

Biomedical Sciences Lab Techniques, MEDS2030C

Syllabus for Fall Semester, 2022

Tuesday or Thursday 2:20-5:00

Lecture hall MSB 2351, Laboratory CVC G940

Faculty Instructors:

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Welcome to BLT! Our goal throughout this semester is to acquaint you with the major branches of biomedical research: Microbiology, Recombinant DNA, Protein Biochemistry and Cell Biology. These are core competencies you will need as you progress in your undergraduate career and beyond as you seek to create new knowledge through a research profession or to use advancing research in clinical decision making.

The laboratory guide for the course is required and students must be ordered in advance from the publisher. The manual will not be in the College of Medicine bookstore.

To purchase course manual a hard copy or electronic:

<https://store2.van-griner.com/product/biomedical-sciences-laboratory-techniques/>

EXPECTATIONS:

Before coming to lab: Read the lab manual and familiarize yourself with all the material relevant to the exercises. The schedule for the semester which highlights which activities to prepare for can be found on Canvas. Check Canvas for any changes to the procedures outlined in the manual. These will be posted in the Modules section. Write up a brief purpose and a complete protocol for the day which includes any of these modifications. Your lab notebooks should have thorough enough procedures such that your lab manual is not needed. Notebooks will be reviewed at the end of each module and contribute to your lab preparedness grade. Repeated failure to come prepared to lab will result in a grade deduction, at Drs. Schoch and Glasser's discretion.

Additionally, take the pre-module quiz in Canvas. These are open book to ensure that key information has been read before lab. Many of our lab days will be quite full and depend upon adequate preparation in order to finish on time.

We will start our days in the lecture hall for a pre-lab discussion before heading over to the lab in CVC.

Notebook Guidelines:

All notebooks should contain the following sections and should be written for each lab period separately:

1. Purpose - what is the goal of this lab?
2. Methods - how are you to perform this lab? This should have every detail in it such that you do not need your lab manual at the bench.
3. Results - what data was obtained in this lab? This could include observations, pictures, measurements etc.

4. Discussion - how is the data from this lab to be interpreted? What is the significance of your results?

Laboratory safety: Students must wear masks per CoM Covid guidelines. Student will be assigned and work in teams. All students will be provided with eye protection, gloves, and lab coats which must be worn at all times in the lab. This PPE should not be worn outside of the lab – if you need to leave for the restroom or any other reason, please take off your PPE before leaving. Students must wear long pants and closed-toe shoes. **Students will not be allowed entry in shorts and sandals.**

Leaving the lab: It is your responsibility to record all data, observations, and discussion in your notebook before leaving the lab. You can never include too much in your lab notebook, but you *can* be too brief. After you finish each lab, clean up your lab space, wipe down all surfaces with a bleach or ethanol squirt bottle and leave your bench space clean.

Worksheets: The lab worksheet is meant to serve as a *polished* final report of the data you record in your lab notebook throughout the entire module. Take notes throughout the experiment in your lab notebook and transfer to the worksheet once the experiment has concluded. Worksheets are to be turned in at the beginning of class before each module practical. The questions to be answered are listed in the laboratory schedule.

Practical exams:

For the exams, 10-20 test stations will be set up throughout the lab where each student will be asked to complete hands-on tasks and answer knowledge-based questions relevant to the module material.

Exam 1: Module 1 Sept 6/8
Exam 2: Modules 2 & 3 Oct 25/27
Exam 3: Modules 4 & 5 Dec 6/8

Grading:

Each module will be worth 100 points for 500 points total in the class. The exact breakdown is shown below, where 10% of your grade will be lab preparedness, 10% pre-module quiz, 30% worksheets, 50% practicals. The class will be grading on the traditional 10-point scale with no expected curve. Grades will be rounded up to the nearest percentage. We will not adjust grades at the end of the semester for any reason.

	Module 1	Module 2	Module 3	Module 4	Module 5
Preparedness	10	10	10	10	10
Pre-module Quiz	10	10	10	10	10
Worksheet	30	30	30	30	30
Practical	50	50	50	50	50

93-100 **A**
90-92 **A-**
87-89 **B+**

83-86	B
80-82	B-
77-79	C+
73-76	C
70-73	C-
67-69	D+
63-66	D
60-62	D-
>60	F

LATE WORK/ATTENDANCE:

Excused absences and an opportunity to make up a missed lab session will only be offered with documentation of a medical or family emergency *in advance*.

Unexcused tardiness on assignments will result in 50% off that assignment for one day, with a loss of all points if turned in more than a day late. Unexcused absence from lab will result in 10% off the final grade per lab missed. Habitual lateness to lab will result in a grade deduction, per Drs. Schoch and Glasser's discretion.

LAB INQUIRIES:

Please do not hesitate to ask questions in class as demonstrations are often the best way to answer questions. If you have questions outside of lab/class, email any of the instructors. Office hours will not be held on a regular basis, however meetings can be scheduled on an individual basis. Any emails relating to course policy or grades must be sent to Drs. Schoch & Glasser.

ACADEMIC INTEGRITY:

In this lab you will be working in teams of two. Although you will be doing the lab work as a team, it is very important that both team members contribute equally to the experiments. This will also ensure that both lab members are prepared to perform each task during the practical exams. Data and results used for the worksheets will be the same for team members. However, the discussion is to be done **individually**. **Cheating, sharing of answers/test questions, etc. will result in an immediate loss of all points for that assignment. Repeat offenses will result in failure of the class and discipline via the university.**