Engineering 101: Introduction to Information

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Evansdale Library
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* Basic Library Webpages

* Quoting Articles

* Evaluating Information Resources

* Citations

* Finding Information
  * WorldCat
  * Encyclopedias
Finding WVU Libraries’ Webpages

https://lib.wvu.edu
Research Guides:
http://libguides.wvu.edu/engr101
When to cite?

* You must provide internal citation when you:

* Summarize or paraphrase someone else's thoughts or ideas.
* Include information which is not common knowledge.
* Directly quote someone else's words.
Facts:

* Thomas Jefferson was the third President of the United States.

* Alan Turing decrypted the Enigma machine.

* Regular coffee has caffeine.
Jefferson’s interest and work in horticulture, architecture, archaeology, paleontology, and as an inventor.

Ada Lovelace’s notes about analytical engines became one of the critical documents to inspire Alan Turing’s work on the first modern computers in the 1940s. (http://findingada.com/about/who-was-ada/)

The effect of caffeine on the human body.
*Citation or Not?

Copying a paragraph from a Wikipedia article.
Including a sentence in your paper about the high sugar content in candy.
Putting an author’s ideas in your own words about the discovery and x-ray proof of DNA.
*Citation or Not?*

Directly quoting words from President Gee’s State of the University speech.
Reliability: How is information evaluated before publication?
Why is Reliable Information Important?

* Bad information is a time waster
* Good Foundations help to produce a reliable product
* Engineering Student’s Creed #3:
  * “to uphold the highest standards of academic integrity”
* National Society of Professional Engineers (NSPE)’s Canon 1:
  * “Hold paramount the safety, health, and welfare of the public”
*Evaluating the Internet*
* Who can create a webpage?
* Who has a Facebook page?
  * Who evaluates what you have on that page?
  * Are we sure you didn’t eat 100 ice cream cones yesterday?
* Anyone can edit Wikipedia page.
* What websites are generally more reliable?
  **.edu, .gov, .org
Scholarly vs. Popular Sources

* Uses technical language
* Includes full citations for sources
* Often peer reviewed (reviewed by an editor and other experts before being accepted for publication)

* Uses language easily understood by general readers
* Rarely gives full citations for sources
* Often written by journalists or professional writers
*Sends articles submitted by authors to a group of experts in the field for review before publication.

*Reviewers recommend whether the submitted article be published, revised, or rejected.

*The review process ensures that research of high quality and contributes new information to the field.
* Evaluating Information Resources

* Who created?
* When created?
* Why created?
* How created?
* What perspective is the author using?
*Avoiding Plagiarism*
*The following definition are from the West Virginia University Student Code.

*Plagiarism: the use, by paraphrase or direct quotation, of the published or unpublished work of another person without full and clear acknowledgment, including, but not limited to, the unacknowledged use of materials prepared by another individual engaged in the selling of term papers or other academic materials.
*Citation and Plagiarism*

*Plagiarism*
* Representing someone else's writing as your own.
* Failing to provide appropriate internal documentation.
* When you don't provide the appropriate citation, you are representing someone else's ideas, research, thoughts, etc. as your own.
1. Changing a few words in a sentence and using it as your own.
2. Copying a unique phrase without giving the original author credit.
3. Piecing together ideas from more than one source without citing the original sources.
4. Re-using a term paper from a previous class.
5. All of the above are plagiarism.

*Which of the following IS considered plagiarism:
*Citations allow the reader to locate the information the writer has used to create their work.

*Citations are found in footnotes, lists of references and bibliographies and databases

*Included in a citation is information for the reader to find the source again: author, title, publisher or publication, date, among other things.

*Citations are specialized by type of information references and by the format followed, e.g. MLA.
Components of an article citation

- Author
- Article title
- Publication title
- Volume and issue number
- Date
- Page numbers
Citation Examples

**MLA**


**APA**


**Chicago**

To avoid plagiarism, use footnotes or in-text citations to have reader know where information was found

In-text citations
* Use Parentheses
* Use Author last name
* Use page number that quote appears on
* Example: By the end of the 1940’s Langley had over 1,500 employees (Shetterly 1).

Use in conjunction with “Works Cited” page

Example:

(Davies 45)


(Hough 120)


(Saenz-Otero et al. 9)

(Yoshida, NASA 69)


(Yoshida 1010)
*MLA or Modern Languages Association
*Style Manuals in Book format available in Reference Collections in the Libraries
*Research Guide:
  * [http://libguides.wvu.edu/mlaguide](http://libguides.wvu.edu/mlaguide)
  * EndNote Web
  * Purdue OWL
Finding Information

- Internet—Google
- Library Sources:
  - Catalogs
  - Indexes
- Now: Databases & eBooks & eJournals
- Library Resources are partially paid by your library fees.
*Encyclopedias Available Electronically*

*Access Science*: McGraw-Hill Encyclopedia of Science and Technology Online

*Encyclopedia Britannica*

*Encyclopedia of Nanoscience and Nanotechnology*

*Kirk Othmer Encyclopedia of Chemical Technology*

*Wiley Encyclopedia of Biomedical Engineering*
Newton's laws of motion

Definition

**Newton's laws of motion**

The basic principles of classical dynamics.


Article

**Newton's laws of motion**

The basic principles of classical dynamics. They are 1. A body not acted on by a force moves with constant velocity, that is, with constant speed in a straight line. 2. The acceleration (rate of change of velocity with time) of a body is proportion...
Newton's laws of motion, relations between the forces acting on a body and the motion of the body, first formulated by Isaac Newton.

Newton's first law states that, if a body is at rest or moving at a constant speed in a straight line, it will remain at rest or keep moving in a straight line at constant speed unless it is acted upon by a force. This postulate is known as the law of inertia. The law of inertia was first formulated by Galileo Galilei for horizontal motion on Earth and was later generalized by René Descartes. Before Galileo it had been thought that all horizontal motion required a direct cause, but Galileo deduced from his experiments that a body in motion would remain in motion unless a force (such as friction) caused it to come to rest.

Newton's second law is a quantitative description of
Three Online eCampus Modules:

1. Plagiarism Avoidance Tutorial & Quiz
2. Web-Based Information Tools & Quiz
3. Intellectual Property & Quiz

Questions on MidTerm and Final Exam.