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Laboratory Report Guidelines and Format





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Lab Reports		see pages iv and v for more details
Exams		see page iv for more details
Practical Assessment		see page iv for more details
Laboratory Journal		see page iv for more details

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A final percentage will be calculated for the course based on the above criteria. All percentages will be rounded to the nearest whole number. For example, a calculated percentage of 79.49% will be recorded as 79% whereas 79.50% will be recorded as 80%

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90 - 100	A+
85 - 89	A
80 - 84	A-
77 - 79	B+
73 - 76	B
70 - 72	B-
65 - 69	C+
60 - 64	C
50 - 59	D
0 - 49	F (or N*)

#### \* N grades

Students who have completed the following course requirements will be considered to have completed the course and will be assigned a final percentage and letter grade.

- *In class lab work (all Day 1 and Day 2 components of the practical work must be performed)*
- *Midterm exam*
- *Final exam*

Failure to complete one or more of these elements will result in a grade of "N" regardless of the cumulative percentage on other elements of the course. An N is a failing grade, and it factors into a student's GPA as 0. The maximum percentage that can accompany an N on a student's transcript is 49.

\_\_\_\_\_ Marks for the lab reports will be assigned as indicated below.

Lab 1 – Primer Design	15
Lab 2 – Site-Directed Mutagenesis of a CBM Protein	40
Lab 3	

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- Text should be typed and double-spaced, with margins no smaller than 1.9 cm (0.75")
- Use 12 point font of a standard style such as Arial or Times New Roman.
- All written text should be concise, well written and proofread for grammar and spelling.

Below is a general outline of what should be included in the following portions of a lab report in this course. Each lab report will have a different set of requirements so be sure to read the instructions for each submission carefully. Refer to CourseSpaces for a more detailed description of lab report expectations.

State the purpose of the experiment(s) and put it in context. Summarize the methods, results and conclusions of the research.

In a few well written paragraphs, state the purpose and introduce the main concepts of the lab by defining important terms and explaining new ideas. As well, briefly describe and indicate the purpose of performing the individual techniques or experiments.

Refer to the source of the procedure in proper citation format (most of the time this will be the lab manual). For procedures that you have designed, briefly summarize techniques and materials used so that someone could repeat the experiment (minor details are not necessary). Include any *significant* modifications that were communicated to you either verbally or in written form. Also, include mistakes that were made by you, your partner or other individuals that may have affected your results.

Organize data in the form of fully labeled tables, graphs or figures. State the results in written form in a *Results Summary* placed before the figures, drawing attention to the key results. Reserve *all* interpretation for the discussion. Tables, graphs and figures should be numbered in the order in which they are cited in the text.

The discussion should provide an interpretation of your results. Be concise. Keep discussion relevant to the data generated from your own experiment (and that of your classmates when appropriate). Incorporate into your discussion the answers to any relevant questions that appear in the lab manual. In a couple of sentences, draw a conclusion based on the results of the experiment.

Include raw data, calculations and other information that is relevant. Remember to number your appendices and include a basic title for each.

Online links to all relevant reference papers can be found on CourseSpaces. Laboratory reports must be referenced following the format of the *Journal of Molecular Biology*. This is the same format we use in the lab manual.

A lab report submissi



Laboratory attendance is compulsory. Failure to attend a lab without a written medical excuse will result in a mark of \_\_\_\_\_ for the course. A change of lab section must be arranged with the lab instructor \_\_\_\_\_ to the lab period. Students who miss a lab for medical

Suspected cases of plagiarism or cheating will be documented and submitted to the department chair for penalty assessment as described in the UVic calendar (2016-2017).

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A student commits plagiarism when he or she:

- submits the work of another person as original work
- gives inadequate attribution to an author or creator whose work is incorporated into the student's work, including failing to indicate clearly the inclusion of another individual's work
- paraphrases material from a source without sufficient acknowledgement as described above

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Falsifying materials subject to academic evaluation includes, but is not limited to:

- fraudulently manipulating laboratory processes, electronic data or research data in order to achieve desired results
- using work prepared by someone else and submitting it as one's own
- citing a source from which material was not obtained
- using a quoted reference from a non-original source while implying reference to the original source
- submitting false records, information or data, in writing or orally

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Cheating includes, but is not limited to:

- copying the answers or other work of another person
- sharing information or answers when doing take-home assignments, tests and

Work in a microbiology laboratory involves exposure to living microorganisms, many of which must be considered as potential pathogens. Personal recognition of safety and the acceptance of certain precautions are therefore necessary prerequisites to working in the laboratory.

1.

2.

Keep paper, pencils, fingers, and other objects out of your mouth.

3.

4.

Laboratory coats will be provided for you and will be shared between sections. If you would prefer a lab coat of your own, you will need to bring one to your first lab section. It will be kept in the lab until the end of the course, at which time it will be autoclaved and available for pick-up.

5.

Capri pants, skirts and shorts are only allowed if they cover the knees when you are sitting down.

6.

7.

8.

9.

to protect against burning and falling into stains, chemicals or bacterial cultures.

10.

- Working with Level 2 organisms
- Working with potentially harmful reagents
- If you have open cuts or abrasions on your hands

11.

12.

13.

14.

No liquids are to be poured down the sink (except water).

15.

16.

This includes pipette tips, agar plates, contaminated gloves or paper towels, etc !

17.

- If skin comes into contact with chemicals, wash immediately with cold running water for at least 10 min.
- In the event of a bacterial spill, pour an equal volume of bench disinfectant on top of the spill and allow it to sit for five minutes. Clean up the spill wearing gloves and using a no-touch technique. Discard all waste in a yellow biohazard bucket for autoclaving.
- Do not pick up broken glass. The instructor will do this.
- If something has splashed in your eyes, rinse them at the eye wash station for at least 20 min.

18.

19.

20.

- Eye wash station
- Safety shower
- Fire extinguisher
- Telephone
- Fire alarm

21.

- Place all cultures and other contaminated materials to be discarded in the appropriate containers for sterilization in the autoclave
- Put your experimental materials ( ) in the appropriate bins or racks for incubation or storage
- Place contents of "tip discard" and used microfuge tubes into yellow biohazard bucket
- Rinse all glassware and place in the appropriate bin(s)
- Check that gas, water and microscope lights are turned off
- Wash the bench top with bench disinfectant
- Wash your hands thoroughly with hand disinfectant and/or soap

Experiments conducted in a microbiology laboratory involve the handling of pathogenic organisms. Failure to handle and dispose of these organisms correctly may lead to infection, injury or even serious illness. For the safety of everyone, it is required that you understand and follow the appropriate laboratory procedures as outlined by your laboratory instructor.

Your signature on the Biochemistry and Microbiology Lab Safety Form is your acknowledgement that you have read the safety regulations and agree to abide by them.

