

Plagiarism and Academic Integrity
Definitions, Examples and Penalties
Department of Chemistry
Lakehead University

Academic integrity is of central importance in any university community and the Chemistry Department at Lakehead University is taking steps to promote responsible academic behaviour. Academic integrity involves committed allegiance to the values, the principles, and the code of behaviour held to be central in our community. Integrity concerns honesty and implies being truthful, fair, and free from lies, fraud and deceit.

University Definition

Lakehead University defines plagiarism and other academic offences in the Code of Student Behaviour and Disciplinary Procedures and in the University Calendar under the section University Regulations IX: Academic Dishonesty.

[Code of Student Behaviour and Disciplinary Procedures](http://policies.lakeheadu.ca/policy.php?pid=60)

(http://policies.lakeheadu.ca/policy.php?pid=60)

[Lakehead University Regulations IX: Academic Dishonesty](http://mycoursecalendar.lakeheadu.ca/pg39.html)

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Possible penalties for academic offences such as plagiarism range from a mark of zero for the assignment or report to expulsion from the University.

The salient points of the Code are discussed here.

PLAGIARISM

All academic work, written or otherwise, submitted by students to their instructors or other academic supervisors, is expected to be the result of their own thought, research, or self-expression. **In cases where students feel unsure about a question of plagiarism involving their work, they are obliged to consult their instructors on the matter before submission.**

Plagiarism includes reproducing someone else's work, whether it is a laboratory report from a friend, a published article, a chapter of a book, web site material, or whatever. Plagiarism also includes the practice of employing or allowing another person to alter or revise the work that a student submits as his/her own, whoever that other person may be. Students may discuss (for example) laboratory experimental data among themselves or with an instructor, teaching assistant or tutor, but **when the actual report is written, it must be done by the student, and the student alone.**

When a student's assignment involves research of outside sources or information, **the student must carefully acknowledge exactly what, where and how he/she has employed them. If the words of someone else are used, the student must put quotation marks around the passage in question and add an appropriate indication of its origin. Making simple changes while leaving the organization, content and phraseology intact represents an act of plagiarism.**

EXAMPLES OF PLAGIARISM

Below are some cases representing acts of plagiarism. This list is by no means complete, but simply contains the most common occurrences and misperceptions about plagiarism. If you have any doubt whatsoever whether your use of materials constitutes plagiarism, consult with your course instructor and/or teaching assistant before you submit the laboratory report or assignment.

Case 1: Submitting Someone Else's Work

ALL work submitted must be your own, even if you worked with a laboratory partner, unless specified otherwise by the instructor. Here are a few of the more common examples:

- **Copying someone's laboratory report or assignment and turning it in as your own.** This is easily detected and is harshly punished. Whatever you submit for grading must be your own work. **Note that copying, or using as a template, the laboratory report of a classmate in the corridor immediately prior to submission constitutes plagiarism and will not be tolerated.**
- **Identical passages in laboratory reports or assignments.** You and your laboratory partner (unless otherwise indicated) must prepare **independent, individual** laboratory reports and assignments. ALL aspects of the written material should differ. In the case of laboratory reports, the Experimental Section should differ because you need to express what you did in your own words.
- **Copying or using a laboratory report or assignment from a previous semester.** Direct copying or even using an old laboratory report as a template are violations. Contrary to what you may think, this is also easily detected. Students have unique writing styles that can be easily spotted. In addition, some instructors photocopy old laboratory reports at random for reference purposes. **Note that copying, or using as a template, the laboratory report of a previous student in the corridor immediately prior to submission constitutes plagiarism and will not be tolerated.**
- **Submitting someone else's computer input/output as your own.** Laboratory reports or assignments that require you to generate computer input or output files are usually assigned

on an individual basis. Copying another student's files or printouts is plagiarism. If you work on the laboratory report or assignment with a lab partner, you must BOTH have made a contribution to the work done on the computer -- one person can not do it and simply give it to his/her partner.

Case 2: Rewording a Sentence (Superficial Paraphrasing)

This is one of the most common mistakes that students make. You **cannot** simply reword a sentence. This is best illustrated by an example. Consider the following sentence from *Synthesis and Technique in Inorganic Chemistry* (G. S. Girolami, T. B. Rauchfuss and R. J. Angelici):

"Those complexes that contain unpaired electrons are attracted into a magnetic field and are said to be paramagnetic, while those with no unpaired electrons are repelled by such a field and are called diamagnetic"

The following permutations are **unacceptable** changes in wording:

- "Complexes that contain unpaired electrons are those that are attracted to a magnetic field. These are called paramagnetic, while those with no unpaired electrons are repelled by a magnetic field and are said to be diamagnetic."
- "Those complexes that contain paired electrons are repelled by a magnetic field and are said to be diamagnetic, whereas those with no paired electrons are attracted to such a field and are called paramagnetic."
- "Compounds that have unpaired electrons are attracted to a magnetic field and are called paramagnetic. Compounds with no unpaired electrons are repelled by this field and are said to be diamagnetic."

The following permutations would be **acceptable**:

- "Since compounds containing unpaired electrons are attracted to a magnetic field , and vice-versa, it allows us to categorize complexes based on this criterion. Thus, a complex that contains unpaired electrons is termed paramagnetic while a complex where all electrons are paired is referred to as diamagnetic."

Sometimes there is no good way to make the sentence substantially different and still convey the information with the same effectiveness. In such a situation one should use quotes, which is permitted once or twice in a laboratory report or assignment, but certainly no more than that. Remember, the wording must be your own! Express information in your own words.

Remember: Simple Rewording is Plagiarism!!!

Case 3: Direct Copying from Original Sources

Typically, this involves using one or more sentences verbatim (word-for-word) from your original source. If you copy your source text you must put the passage in quotation marks and cite the source. **This includes material taken from a web site.** However, extensive quoting of this nature is generally frowned upon in scientific writing and indicates that you have made little original contribution to the work.

Do not be fooled into thinking that you can copy sentences from textbooks, journal articles or web sites and get away with it. The shift in your writing style is often quite obvious as is the ease with which you suddenly start discussing unfamiliar terms or concepts. Your instructors are very familiar with the common sources of information on each subject.

The best way to avoid accidental copying (it is still a violation whether you meant to or not), is to read the passage and then **express it in your own words** . Afterwards, compare your text to the original and make sure that they are sufficiently different. Take care to avoid paraphrasing (simple rewording, see Case 2).

Case 4: Borrowing Organization

This is also fairly common because many introductions, for example, tend to follow the same pattern of organization. However, beyond the first sentence or two, there is plenty of room for divergence.

Avoid the trap of following the organization and content of your source too closely by making sure that you collate the ideas to be presented and then express them in your own fashion. You may still follow elements of another author's organization, but make sure that you haven't copied sentences verbatim (Case 3) or paraphrased the original work (Case 2).

Case 5: Failing to Reference/Footnote Source Material

Any time you present a new fact that is not immediately obvious to someone in the field (or at your level of knowledge), you should provide a footnote reference to the source material. Ideally, this will be a reference to the primary literature (usually a scientific journal or sometimes a book).

Some examples of items that need to be referenced/footnoted:

- Data obtained by other researchers such as the melting point of a chemical compound.

- Any sentence or passage that is used verbatim or paraphrased. Caution: do not overuse this option (see Case 3 above).
- Concepts, ideas or conclusions that are not obvious and are not your own.
- Drawings, charts, graphs etc. that you copied from elsewhere.
- Laboratory procedures followed; usually your laboratory manual or an original research article.
- Almost anything else that is not your own work.

Statements such as "benzene is an aromatic compound" do not need to be footnoted, but something such as "toluene is an aromatic compound that has been shown to be more reactive than benzene in electrophilic aromatic substitution reactions" requires a footnote. In the previous example the phrase "has been shown" should elicit the response "BY WHOM???" Whenever you can ask a question like this, you probably need to footnote.

To summarize: If it isn't your work and/or you aren't sure what to do, footnote it. Ask your instructor BEFORE you turn in the work.

The laboratory notebook

The laboratory notebook is a complete record of what you have done in the laboratory. In a "real life" research situation, someone may have to reproduce your work several years after you have left the laboratory and the only record they will have to rely on will be what you wrote in your notebook.

In both academic and industrial settings, the notebook is a legal document that records your original work. Patents are granted on a "first to invent" basis, so it is not surprising that laboratory notebooks are occasionally subpoenaed. For example, in 1995 Exxon and Dow Chemical became embroiled in a patent dispute that arose when both companies claimed to have invented a catalyst within two weeks of each other. That dispute involves a product line worth hundreds of millions of dollars per year and has yet to be resolved. Both companies are building their cases around laboratory records and employee depositions. It is therefore not surprising that corporations not only require that their employees keep thorough records, but that they are signed and witnessed each week!

We hold you to the same standards that you will encounter when you begin your career. In industry, a patent would be invalidated if it was found that the supporting information in the patent was fraudulent or missing. Likewise, if we should discover that your laboratory report contains information not found in your notebook or any suggestion that pages might have been

removed or inserted, it will be considered a violation of the University's Code of Student Behaviour.

PROCEDURES AND PENALTIES

The University clearly defines the procedures that are to be followed when an instructor encounters a case of possible plagiarism. Please note that instructors and Department Chairs in the Faculty of Science and Environmental Studies are obligated to follow through on such suspicions. The Code of Student Behaviour and Disciplinary Procedures should be consulted for more information:

[Code of Student Behaviour and Disciplinary Procedures](http://policies.lakeheadu.ca/policy.php?pid=60)
(<http://policies.lakeheadu.ca/policy.php?pid=60>)

SOME USEFUL RESOURCES

<http://library.camden.rutgers.edu/EducationalModule/Plagiarism/>

http://www.chem.unsw.edu.au/coursenotes/plagiarism/Chem_Anti_Plag_05.pdf

<http://www.indiana.edu/~wts/pamphlets/plagiarism.pdf>

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