Faculty of Engineering
The Chinese University of Hong Kong

Guidelines To Academic Honesty

This booklet contains guidelines for undergraduate students in their pursuit of academic honesty in academic works, which is the core value of higher learning. Guidelines and examples quoted here are more related to the Engineering context. **Students in the Faculty should always refer to the more comprehensive University guidelines at the website: http://www.cuhk.edu.hk/policy/academichonesty/.**

The first part of this booklet cites concrete examples in the Engineering environment such that students would have a deeper understanding on what constitute plagiarism in making use of materials and discussion results for Engineering assignments, laboratory reports, and projects. The second part deals with the penalty policy of the Faculty Disciplinary Committee such that students are fully aware of the possible consequences.

If students are still in doubt as to whether a certain act is clear of plagiarism, they should always seek assistance from tutors and teachers in their Department.

Some examples of plagiarism in "Computer" Programming

Plagiarism is not restricted to just quoting/paraphrasing from publications without acknowledgement. In many cases, plagiarism involves a student (the "copier") copying parts or whole of a work of fellow classmate(s) or friend(s) (the "provider(s)"), who may or may not have to submit the same assignment. At the Faculty of Engineering, we consider cases in which the providers consciously furnish their own work for the copiers' plagiarizing purposes, so that both the copiers and the providers are to be held liable in the offense. If a copier copied without a provider's consent, the case will be handled as theft.

Advancement of the knowledge frontier is seldom a result of solo work, but relies on collaborative effort by the research community at large. Many breakthroughs were built upon the work of great scholars of the past. Therefore, copying is not equivalent to plagiarism but credits must be given where credits are due. By this principle, a student can choose to copy peers' work in an assignment when necessary, provided that proper acknowledgement is given. The copied parts should only constitute a minor part of the work submitted. Of course, teachers concerned would certainly take this fact into account in evaluating the student's effort and work.

In case of term paper assignments, prior examples and guidelines of plagiarism from publications are all applicable in this context. In the case of computer programming and mathematical/scientific problem solving exercises, while it is possible for two different persons to come up with similar solution methods, there is usually much more than one way of coding an algorithm and phrasing a mathematical derivation.

In general, it is difficult to formulate precise guidelines on when computer program codes or mathematical derivation/proof fragments are plagiarized from another source, since allegations of this sort depend on the amount of similar codes or structures, and plausibility of two persons coming up with the same tricky idea. Appearance of (a) substantial identical or similar structures, (b) identical or similar non-trivial structures, or even (c) identical or similar mistakes in two submissions is, however, a good indication of possible plagiarism. The teachers concerned would have to examine the suspected submissions more closely, exercise professional judgment, and, perhaps also, consult other colleagues to come up with a conclusion. Students should also be prepared to appear before the teachers concerned to, for example, describe the working principle and machineries of the submitted work.

In the following, we give examples of proper and improper uses of other people's work in the context of computer programming assignments.

Original source: Student A came up with the following routine in the C language for use in an assignment (which contains other parts).

```
/*-----------------------------------------------------------*/
int findLargest(int size, int a[]) {
   int i, tmp = 0;

for (i = 1; i < size; ++i)
      if (a[i] > a[tmp])
            tmp = i;
   return(tmp);
}
/*-----------------------------------------------------------*/
```

Example 1: Improper use (straight copying): Student B copied student A's routine verbatim.

```
/*-----------------------------------------------------------*/
int findLargest(int size, int a[]) {
   int i, tmp = 0;

   for (i = 1; i < size; ++i)
      if (a[i] > a[tmp])
            tmp = i;
    return(tmp);
}
/*-----------------------------------------------------------*/
```

Example 2: Improper use (paraphrasing 1---change of variable names): Student C copied student A's routine, and performed only a systematic change of variable names.

```
/*-----------------------------------------------------------*/
int findL(int s, int b[]) {
   int j, tmp1 = 0;
   for (j = 1; j < s; ++j)
      if (b[i] > b[tmp1])
            tmp1 = j;
   return(tmp1);
}
/*-----------------------------------------------------------*/
```

Example 3: Improper use (paraphrasing 2---superficial changes):

Student D basically copied student A's routine, and performed some superficial re-ordering of statements and expressions.

```
/*-------------------------------------------------------------*/
int findLargest(int size, int a[]) {
    int tmp;
    int i;
    tmp = 0;
    for (i = 1; i < size; ++i)
        if (a[tmp] < a[i])
                tmp = i;
    return(tmp);
}
/*-------------------------------------------------------------*/
```

Example 4: Improper use (paraphrasing 3---slightly more structural changes):

Student E basically copied student A's routine, and a simple transformation of the for-loop into a while-loop.

```
/*-------------------------------------------------------------*/
int findLargest(int size, int a[]) {
    int tmp;
    int i;
    tmp = 0;
    i = 0;
    ++i;
    while (i < size) {
        if (a[i] > a[tmp])
                tmp = i;
        ++i;
    }
    return(tmp);
}
/*-------------------------------------------------------------*/
```

Example 5: Proper use (quoting and acknowledging): Student F did not know how to write the findLargest() routine, but did not want to jeopardize the completion of the entire assignment. Student F copied student A's routine, and acknowledge the copying. It is envisaged that teachers will take into account the quoted work when awarding marks.

```
/*-------------------------------------------------------------*/
/*************************************/
/* Copied from my classmate Student A *        /
/*************************************/
int findLargest(int size, int a[]) {
   int i, tmp = 0;

   for (i = 1; i < size; ++i)
      if (a[i] > a[tmp])
            tmp = i;

   return(tmp);
}
/*-------------------------------------------------------------*/
```

How to make use of results from "Discussions with Fellow Students"

We discuss with our teachers or fellow students in order to understand a subject better. In many cases discussions are even more fruitful than studying on your own and hence they should be encouraged. However, we should also note that when transferring the results of a discussion to an individual assignment like writing a computer program or solving an equation, care must be taken in order not to commit plagiarism. The following examples will help you not only to avoid any technical faults but also to build up a right attitude towards group discussions.

Example 1: In a computing assignment you are asked to write a program to sort a given set of 5-digit numbers. You may discuss with your classmates on sorting methods, general programming techniques, or functions specific to the language being used. You must however write your own program without assistance from others.

Example 2: You are doing a laboratory experiment with another two group members. After taking the necessary data, all three of you will together examine the data to see if they comply with the theory. While the raw data can be shared and presented identically in your reports, each of you must write in your own words your interpretation of the data, their agreement or disagreement with the theory, and your conclusion.

Example 3: In a math assignment you are asked to find the inverse of a 3-by-3 matrix. In this calculation you need to find the determinant of this matrix but you have the knowledge only for a 2-by-2 matrix. You may ask someone to teach you how to cope with a general 3-by-3 case but you must perform the actual calculation by your own effort.

Case study of plagiarism in Lab reports

1. A group of students, Ming and Man, had just finished their lab work. They left the lab and worked on the report in the computer room. Then they discovered that their data was not quite right. So they consulted their classmates Ho and Hei and checked their data against their own.

   Q: Is it OK to consult another group and look at their results?

2. Indeed Ming and Man had overlooked a crucial step in the measurement and got the wrong results. Since the lab had already been closed, and Ming and Man did not want to take the trouble to repeat their lab measurement, so Ming suggested that they just replaced their wrong data with Ho and Hei's data.

   Q: Is it an act of plagiarism to replace the lab data taken by another group?

3. Man thought that it would not be courteous to use other's data without asking, so Man sought Ho and Hei's consent to just pull a small portion of the lab data from their report and graft into theirs. As good citizens with kind hearts to help others, Ho and Hei consented.

   Q: Should good citizens allow their lab data to be used by another group?

4. After the lab reports were submitted, the TA discovered that the two group reports had contained identical lab data and explanations, so a clear case of plagiarism was established. Ho and Hei explained to the TA that it was Ming and Man who copied from them.

   Q: Would Ming and Man receive penalties because they copied another group's result? Would Ho and Hei receive penalties just because they shared their work with another group?

5. What should Ming and Man do to avoid the plagiarism?
   - Go back to the lab at some other time and redo the invalid part.
   - Leave out the invalid part and just submit the lab report.
   - Use Ho' and Hei's data but state clearly in the report that the data was obtained from Ho and Hei.

6. Instead of lending their data to Ming and Man directly, how could Ho and Hei help their classmates?
   - Ask Ming and Man to state explicitly in the lab report that they have consulted Ho and Hei and used their data.
   - Explain the concept to Ming and Man without showing the lab data to them.
   - Look at Ming and Man's data and tell them where they got wrong.

How to make use of materials from the Internet

There is abundant information available in different formats on the internet. With the powerful search engines like Google, one can retrieve useful online articles or writings by simply inputting a few keywords of interest. This is an effective way of retrieving timely information and should be encouraged.

However, one must be careful when he/she would like to incorporate such online information into his/her own work. It is considered to be plagiarism if a student includes the original text of the whole or part of an article that he/she finds on the internet into his/her assignment/report without properly acknowledging the source of the information.

Example 1:

Suppose that you would like to write a paper on the history of internet. The following is part of an online article (http://www.isoc.org/internet/history/brief.shtml):

"The original ARPANET grew into the Internet. Internet was based on the idea that there would be multiple independent networks of rather arbitrary design, beginning with the ARPANET as the pioneering packet switching network, but soon to include packet satellite networks, ground-based packet radio networks and other networks. The Internet as we now know it embodies a key underlying technical idea, namely that of open architecture networking."

The following paragraph directly copies the original text of that article, without mentioning the source of information. This is obviously plagiarism:

The Internet was developed from the original ARPANET. Internet was based on the idea that there exist multiple independent networks of rather arbitrary design. It began with ARPANET as the pioneering packet switching network, and soon included packet satellite networks, ground-based packet radio networks and other networks. The Internet as we now know it embodies a key underlying technical idea, namely that of open architecture networking.

The following shows a proper incorporation of the information provided in that article:

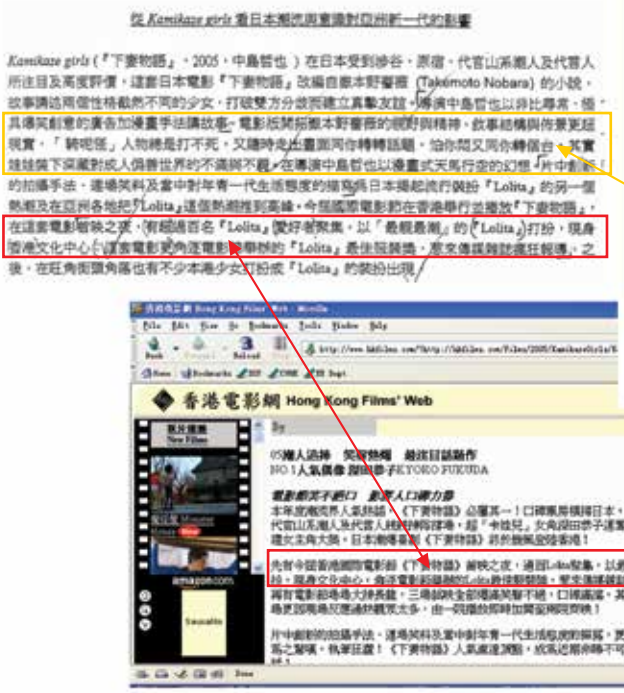
The Internet was developed from the original ARPANET. It attempted to connect a number of independent computer networks that might have arbitrary design[1]. Initially, only packet switching network was included. Packet satellite networks, ground-based packet radio networks and other networks were introduced in a later time. The key idea of Internet is the so-called "open architecture networking".

[1]Barry M. Leiner et al., **A Brief History of the Internet,** Online article available at http://www.isoc.org/internet/history/brief.shtml.

Example 2:

A case of plagiarism on a General Education term paper:

Extract from the student's term paper:



Penalty Scheme

The Penalty Scheme adopted by the Faculty Disciplinary Committee is detailed below:

A. First time offender will receive one demerit on the transcript that may be reviewed and a zero mark for the assignment/lab report/test/exam or the entire course in question.
B. Second or more time offender will receive two demerits (reviewable/non-reviewable or a combination of both) on the transcript, and a zero mark for the assignment/lab report/test/exam or the entire course in question.
C. According to the University regulations, students who have received a total of three demerits will be reported to the Senate Committee on Student Discipline for final decision, which can be immediate suspension/termination of studies.

All those who willingly allow others to copy his/her work will be considered having aided plagiarism and those who have aided plagiarism will receive one demerit (reviewable or non-reviewable) and/or having a zero mark for that component of the course. In this regard, students should not share their assignments with others by any means, including, but not limited to, putting the assignment in a publicly accessible venue (such as a public repository, personal homepage, or Facebook).

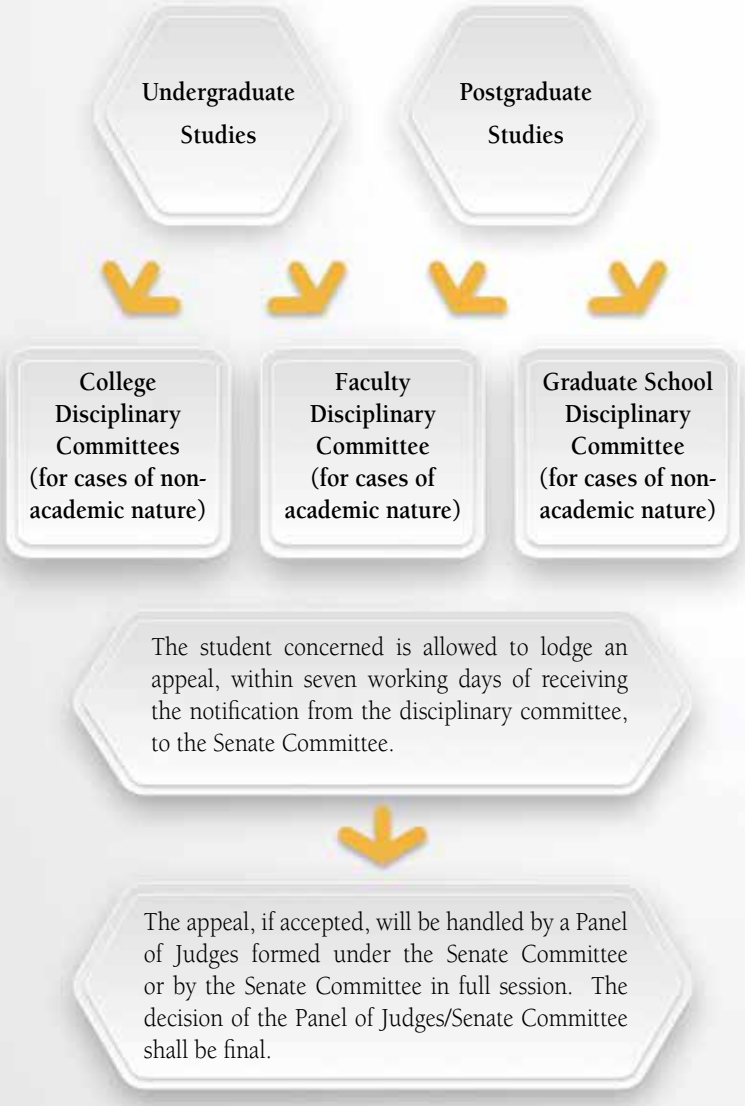
According to the University policies, each student in a group work is responsible and liable to disciplinary actions should there be any plagiarized contents in the group work, irrespective of whether he/she has contributed directly or indirectly to the plagiarized contents.

Note:

It is the decision of the Senate Committee on Student Discipline that under normal circumstances the demerit(s) (if reviewable) will be reviewed no earlier than the final term of the normative study period of the student concerned, or the demerit(s) (if reviewable) will be removed from the University's record by the time of graduation of the student concerned if no further offence is committed.

For full version of the Academic Honesty Policy, please refer to the University website at http://www.cuhk.edu.hk/policy/academichonesty/.

Procedures for Handling Student Disciplinary Cases



* When the disciplinary case involves students belong to different Faculties/Colleges or involves both undergraduate and postgraduate students, or when the case is deemed very serious in nature, it shall be handled by the Senate Committee directly, by means of a Panel of Judges formed under the Senate Committee.

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