EXAMPLES OF ACADEMIC MISCONDUCT

Academic misconduct includes but is not limited to the following:

CHEATING

Cheating is committing fraud and/or deception on a record, report, paper, computer assignment, examination, or any other course requirement. Examples of cheating include:

- Obtaining work or information from someone else and submitting it under one's own name.
- Using unauthorized notes, or study aids, or information from another student or student's paper on an examination.
- Communicating answers with another person during an exam.
- Altering graded work after it has been returned, and then submitting the work for regrading.
- Allowing another person to do one's work and submitting it under one's own name.
- Preprogramming a calculator to contain answers or other unauthorized information for exams.
- Submitting substantially the same paper for two or more classes in the same or different terms without the expressed approval of each instructor.
- Taking an exam for another person or having someone take an exam for you.
- Fabricating data which were not gathered in accordance with the appropriate methods for collecting or generating data and failing to include a substantially accurate account of the method by which the data were gathered or collected.

PLAGIARISM

Plagiarism is representing someone else's ideas, words, statements, or other work as one's own without proper acknowledgment or citation. Examples of plagiarism include:

- Copying word for word or lifting phrases or a special term from a source or reference, whether oral, printed, or on the internet, without proper attribution.
- Paraphrasing, that is, using another person's written words or ideas, albeit in one's own words, as if they were one's own thought.
- Borrowing facts, statistics, graphs, or other illustrative material without proper reference, unless the information is common knowledge, in common public use.
UNACCEPTABLE COLLABORATION

Collaboration is unacceptable when a student works with another or others on a project and then submits written work which is represented explicitly or implicitly as the student's own individual work. Using answers, solutions, or ideas that are the result of collaboration without citing the fact of collaboration is improper. Students also engage in unacceptable collaboration when they expressly have been instructed to do their own work and have not been given prior approval by the instructor to collaborate.

FALSIFICATION OF DATA, RECORDS, AND OFFICIAL DOCUMENTS

- Fabrication of data
- Altering documents affecting academic records
- Misrepresentation of academic status
- Forging a signature of authorization or falsifying information on an official academic document, grade report, letter of recommendation/reference, letter of permission, petition, or any document designed to meet or exempt a student from an established class, College, or University academic regulation.
- AIDING AND ABETTING DISHONESTY

Providing material or information to another person with knowledge that these materials or information may be used improperly. This includes both deliberate and inadvertent actions.

UNAUTHORIZED OR MALICIOUS INTERFERENCE/TAMPERING WITH COMPUTER PROPERTY

Unauthorized or malicious interference or tampering with faculty, administrative, or staff computers is considered an academic offense and, as such, is subject to College judicial procedures and sanctions.

CLASSROOM DISTURBANCES

Classroom disturbances can also serve to create an unfair academic advantage for oneself or disadvantage for another member of the academic community. Some examples of actions that may violate the LSA Community Standards of Academic Integrity include:

- Interference with the course of instruction or an exam to the detriment of other students.
- Disruption of classes or other academic activities in an attempt to stifle academic freedom of speech.
- Failure to comply with the instructions or directives

Resource: http://www.lsa.umich.edu/academicintegrity/examples.html
Exercise #1 – Assessing a rubric/answer key

Evaluate the following answer key to the “Little Variety Test”. Discuss in a small group if this is good answer key for a grader. Remember to evaluate the answer key itself, not the test content.

Do you find any parts of the answer key confusing, unclear, and/or incomplete? Which parts?

How would you rewrite the answer key so as to be clearer for the grader?
Little Variety Test
50 points

1.) Which of the following is an alcohol? (4 pts.)
   a) Acetone (CH₃)₂CO  b) Sodium Chloride NaCl
   c) Hexane C₆H₁₂  d) Methanol CH₃OH

2.) True or false? Correct the statement if it is false. (4 pts.)
   The University of Michigan mascot is a buckeye.

   For the remaining problems, show all work to be eligible to receive partial credit.

3.) You are a plant manager. You hire a consultant to assist you in transforming your plant from mass to lean. The consultant recommends you immediately remove all inventory and incorporate one-piece-flow in order to reduce your process leadtime. What do you think of this strategy? Why?

   Start with foundation of lean, 5S, standard work
   problem solving, leveling scheduling
   Reduce inventory gradually

4.) Using the following table of water density at various temperatures, estimate the density of water at 23.4°C. (15 pts.)

<table>
<thead>
<tr>
<th>T (°C)</th>
<th>p, g/cm³</th>
</tr>
</thead>
<tbody>
<tr>
<td>20</td>
<td>0.998220</td>
</tr>
<tr>
<td>21</td>
<td>0.998306</td>
</tr>
<tr>
<td>22</td>
<td>0.997782</td>
</tr>
<tr>
<td>23</td>
<td>0.997548</td>
</tr>
<tr>
<td>24</td>
<td>0.997304</td>
</tr>
<tr>
<td>25</td>
<td>0.997050</td>
</tr>
</tbody>
</table>

   \[
   \frac{24 - 23}{(997304 - 997548)} = \frac{24 - 23.4}{(997304 - p)}
   \]

   \[
   p = 10.0204 \text{ g/cm}^3
   \]

5.) Frank is pulled over for speeding by the Ontario Provincial Police (OPP). His speedometer tells him that he is driving 75 miles per hour. The speed limit is 100 kilometers per hour. If the fine is $10 Canadian for each kilometer over the limit, how much does Frank owe the OPP in US dollars? (Assume the exchange rate is $1.02 American per $1 Canadian) (17 pts.)

   \[
   \frac{75 \text{ mi}}{hr} \times \frac{1 \text{ km}}{1.609 \text{ mi}} = 120.70 \text{ km/hr} = 20.7 \text{ km/hr over limit}
   \]

   \[
   20.7 \text{ km/hr} \times \frac{$10 \text{ Can}}{\text{km over limit}} = $207 \text{ Canadian fine}
   \]

   \[
   207 \text{ Can} \times \frac{1.02 \text{ An}}{1 \text{ Can}} = $211.14 \text{ American fine}
   \]
Exercise #3 – Evaluating lab report introductions with a rubric/answer key

Evaluate these examples of introductions to lab reports based on the criteria provided.

After grading, see how closely your grades matched those of other students. Where did you agree? Where did you disagree?

Grading criteria:
- The introduction is worth 3 points. Giving half points is allowed.
- Roughly one paragraph long.
- Generally talks about the concepts being covered in the lab experiment.
- Mentions relevant techniques being utilized in the lab.
- Written in present tense.

Student #1

The purpose of this experiment is to investigate the parts per million of Pb2+ in an aqueous solution. In this experiment, the analyte is first deposited at the mercury film electrode. When a substantial amount of analyte has been deposited at the electrode, the potential of the electrode is scanned such that the deposited metals are stripped from the mercury electrode. The concentration of metal in solution is determined via a standard curve and/or standard addition techniques.

Student #2

The goal of this lab was to experimentally determine the concentration of an unknown solution of Pb2+. The technique of stripping voltammetry was used in this experiment. In stripping voltammetry, a voltage is applied at two different points of a surface and the current is then measured. A working curve was created using a Pb2+ solution of known concentration and then this curve was used to determine the concentration of the unknown Pb2+ solution. A basic description of the specific technique used (Anodic Stripping Voltammetry) is as follows. Potential electrolysis occurs in a stirred solution. Metal ions in solution (Pb2+) collect as lead metal on the surface of the electrode. The potential of the electrode is then scanned in an effort to electrolyze the deposited metals, returning them into solution. The current is then measured at different potentials, with peaks responding to the relative amounts of certain metal species.
Survival tips for grading

- **Before grading, briefly skim through a portion of problems or essays.**
  - This will give a good idea of average student performance and how to handle partial credit.
  - This also helps identify common errors, topics or issues that need to be reviewed or covered more thoroughly in future classes or discussion sections. These topics are also good areas for exam questions if you are asked to develop them.

- **Be consistent with grading.**
  - To help facilitate consistency, grade one problem on each paper until all papers have been completed. Then, grade another problem until all papers have been completed. Continue doing this until all problems have been graded.
  - If you have multiple graders working on a problem set, ensure that only one grader works on a particular problem.
  - Reread your first graded solution every 10 – 15 assignments to help maintain consistency.

- **Decide beforehand how mechanical errors like grammar, units, significant digits and mathematical errors will be handled.** Ensure that students are aware of your policy. Be consistent throughout the term.

- **Be consistent with students**
  - What you do for one student, you must do for all students, so be careful.
  - Never deny a student regrade request. It can cause issues between you and the student. If the request does not follow the course guidelines, refer the student to them.
  - If you are a member of an instructional team (particularly for a lab course), make sure there is a line of communication between all members.
  - Briefly review assignments returned from a grader before handing the work back to the students.

- **During and after grading, make note of common mistakes or problems encountered by students.**
  - It will give you an opportunity to see the concepts and/or methods that the students had trouble with on the assignment, which can be discussed at a later time.
  - If you have graders, briefly review assignments with them after grading or ask them to note any common errors seen in the assignments.
  - Use grader's notes.
• Provide written comments (feedback) to students to explain why they have lost points.
  o This will save you time as it will reduce the number of students asking: “Why did I lose points on this problem?”
  o It will provide a learning tool for the students to learn from their mistakes.

• Ensure that the written directions for a problem/assignment clearly define the scope of the assignment and what is expected of the students.
  o A common excuse from students is: “Well, I didn’t know that’s what you wanted”. This can be avoided by being clear in writing from the beginning.
  o If you did not write the problem and are unclear of what is expected of the students, ask the person who wrote the problem/assignment statement. Ideally, this should be done before the students receive the assignment or sufficiently in advance of the due date.
  o Provide the students with sufficient time to ask questions for clarity before the assignment is due.

• Clearly define to the students in written directions the point values associated with each problem or part of a project.
  o This will alleviate the “How much is this problem worth?” questions.

• Although solutions manuals are nice and convenient, it is in your best interest (as a GSI) to write your own solutions or at least go through the problem yourself before consulting the solution manual.
  o In writing your own solutions, it will be easier to assist students with the problems in office hours.
  o It will be easier to identify the steps in the solution process to assist in student instruction and identify partial credit.

• For each assignment, provide the students with the average and standard deviation of the assignment.
  o Providing statistics (particularly for exams or major projects) will allow the students to track their progress and success in the course and will reduce the number of questions from students asking how they are doing in the class.

• Never publish students’ grades in a manner that can be easily identifiable by others.
  o Never publish student grades by name, uniqname, birthday, etc. Using the student’s UM ID is a generally acceptable way to post grades.
  o Try having the students write their name on a coversheet so you can grade anonymously.
- Write the final grade on an inside page so that students can keep their grades private when the work is returned to them.
- Hand the assignment back to the students face down.

- Don’t take things personally.
  - Grading issues can cause students a significant amount of anxiety. They may express anger or despair over their grade. You do not need to be a student’s buddy or enemy when it comes to grading. If you have a method for grading and regrading, stick to it and remain impartial.

- When in doubt, involve the professor on all judgment calls, or issues where you are uncertain of the University’s accepted protocol.
  - It is best to keep the Professor abreast of any and all grade issues that arise between you and a student.

- Grade in ink
  - This prevents students from erasing your marks/corrections and putting in the correct answer.
  - Grade in colors other than red for it is viewed as less harsh to some students.

- Cross out empty spaces on students assignments/exams
  - Sometimes, after students receive their graded assignment or exam, they will add missing solutions on the reverse side, and ask for a regrade claiming that the solution was there all along and GSI did not notice it before. To avoid this, cross out all the blank pages of students’ assignments when you are grading them, including the back sides of pages.
Suggestions for grading lab reports

Writing a lab report serves several purposes. First, producing a report allows students the chance to put their observations and interpretations into a cohesive and coherent format. Secondly, it helps students prepare for their future careers, illustrating the process of conducting research and documenting results.

The following suggestions should help make the grading of lab reports easier.

1. **Lay out grading criteria clearly and in advance.** A written statement clarifying what your expectations are provides a means for the students to understand your expectations and ask questions as necessary. It can also serve as a useful reference tool should a student have a question about a grade received. Additionally, policies on late lab reports should be written down and handed out at the beginning of the term. This reduces possible misunderstandings and allows for easier decision making during the term.

2. **When grading lab reports, read through several before making any comments or determining scores.** This allows you to form a baseline impression for the class before grading individual reports. It also helps to form a checklist of criteria that you can refer to when grading, to ensure consistency in your marks and to give students a specific understanding of what you are looking for in that report. Find out if there is a course-wide checklist for grading each lab to promote consistency across labs. If possible, grade reports closer together in time to ensure greater consistency in grading.

3. **When developing your criteria, decide how heavily you will weigh content vs. form.** Content refers to the substance of the report: data, results, interpretations, conclusions, etc. Form refers to how the substance is presented: organization of material, quality of graphs and tables, clarity of writing, grammar, etc. Many courses will have a standard format that students should follow in doing their write-ups. Check with the course professor to develop a clear understanding of grading criteria for reports. It also helps to check with other GSIs teaching the same course, or with those who have taught it previously.

As with any "real" science, not all labs will work out successfully for students. In many labs, the report will not be graded on the success of the results, but on the students' interpretation of their results. Thus, students who do not get the desired results from an experiment, but make a thoughtful analysis of why or of what should have occurred would not be penalized in their report. Evidence of good interpretation or analysis involves identification of patterns or contradictions and a specific, plausible and well-supported explanation for these results.

4. **Give useful and prompt feedback to students.** In addition to determining a grade for the report, your role as a GSI involves giving useful feedback to students. You should make comments on lab reports and return them with sufficient time for
students to learn from the comments before turning in their next report. When providing feedback, remember to focus on functional comments, not subjective opinions. For example comments such as "Could there be another explanation?" are more productive than statements such as "Oh really?" When providing feedback, try not to overwhelm the students. Sometimes, too many comments on a page can be daunting to a student who wants to improve. Instead, pinpoint a few key issues for each report. Spending extra time to thoroughly grade the first assignment and provide prompt feedback will greatly ease the grading procedure for the latter part of the semester.

5. **Determine your policy for late papers if not decided by the professor.** Policies for lateness have included: no late reports accepted, late reports accepted only with valid excuse, late reports accepted with grade reduction penalty, and one late lab accepted without penalty during the term. Develop a policy that fits with your philosophy and apply it consistently throughout the term. When determining your late policy, make sure to pay attention to when labs are due. If you are setting due dates that are difficult for students to meet, then you will probably have more late lab issues to address.

6. **Finally, remember that learning to grade is an ongoing process.** As you gain experience as a GSI, you will develop your own methods and systems for grading, and will constantly fine-tune them. Sharing grading issues and ideas with peers can help you in this process. If you have any doubts on a grading issue, consult the appropriate person in charge. It is difficult to alter grades once they are assigned.

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### Example of a formal lab report evaluation³

Some general comments that apply to many reports are given below, with some specific comments written in. You may also find comments on your paper. Total points possible are 35.

**FORMAT**

**Title:** The title of an experimental report should indicate the factors being manipulated, the effects or responses being measured and (sometimes) the specific topic or organism under study. Be as concise as possible.

___ / 1

**Introduction:** The introduction should provide a clear statement of the problem or questions addressed by your study. It should give references to relevant reports by other workers and should include enough background information to make your report understandable as an independent unit.

___ / 4
**Materials and Methods:** This section should (1) enable others to judge whether your techniques justify your conclusions and (2) provide enough information to allow your work to be repeated. Since your protocol was detailed in the lab manual, a short outline or explanation and a formal reference to the lab manual will suffice. Include any deviations from the lab manual protocol.

___/3

**Results:** Tables and figures, although important, are not enough for this section. Describe your results briefly, but indicate trends in your data that will be discussed in the next section. Tables and figures should be numbered, labeled, and mentioned in the text. The dependent variables should be on the vertical axes and independent variables on the horizontal axes. Linear, semi-log or log-log graphs should be used where appropriate.

___/4

**Discussion:** The discussion should include an error analysis (or at least an estimate of uncertainties), any inductions drawn from your results, and whether your data are consistent with relevant models or hypotheses.

___/4

**Summary:** The summary should be a shorter version (1-2 paragraphs) of the paper for those who don’t want to read it in detail. This section should be independent of the paper. Tell what you did, what happened as a result, and what you concluded.

___/4

**Literature Cited:** Any facts or ideas that you did not generate yourself must be attributed to the source where you found them (including other people). Indicate such references by inserting the author’s (authors’) name(s) and the date of publication at the appropriate place in the text and by listing a complete citation under Literature Cited. If any of the analysis was done as a group effort, this should be indicated. All references cited MUST be mentioned in the text. See the lab manual supplement for complete citation format.

___/3

**SCIENTIFIC CONTENT:**

Is the reasoning accurate? Are all possible inferences made? No illogical inferences drawn?

___/3

**STYLE, GRAMMAR AND SPELLING**

___/4

**TOTAL** ___/35