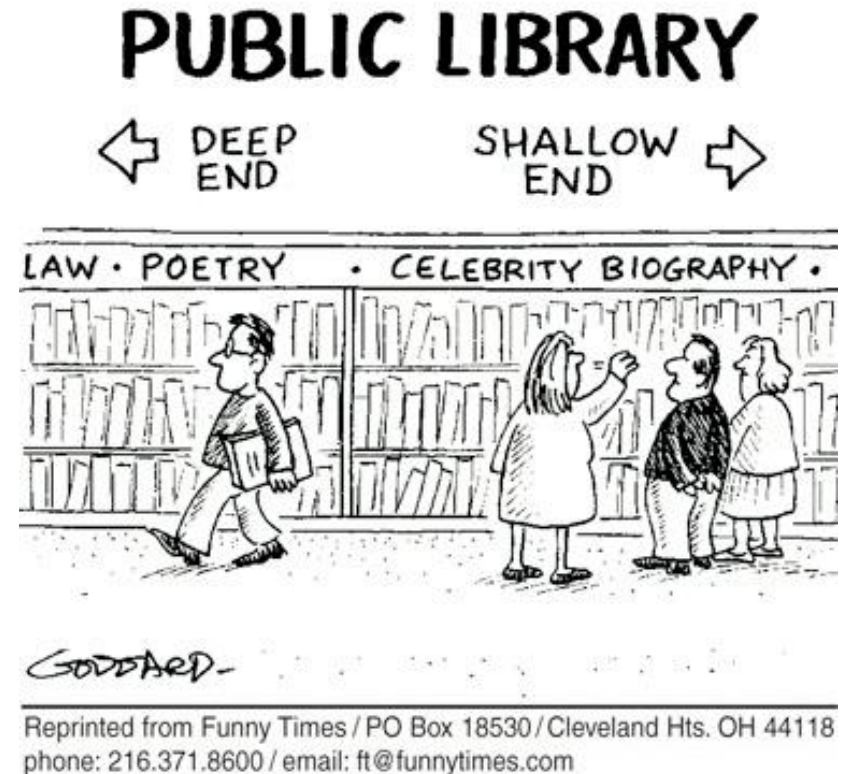
- Once an outline is prepared, finishing the report is a matter of filling in the thoughts with whole sentences and sentence groups
- The usual rules of good writing still apply  
→ best practices

# Best Practices

- Basic considerations of good writing include
  - typographical and grammatical accuracy
  - clarity
  - conciseness
  - overall layout and pagination

# Best Practices

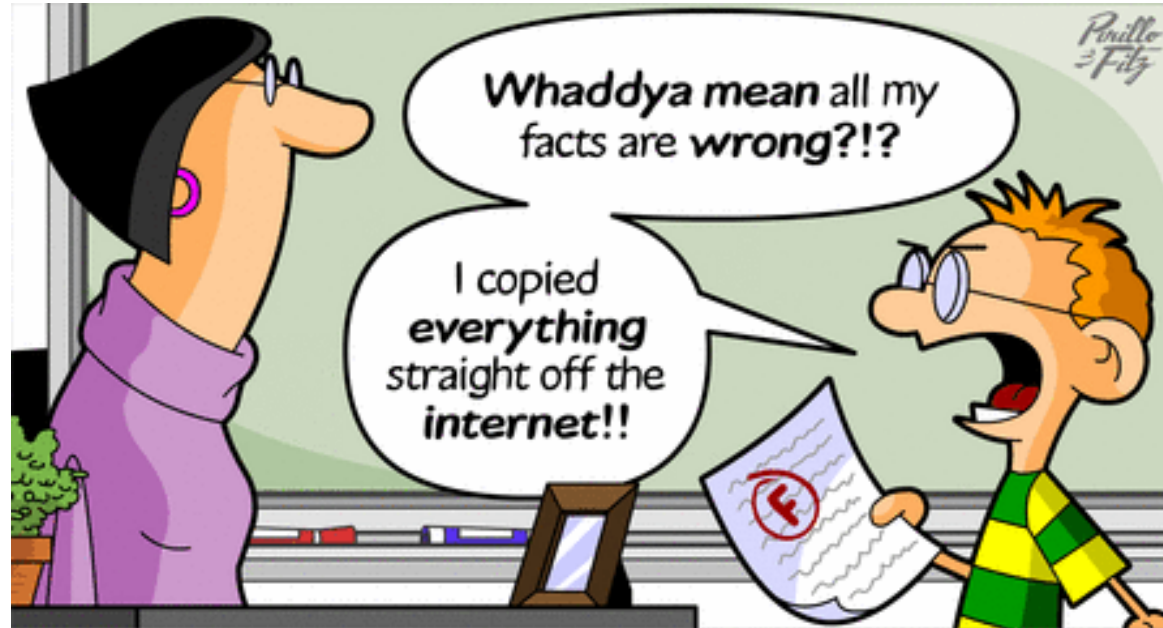
- Good academic writing further includes
  - a formal tone of expression – no slangs
  - considering the familiarity of the target audience with the topic
  - maintaining a direct expressional style
    - Academic arguments are to be made in a plain manner
    - Ambiguities cannot be tolerated
    - Obfuscations cannot be tolerated either!!
  - using sources to support arguments
    - Every argument must be supported
      - by the evidence provided in the report or
      - by previous findings from the literature



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# Plagiarism



Source: <http://www.edwize.org/to-catch-a-plagiarist>

# Plagiarism

- Of particular importance are the original sources to be referenced in the report
  - footnotes included in the main text
  - citations listed in the Bibliography section
- Non-compliance with this essential requirement is referred to as **plagiarism** and cannot be tolerated

# Plagiarism

- Plagiarism amounts to **academic theft** as it involves getting credit of intellectual work by someone else without proper reference to the true originator
  - **cheating in a test** – use of unauthorized help – is a more obvious form of academic misdemeanor and is equally intolerable

Name :

Number :

Your name above is a statement on your part certifying that you have neither received nor given any unauthorized help.

**EE101**

**Introduction to Electrical Engineering**

# Plagiarism

- Basic rule on plagiarism:

**give credit to a source whenever you use information that is not your own unless it is common knowledge\***

- Common knowledge implies a piece of information that is widely known and well accepted by the community
- If in doubt, it is best to provide the source just to be certain

\*Prentice Hall –

[http://wps.prenhall.com/hss\\_understand\\_plagiarism\\_1/6/1668/427074.cw/index.html](http://wps.prenhall.com/hss_understand_plagiarism_1/6/1668/427074.cw/index.html)

# Plagiarism

- Example (reproduced from <http://www.albany.edu/eas/104/plagiary.htm>)

Original text:

In 1925 Dreiser produced his masterpiece, the massively impressive *An American Tragedy*. By this time--thanks largely to the tireless propagandizing on his behalf by the influential maverick critic H.L. Mencken and by others concerned with a realistic approach to the problems of American life--Dreiser's fame had become secure. He was seen as the most powerful and effective destroyer of the genteel tradition that had dominated popular American fiction in the post-Civil War period, spreading its soft blanket of provincial, sentimental romance over the often ugly realities of life in modern, industrialized, urban America. Certainly there was nothing genteel about Dreiser, either as a man or novelist. He was the supreme poet of the squalid, a man who felt the terror, the pity, and the beauty underlying the American dream. With an eye at once ruthless and compassionate, he saw the tragedy inherent in the American Success ethic; the soft underbelly, as it were, of the Horatio Alger rags-to-riches myth so appealing to the optimistic American imagination.

from Richard Freedman, *The Novel* (New York: Newsweek Books, 1975), pp. 104-105



# Plagiarism

Original:

“... Certainly there was nothing genteel about Dreiser, either as a man or novelist. He was the supreme poet of the squalid, a man who felt the terror, the pity, and the beauty underlying the American dream. ...”

Student's version:

There was nothing genteel about Dreiser, either as a man or novelist. He was the supreme poet of the squalid, a man who felt the terror, the pity, and the beauty underlying the American dream.

Verdict: **Obvious plagiarism** – word-by-word repetition

# Plagiarism

Original:

“... Certainly there was nothing genteel about Dreiser, either as a man or novelist. He was the supreme poet of the squalid, a man who felt the terror, the pity, and the beauty underlying the American dream. ...”

Student's version:

There was nothing genteel about Dreiser, either as a man or novelist. He was the supreme poet of the squalid, a man who felt the terror, the pity, and the beauty underlying the American dream.<sup>1</sup>

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<sup>1</sup>Richard Freedman, *The Novel* (New York: Newsweek Books, 1975), p. 104.

Verdict: **Still plagiarism** – quotation marks are missing

# Plagiarism

Original:

“... Certainly there was nothing genteel about Dreiser, either as a man or novelist. He was the supreme poet of the squalid, a man who felt the terror, the pity, and the beauty underlying the American dream. ...”

Student's version:

Nothing was genteel about Dreiser as a man or as a novelist. He was the poet of the squalid and felt that terror, pity, and beauty lurked under the American dream.

Verdict: **Still plagiarism** – changing a few words is not enough

# Plagiarism

Original:

"... Certainly there was nothing genteel about Dreiser, either as a man or novelist. He was the supreme poet of the squalid, a man who felt the terror, the pity, and the beauty underlying the American dream. ..."

Student's version:

"Nothing was genteel about Dreiser as a man or as a novelist. He was the poet of the squalid and felt that terror, pity, and beauty lurked under the American dream."<sup>1</sup>

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<sup>1</sup>Richard Freedman, *The Novel* (New York: Newsweek Books, 1975), p. 104.

Verdict: **Not quite plagiarism; but incorrect** – quotation requires exact replication

# Plagiarism

Original:

“... Certainly there was nothing genteel about Dreiser, either as a man or novelist. He was the supreme poet of the squalid, a man who felt the terror, the pity, and the beauty underlying the American dream. ...”

Student's version:

"Certainly there was nothing genteel about Dreiser, either as a man or novelist. He was the supreme poet of the squalid, a man who felt the terror, the pity, and the beauty underlying the American dream."<sup>1</sup>

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<sup>1</sup>Richard Freeman, *The Novel* (New York: Newsweek Books, 1975), p. 104.

Verdict: **Acceptable**; but undesirable – the student does not add anything

# Plagiarism

Original:

“... Certainly there was nothing genteel about Dreiser, either as a man or novelist. He was the supreme poet of the squalid, a man who felt the terror, the pity, and the beauty underlying the American dream. ...”

Student's version:

By 1925 Dreiser's reputation was firmly established. The reading public viewed Dreiser as one of the main contributors to the downfall of the "genteel tradition" in American literature. Dreiser, "the supreme poet of the squalid," looked beneath the bright surface of American life and values and described the frightening and tragic elements, the "ugly realities," so often overlooked by other writers.<sup>1</sup>

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<sup>1</sup>Richard Freedman, *The Novel* (New York: Newsweek Books, 1975), pp. 104-105.

Verdict: **Good**

