# Introduction to Molecular and Cell Biology Laboratory Biology 322 Syllabus Fall 2012 Room 3109 EBS

This is a laboratory course presenting fundamental techniques for the isolation and characterization of biological molecules, with an emphasis on proteins and nucleic acids. This course must be taken with Biol 319, the lecture course.

Dates	Exercise
Aug 27	Exercise 1. Introduction
Sept 10	Exercise 2. Light Microscopy: Cell Structure
Sept 17	Exercise 3. Amino Acid, Buffers & pH
Sept 24	Exercise 4. Protein Structure & Assays
Oct 1	Exercise 5. Enzyme Assay: Lysozyme
Oct 8	Discussion and Review
Oct 15	Mid-term exam.
Oct 22	Exercise 7. Nucleic Acids & DNA Extraction
Oct 29	Exercise 8. DNA Characterization
Nov 5	Exercise 9. DNA Gel Electrophoresis
Nov 12	Exercise 10. Bacterial Transformation
Nov 19	Exercise 11. Computer Analysis of DNA
Nov 26	Discussion and Review
Dec 3	Final Examination

# Instructors:

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#### **Attendance**

Laboratory attendance is mandatory. Each absence will drop your final laboratory score by 10 points up to 30 points. More than three absences will result in your withdrawal from this course.

### **Laboratory Notebook**

Students will be required to write up all laboratory exercises in a bound notebook, with the pages sewn into the notebook. Each day's laboratory data will be recorded directly in this book and each experiment must contain the following: Title, Date, Methods, Results, and Discussion or Summary. **Title, Date, and Methods must be filled out prior to lab.** Answers to all questions found in section C must either be answered and turned in to your instructor or recorded in you notebook. Ask your instructor which method of reporting should be followed for answers to section C. The laboratory notebook is worth a total of 50 points.

## **Laboratory Exams**

There will be two exams, a mid-term and final exam, on the dates noted. The final is not comprehensive, but be aware that much of the material builds on skills learned early in the course. If you miss an exam and do not notify the instructor within 24 hours, **there will be no make up**. Each exam is worth 100 points.

#### **Grades**

There are a total of 330 possible points for the laboratory.

Exam 1	100
Exam 2	100
Attendance	30
Notebook	50
Quizzes or assignments	50

Total 330

The laboratory grade will be determined by the percentage of points earned. The following scale will be used to determine grades:

Α	90% to 100%
В	80% to 89.99%
С	70% to 79.99%
D	60% to 69.99%
F	less than 60%

#### **Academic Integrity**

It is expected that each student will do his/her own work at all times and contribute equitably in all group projects. Dishonesty, in any form (cheating on quizzes or exams, plagiarism, copying another's assignment answers, etc.) will result in a failing grade.

### Students with disabilities

"Students with disabilities who require accommodations (academic adjustments and/or auxiliary aids or services) for this course must contact the Office for Student Disability Services, Room 445, Potter Hall. The OFSDS telephone number is (270) 745-5004 V/TDD. Please DO NOT request accommodations directly from the professor or instructor without a letter of accommodation from the Office for Student Disability Services."