

# BIOLOGY 2910 Laboratory Biology

## Course Outline

FILE COPY

Instructor: Lada Malek, CB 4050, ph. 8709, [lmalek@lakeheadu.ca](mailto:lmalek@lakeheadu.ca)

Laboratory technician: Susanne Walford, [swalford@lakeheadu.ca](mailto:swalford@lakeheadu.ca)

Graduate assistants: TBA

Textbook: none, several books will be made available in the lab for your use. **THESE MAY NOT BE TAKEN OUT OF THE LAB EXCEPT FOR IMMEDIATE PHOTOCOPYING. I.e. they DO NOT GO ANYWHERE ELSE!!!!**

There is an extensive laboratory manual, lecture content can be found on my website: <http://flash.lakeheadu.ca/~lmalek/courses/index.htm>. But ignore everything else on the website as it is OUTDATED! Susanne Walford will be in contact with you via D2L system for up-to-date information and grades. Every attempt will be made to cover relevant materials in lectures PRIOR to each lab, but this is not always possible. **Help each other**, particularly with the computer tasks! Before each lab, there will be a quiz based on ONE of the pre-lab questions, testing your preparation for the lab.

There will be only lectures in the first week of the course and subsequently in the scheduled 1 hour. During the rest of the course, you will have five hours per week to complete the labs. Major emphasis in the course is on lab skills, this is reflected in the course mark breakdown (NOTE: any assignment handed in late will have 10% of its grade deducted for each day late):

45% Formal experiment reports (15% for 1<sup>st</sup>, 30% for 2<sup>nd</sup> report)

25% Techniques reports (4 x 10%)

Format and expectations regarding content of both types of reports are outlined in the lab manual.

15% pre-lab questions - expectations will be outlined in class

15% mid-term/final exam on theoretical content of the course (late February or early March)

100% total

**Lecture component of the course deals with, in approximate time sequence of lectures:**

At the beginning of this course:

- Laboratory note-taking and notebooks
- The study of science and study skill development
- Graphing
- Antibodies as detection tools
- Tissue homogenization and buffers
- Centrifugation and chromatography
- Electrophoresis

Information given to you in the first two weeks of the course and in the introduction to the lab reports should be used in the preparation of BOTH types of the lab reports – techniques and experiments. See detailed instructions in the lab manual.

Literature searching and the structure of scientific papers are covered in Biology 2230. Computer applications (graphing, databases, statistics) will be introduced at appropriate points in this course. Please, help each other with formatting and presentation issues, as these are often specific to your own computer set-up.