# Academic Integrity Handbook

## Table of Contents

- **Academic Integrity Handbook** .................................................................................................................. 3

- **A. Preamble** .................................................................................................................................................. 4
  1. **About this Handbook** ............................................................................................................................... 4
  2. **Why academic integrity matters** .............................................................................................................. 4
  3. **Academic integrity at NTU – and other institutions** .................................................................................. 4

- **B. Academic Integrity** ....................................................................................................................................... 5
  1. **Overview** .................................................................................................................................................. 5
  2. **Plagiarism** ................................................................................................................................................ 6
  3. **Quoting, Paraphrasing and Media** ........................................................................................................... 10
  4. **Reference Lists** ........................................................................................................................................ 20
  5. **NTU's Declaration Form** ............................................................................................................................ 26
  6. **Turnitin** .................................................................................................................................................... 30
  7. **Strategies and Tools** ................................................................................................................................... 35
  8. **Summary and Resources** ........................................................................................................................... 37

- **C. Research Integrity** ......................................................................................................................................... 38
  1. **Overview** ................................................................................................................................................... 38
  2. **Intellectual Property** ................................................................................................................................... 39
  3. **Copyright** .................................................................................................................................................. 43
  4. **Copyright Exceptions** .................................................................................................................................. 54
  5. **Research Ethics** .......................................................................................................................................... 60
  6. **Summary** ................................................................................................................................................... 68

- **Part D – Resources and References** ............................................................................................................... 69
  1. **Helpful resources and links** ...................................................................................................................... 69
  2. **Handbook reference list** ............................................................................................................................. 70
  3. **Congratulations!** ....................................................................................................................................... 73

---

**Teaching, Learning and Pedagogy Division**  
Under the auspices of the Teaching Excellence Academy  
Nanyang Technological University

---
A. Preamble

1. About this Handbook

This Handbook is a summary of what we expect of students who graduate from NTU when it comes to academic integrity. Some of you are very familiar with the concepts presented in this Handbook because you were lucky enough to attend a school that put a high priority on academic integrity. Others of you will learn how to use sources in an appropriate academic manner, and will learn aspects of research integrity that are important for student life, as well as for your future professional career.

2. Why academic integrity matters

You spend 3 or more years of your life getting your degree, and another 4 or so years if you complete a PhD.

You then go looking for a job. One of the worst things that can happen is that your qualifications are not recognised, or not respected, because of rumours about the university you attended. Those rumours could include academic malpractice.

NTU's reputation is tied closely to your future prospects.

Now, if everyone at NTU cheats in examinations, buys essays from the Internet, falsifies lab data or ignores copyright, fairly soon NTU's reputation will plunge.

Then you, and all your classmates, will have a hard time getting a job.

So academic integrity matters. It matters for your future and the future prospects of all your classmates.

“Whoever is careless with the truth in small matters cannot be trusted with important matters.”
[Albert Einstein] Source

3. Academic integrity at NTU – and other institutions

All undergraduate and post-graduate NTU students are required to complete courses in proper referencing, copyright and research integrity.

This is consistent with all major universities in the world. It's part of the culture of academic institutions. Here are some examples of other institutions which have similar academic integrity requirements as NTU:

- Harvard - Proper use of Sources, USA
- Indiana University - Definition of Plagiarism, USA
- Cambridge University - Good Academic Practice, England
- University of NSW - Academic Integrity & Plagiarism, Australia
- National University of Singapore – Academic Code, Singapore

Top ↑
B. Academic Integrity

1. Overview

Handbook Part B Learning Outcomes
This section of the Handbook will enable you to:

• Apply the principles of academic honesty
• Paraphrase and use direct quotations appropriately
• Reference text, images, graphs and tables within papers
• Formulate strategies to ensure you don’t plagiarise
• Use referencing tools and resources
• Check your research papers using the Turnitin originality checking tool

In short, we want to make sure you have the skills and knowledge to uphold the NTU Honour Pledge:

<table>
<thead>
<tr>
<th>NTU Honour Pledge</th>
</tr>
</thead>
<tbody>
<tr>
<td>I, [as a] matriculated student of NTU, pledge that I will abide by the Honour Code of the University. I pledge that I will</td>
</tr>
<tr>
<td>• conduct myself at all times in a manner that is worthy of the good name of the University;</td>
</tr>
<tr>
<td>• promote, and help others to adhere to the values of truth, justice and trust enshrined in the Honour Code;</td>
</tr>
<tr>
<td>• be honest in my academic work;</td>
</tr>
<tr>
<td>• respect the University’s rules and regulations, the rule of law, and the rights of others.</td>
</tr>
</tbody>
</table>

And here’s something to consider...

Quote from a former student

"I wish I knew the importance of keeping up-to-date with writing footnotes, in-text citations, and a reference list as I was writing. I shouldn't have left it all to the end!"
2. Plagiarism

What is plagiarism?

"If I have seen further it is by standing on the shoulders of giants."

[Isaac Newton]

At university (and in the "real world") you are encouraged to read widely so you can learn different points of view on a topic. You then need to analyse & compare those points of view and then come up with your own conclusions.

A university essay (or project, or assignment) should normally have:

1. **Most** of the words written by you (certainly more than half, and as a general rule, around 85% of a research essay should be your own words)

2. **Quotes and paraphrases** from articles, books and other sources to back up your conclusions (generally no more than 15% of the total words should be quotes or paraphrases)

3. **Proper citation** of each quote and paraphrase (this means indicating in the body of the essay the name of the person who wrote the quote, the date and perhaps the page number)

4. A **Reference List** at the end of the essay giving full details of the original articles (or books or other sources)

### i. Important Definitions

Some of the following terms are used quite loosely by some writers. The following definitions are the commonly accepted way they are used when we are talking about academic writing.

**Quote:** To copy exactly the words of another writer (or speaker). We need to place such copied words in quotation marks and we need to acknowledge the source of the quote (say who said it).

**Paraphrase:** To restate the words of another in your own words. A paraphrase should not be surrounded by quotation marks, but once again we must acknowledge the source of the original words we have paraphrased (say who originally said it).

**Referencing:** "Referencing" is a term we use for the overall concept of acknowledging sources used when writing an essay. "Referencing" involves citing the original author in the body of our essay (an "in-text citation"), and including a reference list at the end of our essay.

**Cite:** To indicate the source of our quote or paraphrase. We normally talk of an in-text citation to mean the information about the author and date of the publication that we put in brackets after the quote or paraphrase in the body of our essay. (There are other types of in-text citation as well, e.g. using numbered footnotes, or numbered references.)

**Reference List:** The reference list includes all the publications from which we have quoted or paraphrased (or where we have copied diagrams, tables or images).

You’ll see many examples of quotes, paraphrases and reference lists later in this Handbook.
**ii. A typical academic research paper**

This short video shows you the characteristics of an academic research paper. Your own essays should have many of the same features. When referencing your quotes, you need to know where to find certain information, and the video shows where to find it.

[Journal Article video]

**iii. Why reference your sources?**

When you write an essay (or assignment, or project), you need to **give proper recognition** to those who came before you. That is, when you **quote** or **paraphrase** words from someone's article, book, video or Web site, you need to **include information on the source**, like the author, the date of publication, and the article name.

When I read your essay, I want to:

1. Be sure I am reading your thoughts about the topic (that is, I want to know you wrote the essay)
2. See evidence of what you have **read**
3. See evidence of what you have **learned** and how you have **responded** to the new information
4. Be able to **check your sources**. If something you quoted doesn't make sense, I want to be able to go to the same article you read, and see for myself what the original author wrote, what conditions were used for the experiment, or perhaps find out something about the author so I can understand their point of view.

We say **plagiarism has occurred** if you copy the words (or ideas) from somebody else in your essay, but you've made it look like you wrote it because you haven't given any details about the original author or the original place where you got it from.

Plagiarism is regarded as a serious matter because it is **dishonest**. If you plagiarise, we no longer trust that it is your work, and we are uncertain how much of the essay you wrote and how much was simply copied from somewhere else.

It's also a serious matter because it **devalues your qualification**. If the university has a reputation as a place where it is "easy to pass" and "no-one checks", then an NTU degree has less value over time.

**iv. So, what is plagiarism?**

**NTU's Plagiarism Definition**

To use or pass off as one's own, the writings or ideas of another, without acknowledging or crediting the source from which the ideas are taken.

(from the University Honour code)

**Reference for this section**


**Do we have to reference everything?**

Many times we want to include information in our essay which is generally well known. This is called "common knowledge".

---

Academic Integrity Handbook – Nanyang Technological University  Page 7 of 74
In such cases, we do not need to cite the source. Examples of "common knowledge" would include:

- The president of the United States is Barack Obama
- Obama took over the presidency when the economy of the USA was still in the midst of the Global Financial Crisis
- President Obama promised to close Guantanamo Prison

However, specific information, not generally known, and interpretive comments, should be properly cited. Examples would include:

- The United States spends $114 million a year to run the Guantanamo prison
- [The US] Congress has blocked administration efforts to shut [Guantanamo] down and made it increasingly difficult to resettle Guantanamo prisoners.

The above two statements come from a Reuters news article, *Guantanamo hunger strike stems from frustration: U.S. general* (20th Mar 2013). The first is a specific fact that would not be regarded as "common knowledge". The second statement interprets the actions of Congress. Both these statements should be quoted (or paraphrased) properly and should be cited.

### I. Quoting from lecture notes or slides

Even if you copy portions from your lecture notes or slides, you must put the quote in quotation marks, cite the author (your lecturer), and include the usual information about the source in the Reference List.

### ii. Referencing Images, Movies, Podcasts

We have to reference anything we refer to in our essay. So we need to properly cite and reference any electronic media, like images, movies or podcasts. (We’ll learn how to do this later in the Handbook.)

### iii. If in doubt...

It’s often difficult to decide if something is "common knowledge" or not. A fact may be commonly known in some circles (like the audience for your essay), but not for the general public.

**Advice:** In general, take note of what is referenced in the journal articles you read as part of your research. Take your cue from them as to the amount of referencing to use.

However, if in doubt, reference it properly (cite the source and include the details of the source in the Reference List).

### Can you plagiarise yourself?

You may face a situation where you are asked to write an assignment on a topic which is very similar to an assignment you wrote in a previous semester.

It would be very tempting just to submit the paper again, especially if your earlier grade was quite good. However, this would certainly be seen as a breach of academic integrity.

### i. What is permissible

In academic research, it is very common that authors need to refer to previous related research they have done. In such a case, they will quote from a previous paper and will use quotation marks, will cite the author (their own name) and include details of the earlier paper in the Reference List.

For example, in the journal article, *Poverty: An Ordinal Approach to Measurement*, author Amartya Sen
writes:

In particular, the poverty measure can be made to depend also on the ratio of the mean income of the poor to the mean income of the entire community (Sen [33, equations (8) and (9)])

In this case, he is paraphrasing himself from a paper he wrote previously, and the citation (in red, above) includes his name. The number 33 indicates this paraphrase comes from the 33rd reference in the Reference List.

In the Reference List, he has included all his own past papers as referenced in the article, including the 33rd reference, as follows (there are 32 other articles mentioned before this one):


**NOTE:** He is not using APA referencing style here (although it is quite close to APA - the only difference is he is using numbered references.) Most academic journals require one of the common referencing styles, like APA (American Psychological Association), MLA (Modern Language Association), CMS (Chicago Manual of Style), while other journals have their own requirements for citation and referencing.

**ii. In your own essays**

In short, if you use material from previous things you've written, you must quote it properly (or paraphrase it), cite it properly in the essay, and then include the details in the Reference List. Your previous work can only form a limited portion of the new essay.

Also, be clear about what referencing style you need to use. You may need to use a different style for different essays across different schools, and even within the same school. (We'll cover some of the different reference styles in more detail later in this Handbook.)

**Penalties for plagiarism**

At NTU, like most universities around the world, plagiarism is regarded as a serious offence.

Depending on the severity of the case, penalties can involve:

- **Rewriting** the paper, and re-submitting it (with a grade penalty)
- Receiving zero for that assignment
- **Expulsion** from the university, especially after repeated cases of plagiarism
3. Quoting, Paraphrasing and Media

Quoting

This shows you the main things you need to know about how to reference quotes from other authors.

I. Background

We are writing an essay about eye surgery. For our essay, we need to analyze several articles and consider their conclusions. We found a good journal article to analyze.

Below is some text from the journal article.

Below is part of our essay.

We have decided to quote part of the second paragraph shown in the original article and write a response to it. Notice we have surrounded the in-text quotation with quotation marks in our essay. This is how we give credit to the authors, and indicates we’re not claiming we wrote the words.

From the Original article

Several methods of attachment of the eye were considered and tested.

Method 1 is a simple velcro lining of the bottom of the cup to increase friction between specimen and cup. Method 2 consists of fixation with a needle transversely penetrating the specimen, holding the eyeball more rigidly to the cup.

Part of Our Essay

Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat. Duis aute irure dolor.

One of the methods described by Leuschke, Bhandari, Sires, and Hannaford (2006) is to use "a simple velcro lining of the bottom of the cup to increase friction between specimen and cup" (p. 3).

This method may not be satisfactory in the situation where...
For a block quote we don't need quotation marks around the quote.

From the Original article

The human eye is one of the most delicate structures in the human body. Ophthalmic surgeons need years of training and continuous practice to carefully and successfully manipulate the tissues. Tool motions and forces used in these procedures are extremely small.

Development of the fine motor skills is therefore an important component of resident training and generally consists of wetlab practice on cadaveric eyes and assisting experts with surgery in live cases in the operating room.

Part of Our Essay

Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua.

According to Leuschke et al., (2006),

Development of the fine motor skills is therefore an important component of resident training and generally consists of wetlab practice on cadaveric eyes and assisting experts with surgery in live cases in the operating room. (p. 1)

As a result, clinicians need to be conscious of the training needs of new surgeons.

Duis aute irure dolor in reprehenderit in voluptate velit esse cillum dolore eu fugiat nulla pariatur.

Of course, once again we need to cite the author properly, and we'll include the author and journal details in our Reference List at the end of our essay.

When there are many authors for a source, we don't need to list their names throughout our essay after the first citation. We use "et al." (Latin for "and others") after the first author's name to indicate there were several authors for this journal article.

The Reference List at the end of our essay will contain more details about the authors.

Now for the Reference List

We have finished writing the text of our essay and we now need to produce the Reference List.

We'll be using APA (American Psychological Association) style for these examples.

APA style is commonly used for social sciences courses, like psychology and education, but is common in other fields as well.

The Reference List comes at the end of our essay and contains a list of all the sources we have quoted, paraphrased or referred to in our essay.

We'll learn more about how to develop a Reference List later in this Handbook.

Conclusion

In conclusion, I believe we cannot always use the methods proposed by vero eos et accusamus et iusto odio excepturi sint occaecati cupiditate non provident.

References


ii. How many quotes should I use?

In academic writing, it is expected that you read widely and form your own opinions about the topic. You need to quote from other authors to back up your own arguments and to critique opposing views. However, if most of your essay is quotes, it won’t be clear to the reader what your ideas are, or what you have learned.

As a general rule of thumb, no more than 10 to 15% of your essay should be quotes or paraphrases. The rest of the paper should consist of your own analysis of the question, your agreements and disagreements with other authors, and your conclusions.

IMPORTANT NOTE

The above statement does not imply that a Similarity Score of 10 to 15% in a Turnitin report is "OK". Whether it’s plagiarism or not depends very much on the nature of the similarity, and whether the copied portion has been used and referenced correctly.

Use quotes sparingly. We want to know what you think.

iii. More examples - block quotes

Recall from the above activity that we need to use a blockquote if we are quoting more than about 40 words.

Example 1

We can cite our source using a name and date in brackets before the block quote, and then the page number immediately after the quote.

Today, digital cameras have practically taken over photography. As Johnson (2010) explained:

    Digital cameras now make up 90% of all camera sales at the leading electronic stores. This increase in sales can be partially attributed to the widespread use of email and social networking, which has encouraged the sharing of digital photos. Now, many people, from students to grandparents, prefer to take pictures digitally so they can upload and share those photos. (p. 23)

    Along with the use of email and social networking, phones and iPods that have cameras have also replaced regular, film photography.

Example 2

In this next example, we have two paraphrases (which we learn about in the next section) highlighted in green and one block quote. This time the block quote has the citation at the end, with name, date and page number in brackets.

Computer users often disagree about which operating system is best: Mac or PC. Oyler (2010) stated
that one operating system is not better than the other, but that one may be better suited for different purposes than the other. She explained by saying that

Macs are often the best option for users who wish to work with video or picture manipulation. Macs are also very user friendly, which may benefit consumers who are new to computers. PCs, however, run Microsoft Office Suite the best. Therefore, students might find that a PC is their best option because it can run Microsoft Word and PowerPoint the smoothest. (Oyler, 2010, p. 48)

Conversely, Jones (2010, p. 34) disagreed with the statement that Macs work with graphics such as video and pictures better than PCs, stating that PCs can be modified to work as well as Macs.

Block quotes should only be rarely used, for the reasons given above. It’s not easy to weave your own views into the essay if you have many block quotes.

**Paraphrasing and summarising**

*1. What is paraphrasing?*

Paraphrasing is an important part of any essay, since we often don't want to quote directly what another author says in our sentence, but just give the main ideas.

To *paraphrase* another author's work is to *re-write* the original sentences in our own words. A paraphrase will be about the same length as the original. Just like direct quotes, we must *cite the original source* in our essay. We do this in the same way we cite sources when including direct quotes.

When using APA referencing style, we need to put the author's family name and the year of the publication in the body of the essay right next to the paraphrase (either immediately before it, or after it), and the page number(s). The year of publication is usually written in parentheses (brackets).

Then, in the Reference List at the end of the essay, we put the full details of the author and publication. This is also the same procedure we follow when directly quoting.

*2. Paraphrasing examples*

**Background**

This time, we are writing an essay on the theory of learning.

We need to research various teaching methods and write a critical review of what we discover.

We decide to *paraphrase* a portion of a book.

<table>
<thead>
<tr>
<th>Below is some text from the original book by Margaret Gredler, Learning and Instruction: Theory into Practice.</th>
<th>To the right is part of our essay.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Developing complex skills in the classroom involves the key ingredients identified in teaching pigeons to play ping-pong and to bowl. The key ingredients are: (1) inducing a response, (2) reinforcing subtle improvements or refinements in the behavior, (3) providing for the transfer of</td>
<td>According to Gredler (2001, p. 28), the same factors apply to developing complex skills in a classroom setting as to developing complex skills in any setting. A response must be induced, then</td>
</tr>
</tbody>
</table>
stimulus control by gradually withdrawing the prompts or cues, and (4) scheduling reinforcements so that the ratio of reinforcements in responses gradually increases and natural reinforcers can maintain their behavior.

reinforced as it gets closer to the desired behavior. Reinforcers have to be scheduled carefully, and cues have to be withdrawn gradually so that the new behaviors can be transferred and maintained.

However, this may not necessarily apply in the case of all human adult learning contexts. Duis aute irure dolor in reprehenderit in voluptate velit esse cillum dolore eu fugiat nulla pariatur.

The sentences in our essay are based on what the original author said, but we have condensed the ideas and re-written the whole section using our own words. That is, we have paraphrased the author's words.

The important thing here is that we have demonstrated we actually understood what the original author was talking about, and have learned something about the topic, and have expressed it in our own words.

Commentary

After the paraphrase, we add our own commentary, which may be criticism, further explanation based on our own experience, suggestions for better outcomes, and so on. (The section above starting, “However, this may not necessarily apply…”).

Citing

Of course, just as in the case when we are quoting directly, we need to cite where we got the original information. We need to indicate the author's name, the year of publication and the page number(s). We'll provide more details about the source (including author details) in the Reference List at the end of our essay. In this case, we have not plagiarized, because we have given full credit to the original author. We have paraphrased the author's words, and have cited the source properly.

(As before, we are using APA style referencing for these examples.)

According to Gredler (2001, p. 28), the same factors apply to developing complex skills in a classroom setting as to developing complex skills in any setting. A response must be induced, then reinforced as it gets closer to the desired behavior. Reinforcers have to be scheduled carefully, and cues have to be withdrawn gradually so that the new behaviors can be transferred and maintained.

Poor paraphrasing

Let's now see an example where another student's paraphrasing was not done properly.

<table>
<thead>
<tr>
<th>From the Original Book</th>
<th>Part of Another Student's Essay</th>
</tr>
</thead>
<tbody>
<tr>
<td>Developing complex skills in the classroom involves the key ingredients identified in teaching pigeons to play ping-pong and to bowl. The key ingredients are: (1) inducing a response, (2) reinforcing subtle improvements or refinements in the behavior, (3) providing for the transfer of stimulus control by gradually withdrawing the prompts or cues, and (4) scheduling reinforcements so that the ratio of</td>
<td>Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo.</td>
</tr>
<tr>
<td></td>
<td>Inducing a response, providing for the transfer of stimulus control by gradually withdrawing prompts or cues, reinforcing subtle improvements in the behavior, and scheduling reinforcements so that natural reinforcers can</td>
</tr>
</tbody>
</table>
reinforcements in responses gradually increases and natural reinforcers can maintain their behavior. Maintain their behavior are the key ingredients identified both in teaching pigeons to play ping-pong and in developing complex skills in the classroom.

In fact, just about all of the student's words are actually **direct quotes**, but there are no quotation marks in the student essay to indicate this. Also, there is **no citation** giving the original author's name and the date of the book.

The student has plagiarised in this case. They have just done a copy-paste and moved things around. This is not proper research – or academic writing – at all.

**Proper Referencing**

Let’s see how to properly include the book used in this example in the Reference List.

(As before, we'll be using APA style for this example.)

We'll learn more about how to make Reference Lists in a later section.

**References**


**iii. Paraphrasing does not mean "fudging"**

When we paraphrase, we are not just "changing a few words here and there" to hide the fact we got the words from someone else.

Rather, we are indicating that we have read, understood, processed and incorporated the author's point into our essay, and have either criticised it, or given reasons why we agree with it.

**iv. Example - Plagiarism, incorrect and correct citation**

(Copied portions are highlighted).

**Original: Severin and Tankard (1992)**

There is evidence to suggest that newsmakers are becoming particularly savvy about placing items on the media agenda. When for example, President Reagan was running for his second term, he took a tour to promote his administration's record on environmentalism. The tour was full of photo opportunities, including the president standing on a fishing boat in the Chesapeake Bay and the president wearing a park ranger's hat at Mammoth Cave, Kentucky.

**Attempt 1: Plagiarism**

Evidence suggests that newsmakers are becoming particularly savvy about placing items on the media agenda. When President Reagan was running for his second term, he took a tour to promote his administration's record on environmentalism. The tour was full of photo opportunities, including the president standing on a fishing boat in the Chesapeake Bay and the president wearing a park ranger's hat at a cave in Kentucky.

**Attempt 2: Plagiarism Despite Citation**

These are direct quotes, not proper paraphrasing. Citations are included (shown with highlight), but quotation marks are missing.

Evidence suggests that newsmakers are becoming particularly savvy about placing items on the
media agenda (Severin & Tankard, 1992). When President Reagan was running for his second term, he took a tour to promote his administration's record on environmentalism (Severin & Tankard, 1992). The tour was full of photo opportunities, including the president standing on a fishing boat in the Chesapeake Bay and the president wearing a park ranger's hat at a cave in Kentucky (Severin & Tankard, 1992, p. 256).

(Compare it to the original above.)

**Attempt 3: Successful Paraphrasing**

This is paraphrased properly, and the source is cited properly. There's no plagiarism here.

Severin and Tankard (1992) noted President Reagan's apparent hypocrisy when he ran for reelection in 1984. By posing for a photo opportunity in a boat on the Chesapeake Bay, Reagan, according to Severin and Tankard, possibly used the appearance of concern to mislead voters.

[Example source: Walden University]

**v. Summarising**

Summarising is similar to paraphrasing, in that we are re-writing someone else's statement using our own words.

The key difference is:

- A **summary is shorter** than the original
- A paraphrase is usually **about the same length** as the original

**vi. Use Primary Sources**

A "primary source" is a piece of original writing. It may be a report on some original research, or it may be an opinion piece. On the other hand, encyclopedias are called "secondary sources" since the entries consist of a compilation of paraphrases from primary sources.

At the end of the encyclopedia article you will see a list of references for the article.

This is the case for Wikipedia as well. All facts in a Wikipedia article need to be verified using primary sources.

As a result, secondary sources such as Wikipedia should not be used as sources for our academic writing. Use the list of sources to find the original articles, read them and then quote from them.

**Referencing images, graphs and tables**

When we copy images, graphs or tables from other sources into our essay, we need to reference them appropriately. The referencing format we usually follow is:

- Figure number
- Title or description of media
- [type of media] in square brackets.
- Reprinted from Book title (page number).
- by author's name (Initials, Surname) (publication date)
- Place of publication Publisher Copyright (year) by {copyright holder}.
- Reprinted with permission.
Following are some examples using this format.

**i. Referencing images**

Example (image from a book)

![Image of brains](image1.png)

Figure 5. Short-term memory test involving pictures. [Image]. Reprinted from Short-term Memory Loss (p. 73), by K. M. Pike, (2008), New York, NY: Mackerlin Press. Copyright 2008 by the Association for Memory Research.

**NOTE 1:** You do not need to add a Reference List entry for images, graphs and tables. We have all the information we need to track down the original publication in the citation.

**NOTE 2 (COPYRIGHT):** For your university essay, you do not need to seek copyright permission to use (for example) one image from a book. This is covered under the "fair dealing" provisions for educational purposes since we won't be selling our paper. Therefore we don't need to write "Reprinted with permission". However, if you were writing an academic paper for publication, you **would** have to get permission (in writing) to use the image, graph or table, because the journal is sold and makes money. Permission may involve paying a fee to the copyright owner. You'll learn more about copyright later in this Handbook.

**ii Referencing graphs**

We reference charts and graphs similar to the way we reference images.

Example (chart from a journal article)

![Graph of emissions over time](image2.png)
iii. Referencing tables

Example (Table from a Website)

<table>
<thead>
<tr>
<th>BMI Level</th>
<th>Weight Measurement</th>
</tr>
</thead>
<tbody>
<tr>
<td>20-25</td>
<td>Normal Weight</td>
</tr>
<tr>
<td>26-29</td>
<td>Overweight</td>
</tr>
<tr>
<td>30-39</td>
<td>Obese</td>
</tr>
<tr>
<td>40+</td>
<td>Morbidly Obese</td>
</tr>
</tbody>
</table>

Figure 7. BMI and levels of obesity. [Table]. Reprinted from How Obesity is Affecting the World Around YOU by J. D. Dace, (n. d.), Retrieved from http://americanadultobesity.wordpress.com/mark-public-argument/. Copyright J. D. Dace.

NOTE: When there is no date of publication, we put "n. d." (no date), as in the above example.

Other referencing styles

i. Common Styles

APA (American Psychological Association) style is one of the most commonly used referencing styles. It is used in most social science courses, where the date of a publication is quite important.

Some other common referencing styles are:

- **MLA** (Modern Language Association) style is used in most humanities courses, like literature or arts. MLA citation places emphasis on authorship.
- **CMS** (Chicago Manual of Style) is used in most history courses. CMS citation uses numbers in the text and footnotes at the bottom of each page.
- **AMA** (American Medical Association) style is used in medicine, health, and biological sciences.

Check with your lecturers to see which style is required in your school when you are writing essays.

ii. Brief comparison - APA and MLA referencing

Here is a simple comparison of 2 common referencing styles, to give you an idea of some of the differences.

In-text Citations

Here is an in-text citation in APA style:

> Romantic poetry is characterized by the "spontaneous overflow of powerful feelings" (Wordsworth, 1967, p. 263).

Note the date comes after the author's name.

Here's the same citation, this time in MLA style:
Romantic poetry is characterized by the "spontaneous overflow of powerful feelings" (Wordsworth, 263).

In MLA, we don't include the date in the in-text citation, and the number given is assumed to be the page number.

**Reference Lists**

In the References list using **APA style**, we would put:


For the same book in **MLA style** we should have:


The date is at the end, the author's name is spelled out in full and the publisher's name is abbreviated.

[Example source]

### iii. Reference Styles in Different Schools in NTU

Here is the advice received from a sample of the Schools at NTU:

**School of Mechanical & Aerospace Engineering**

No specific requirement. Lecturers may require any of **APA, Turabian, MLA, CMS** or **AMA**. When writing journal articles, you always have to conform to that specific journal’s referencing requirements.

**School of Computer Engineering**

We do not have preferred referencing styles and are dependent on the journals’ requirements. Usually follow **IEEE** and **ACM** templates.

**School of Business**

We do not have any preferred referencing styles. What is key is that students reference their work appropriately. If a particular referencing style is specifically required for a particular project, the professor will provide an appropriate style guide.

**School of Materials Science and Engineering**

Does not have a preferred referencing style for the undergraduates.

**NIE**

Uses **APA Style** (Publication Manual of the American Psychological Association, 6th ed.)
4. Reference Lists

Reference Lists Overview

Earlier we saw some examples of Reference Lists in the "Quoting" and "Paraphrasing" sections. We saw how to list the details of the journals, books and Internet sources.

A Reference List should contain details of all the sources we have directly used in our essay - no more, and no less.

The next section provides many examples, with explanations.

i. Proper Referencing of Others' Work - the Reference List

Background

Let's assume we have finished writing our essay and now we need to produce the Reference List.

We'll be using APA (American Psychological Association) referencing style for these examples.

APA style is commonly used for social sciences courses, like psychology and education, but is common in other fields as well.

The Reference List comes at the end of our essay (after our Conclusion) and contains a list of all the sources we have quoted, paraphrased or referred to in our essay.

We indent any lines after the first line.

Final Part of Our Essay

Conclusion

In conclusion, I believe we cannot always use the methods proposed by vero eos et accusamus et iusto odio excepturi sint occaecati cupiditate non provident.

References


Notes

1. The references are listed by the **first-listed author of each paper** (or book, Web resource, etc), in **alphabetical** order. (The first-listed author is usually the principle researcher.)

2. The **publication date** follows the authors' names.

3. The **title of the journal article** comes next. It's in lower case except for the first letter.

4. The **journal title** comes next, in italics. We also include the edition and page numbers.

5. In the case of a **book**, we put the book title in italics and lower case except for the first letter. For example:


6. For a book, after the title (and edition) we put the **place of publication**. (This doesn't apply for journals.)

7. Finally for a book, we put the **publisher**. (This doesn't apply for journals.)

8. In the case of an **online reference**, we need to give the URL. (We need to include the access date as well if the page is likely to change, e.g. in the case of a news Website).

**Important note**

If you cite a source in your essay, that source must appear in your Reference List.

Similarly, if there is a source in the Reference List at the end, that source must have been cited in your paper at least once.

**Reference for this Lesson**

The quote examples in this lesson came from:


Our examples used APA Style. Remember, your field of study may use a different citation style.

Common ones are **MLA** (Modern Language Association), **CMS** (Chicago Manual of Style), and **AMA** (American Medical Association).

**ii. Difference between a Reference List and a Bibliography**

Many people (including some of your lecturers) will use the terms "Reference List" and "Bibliography" interchangeably. However, they are not the same thing.

A **Reference List** is restricted to the sources we actually quote or paraphrase in our essay. A Reference List is essential for any proper academic paper.

A **Bibliography** will include all of the books, journals, Web sites, videos and any other sources that we have read in the preparation of our essay. Lecturers will generally not ask for bibliographies for university essays, since the lecturer will only be interested in what you actually used in your paper, not the other sources you've read and decided not to use.
Reference List Examples

Each referencing style is different, and the resulting Reference List will contain the information in a slightly different order, with a different emphasis.

However, the information that is needed for any reference style is fairly common:

- Information about the **author(s)**
- Information about the **publication** (book, journal, magazine, newspaper, Website, video), including:
  - **date** of publication; (if known)
  - **title** of article, or book, or video;
  - **place** of publication (if known)
  - **publisher** (if known)

In the following examples we are using **APA style**, since that is one of the most commonly used. The examples are some of the most commonly used ones you’ll see in Reference Lists.

Make sure you find out what referencing style your lecturer requires for your assignments and be sure to learn how to create a Reference List in that style.

### i. Journal article with known author

**Format:** Author, A. (Year, month). Title of article. *Name of Publication*, p.

**Example**


### ii. Journal article with known author

If the journal has volume and issue numbers:


**Example**


### iii. Journal article, 2 authors


**Examples**


iv. Journal article with three or more authors


**Example**


v. Book with one author

**Format:** Author, A. (Year of publication). *Title of book* (Edition). Place of publication: Publisher.

**Example**


vi. Edited book

**Format:** Editor, A. A. (Ed.). (Year of publication). *Title of book* (Edition). Place of publication: Publisher.

**Example**


vii. Newspaper article with known author(s)

**Format:** Author, A. & Author, B. (Year, month day). Title of article. *Name of Publication, p.*

**Example**

Begley, S., & Murr, A. (2007, July 2). Which of these is not causing global warming? Sport utility vehicles; rice fields; or increased solar output. *Newsweek, 150*(2) 48-50

viii. Newspaper article, no author

**Format:** Title of article. (Year, month day). *Title of publication, p.*

**Example**


ix. Newspaper article with known author(s)

**Format:** Author, A. (Year, month day). Title of article. *Name of Publication, p.*

**Example**

x. Web page with author


Examples


Note 1: The title of the article is in lower case, except for the first letter and names of people or places.

Note 2: We only need to include a retrieval date of the Website if the page is likely to change. In the second example, CNN correspondent Christiane Amanpour updates her blog page almost daily, so we need to include the retrieval date.

Note 3: We don’t use italics in the title for Web pages or newspaper articles.

xi. Web page with no author

If we don’t know the author of a Web site (or individual Web page), we use the page title and then the date in brackets. For example:


In this case, the bottom of the page says, "Last updated 03/02/2012", which is taken to be the publication date. It is unlikely this information will regularly change, so there is no need to include a "retrieved" date.

xii. Web page with organisation as author


Example


xiii. Video or an Audio Podcast

We need to indicate the format of the electronic work if it is a non-text format. So for example, for a video:


Notice for the date we use Year, Month Day format.

For an audio podcast:

xiv. When we can't find the date

Almost all books, journals, magazines and newspapers will include the date of publication, and it is quite easy to find.

However, there are some resources, especially many Web pages, which do not include the publication date anywhere. In this case, we put "n.d." (which stands for "no date") in the reference list.

For example, the page Aims and Scope, has no publication date, nor is there an author mentioned. So we would cite it as:


Useful resources for referencing

i. re:cite

re:cite is an interactive resource for finding out how to properly reference a wide range of sources. It gives you examples for typical situations.

It includes options for:

- Different citation styles (APA, Harvard, Chicago, Vancouver, MLA, AGLC3)
- Different reference types (book, journal article, newspaper, electronic source, audio-visual)
- Different details (number of authors, DOI number, magazine)

Choose your situation from the drop-down menus at the top when you get there.

Go to: re:cite

ii. OWL Online Writing Lab

The OWL is an excellent resource when you have questions about academic writing conventions. The site has information and many examples on:

- APA, MLA and Chicago referencing styles
- Research
- Citation
- Subject-specific writing
- Job search writing

Go to: OWL Purdue Online Writing Lab
# 5. NTU's Declaration Form

**Declaration Form**

## I. Assignment Declaration

Most NTU schools require you to complete and attach a form similar to the following before submitting your assignment.

Note the parts about plagiarism and collusion on the form.

When you sign such a form, you are claiming you have done the learning – and the work – involved in writing the essay.

## Assignment Submission Declaration

<table>
<thead>
<tr>
<th>School of __________________________</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Name:</th>
<th>Course and Code:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Matriculation No:</td>
<td>Lecturer/Tutor:</td>
</tr>
<tr>
<td>Title:</td>
<td>Submission Date:</td>
</tr>
</tbody>
</table>

**Keep a Copy of the Assignment**

Please make a copy of your work. If you have submitted your assignment electronically also make a backup copy.

**Plagiarism and Collusion**

**Plagiarism:** to use or pass off as one’s own, the writings or ideas of another without acknowledging or crediting the source from which the ideas are taken.

**Collusion:** submitting an assignment, project or report completed by another person and passing it off as one’s own (as defined in the NTU Honour Code. See the NTU Honour Code and Pledge).

**Penalties for Plagiarism and Collusion**

The penalties associated with plagiarism exist to reward good academic conduct. Those who cheat will be severely punished to reflect the seriousness with which NTU views cheating, and its commitment to academic integrity. Penalties may include: the requirement to revise and resubmit an assignment, receiving a lower grade, or receiving an F grade for the assignment.

**Declaration**

I declare that this assignment is my own work, unless otherwise referenced, as defined by the NTU policy on plagiarism. I have read the NTU Honour Code and Pledge.

Signed ____________________________ Date _______________________

---

Academic Integrity Handbook – Nanyang Technological University  Page 26 of 74
ii. NTU Honour Code

Read the NTU Honour Code.

On that page, note especially the definitions of:

- Cheating
- Plagiarism
- Collusion
- Falsification / Tampering
- False Declaration
- Unauthorised Access
- Endangerment

These are all important aspects of Academic Integrity. We hope your time here at NTU will not involve any of these!

Forms of Academic Dishonesty

i. Other forms

Apart from plagiarism, other types of academic dishonesty that are just as serious include:

Collusion

The act of secretly agreeing to commit fraud. In the university context, collusion occurs if students work in a group to produce an assignment that was supposed to be done individually. Your lecturer won't know who has learned the material and who has the skills.

Who wants to visit a doctor who always got his friends to do his assignments?

Falsifying data

It's tempting when doing lab experiments to cut corners and produce the results that we think the lecturer "wants".

Would we want to buy drugs or food from a company who has a history of falsifying data?

Cheating

Cheating occurs when we have an "unfair advantage" over others. For example, when we refer to lecture notes we have smuggled into an exam.

Would we want to fly with a pilot who cheated in all his flying exams?

Ghost writer

When you employ someone else to write an essay for you, this is called using a "ghost writer". This gives an unfair advantage to those who can afford such services.

Would we want to employ a lawyer who couldn't even write his own university essays,
and paid a ghost writer to do them for him?

Unethical behaviour can hurt a lot of people. For example, the world is still recovering from the dishonest behaviour of the banks and investment companies which culminated in the Global Financial Crisis of 2008.

Our integrity as professionals is important for the proper functioning of society. At NTU, we feel it's important that high standards of integrity should be a core value of all our students.

**ii. Recent fraud case in Singapore**

This case indicates the possible consequences of forgery for the purposes of cheating.

**Student, 22, nabbed over sale of fake MCs**

A FEMALE student aged 22 has been arrested for allegedly selling forged medical certificates (MCs) to other students.

According to the police, students contacted the suspect through social media and then arranged to meet her to buy the certificates, which were alleged to have fraudulently carried the letterheads of legitimate clinics.

The MCs were then reportedly submitted to schools so that the students could skip classes.

A police report was lodged after a teacher “of a school in the east” had suspicions about the certificates’ authenticity.

The suspect was arrested in the vicinity of Ang Mo Kio Avenue 9 at around 10.30pm on Wednesday, and a stack of forged MCs found in her home were seized, police said.

While investigations are ongoing, preliminary findings indicate that the suspect had sold the forged certificates to at least 30 students between March and May.

Anyone found guilty of forgery for the purpose of cheating faces a jail term of up to 10 years and may also be fined.

HOE PEI SHAN

[Source: Straits Times, 25 May 2013]

**iii. Group work and Collusion**

At NTU, we believe it is important that you develop team work skills, so you will have many experiences working in groups.

Groups allow you to learn from each other, and to see situations from many different points of view. Group work can also reduce the workload of each individual.

Some group work tasks result in a group mark.

However, we need to know that you as an individual have learned what you need to learn from the experience. So many of your assessments will be individual. That is, you will be expected to do the work yourself and not receive direct help from others.

If the assignment was meant to be done individually, but you "borrowed" portions of the assignment from others, this is regarded as an example of Academic Misconduct. We call this kind of behaviour collusion.
According to the Merriam-Webster dictionary:

Collusion (noun): A secret agreement or cooperation especially for an illegal or deceitful purpose. [Source]

If someone else has done the work, it means your learning will suffer.

**iv. Tip: Make sure you are clear about group & individual tasks**

When you begin any assignment, read the instructions carefully and determine which parts are meant to be done as a group (if any), and which parts are meant to be done individually.

**v. Collusion is a form of plagiarism and penalties apply**

Plagiarism involves passing off the work of others as your own. The penalties for collusion are the same as those for plagiarism.

If 2 or more students are involved in collusion, all parties receive the same penalty (which could be 0 mark, or re-submitting, or if it is a repeated offense, it could mean dismissal from the university).

That is, if you copy your friend’s assignment, both of you will face the same penalties for plagiarism. It doesn’t matter if one of you originally wrote it all, and the other person copied.

Also, if you allow someone else to copy your work, it is considered plagiarism, and both persons will face a charge of Academic Misconduct.

**vi. Example**

This video by the University of Derby gives some more insight about collusion.

[Collusion video]

**vii. A Disciplinary Committee meeting**

Watch this video by Murdoch University in Dubai. It shows what can happen if students try to obtain better grades dishonestly.

[Disciplinary Committee video]

Here’s a summary of the characters in the video and their situation:

Jack is accused of plagiarism.

Adeline is accused of using a ghost writer (someone who is paid to write the essay).

Sameer faces a charge of purloining (stealing, and violating trust).

Mohammad and Sandra are involved in an act of collusion (secretly agreeing to commit fraud).

**NTU Collusion case**

Following is a recent case as reported in the Nanyang Chronicle (8 April 2013).

It shows that an act of academic misconduct can be quite unfair and troublesome for everyone concerned.
6. Turnitin

Turnitin Overview

Turnitin is used by NTU lecturers to help determine if your work is genuinely written by you, or has been copied from other sources (the Internet, published articles, your friends, etc.).

Turnitin is a **text-matching system**, which means it will find:

1. **Properly quoted material** in your essay (where you have cited the source properly in the essay, and provided details of that source in the Reference List at the end of your essay). There is no problem in this case, since you have not plagiarized.

2. **Copy-paste material** from the Web, or a journal, or book (where you have not cited it properly, nor included it in your Reference List). In this case, **plagiarism has occurred**, because you have not given proper recognition to the original author's work.

3. **Copy-paste material from your friend's essay**, In this case, if you have not cited your friend as author, then you have plagiarized. This is also called collusion.

Your lecturer will use the Turnitin Report to help determine if you have plagiarized. They will look for proper citation and referencing. If the material has been properly referenced, there is **no problem**. If it has not been properly referenced, then your lecturer will want to talk to you about the situation.

It is also possible (if your lecturer allows it) for you to see the Turnitin Originality Report for your assignment. You can use this to learn how to improve your referencing skills.
Viewing your Originality Report in Turnitin

Sometimes, your lecturers will allow you to upload drafts to Turnitin so you can see how it works. You can use the Originality Report to make sure everything is cited properly.

View Turnitin Originality Report video

Revising your essay based on Turnitin report

After you have submitted your draft to Turnitin, you can make use of the Originality Report to fix any referencing issues.

Example 1 - Almost pure plagiarism

Here is an Originality Report that reveals the student knows nothing about writing an academic paper. Basically every part of the essay is copied from somewhere else - more than 1/4 of it from www.canadiancrc.com.

There are no quotation marks (properly used to indicate a quoted portion), block quotes, or citations anywhere to be found.

The above student clearly does not understand that the majority of the essay should be their own thoughts, their own analysis, and mostly in their own words.

They should only paraphrase or quote from other sources to justify their conclusions (or to critique).

In other words, quotations should be used sparingly.

If this is a draft paper, based on the above Report the student would need to:

1. Do plenty of reading on the topic
2. Rewrite the whole essay.
3. Quote sparingly (and reference the quotes properly)
4. Paraphrase properly (and reference the paraphrases)
5. Use mainly his own words and own analysis

If this was a final submission to Turnitin, the student has plagiarised and will need to face the consequences.

**Example 2 - Proper quoting and referencing**

This next student has written a much better paper.

Most of the essay is the writer's own conclusions, and the one quote is properly surrounded by quotation marks, and is cited properly (using Harvard referencing style).

In this example, if we were using APA style, the citation at the end of the quote would say:

(2002, p. 192)

We would not need to repeat the author's name (we already have it at the beginning of the sentence), and APA uses commas rather than colons between the date and page number.

This is quite a long quote, but less than 40 words, so we don't need to present it as a block quote.

If this is a **draft paper**, the student could check all Turnitin highlights, and if all quotes and paraphrases are referenced properly, they could go ahead and submit their paper.

**Example 3 - Poor paraphrasing and plagiarism**

In this next example, you can see the original article on the right. The highlighted portions show identical text.

The student has just changed a few words here and there - this is not proper paraphrasing.
What this student should have done is:

1. **Read** the original article a few times, taking note of the main points.
2. **Put aside** the original
3. **Written** the main points in his **own words**
4. **Cited** the source in the body of the essay
5. **Included** the source in the **Reference List**

**Example 4 - Some missing citations**

It often happens that a student knows how to reference properly, but is careless in a few places. So most of the quotes and paraphrases have citations, but some do not. In the following example, the student properly quoted and cited the first time they used the Psacharopoulous & Woodhall resource, but the next few portions of copied text are not cited at all. They have plagiarised, but if this is a draft, the situation can be remedied before they submit the final work.
Example 5 - Copying someone else's citations: plagiarism

In the next case, the student has copied a large slab from a Website.

If this essay was submitted as a printout on paper, it could look like he has paraphrased and properly cited the sources, however, by copying the whole thing, he has plagiarised.

Turnitin makes it very obvious when a student attempts such a trick.

Example 6 - Reference List

If you have done your referencing properly, there is a good chance your Reference List will have a lot of identical text with other essays, and the Originality Report will look something like the following.

This Report is showing a great deal of "copied" material, but it is nothing to worry about. This is not plagiarism — it just indicates other papers have referenced many of the same sources as you (unless you copy an entire Reference List from another paper).
7. Strategies and Tools

Strategies to reduce plagiarism

10 key strategies

1. Your learning is the most important outcome of an assignment.

2. Plan your time. You will be more tempted to cut corners if an essay is due tomorrow and you haven't started yet. Plan to have your first draft written a few weeks before the due date. Stay focused.

3. Keep track of all the sources you find when researching an essay. (Some of them may not seem relevant at first, but it's time-consuming to go back and find the source again later.)

4. Use tools like EndNote or Zotero to help keep track of your sources. (We'll learn about these two tools in following pages.)

5. Summarise as you do your research by taking good notes. Keep track of what is a direct quote and what is your summary.

6. Quote sparingly. Paraphrase and summarise rather than quote (this shows you have understood and learned what the words mean.)

7. Reference anything that is not yours. Use in-text citations and include the source in the Reference List.

8. Don't plagiarise yourself. (You are allowed to quote something you wrote for a previous essay but you must reference it.)

10. Look at the **big picture**. Why am I being asked to do this essay? What are the learning objectives? What do I personally intend to get from the process?

Based on [What are some strategies to avoid plagiarism?](#)

**EndNote**

Let's face it - referencing can become very tedious and time-consuming.

But the good news is there are tools that can save you a lot of work when it comes to citation and creating Reference Lists.

As a student at NTU, you have use of EndNote, which you can use on your laptop, tablet or mobile phone.

Here's a short introduction to what EndNote is all about. (They use the word "bibliography" where we would use "reference list").

[Introduction to EndNote video](#)

**NTU EndNote resources**

Downloads, tutorials, FAQs and more: [EndNote at NTU](#)

**How to Use Endnote in 7 minutes**

This is a short overview of how to search and keep track of sources for your essay, and how to create your Reference List or bibliography.

[How to use Endnote video](#)

**Using EndNote with MS Word**

This video gives you more on how to use EndNote plugin for Microsoft Word to keep track of your references.

[Using EndNote with MS Word video](#)

**Zotero**

**I. Zotero – alternative to EndNote**

Similar to EndNote in many ways, Zotero can keep track of all the resources you use when writing a paper, and can even automatically create a Reference List.

You can use Zotero as a Firefox plugin (where it is quite easy to use), or as a standalone application.

This video gives an overview of how to get bibliographical information into Zotero.

[Zotero video](#)

**ii. Mendeley**

Not impressed with OneNote or Zotero?
Mendeley is another free offering that offers a similar functionality to EndNote and Zotero.

### iii. Conclusion

EndNote, Zotero and Mendeley are good tools that will help you spend less time on the mechanical side of your referencing, and more time on your learning!

It takes a while to figure out how to use each one, but it's well worth the effort.

---

### 8. Summary and Resources

#### Summary of main points

Ten take-home tips from this Section

1. **Academic Integrity** is important.
2. Students who plagiarise or otherwise cheat **reduce their own learning**.
3. Academic misconduct **reduces the value** of an NTU degree. If NTU's reputation suffers, so do your job prospects and starting salaries.
4. When you write an essay, the majority of it should be your **own thoughts and analysis**, and your own images, tables, and charts.
5. Use quotes **sparingly**.
6. The "culture" of academic writing has developed over the years as a way to respect each others' contributions. When you use someone else's conclusions, you need to **acknowledge** the author (by citing).
7. **"Proper referencing"** means citing the source in the body of the essay, and giving full details of the source in the Reference List.
8. **Turnitin** can be your friend. Use it appropriately to help you write good academic articles.
9. There are many good **online resources** which help with referencing (like re:cite and The OWL). Use them!
10. There are some good **tools** (like EndNote and Zotero) that help to reduce the time-consuming tasks involved in referencing. Use them!

**Overall Summary...**

"When you say did the work, you actually did it.
When you rely on someone else's work, you cite it.
When you present research materials, you present them fairly and truthfully."

(Lipson, 2008, p.3)
C. Research Integrity

1. Overview

a. Research Integrity — Overview

Many people have no idea how copyright works and end up breaking the law without even realising it. But of course, ignorance is no excuse.

Similarly, there are many pressures on us when we conduct research. Sometimes the easiest way to cope with those pressures is to take short cuts - but these short cuts may not be ethical, or legal.

This Section will address these issues.

Quote

Of all the creative work produced by humans anywhere, a tiny fraction has continuing commercial value. For that tiny fraction, copyright is a crucially important legal device.

[Lawrence Lessig]


The Research Integrity Section will enable you to:

• Define what constitutes intellectual property and how it pertains to academic work
• Identify your responsibilities in using copyrighted work
• Identify the ethical responsibilities of a researcher when conducting primary research
• Be aware of and identify ethical issues encountered in research work and during the preparation of research reports

Research Ethics

Disgraced Korean researcher, Hwang Woo-suk.

[Image source]

In the (UK) Telegraph 2009 article, Disgraced South Korean scientist guilty of fraud over faked stem cell research, we learn how Hwang Woo-suk violated bioethics laws, fabricated results and diverted some of his research funding for his own personal use.
He went from being a "rock star" at the forefront of stem cell studies, with his 2005 paper in the journal Science detailing his "success" in cloning stem cells and "tailoring them to a specific patient", to landing in jail, and being stripped of his license to conduct research — all as a result of his fraud.

**Your future as a professional**

Most of you will work in professional engineering, bioscience, economics, medicine or humanities-related industries.

All of these industries regard protection of their intellectual property as very important. The company you work for will be very unhappy with a new graduate who has no respect for IP, who gives away company secrets, or who seeks to benefit from "insider knowledge". They will also expect you to conduct yourself with the highest level of integrity.

Any research you conduct in your future company needs to follow ethical guidelines, and must reflect the actual results achieved.

So we believe it is important you develop appropriate attitudes and skills in the areas of copyright and research ethics while you are here at NTU. It's an important aspect of your future career.

This Section will help you to know some of the basics of intellectual property, and understand the importance of conducting yourself in a professional manner.

In short, we want to make sure you have the skills and knowledge to uphold the NTU Honour Pledge:

---

**NTU Honour Pledge**

I, [as a] matriculated student of NTU, pledge that I will abide by the Honour Code of the University.

I pledge that I will

- conduct myself at all times in a manner that is worthy of the good name of the University;
- promote, and help others to adhere to the values of truth, justice and trust enshrined in the Honour Code;
- be honest in my academic work;
- respect the University’s rules and regulations, the rule of law, and the rights of others.

---

**2. Intellectual Property**

**What is intellectual property?**

a. What is Intellectual Property?

Intellectual property (IP) refers to creations of the mind:

- inventions,
- literary and artistic works, and
- symbols, names, images, and designs used in commerce.

IP is divided into two categories:

1. **Industrial property**, which includes inventions (patents), trademarks, industrial designs, and geographic indications of source; and
2. **Copyright**, which includes literary and artistic works such as novels, poems and plays, films, musical works, artistic works such as drawings, paintings, photographs and sculptures, and architectural designs. Rights related to copyright include those of performing artists in their performances, producers of phonograms in their recordings, and those of broadcasters in their radio and television programs.

[Source: World Intellectual Property Organization]

**b. Why do we have Intellectual Property laws?**

Most companies go into business to make money. They will invent a new product or service, and they will try to stop other companies from copying the idea. This is usually achieved by applying for a patent (before they begin manufacture), or relying on copyright laws (once the product appears in shops).

Governments recognize that it is important to protect intellectual property to encourage innovation and a thriving private sector.

**c. Glivec case study**

Glivec is a cancer drug that costs patients about US$2,600 per month. Factories in India produce a generic equivalent for just US$175 per month. Their biggest export market is Africa, where the drug is vital in the treatment of AIDS patients.

Glivec was developed by Novartis, a large Switzerland-based pharmaceutical company with sales approaching 50 billion dollars per year.

In April 2013, they lost an appeal in the Indian Supreme Court for a patent on an updated version of Glivec, according to a BBC news report. What this means is Indian pharmaceutical companies will still be allowed to produce the generic drug, competing directly with Novartis.

Patents for such drugs typically are in force for 20 years, giving the developer exclusive rights to manufacture and sell the product. Once the patent expires, other companies can sell a generic version of the drug. This is much cheaper for the patient, but still profitable for the generic drug manufacturer.

[Source: BBC]

**d. Types of Intellectual Property**

Intellectual property can involve one or more of the following types:

- **Trademarks** (a company's unique logo or other design, which identifies that company)
- **Patents** (which is the right of an inventor regarding the manufacture or production of a product or service)
- **Industrial design rights** (the shape, color and form of an invention)
• **Trade secrets** (information that is unique to a company, and that is a key aspect of the competitiveness of that company)

• **Copyright** (the right to make copies and make other uses of a creative product)

In this Section, we’ll concentrate on copyright since this aspect of IP has the most relevance for all of us.

**e. Did you know?**

• The innovations and creative expressions of indigenous and local communities are also IP, yet because they are “traditional” they may not be fully protected by existing IP systems.

• Access to, and equitable benefit-sharing in, genetic resources also raise IP questions.

[Source: [World Intellectual Property Organization](https://www.wipo.int)]

**Recent high-profile cases of plagiarism and copyright violations**

Many companies have been sued for copying someone else's IP (intellectual property).

(You don’t need to click on all the links to read the details of these stories. The links are there in case you wish to find out more.)

**i. Apple vs. Samsung**

![Apple vs Samsung](image-source)

Details: [Apple Sues Samsung for Copying iPhone, iPad](https://www.apple.com)

**ii. Monsanto**

The Monsanto multi-national corporation is keen to take out patents on genetic material, and will sue to protect their IP.

Details: [Monsanto sued small farmers to protect seed patents](https://www.monsanto.com)

**iii. P2P File Sharing**

The music and movie industries have sued many P2P filesharing companies for copyright infringement, as we see in these cases:

a) Napster ([Napster loses net music copyright case](https://www.napster.com), in 2000);

b) Kazaa ([Australian court rules against Kazaa](https://www.kazaa.com), in 2005); and

c) MegaUpload ([MegaUpload sees big court win, but case far from over](https://www.megaupload.com), in 2012).
iv. German education minister accused

Academic dishonesty when a student can affect us in later life. Cheating is a form of academic misconduct, and infringes the intellectual property of the original author.

German education minister accused of cheating in university dissertation

Germany's education minister is facing a battle for survival following allegations that she cheated in her university dissertation.

v. Cheating at Britain's universities

We don't want stories such as the following to appear about NTU. Such cheating de-values the degree offered by the institution.

45,000 caught cheating at Britain's universities

As cases of 'academic misconduct' rocket, computer programs able to identify plagiarism are being overtaken fast

Brian Brady, Kunal Dutta

Sunday, 11 March 2012

Tens of thousands of students in universities across Britain have been caught cheating in exams and coursework – and the trend is on the rise, according to an investigation by The Independent on Sunday.

Over the past three years, more than 45,000 students at 80 institutions have been hauled before college authorities and found guilty of "academic misconduct" ranging from bringing crib-sheets or mobile phones into exams to paying private firms to write essays for them.

Some 16,000 cases were recorded in the past year alone, as university chiefs spent millions on software to identify work reproduced from published material, or simply cut and pasted from the internet.
vi. SPH and Yahoo in copyright spat

Singapore Press Holdings is enthusiastic when chasing copyright violations.

**Yahoo Denies Infringing Singapore Press Holdings’ Copyright, Countersues**

By Andrea Tan - Dec 12, 2011 5:37 PM GMT+0800

Yahoo! Inc., accused by Singapore Press Holdings Ltd. (SPH) of reproducing news content without its permission, denied infringing the city state’s copyright laws and countersued the newspaper publisher.

The articles that Singapore Press claimed were reproduced without authorization were insubstantial and insignificant, Yahoo’s Southeast Asia unit said in a defense filed in the Singapore High Court today.

“There is an important public interest in respect of the right of the public to be informed of current events in Singapore,” the Sunnyvale, California-based Internet company said in its filing. “Copyright law does not protect facts and information.”

The Singapore-based newspaper publisher sued Yahoo last month, seeking unspecified damages for alleged copyright infringement of 23 articles from newspapers including the Strats Times from November 2010 to October 2011. Yahoo claimed in its countersuit that Singapore Press infringed its copyrights by reproducing articles and images on a website.

[Article extract source: Bloomberg]

Professional reputation

Academic dishonesty can be very damaging to your reputation, and can adversely affect future employment prospects.

One of the aims of this Handbook is to remind you of some of the things you need to be aware of so you don’t fall into the traps of infringing copyright or plagiarizing.

3. Copyright

Rights of the Copyright Holder

A company (or individual) that produces some intellectual property (e.g., they invent something, create a new service, write a book, write some music, or create a video) has the right to copy (or perform, or adapt) what they have produced.

In most cases, copyright is granted automatically to the creator of the work - there is no need to "register" the copyright or put the © symbol on the work.

No other company (or individual) is allowed to copy that item. The main idea here is that if governments want people to produce science, art, music, videos, computer programs, articles or services, then those governments needs to protect the right of that person (or company) to make money from their hard work.
Most countries in the world have some kind of laws to protect intellectual property.

As a consequence, no other company or person may copy or perform the copyrighted work, or adapt the work unless they first obtain permission to do so from the copyright owner.

While it may be possible to obtain permission to copy (or perform, or adapt) an item from the copyright holder, this usually involves paying a fee.

**i. Copyright Examples**

1. You are writing a book and you want to use a diagram you found on the Internet. You must obtain permission to use that diagram because you are creating a product you are going to sell, and the developer of the diagram must be compensated.

2. Your friend copies some songs by Korean boy band 2AM from your MP3 player. This is a copyright violation because your friend does not have permission to copy and they did not compensate 2AM for making the copies.

3. The compulsory text book for an NTU course is very expensive, so a student scans all the pages they need from a friend's text book. This is a copyright violation because the student did not obtain permission, nor did they compensate the book publisher for the copies they made.

4. Your friend buys a pirated copy of Microsoft Office while in Johor Baru. This violates Microsoft's copyright.

5. A group of friends decide to perform the musical "Fame" for a fund-raising event. Without the copyright owner's permission (and payment of a fee), they will be in breach of copyright law, since they will be making money from selling tickets.

6. When we buy some recorded music, we have the right to make a "personal" copy. That is, if the song was on a CD, (in most countries) we are allowed to make one copy in MP3 format (called "ripping") to listen to on our phone. The important thing here is that we legally obtained the music in the first place, and we are not passing the copies out to others. In a school setting, we are allowed to make copies of songs (or portions of songs) for academic purposes. (That is, we are studying the music as part of our degree.)

7. We are allowed to copy portions of a book for "personal study" purposes (generally no more than 10% of the book). But we are not allowed to copy the whole thing, nor pass those copies on to others.

8. This also applies to magazine and journals. For example, if we purchase an article from an online database, we are the only ones allowed to make use of that article. We cannot pass it around to the others in the course.

**ii. Why should I respect copyright?**

Authors, artists, musicians, playwrights, programmers and others involved in the copyright and related industries are creative professionals who bring us new songs, books, plays, films and other works. They invest time, intellectual and creative effort to make available to the public works of literature, music, art, software applications and so on.

Copyright laws are in place to provide protection for such works, and to recognise the creators for their creative effort. They also provide incentives for them to continue creating. [Source: IPOS](https://www.ipos.gov.sg/)

The same thinking applies to scientific & technological discoveries. If I spend a lot of money on research and development, I want to make sure I am protected from having other companies copy my technology and driving me out of business.
The 5 P's of Copyright

A company takes Tom to court for copyright violation. The judge considers the following issues:

Permission: Did Tom fail to seek the copyright owner's permission and negotiate a fee before going ahead?

Purpose: Did Tom make money from the sale of the copies (or portions that were copied)?

Profit: Will the copyright owner miss out on some profit due to Tom's actions?

Proportion: How much of the original work was copied? Was it a "substantial" amount?

Place: Where did the copying take place? Was it in a school setting for school purposes, or in a company’s office (for the benefit of the office)? Did Tom upload the copied material to a publicly accessible Website (e.g. YouTube)?

If the answer is "yes" to all (or most) of these questions, the judge will almost certainly rule in favour of the copyright owner, and Tom will possibly need to pay a large fine and could face jail time.

What does copyright protect?

According to IPOS (Intellectual Property Office of Singapore),

Copyright protects the expression of ideas (e.g., in words and illustrations).

Ideas alone are not protected. [Source: IPOS]

The following may be protected under copyright law:

i. Works

• Literary works (e.g., written works, source codes of computer programs)
• Dramatic works (e.g., scripts for films and dramas)
• Musical works (e.g., melodies)
• Artistic works (e.g., paintings, photographs)
• Published editions of the above works

ii. Subject matter other than "works"

• Sound recordings
• Films
• Television and radio broadcasts
• Cable programmes
• Live performances

iii. Who owns the copyright in a work?

Generally the person who created the work owns the copyright in that work.

However, there are situations where this is not the case. For example:

1. When the author of a book assigns the copyright to the publisher of the book. This is usually part of
the agreement made between the author and the publishing company. (Similarly for a film maker when the copy rights are given to the film distributors)

2. When you create something in the course of your work. So for example if you are working for DBS bank and write a report, the copyright belongs to DBS, not you. (So you cannot sell a copy of your report to a news magazine, for example.) This also applies to journalists - the newspaper or TV station owns the copyright in anything they produce.

3. A photographer who is engaged by a person to take photos. So for example, a wedding photographer should give all the original photos to the couple getting married and cannot make money selling them.

**iv. Copyright Scenarios Activity**

Here are 3 scenarios where you can check your understanding of copyright.

Decide whether the following are OK or Not OK, based on the information given.

(a) Gibson copies photos from several websites that do not bear the copyright symbol © and includes them in his class presentation slides.

He doesn’t attribute the source of the photos in his slides as his presentation is only for school use. Is it OK?

(b) Noor is researching her term assignment and finds a relevant article from an academic journal in the Library that she can use.

As she is unable to bring this reference journal home, she decides to make a photocopy of this article so that she can take it home for private study. Is this OK?

(c) Mark wrote a screenplay for a campus drama production based on several characters from the local film “Army Daze”.

As this screenplay is his own creation, he does not seek permission from the film's producers. Is this OK?
Answers

(a) Not OK! This is actually a plagiarism issue, not a copyright one. Although his presentation slides are for educational purposes, Gibson did not take the photos, so he needs to attribute the source of the photos. It doesn’t matter if an image bears the copyright symbol ©, or not. The photo is still automatically covered by copyright. Gibson may use it for his school assignment as long as:

- The photo is a small portion of the original site
- Gibson references it properly

(b) It’s OK. Noor’s thinking is correct. The Singapore Copyright Act (Chapter 63) stipulates that you can make one copy of an article from a periodical for personal research and private study. For a published work, you can make one copy of not more than 10% of the total number of pages, or one chapter.

(c) Not OK! Mark has infringed on the film producers’ copyright as he has made a “derivative work” which is a work derived from a copyrighted work. As he is using the characters from a specific film, he needs to seek permission from the creator of the original work to create this “derivative work”.

Comments

As shown in those scenarios, there are instances where we can knowingly or unknowingly violate academic codes of conduct and copyright laws.

It’s important to know what you are allowed to copy here at NTU, and how that changes when you begin working for a company.

Penalties for Copyright Infringement

According to IPOS (Intellectual Property Office of Singapore):

Penalties

The penalties for manufacture for sale; sale of infringing copies; and possession or importation of infringing copies for the purposes [of sale] are:

- a fine not exceeding $10,000 per infringing copy, up to a total of $100,000 per charge; and/or
- imprisonment up to five years.
- The penalties for distribution of infringing copies for trade or for other purposes to such an extent as to affect the copyright owner prejudicially are:
- a fine not exceeding $50,000; and/or
- imprisonment up to three years.
- The making or possession of an article specifically designed for making infringing copies, e.g. machinery for manufacturing infringing copies, is also an offence attracting the following penalties:
- a fine not exceeding $20,000 per article; and/or
- imprisonment up to two years.

[Source: IPOS]
Copyright vs Plagiarism

Copyright violation and plagiarism are not the same thing, but the two concepts do overlap in some ways. They are both instances of "theft of intellectual property".

Copyright

Copyright violations occur when the developer of a creative work loses money because of the copying. Copyright cases happen in:

- The corporate world (copying of products or services without permission or payment)
- The entertainment industry (performing a work without permission or payment)
- Education contexts (copying substantial portions of books, journals, videos, without permission and without payment)

Copyright violations often result in court cases, and the fines are usually very high.

In order to ensure you are within copyright laws when you want to copy anything that you will sell, or otherwise make money from:

- Obtain permission before copying.
- Pay any fee due for the use of the copied portions.
- Give proper recognition to the creator of the original work (via a citation)

If in doubt, and you will be making money from your product, seek permission!

Plagiarism

Plagiarism, on the other hand, involves copying from others without giving proper recognition of the source. Sometimes plagiarism is intentional and dishonest, and sometimes it is due to carelessness (sloppy citation, or forgetting to include all sources in the Reference List at the end of the essay.)

Plagiarism is mostly regarded as an offence in the academic world and can result in either failing the course or expulsion from the institution.

Plagiarism can also be an issue in the corporate world, and companies have been sued for plagiarising ideas or concepts from others.

To ensure you don't plagiarise, you need to give proper recognition to the creator of the original work, by:

- Including an in-text citation which gives details of where the statement comes from (usually who wrote it and when, and the page number)
- Including full details of the original work in the Reference List at the end of your paper

You can also make use of the Turnitin Originality Report (if it is made available to you) to check you have properly cited all your sources, and included full details of cited works in the Reference List. Turnitin simply indicates the matching text between your paper and known sources. A human needs to interpret those matches to decide whether it has been properly referenced or not.

Tip

EndNote is a useful tool that makes it easier to keep track of your essay sources, and for creating the Reference List.

NTU Library conducts workshops on EndNote. For more information, see:

EndNote online Tutorials
Examples of Copyright Infringement

Since Singapore signed a free trade agreement (FTA) with the US, and became a member of the World Trade Organisation, it has taken copyright law much more seriously.

Example 1: Sim Lim Square

Sim Lim Square used to have many shops that sold pirated software, but they were all shut down. However, from time to time there are still instances of pirated software for sale, as reported in this 2012 article from the Straits Times.

By Khushwant Singh

Four shop-owners, an assistant store manager and eight salesmen nabbed in a raid of shops in Sim Lim Square two years ago were each fined between $800 and $37,700 by a district court on Tuesday.

The 13 men, aged 23 to 42 years old, had pleaded guilty to committing copyright and trademark infringements on Friday.

The cases against two others have yet to be dealt with. The 15 men were found with counterfeit gaming accessories and storage devices containing copyright infringing games and software.

The raid was conducted by officers of the Intellectual Property Rights Branch (IPRB) of the Criminal Investigation Department at about noon on Nov 22, 2010, together with representatives of Sony Computer Entertainment and Nintendo.

Later in the article, we read:

Receiving the stiffest fine of $37,700 was Lim Kiam Hong, 39, the assistant manager at Play Edge, Jizz Mobile Game Craft.

Partners running the Mobile Evolution and Evolution Gaming outlets, Ronald Luke, 28, and He Yanping, 27, were fined $34,700 and $7,500 respectively.
A $19,600 fine was dealt to Ronnie Ho Choon Wah, 38, the owner of Game Craft, while the owner of Play Edge and Jizz Mobile, Ho Kwang Wah, 42, was fined $25,000.

The eight sales assistants are:
Dean Lew Chee Meang, 33, fined $10,200; Chua Soon, 38, fined $10,200;
Dave Lew Chee Seang, 27, fined $9,000; Tan Choon Keap, 31, fined $9,000;
Justin Yang Jiarong, 23, fined $3,800; Jack Muang Lwin Htoo Nuang, 24, $3,800;
Steve Pang Wei Keong, 26, fined $3,800; Alan Liang Chuan Heng, 29, fined $800;

Example 2: Company caught using pirated software

In the next case, interior design company PDM International was found to have illegal copies of software on its computers. This was in 2006, after Singapore tightened some of its copyright laws.

SINGAPORE (AFP) - An interior design firm caught using pirated software has become the first company in Singapore to be criminally charged under tougher copyright laws, court documents showed.

Police lodged criminal charges against PDM International Pte Ltd before a district court Thursday after discovering 51 pieces of illegal Microsoft, Adobe and Autodesk software installed in the company's computers.

Media reports said police raided the company’s premises last September after getting a tip-off from the industry organization Business Software Alliance, which offers rewards of up to 20,000 Singapore dollars (12,300 US) to informers.

While no officials of the firm were charged, the company could be fined 20,000 Singapore dollars if convicted.

It was the first time in Singapore that a company had been hauled to court to face criminal charges for copyright infringement under tougher laws aimed at protecting intellectual property.

In a move to boost its status as a research and development hub, Singapore last year amended the Copyright Act to make the use of pirated software "for commercial advantage" a criminal offence.

Example 3: Singapore Land Authority and Virtual Map

In Appeal case between SLA, Virtual Map (2008), Channel NewsAsia reported the case of SLA vs Virtual Map (makers of StreetDirectory.com).

SINGAPORE: The Singapore Land Authority (SLA) and Virtual Map were back in court on Tuesday for an appeal case over copyright infringements.

Virtual Map is the company behind the online website, streetdirectory.com, which allows web users to search for building locations or road maps.
SLA claims that maps on the website are based on the Authority's original maps, which constitutes a violation of copyrights.

Virtual Map had a licence agreement with SLA to use the online maps from 1999, but that was terminated in 2004. Virtual Map's lawyer, Mr Low Chai Chong, argued that the company had not infringed any SLA copyrights because Virtual Map had created independent maps using methods like satellite images and the global positioning system from 2004. Since Virtual Map had created and improved the maps using its own technology, it should be entitled to keep, market and sell the maps. The company has offered to pay SLA royalties from the sales.

SLA disagreed and said it had deliberately put some non-existent buildings on their maps and those phantom features were also replicated on streetdirectory.com. The Authority said this shows Virtual Map had reproduced SLA's maps, and in so doing, Virtual Map had attempted to use SLA's work without licence or consent.

That propelled Justice Tan Lee Meng, who is hearing the appeal, to suggest that perhaps Virtual Map had not done something new enough to cut off their apron strings from SLA.

Virtual Map charges companies that reproduce their online maps, and has even threatened to track down companies who use their maps without permission. That prompted SLA to take action against Virtual Map, saying that the company itself is using SLA's maps without consent. [CNA]

StreetDirectory.com was shut down for 9 months until all its map data was replaced.

Virtual Map eventually paid $200,000 damages to Singapore Land Authority.

[Source: Sgforums]

**Example 4: Happy Birthday song**

According to this article on BoingBoing,

Copyright scholars have long been pretty certain that "Happy Birthday to You" is in the public domain, despite the fact that Warner/Chappell claims copyright on it and charges impressive licensing fees to use it in public performances. Those fees, however, are much lower than a copyright lawsuit would be, so everyone shrugs and pays them. Until now.

A documentary film company working on a movie about "Happy Birthday" has assembled a huge body of evidence showing that the song has been in the public domain since the 1920s, and is suing Warner to get them to return the hundreds of millions they've improperly charged in licensing since.

[Sources: BoingBoing, TechDirt, Image source.]

We'll learn more about "public domain" in Section 4, Copyright Exceptions.
Obtaining Permission to use copyrighted work

How do we obtain permission from the copyright holder for use of a work?

Before you worry about having to do this, ask yourself:

- Is the copying covered under "Fair Dealing" (fair use) guidelines for academic purposes?
  If so, you **don't need** to seek permission. (We'll learn more about "fair dealing" in Section 4, Copyright Exceptions.)

- Am I going to make a profit by copying and selling this work? (If so, you **do need** to seek permission)

- Is the copyright owner going to lose money because I am copying? (If so, you **do need** to seek permission)

**Summary - Obtaining Permission to use Copyrighted Work**

Here are some of the places you can look to find the copyright owner, so you can seek permission to use their work. You would need to do this if you want to use the item for commercial purposes.

**i. Items you find on a Website**

Check the "About us" or "Author" pages of the site. Usually there will be an email address, contact form or phone numbers.

Be careful though - if the Website has just copied the image (or other items) without obtaining permission, they are infringing copyright, and there is no point asking them. You always need to find the **original author**, or photographer, or artist.

**ii. Items you find in a book, journal or magazine**

A good place to start is the Copyright Clearance Center. They offer case-by-case permission services, via:

- A pay-per-use license (which will be your situation most of the time); or

- An annual fee (which is what many news services use so they can copy photos, videos and articles from each other, without having to ask for permission each time.)

**iii. Other Items you wish to copy**

University of Texas has a good resource: Getting Permission, which lists how to obtain permission for a wide range of media types. *(Note: The article has an educational focus, so some of the suggestions may differ from those given in the video above.)*

**Strategies to avoid plagiarism and copyright infringement**

The most important rule for ensuring you don’t plagiarise or infringe copyright:

**The golden rule**

| Acknowledge your sources!

This is essential for all things you copy and intend to use in work you create.

But it’s not as simple as that.
Plagiarism

As you have learned already, plagiarism occurs if you pass off someone else's work as your own. This may be:

- Sentences you copied from a book, journal or Website
- Images (photos or diagrams) you copied from a book, journal or Website
- Video or soundtrack you copied from a movie or documentary.

In the above cases, it is OK to copy small portions of the original to use in your essay, article or video, as long as you acknowledge the source properly. In the case of an essay, this means citing the source in the body of the essay, and including the full details (author's name, title, and other publication details) in the Reference List at the end of the essay.

Don't fall into these traps:

- "Borrowing" an essay from a friend, and submitting it as your own (both of you will face plagiarism charges)
- "Buying" an essay from an essay service.

In both cases, your learning suffers.

Copyright Infringement

Before copying any part of a copyrighted work, ask yourself:

Key question

| Does the copying come under "fair dealing"? |

To help decide, consider these questions (based on the "5 P's of Copyright" we learned about before.):

1. What is the purpose of copying (for research or private study - or for adding to some commercial product)?
2. What is the proportion I want to copy? (Is it "substantial", i.e. generally more than 10%? If it is for commercial use, the proportion does not matter that much, because you'll seek permission for the proportion you want to use.)
3. Where will I copy it? (Is it at school for educational purposes?)
4. Will it negatively affect the copyright owner's profit?
5. Will I make money by copying?
6. Do I have permission from the copyright owner to copy?

Later in this Handbook you will learn about public domain and Creative Commons. Always look first for materials released under a license that allows for commercial use of the work.

If you can't find what you need there, then look for copyrighted works, ask permission, pay the fee and go ahead, knowing there will be no problems.

Top ↑
4. Copyright Exceptions

Introduction
There are situations where copyright restrictions are less strict. These situations are:

i. Copying for educational purposes
Non-profit educational institutions (like NTU) are given some freedom to copy a limited proportion of creative works, as long as it is for educational purposes.
So you are allowed to make one copy of one article from a scientific journal, or less than 10% of a book, or part of a video or other media, as long as it is part of your academic programme. (There are more specific rules we'll learn about later.)

ii. If copyright has run out
Copyright doesn't last forever. It's normally in place for 70 years after the author's death (in the case of a book or journal) or 50 years after the broadcast date in the case of radio or TV broadcasts.
When copyright has ceased, we say the item is in the "Public Domain". We can freely copy such items (in most countries). We will see some examples a bit later.

iii. Items released in the public domain
Many governments release information in the "public domain", meaning we are free to make copies without asking permission. Most USA government publications are public domain.

iv. Items released under Creative Commons:
Creative Commons is a relatively new publishing license. There are various permission levels for Creative Commons (which we'll learn more about later), but in general it is not as strict as copyright law, since the copyright owner allows us to use the work without having to seek permission. For example, Wikipedia is released under a Creative Commons license. We will learn more about Creative Commons in the next chapter.

v. Copyright applies to published items, not ideas or facts
A copyright holder cannot claim his work has been copied if there no work exists yet. So if I copy a recording of a song without permission, that is an infringement of copyright since the recording exists.
But if a song writer just talks about her idea for a song, she can't later sue me for recording a song using that idea, because I didn't copy anything that was published already.
The same goes for discoveries and facts. The discovery (or fact) needs to be published in some format before it obtains copyright protection.

NOTE: Acknowledge sources
No matter what the restriction level is, whenever you use a portion of another person's work, you must always acknowledge the original author, photographer, or artist.
We'll learn more about the above exceptions in the next sections, starting with Fair Dealing.
Fair Dealing (Fair Use)

i. Overview
Copyright law recognises there needs to be a balance between the rights of the copyright owner, and the rights of the general public.

For example, a journalist who writes reviews of books or plays may need to copy a portion of the work in order to critique it effectively (otherwise the reader won't know what the reviewer is talking about).

Similarly, for educational purposes, we should not have to buy every book we intend to read for an essay, or every journal we refer to in an assignment.

So we are allowed to copy limited amounts of copyrighted work as long as it is "fair dealing".

ii. What makes it "fair dealing"?
Factors that will be taken into account in deciding whether such copying is a fair dealing include the following:

- Purpose and character of the dealing, including whether such dealing is of a commercial nature or is for non-profit educational purposes;
- Nature of the work;
- Amount and substantiality of the part copied taken in relation to the whole work;
- Effect of the dealing upon the potential market for, or value of, the work;
- The possibility of obtaining the work within a reasonable time at an ordinary commercial price.

iii. Limits - research or study
Where the copying is for the specific purposes of research or study, it shall be taken to be a fair dealing as long as the copying limits are observed.

For a published work of at least 10 pages, the copying limits are up to 10% of the number of pages or one chapter, whichever is the greater.

Other limits when using media for research or study include:

- Journal articles: You can make one copy of one article from a journal (or 2 articles, if they are on related topics).
- Images: You can copy 10% of the number of images (or 10% of the number of bytes).
- Audio, music or video recordings: You can copy 10% of the number of bytes.

iv. Requirements - Criticism, Review or Reporting current events
Fair dealing for the purposes of criticism, review or reporting current events would not constitute copyright infringement.

In the case of criticism or review and the reporting of current events in a newspaper, magazine or similar periodical, a sufficient acknowledgment of the work is required.

v. Other copying we are allowed to do
You are allowed to:
Make **one copy** of a computer program (which you own legally) for the purposes of backup

Make **one copy** of a song recording (which you own legally) for the purposes of backup

**vi. DRM (Digital Rights Management)**

Commercial DVDs and CDs contain a "digital lock" which prevents people from copying the work. This is called Digital Rights Management.

It is **illegal** to circumvent such digital locks (that is, use a process to "get around" the restriction).

[Source: IPOS: Specific copyright issues]

**vii. Summary - NTU's Copyright Policy**

This is the statement from NTU Library’s Copyright Issues page:

**Research and Private Study**

There is a fair dealing exception for personal research and private study. As a quantitative guideline, it allows copying of:

- **ONE copy** of an article from a periodical, OR **ONE copy** of 2 or more articles on the same subject-matter from that periodical,
- **ONE copy** of not more than 10% of the total number of pages of a published work (if the work contains more than 10 pages), OR **ONE copy** of one chapter of the published work even if one chapter exceeds 10% of the total number of pages.

The exception stated above does not apply to commercial and industrial research.

**Public Domain**

Copyright runs out over time. If the author of a book is not around any more, how can he claim rights over his work?

Of course, we need to be fair to the family of the author (or artist, or composer), so the family can continue to make money from sales of the author’s works. Therefore copyright lasts beyond the death of the artist.

**i. Duration of Copyright**

According to the Singapore Law Society,

Generally, copyright in a literary, dramatic or musical work, or in an artistic work other than a photograph, exists up to 70 years after the author’s death.

In the case of a sound recording and film, copyright subsists until 70 years after the recording or film was first published

The duration of copyright protection for a broadcast and cable programme is 50 years from when the broadcast was made.

The duration of copyright protection for a published edition of a work or works is 25 years from when the edition was first published.

**ii. Copyright expired – Public Domain**

When copyright has run out on a creative work, we say the work passes into the "public domain".
iii. Examples of Works Where Copyright has Expired

1. Many of the free e-books available on mobile devices are "classics" where the copyright no longer exists. For example, Moby Dick (by Herman Melville, who died in 1891), Anna Karenina (by Tolstoy, died 1910), The Hunchback of Notre Dame (by Victor Hugo, died 1885). (See Feedbooks)

2. Project Gutenberg has 42,000 e-books which are scans of books whose copyright has expired.

3. These New York Times photos (like the stunt flying photo at right) were taken before 1923, and so their copyright has expired.

NOTE 1: While the copyright of the original work may have expired, trademarked characters have not. For example, the original Peter Pan book is out of copyright, but the Disney version is not. So you can't just copy something that is "old" without doing further checks.

NOTE 2: Copyright laws are not identical around the world. It is possible you'll find something on a US-based Website that says it is "in the public domain", but it may not be so in Europe.

iv. Works released into the Public Domain

Some publishers attach a public domain license to their works upon release. This means you don't need to wait for the author to die and then another 70 years before you can copy the works freely.

All items on US government Websites are released into the public domain.

For example,

1. The Health Information section developed by the National Institutes of Health has "most" of the information in the public domain.

2. Climate and Land Use Change (U.S Geological Survey)

3. U.S. Department of Commerce

4. NASA

5. C.I.A.

Other examples of items released into the public domain are:

6. LibriVox (free audiobooks of books which have passed into the public domain)

7. Unlicense.org releases software into the public domain. One example is Bitcoin.php, which is a library designed for the Bitcoin digital currency.

Creative Commons

i. Reasons behind Creative Commons

Many artists and writers became frustrated with the restrictions of copyright law, because they wanted to freely share their work and allow people to use it and modify it in whatever way they saw fit.

Another group of artists were happy to share their work, but didn't want anyone to make money from that use.

Yet another group were happy for people to copy their work, but in its original form only (not to make any "derivative works").

So the idea of Creative Commons was born. Using Creative Commons licenses, artists can release their work
using a variety of levels, from a "do what you like with my work" license (which allows us to use the work to make money or to change it however we like), to a "most rights restricted" license which doesn't allow us to do much at all.

**ii. Creative Commons License Types**

From Wikipedia's page on Creative Commons Licenses:

The original set of licenses all grant the "baseline rights", such as the right to distribute the copyrighted work worldwide, without changes, at no charge. The details of each of these licenses depend on the version, and comprises a selection of four conditions.

The first 2 of these conditions are quite generous, since they allow us to copy the work freely, with the only requirement that we give proper attribution for the work (which means we need to cite it properly.)

**Attribution (by)**

Licensees may copy, distribute, display and perform the work and make derivative works based on it only if they give the author or licensor the credits in the manner specified by these.

**Share-alike (sa)**

Licensees may distribute derivative works only under a license identical to the license that governs the original work.

The next 2 license types are more restrictive. The first means the artist does not allow us to use the work in a publication where we will make money, and the second means we can copy the work, but we cannot change it in any way. of course, we need to give proper attribution for these 2 cases as well.

**Noncommercial (nc)**

Licensees may copy, distribute, display, and perform the work and make derivative works based on it only for noncommercial purposes.

**No Derivative Works (nd)**

Licensees may copy, distribute, display and perform only verbatim copies of the work, not derivative works based on it.

**iii. Combinations**

Artists are free to use a combination of the above licenses to inform users what they can and cannot do with the work the artist is sharing.

These are the most commonly used Creative Commons combination licenses.

- Attribution alone (by) – CC-by
- Attribution + NoDerivatives (by-nd) – CC-by-ND
- Attribution + ShareAlike (by-sa) – CC-by-SA
- Attribution + Noncommercial (by-nc) – CC-by-NC
iv. Examples of Creative Commons works


Most of Wikipedia is released under the Attribution-ShareAlike license. What this means is a reader of a Wikipedia page is allowed to do the following (according to this Creative Commons Deed).

You are free:

- to Share—to copy, distribute and transmit the work, and
- to Remix—to adapt the work

Under the following conditions:

- Attribution—You must attribute the work in the manner specified by the author or licensor (but not in any way that suggests that they endorse you or your use of the work.)
- Share Alike—If you alter, transform, or build upon this work, you may distribute the resulting work only under the same, similar or a compatible license.

Example 2: Flickr (photos)

Flickr is a photo-sharing site. You will see various combinations of the above licenses for different images on Flickr pages.

For example, this photo of a macaque (by Tambako the Jaquar) was released under a Creative Commons - Attribution - No Derivatives license. The photographer does not want people changing the photo.

On the Flickr page, on the right after the tags, you will see

Some rights reserved

This indicates that if you wish to copy the photo, the photographer requires you to attribute him or her, and that no derivatives are allowed. There are some other rights that the photographer reserves in this case. You would need to follow any such links on the Flickr page for more information.

On many Flickr pages, the photographer is given the option of licensing the photo through Getty images. This means we would pay a fee to Getty, and we would be allowed to use the image for commercial purposes (for example, in the company we work for), because we have bought the rights to do so.

There are 100s of millions of photos released under Creative Commons on Flickr.

Example 3: Jamendo (music)

Jamendo is a music sharing community and all the songs are released using Creative Commons licenses. If you wanted to use a song found on Jamendo for commercial purposes, you would need to negotiate a license.

You can embed any Jamendo album on your blog or other Website. This is actually helpful for the artists as they get promotion this way. They want you to copy their music so you help to promote it!

Jamendo doesn’t state it specifically, but it appears the most common license combination for Jamendo
music is Attribution + Noncommercial (by-nc).

v. Copy considerations

Educational use

If you wish to copy anything released under Creative Commons for educational purposes, you need to attribute the source (as normal) and respect any special requirements of the CC license (like "no derivatives").

Commercial use

If you wish to copy anything released under Creative Commons for commercial purposes, you need to check the license (usually one of the above combinations), especially the noncommercial CC ones, and for any other reserved rights.

5. Research Ethics

Unethical research - Syphilis experiments

The US government conducted scandalous syphilis experiments on African-American and Guatemalan people in the 1930s through to the 1970s.

This was after the Second World War when much of the world was still getting over news of the cruel experiments on people by Nazi Germany in concentration camps and by the Japanese in China.

These experiments caused such a storm of protest that governments around the world began to develop a series of research ethics guidelines, which we'll look at in this section.

Research integrity

Example 1: The Tobacco Industry

The tobacco industry has had a long history of attempting to sway public and legal opinion on the safety of their products. The United States FDA is beginning to fight back, as we see in this recent article.

FDA considers an independent body to monitor tobacco research

3/28/2013

By Jacob Hale Russell

(Reuters) - The Federal Drug Administration is considering a recommendation that an independent body should monitor some research put to the agency by tobacco companies, underscoring the growing concern about conflicts of interest in scientific research.

The recommendation was submitted by the Institute of Medicine, a scientific research organization that's part of the National Academy of Sciences, and is based on its 2011 report. It
suggests that any research provided to the FDA by manufacturers of so-called modified-risk tobacco products, which companies want to market as "less" risky, should be overseen by an independent body. Under the Family Smoking Prevention and Tobacco Control Act of 2009, the FDA must consult with the Institute of Medicine on the regulation of these products. The law allows the FDA to approve them only if research demonstrates their health benefits.

[Article extract source: Reuters]

**Example 2: Marc Hauser**

Marc Hauser was a well-known primate behavior researcher. In this article, we learn that his career appears to be in ruins after he was found to have falsified data.

Marc Hauser’s future has been uncertain since a Harvard inquiry found him responsible for scientific misconduct.

By Carolyn Y. Johnson
Globe Staff / April 21, 2011

Marc Hauser, the prominent Harvard psychology professor who was found by university investigators to have committed scientific misconduct, will not teach there next year, after a decisive faculty vote and a decision by the dean.

Hauser’s scientific and academic future has been uncertain in the months since Michael D. Smith, dean of the Harvard Faculty of Arts and Sciences, announced in a letter than an internal investigation had found the professor "solely responsible" for eight counts of scientific misconduct.

[...]

The Globe first reported last August that a lengthy internal investigation had found evidence of misconduct. The investigation had resulted in the retraction of a study in the journal Cognition and a correction published to another study in the Proceedings of the Royal Society B. A paper published in the journal Science has yet to be corrected.

The dean disclosed that five additional pieces of research had been found to have problems, but those were either not published or corrected before publication. They were “problems involving data acquisition, data analysis, data retention, and the reporting of research methodologies and results,” his letter said.

[Article extract source: The Boston Globe]
These are very serious allegations for any research scientist. In this case, it is especially ironic that Hauser's research was on the development of morality in chimpanzees and other primates.

**Value of research**
Research has little value if it is inaccurate or tainted by conflicts of interest. All of you will do some research in your future careers, some more than others.

"Research" doesn't necessarily mean scientific research in a lab - it could mean compiling a report for your boss on your company's investment outcomes. This is still "research". Other people will depend on the outcomes of your work, so they will expect it to be reported honestly and accurately.

In some research contexts, for example biological sciences, there are specific standards that must be followed.

The following pages will give an overview of the standards and practices that will apply to all of you.

**Standards for research conduct**
When you conduct any kind of research, either during your university days or when you begin working, you need to follow various government, institutional and professional standards.

You will also be guided by your own ethical standards.

**i. Principles of Research Integrity**
These are the principles as outlined in the Singapore Statement on Research Integrity:

- **Honesty** in all aspects of research
- **Accountability** in the conduct of research
- **Professional courtesy and fairness** in working with others
- **Good stewardship** of research on behalf of others

**ii. Four levels of standards**

A. Government Standards for Conducting Research

Most countries, including Singapore, have regulations on research involving:

1. Research misconduct
2. Use of human participants in research
3. Use of animals in research
4. Conflict of interest
5. Data protection and sharing
6. Laboratory management and safety
7. Employment practices
8. Intellectual property
9. Computer misuse
B. Company or Institutional Standards

The company (or university) you work for will have a set of standards covering many of the items in the above list. The company's standards will often be more strict than government standards and you should familiarise yourself with them when you begin working.

There is a good chance you will be asked to sign a document in which you promise to uphold ethical standards, and keep company secrets.

C. Professional Standards

Most professions have their own set of standards, and those who don't follow them can be "struck off", which means they cannot continue to work in that profession.

D. Personal Ethics

Some people follow standards because they don't want any trouble, while others choose not to follow the regulations and continue to do so while they can "get away with it".

And then there are others who have a strong sense of ethics and aim to do the "right thing" at all times.

Summary of Research Responsibilities

1. Responding to Irresponsible Research Practices

Research institutions, journals, and professional organizations should have procedures for responding to allegations of misconduct and for protecting those who report such behavior in good faith. When misconduct is confirmed, appropriate actions should be taken promptly, including correcting the research record.

2. Integrity

Researchers should take responsibility for the trustworthiness of their research.

3. Reporting Irresponsible Research Practices

Researchers should report to the appropriate authorities any suspected research misconduct, including fabrication, falsification or plagiarism, and other irresponsible research practices that undermine the trustworthiness of research, such as carelessness, improperly listing authors, failing to report conflicting data, or the use of misleading analytical methods.

4. Adherence to Regulations

Researchers should be aware of and adhere to regulations and policies related to research.

5. Research Methods

Researchers should employ appropriate research methods, base conclusions on critical analysis of the evidence and report findings and interpretations fully and objectively.

6. Research Records

Researchers should keep clear, accurate records of all research in ways that will allow verification and replication of their work by others.
7. Research Findings
Researchers should share data and findings openly and promptly, as soon as they have had an opportunity to establish priority and ownership claims.

8. Authorship
Researchers should take responsibility for their contributions to all publications, funding applications, reports and other representations of their research. Lists of authors should include all those and only those who meet applicable authorship criteria.

9. Publication Acknowledgement
Researchers should acknowledge in publications the names and roles of those who made significant contributions to the research, including writers, funders, sponsors, and others, but do not meet authorship criteria.

10. Peer Review
Researchers should provide fair, prompt and rigorous evaluations and respect confidentiality when reviewing others' work.

11. Conflict of Interest
Researchers should disclose financial and other conflicts of interest that could compromise the trustworthiness of their work in research proposals, publications and public communications as well as in all review activities.

12. Public Communication
Researchers should limit professional comments to their recognized expertise when engaged in public discussions about the application and importance of research findings and clearly distinguish professional comments from opinions based on personal views.

13. Research Environments
Research institutions should create and sustain environments that encourage integrity through education, clear policies, and reasonable standards for advancement, while fostering work environments that support research integrity.

14. Societal Considerations
Researchers and research institutions should recognize that they have an ethical obligation to weigh societal benefits against risks inherent in their work.

15. Safety
No matter what kind of research is being conducted, safety of all persons (and animals, if relevant) is paramount.

Research Ethics Case Studies
Here are some situations where we have some stark choices, or unfortunate outcomes.
Let's look at some more case studies, so you can consider what you would do in such situations.
**Case Study 1 - FFP & whistle-blowing**

Suu is a graduate student and has been working in a lab for a year on her Ph.D. dissertation research. She has been troubled for the last several months by the possibility that her advisor may be manipulating data used in his publications.

She has just discovered what she believes to be incontrovertible evidence that some of his published data had in fact been fabricated.

• What should Suu do? If she reports her advisor, it would most certainly jeopardise her own Ph.D. outcomes, since he may be replaced with someone unsuitable,

• or if she continues to work with him it would be a very uncomfortable situation.

"FFP" is a commonly used abbreviation for "fabrication, falsification, and plagiarism", aspects of academic misconduct that should never occur. In this story, it appears Suu has uncovered a case of fabrication.

**Suggested actions in Suu's case**

First, it is useful to remember that data fabrication is rare in physics, so while the student is likely in a position where she must take some action, she should keep open the possibility that she has misinterpreted the situation.

This comment, however, should not be used to justify looking the other way on the possibility that she is wrong.

The question about the data needs to be resolved. If there is going to be a formal inquiry of this matter, then it will be very important to preserve as much physical evidence as possible. At some universities, lab notebooks and other relevant material are impounded immediately upon receipt of a formal allegation of research misconduct. Preserving the evidence makes it much easier to arrive at a definitive conclusion regarding the existence of misconduct or the grounds for full exoneration. With this in mind, any actions the student takes should be consistent with the goal of preserving the evidence.

A formal inquiry into a misconduct allegation is kept confidential out of respect to both the accused and the accuser. Anything the student does prior to making a formal allegation should be consistent with this principle. This means that the student should not ask numerous people for their opinion on the matter, but rather advice should be sought from one or two trusted department members or from the university official who is likely to conduct the inquiry.

Nearly every university has someone designated as their Misconduct Policy Officer (or a similar title) who has the responsibility for initiating inquiries in response to formal allegations. The student may well need to take her allegation to this official.

It is best not to try to handle the situation within the department, since her advisor may hear about it and possibly destroy evidence.

**Case Study 2 - Fairness**

A young graduate student in the middle of his thesis research is diagnosed with a debilitating chronic disease. The recurrence of the condition results in his being absent from the laboratory for extended periods of time. Ultimately he falls seriously behind in his research.

This poses a dilemma for his mentor, who, while wanting to be supportive of the suffering student, has an obligation to his research sponsor to be productive scientifically. To complicate matters, the student is from another country, and if he loses his student status, he will have to leave Singapore.

What should the mentor do?
**Suggested actions**

One approach the professor might take is to apply the same standards as best he or she can that other employees at the university would have. Most universities have an office that handles issues pertaining to students with disabilities. By contacting that office, the professor can first find out what the legal requirements are.

The focus can then move to what other accommodations, if any, should be made for the resolution of the situation to be ethical.

**Case Study 3 - Trust**

Background: When you submit a paper to a journal, it undergoes a process of refereeing (usually anonymously). The referee will check the paper's facts and conclusions, and also try to ensure there is no plagiarism. This is normally called peer review.

A young referee claimed to have been coincidentally working on the same problem that appeared in a paper he was sent to review. He made a positive review, and then went on to publish his own paper on the subject. The original author took note, and complained to the journal.

When approached, the referee pleaded with the journal that his institution not be contacted, apologized profusely, sometimes tacitly admitting and sometimes denying any guilt.

- What action should the journal in question have taken?
- Should the editors notify the referee’s institution?
- What should the author of the original paper have done to avoid this mess?

**Suggested actions in this case**

This problem emphasizes the importance of avoiding (whenever possible) even the appearance of a conflict of interest.

The author initially should have returned the manuscript unread, and not attempted to referee it.

The editors, given what occurred, should notify the referee’s institution and leave disciplinary action to it.

**Case Study 4 - Giving Proper Credit**

As a graduate student, you have worked closely with Professor Ching and her post-doc Kevin on a project studying experimental techniques in microfluidics. The project is going very well and you’ve even published some of your initial results. You will be graduating this spring with your master’s degree.

Professor Ching is now writing a subsequent paper with a colleague who is developing a theory that accounts for your results. You see a draft of the paper and notice that you are not listed as one of the four authors of the paper. However, the paper is directly based on the work that you did, and includes a new experimental plot that you created in addition to the theoretical calculations.

What would you do in this situation?

**Suggested actions in Professor Ching’s case**

The question of authorship can seem a bit vague as you begin a research career, but anyone who made significant contributions to the research should generally be included in the author list.
Most journals have regulations which state that all those who have made significant contributions should be offered the opportunity to be listed as authors.

If you believe that you made significant contributions, one possibility is to simply ask your advisor directly whether you will be included as an author. It could be that she has not specifically thought about the author list yet or has other plans for publishing your contributions to the project. If you do not feel that you’ve gotten a satisfactory answer, a trusted faculty member who is not involved with your research group might be able to provide guidance on what is typical and appropriate.

If that fails, consulting the department head or the departmental ombudsperson would be appropriate.

[Case studies based on: APS Physics]

Confidentiality

We all like to talk about the work we are doing, but when it comes to research, we need to maintain confidentiality in various situations.

i. Human research participants

- When the test subject has given private information and trusts the researcher to keep such information private.

There are situations where a researcher will feel compelled to divulge confidential information:

- When it is for the "public good" (the researcher may have discovered a new disease, for example, or when sharing a DNA sequence may help others with a similar problem)
- When there is a police investigation into the test subject

Participants get involved in research on a voluntary basis, so they actually have more rights to confidentiality than a patient in a hospital, for example.

If we want people to volunteer as research test subjects, we must create an environment of trust.

The Common Rule

A researcher obtains the following information about human subjects:

1. Data through intervention/interaction with the individual, or
2. Identifiable private information.

Protecting such data is the key to protecting privacy.

Source: Privacy & Confidentiality, Columbia University

ii. Conducting peer reviews of articles

Academics and lead researchers in companies are often asked to review articles sent by journals.

It is important to maintain the confidentiality of the authors and their results in this situation.

Difference between Law and Ethics

The law has sanctions (punishments) that discourage people from doing harm to others.

Ethics are based on the moral code of the society in which we operate. That "society" may be your family, your ethnic group, your country, your company or your group of friends.
The law is generally fixed within a country, but ethics may vary from society to society.

6. Summary

Summary of main points

Here are the main "take-home" messages from this Section:

1. Copyright law exists to encourage the growth of creative pursuits such as scientific discovery, the arts, journalism, writing and film-making.

2. Most companies regard their intellectual property as vitally important for their survival. If people copy their intellectual property, then the company suffers.

3. We will develop intellectual property throughout our working lives. If we want people to respect our right to profit from what we have created, we need to respect copyright laws.

4. The "culture" of academic writing has developed over the years as a way to respect each others' contributions. When I use someone else's conclusions, I need to recognise them for their contribution (by citing them in my writing).

5. Research only has value when it is conducted properly and reported truthfully.

6. When conducting research, we need to be aware of the ethical guidelines and regulations surrounding that research, especially when dealing with human or animal test subjects.

Overall Summary...

“When you say did the work, you actually did it.
When you rely on someone else’s work, you cite it.
When you present research materials, you present them fairly and truthfully.”

(Lipson, 2008, p.3)
Part D – Resources and References

1. Helpful resources and links

i. NTU Honour Pledge
   NTU Honour Pledge (PDF, NTU)

ii. Academic Writing Guide (NTU)
   Academic Writing Lists NTU Library resources and Web links. (PDF, by NTU Library)

iii. Plagiarism and Academic Integrity Guides (NTU)
   Thou Shall Not Steal (about plagiarism, by NTU Library)
   Plagiarism Guidelines (Contains a definition of plagiarism and an outline of penalties. By NTU's HASS College: 3 pages)
   A Guide to Academic Integrity (by NTU)

iv. Academic Writing Style Guides (various)
   Dr Cite (useful set of FAQs on referencing)
   re:cite (interactive citation tool by University of Melbourne)
   ASA Quick Style Guide (Guide for American Sociological Association referencing. PDF, by NTU Library)
   Research and Citation Sources (Purdue University OWL - Online Writing Lab)
   Referencing Guides (University of Southern Queensland)

v. Copyright Resources
   Intellectual Property Office of Singapore (IPOS)
   What is Copyright? (Intellectual Property Office of Singapore)

vi. Research Integrity
   Singapore Statement on Research Integrity

vii. Courses available at NTU Library
   The Library conducts various programmes on academic writing, plagiarism, and academic writing using EndNote which you may find useful.
   Here is the EndNote information page.
2. Handbook reference list

These are the sources quoted, paraphrased and adapted for this Academic Integrity Handbook.

NOTE: The list was produced by Zotero, using the "APA version 6" setting.


Albert Einstein On Israeli-Arab Relations, New Outlook: Middle East Monthly, Volume 1, Number 1, 1957 July, p 5. Published by Tazpioth, Tel Aviv, Israel


Disgraced South Korean scientist guilty of fraud over faked stem cell research - Telegraph. (n.d.). Retrieved April 2, 2013, from
3. Congratulations!

You’ve made it to the end of the Handbook. We hope you have learned a great deal about academic honesty, and research integrity.