

Academic Integrity

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The Memorial Code

“All members of the Memorial University of Newfoundland Community, which includes students, faculty, and staff, shall treat others with respect and fairness, be responsible and honest, and uphold the highest standards of academic integrity. ”

Outline of talk

- What is academic integrity?
 - What the calendar says
 - What are the consequences of dishonesty
- Quoting, Citing, and the Internet
- Case Studies
- Exams
- Summary

What is Academic Integrity?

- Acting with honesty and ethics in your academic life.
 - Key Principle: Never represent the work or ideas of others as your own.

In courses

- ❑ Any assignments that you hand in should be done by you alone
 - All sources used should be cited.
- ❑ Papers and presentations for courses
 - The ideas you present should be your own or should be credited with citation.
 - The expression of ideas should be your own or should be quoted and cited.
- ❑ Computer code should be original or should be properly credited and cited.

In research

- ❑ Results and ideas presented by you must be your own or must be credited to their originator.
- ❑ Experimental results must be reported honestly.

Ethical Standards

- All professionals are held to a high ethical standard. In many professions this standard is written down (codified).
- Honesty is an important aspect of professional life. For example, from the Code of Ethics for Engineers and Geoscientists of NL:
 - “[...] professional engineers and geoscientists shall ... conduct themselves with equity, fairness, courtesy and good faith towards clients, colleagues, and others, give credit where it is due, and accept, as well as give, honest and fair professional criticism; [...]” [PEGNL 2008]

Ethical Standards

- Academic honesty is one of the important aspects of the ethical standard that students are held to.

What the Calendar Says

- **a) Cheating:** [...] Cheating includes copying from another student's work or allowing another student to copy from one's own work, consulting with any unauthorized person during an examination or test, or using unauthorized aids; or knowingly recording or reporting false empirical or statistical data. [...] [MUN 2009]

What the Calendar Says

- **c) Plagiarism:** Plagiarism is the act of presenting the ideas or works of another as one's own. This applies to all material such as theses, essays, laboratory reports, work term reports, design projects, seminar presentations, statistical data, computer programs and research results. *The properly acknowledged use of sources is an accepted and important part of scholarship. Use of such material without acknowledgment, however, is contrary to accepted norms of academic behaviour.* [MUN 2009] [Emphasis added]

What the Calendar Says

- These excerpts are from Section 2.2.12.2 of the General Regulations of the School of Graduate Studies. Please read it!

Academic Dishonesty and the Law

- Intellectual property is generally protected under one of three kinds of law
 - Patent law. Patents protect ideas. Patents must be applied for.
 - Contract law. For example, you may sign a nondisclosure agreement that forbids you to publish certain things.
 - Copyright law. Copyright protects the expression of an idea. Copyright need not be applied for. Absence of a copyright notice does not imply absence of copyright. All published material is copyrighted by default!

Academic Dishonesty and the Law

- Breaking intellectual property law and academic dishonesty are independent
 - You can violate someone's copyright without being academically dishonest
 - You can be academically dishonest without breaking the law

The Consequences for Honest Students

- Academic Dishonesty in Courses is an important issue
 - If you work hard to get an A, how will you feel if other students get their mark by cheating?
 - If students use dishonest means to help obtain their degree, doesn't that cheapen your degree?

The Consequences for Dishonest Students

- You will not benefit from the process of doing the assignment by your self.
 - Most assignments in courses serve three purposes
 - Teaching you something
 - Practice in writing up your results
 - Evaluation of what you have learned
 - All these purposes are corrupted by copying

When to quote

□ The original paper says:

- “In order to carry out my pursuits successfully, I had purchased a house with above a quarter of an acre of ground in a very quiet locality.”

□ Incorrect

- In order to carry out his pursuits successfully, Babbage purchased a house with above a quarter of an acre of ground in a very quiet locality. [Babbage 1864]

□ Why?

- Most of this sentence is in the words of Babbage. By not quoting, I am misrepresenting his words as my own.

How to quote

- For quotations of less than about 25 words, quotation may be in-line
 - Babbage “purchased a house with above a quarter of an acre of ground in a very quiet locality.” [Babbage 1864]
- For quotations of more than about 25 words, quotation should be in a block
 - In his *Passages from the Life of a Philosopher* Babbage says:
The difficulty did not consist so much in the more or less complexity of the contrivance as in the reduction of the *time* required to effect the carriage. [...] At last I came to the conclusion that I had exhausted the principle of successive carriage. I concluded also that nothing but teaching the Engine to foresee and then to act upon that foresight could ever lead me to the object I desired, namely, to make the whole of any unlimited number of carriages in one unit of time. [Babbage 1864]

When to Cite

- Citations indicate where an idea, quotation, or illustration came from.
 - Each quotation should be accompanied by a citation.
 - Any paraphrasing should be accompanied by a citation.
 - Any reference to an idea presented elsewhere (even by you!) should be accompanied by a citation.
 - Illustrations based on illustrations by others should accompanied by a citation.

How to Cite

- In the text put a citation marker. E.g.
 - [Babbage 1864]
 - It is acceptable to use only the year, if the name is evident in the text. E.g.
 - “Babbage [1864] describes his life’s work ...”
 - [BAB]
 - [42]
- In your bibliography place the full Bibliographic information.
 - See the last slide of this talk.

Aside on Software for Citations and Bibliographies

- ❑ I strongly recommend using BibTeX files for keeping track of your sources. Use JabRef to edit.
- ❑ If you use the LaTeX typesetting system, then your bibliography can be automatically generated from the citations in your paper.
- ❑ If you use Microsoft Word or WordPerfect, you can generate the bibliography using rtfbtX.

Web Software for Citations and Bibliographies

- ❑ RefWorks is a web-based application that allows you to store bibliographic information on a remote server
- ❑ RefWorks helps you to construct your bibliography
- ❑ On Campus:
 - www.library.mun.ca and click on RefWorks.
- ❑ Off Campus:
 - www.refworks.com.qe2a-proxy.mun.ca/Refworks

Aside on Bibliographies and the Internet

- If you consult a source that is solely on the Internet:
 - Cite the full URL or, if that is not stable, a stable URL from which the source can be found.
 - If possible use the DOI (digital object identifier).
E.g. <http://doi.acm.org/10.1145/947923.947931>
 - Include Author and Year information if possible.
- If you consult a source that can be found both on and off the internet:
 - Give the non-Internet information and a note that it can also be found on the Internet at a given (stable) URL.

How to cite in computer programs

```
/** Converts a regular expression to  
* a Deterministic Finite Automaton  
* (DFA). The algorithm used is that  
* presented in Aho, Sethi, and Ullman,  
* Compilers: Principles, Techniques,  
* and Tools (2nd ed.), Section 3.9.  
* The automaton is not minimized. */
```

- This is good professional practice.
- In an assignment, such documentation also protects against Academic Dishonesty.

A word on “paraphrasing”

- “Paraphrasing” is an excellent tool for language learning
- When you are writing a paper based on other sources, the idea is that you should
 - read these papers,
 - understand them as best you can (analysis), and
 - present your understanding (synthesis).
- Simple paraphrasing does not show that you have fully “ingested” the material

Plagiarism and the Internet

- Since the popularization of the Internet, copying has become somewhat easier.
 - Papers are easily accessible and also easy to copy-and-paste.
 - Slide presentations such as this one may be found on the internet.
 - Source code for many computer programs can be easily found. In some cases it is example code that is posted with the intention that it be copied!
- Anything you can find on the internet can be found by your instructors!

Plagiarism and the Internet

- ❑ Downloading music & pictures from the internet is common.
- ❑ You might reason:
 - “Copying a few paragraphs from a website to a term paper is no different from downloading a song to my MP3 player.”
- ❑ This reasoning is quite flawed:
 - Copying a paper from a website and storing it on your hard disk for later reading *is* similar to downloading a song to your MP3 player for later listening. Either may or may not break the law. *Neither is an academic offence.*
 - Copying from someone else’s paper into your paper is more like downloading a piece by Beethoven and then submitting it in your music composition course as your own work.

Case study: The paraphrased paper

- ❑ Zeb submits a paper surveying “Applications of Binary Decision Diagrams”
- ❑ About 80% of the paper is copied from a published survey paper. Some of it is copied word for word; some of it is paraphrased.
- ❑ The original paper is not cited and is not mentioned in the bibliography.

Case study: The paraphrased paper

- ❑ This is about as clear a case of plagiarism as there is. Zeb may have done some work to understand the original paper, but this work is not evident. Rather Zeb has misrepresented the work of someone else as his own.
- ❑ Had Zeb cited the original paper (at least once per paragraph) and used quotation marks appropriately, he might have avoided academic dishonesty. Then it would be clear that the paper is a summary of another paper. This would not have been worth many marks, but it would avoid the plagiarism.

Case study: The copied program

- ❑ Max is having trouble doing a programming assignment and asks Minnie for help. Minnie is in a hurry to go home so she emails her program to Max to “look at”.
- ❑ Max changes the variable names, rewrites the comments, rearranges the order of some declarations and submits it as his own.

Case study: The copied program

- ❑ This is clearly an attempt by Max to misrepresent Minnie's ideas, and the expression of those ideas, as his own.
- ❑ Minnie may not have intended that her work be copied, but, by emailing the program, she intentionally *allowed* it to be copied.
- ❑ Both students are guilty of an academic offence.

Case study: The “helpful” friend

- ❑ Alice is having trouble with an assignment and asks for help completing a problem. Bob helps by telling Alice how to solve the problem. Alice writes up the solution without credit to Bob
- ❑ Is this a problem?

Case study: The “helpful” friend

- ❑ Alice is presenting an idea that came from Bob as her own. This is plagiarism.
- ❑ The same would apply if Alice had found the idea in a book.
- ❑ What if Alice honestly explains, in her write up, that the idea for solving the problem came from Bob or from a book (properly cited)?

Case study: The “helpful” friend

- ❑ In this case the student has not presented the idea of someone else as her own.
- ❑ There is no academic dishonesty problem here.
- ❑ The instructor or T.A. may choose not to award full marks, but has the proper information with which to evaluate the student’s work.

Case study: The best buddies

- Xavier and Yasmine decide to do a problem set together.
- They make roughly equal contributions and each submits their own copy of the write up.
- Is this a problem?

Case study: The best buddies

- If the problem set is not to be handed in and graded, then it is not academic dishonesty, although the students may learn the material better by doing the work on their own.
- If the problem set is an assignment that contributes to their mark in the course, then this is plagiarism.

Best buddies, continued

- What about “brainstorming”?
 - If two students get together to discuss approaches to a problem that’s probably ok.
 - One rule of thumb is not to take any written material away from such brainstorming sessions.

Best buddies, continued

- What about “peer review”?
 - If you know you’ve made a mistake, it might help to show your approach to another student to find out what you did wrong.
 - This should be ok, but make sure the other student doesn’t give you so much help that you are plagiarizing their ideas.
 - Make sure that they do not plagiarize your ideas.
 - It might be better if the other student is not taking the same course.
 - Sharing test cases for computer programs is usually OK.

Case study: The phoney literature review

- ❑ Miles submits a project report that contains a literature review chapter.
- ❑ The chapter is well written and cites the relevant literature.
- ❑ However the literature review is paraphrased from a (cited) survey paper by Prof. John Alden
- ❑ Is this a problem?

Case study: The phoney literature review

- ❑ First: There is no reason to believe that Miles actually read and understood the various papers that they are citing. Therefore the whole chapter misrepresents the work the student has done.
- ❑ Second: Miles is misrepresenting John Alden's work as his own.
- ❑ This is a serious case of plagiarism.
- ❑ Do not cite sources you have not consulted.
- ❑ Use your own words to summarize work that you have consulted.

Case study: The found slide presentation

- ❑ Parry needs to give a 15 minute presentation on “Models of Parallel Complexity”.
- ❑ Luckily he finds a PowerPoint™ presentation on the topic on the web site of a Professor Donander, in Australia.
- ❑ By reducing the number of slides and making a few editorial changes, Parry produces his own presentation.
- ❑ Is this right?

Case study: The found slide presentation

- The educational point of the presentation is that the student should
 - Learn about some particular area.
 - Demonstrate that learning by presenting what he has learned.
 - Educate the other students in the course about that area.
- These educational goals are undermined by taking this shortcut.

Case study: The helpful textbook

- ❑ If you are solving problem 5.1.13 in your text book using the method presented in section 5.1, you probably don't need to cite your text book.
- ❑ What if you find the solution in your undergraduate textbook, or in a book put on reserve by your instructor, or in another textbook that the library has?

Case study: The helpful textbook

- In all these cases, you should follow the “better safe than sorry principle” and cite any books that you used.

Case study: The tight exam room

- A class of 20 students is given an exam in a classroom designed for 35 students.
- Clearly some students must sit close together.
- Is it ok to peek at the paper of the person sitting next to you?

Case study: The tight exam room

- ❑ It is your responsibility not to peek.
- ❑ It is also your responsibility not to allow your work to be easily seen. (Within reason).
- ❑ Generally we treat students (especially graduate students) as adults who will take responsibility for their own ethical conduct.

Exams

- Make sure you know in advance what you may bring into the exam room.
 - E.g. Your PDA, Electronic Dictionary, or Cell-phone will not be allowed, even if you only intend to use its translation, calculator, or clock functions.
 - Even your calculator may be disallowed if it is programmable.
 - Invest in a nonprogrammable calculator, a paper dictionary, and a watch.

Exams

- ❑ Obviously you should not communicate with anyone but the invigilators during the exam.
 - Peeking at classmates' exam papers
 - Passing notes
 - Sharing calculators
 - Using a phone while on a “bathroom break”
 - Using a crib sheet

“That’s how we do it in ...”

- ❑ It could be that instructors and teaching assistants you have had in the past have not noticed academic dishonesty or have “turned a blind eye to it” (i.e. intentionally ignored it to avoid bother).
- ❑ I doubt very much that they actually thought that misrepresentation and dishonesty are good ideas.

What are the consequences

- ❑ In most graduate courses in the MASc CE programme you will receive a grade of zero or less for any copied work.
- ❑ This applies to first offences.
- ❑ The associate dean will be made aware of all academic offences. The same applies if you allowed your work to be copied.

What are the consequences

- A grade of zero in one assignment may cause you to fail the course.
- We don't want this to happen.

Summary

- ❑ Completing the MASc CE program means rising to a significant challenge.
- ❑ If you commit academic offences in completing it, you are undermining the value of your own accomplishment.
- ❑ If your fellow students commit academic offences, this undermines the value of your degree.
- ❑ Being a student is your profession
 - You must follow that profession's ethical standards
- ❑ The instructors in the programme take academic honesty very seriously.

Bibliography

- ❑ [Babbage 1864] Charles Babbage, *Passages from the Life of a Philosopher*, Longman Green, London, 1864.
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- ❑ [PEGNL 2008] Code of Ethics By-Law, made under The Engineers and Geoscientists Act, 2008, also available at http://www.pegnl.ca/documents/bylaw3_final%20Code%20of%20Ethics%20May%2013%202010.pdf, 2008

The Memorial Code

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