

BISC 109 SPECIAL LABORATORY II SYLLABUS  
SPRING 2019

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ZHS 362

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Laboratory Schedule:

<u>Lab #</u>	<u>Date</u>	<u>Laboratory</u>
	Jan 8 – 11	NO LAB THIS WEEK
1	Jan 15 – 18	Introduction to BISC 220 Labs & Assignments Laboratory Safety
2	Jan 22 – 25	Macromolecules*
3	Jan 29 – Feb 1	Scientific Investigation*
4	Feb 5 – 8	Enzymes*
5	Feb 12 – 15	Cell Membranes and Transport
6	Feb 19 – 22	Photosynthesis* (Lab Report 1 due)
7	Feb 26 – Mar 1	Fermentation* (Peer review due)
8	Mar 5 – 8	DNA & Restriction Enzymes*
	Mar 12 – 15	SPRING BREAK – NO LAB
9	Mar 19 – 22	The Cardiovascular System
10	Mar 26 – 29	Blood and Blood Typing (Lab Report 2 due)
11	Apr 2 – 5	The Nervous System
	Apr 9 – 12	LAB EXAM
	Apr 16 – 19	Classic Literature Presentations (Week 1)
	Apr 23 – 26	Classic Literature Presentations (Week 2)

\*Exercise for which a type-written lab report is required.

\*Exercise for which there is a homework/pre-lab assignment.

The Lab Manager reserves the right to make some adjustments to the lab syllabus during the semester.

## REQUIRED TEXTBOOK

SPRING 2019 BISC 220 General Biology Laboratory Manual. PDF will be posted on Blackboard and chapter printouts must be brought to lab each week.

## RECOMMENDED TEXTBOOKS

Adams & Crawley (2018). *Van De Graaff's Photographic Atlas for the Biology Laboratory*, 8<sup>th</sup> ed.  
Pechenik. *A Short Guide to Writing About Biology*. 9<sup>th</sup> ed.

## LABORATORY POINT DISTRIBUTION

The laboratory portion (361 points) will count for ~36% of your final course grade, distributed as follows:

Lab Quizzes (10 – 5 points each)	50 pts
Homework (4 – 6 points each)	24 pts
Identifying the Unknowns (Macromolecules, Exercise #3)	4 pts
Lab Report (2 – 40 points each)	80 pts
Lab Report 1 Peer review	7 pts
Lab Exam	100 pts
Classic Literature Presentation	56 pts
Lab Manual (2 points per chapter)	20 pts
Lab Participation (2 points per lab)	20 pts

## LABORATORY PERFORMANCE GUIDELINES

You are required to attend all lab sessions. Any unexcused absences will seriously affect your evaluation and lab participation points. Come to lab on time. You are also to remain for the entire lab session or until excused by your instructor. DO NOT make any other appointments for the time you are scheduled to be in lab.

You are required to wear closed toe shoes, long pants and a knee-length lab coat. Goggles will be provided in lab. Before you begin the lab exercise, make sure that you remove all unnecessary materials from your work area. At the end of the lab session, clean and return all supplies to their proper place, clean your work area, and slide your chair under the table. Check with your instructor before leaving.

NO EATING OR DRINKING IS ALLOWED IN THE LABORATORY UNDER ANY CIRCUMSTANCES.

## PRE-LAB QUIZZES

Each student will take a **Blackboard pre-lab quiz** prior to coming to lab each week. Quizzes will consist of multiple choice questions. Questions will test your knowledge of the material you will be covering that week in lab.

## LAB MANUAL

During each lab students need to record their results (drawings, observations, calculations) in their lab manual. Tables need to be filled and all post-lab questions answered. Each student is required to show his/her Lab Instructor the lab manual before leaving the lab and obtain their signature. Lab manuals will be checked periodically throughout the semester.

## HOMEWORK/PRE-LAB ASSIGNMENTS

During the semester you will have four homework assignments, based on the data you obtain in your lab experiments. Assignments are explained in the lab manual and more information can be found on Bb.

## LAB REPORTS

Two lab reports will be written during the semester. Lab reports must be posted on Blackboard (*Lab Reports* [turnitin](#) link) and a hard copy turned in at the beginning of the lab session. Lab report guidelines will be posted on Bb (<https://blackboard.usc.edu/>) in the beginning of the semester.

## FIRST LAB REPORT PEER REVIEW

Each student will review one of their lab-mates' lab reports. Instructions will be posted on Blackboard once the semester starts.

## CLASSIC LITERATURE PRESENTATIONS

The last two lab meetings of the semester are reserved for PowerPoint presentations on classic papers from the cell biology/physiology literature and their relation to modern papers. The goals of this assignment are to give you a greater appreciation of the scientific literature and science as a process, as well as to work and communicate collaboratively with fellow students.

Briefly, groups of 3 students will pick one classic paper from a list of several dozen papers that will be provided. All these papers are widely recognized as having had a major impact on the evolution of our understanding of cell biology or physiology. Each group must then find a recent paper (published within the past 5 years) that directly follows from the classic paper. In the PowerPoint presentation, groups must explain the findings in the classic and modern paper, explain the connection between the two papers, discuss the significance of both studies, and suggest some follow-up experiments that should be done.

Complete and detailed instructions for this assignment will be presented during the first lab meeting and can be found in the document "*Classic Literature Presentation and Participation*" posted on Blackboard.

Credit will be assigned to each group based on the clarity of their presentation, understanding of the material, fulfillment of all aspects of the assignment, and their abilities to lead a discussion on the topic and to answer questions. Credit will also be given to non-presenting students based on their participation in discussing the presentations of others.

## LAB EXAM

The cumulative lab exam will test your comprehension of the topics, concepts and exercises covered during the semester. Emphasis will be on application and analysis.

## MISSED LAB EXAM

*It is your responsibility to be present on the days of the lab exams.* If you miss a lab exam due to a serious illness, you must present a valid excuse to the Lab Manager Gorjana Bezmalinovic ([bezmalin@usc.edu](mailto:bezmalin@usc.edu)) **within 48 hours** of the missed exam. A valid excuse is considered to be an official note from your doctor. Note that neither you, nor your doctor, need to tell us the nature of your illness; we just want to verify whether you were too ill to take the exam. If you miss an exam for non-illness related reasons, you must provide similarly convincing documentation of the emergency to the Lab Manager. If we judge your excuse to be valid, you will be allowed to take the lab exam in another lab section that week. If you do not have a valid excuse or fail to provide it within the allotted time, you will receive zero points for the missed lab exam.

## MISSED LABS

If you miss a scheduled lab exercise **due to illness or emergency**, please contact the **Administrative TA Nicole Ratib** at [ratib@usc.edu](mailto:ratib@usc.edu) to see whether it will be possible to make up the exercise by attending an alternative lab section. For

logistical reasons, it will not be possible to make up a missed lab exercise after Friday afternoon of the week in question. Therefore, students with labs scheduled on Fridays will have little or no alternative should they miss lab unexpectedly. Only a few requests for alternative labs can be accommodated, because few sections have available space. Therefore, it is very important for you to attend your scheduled lab section.

Students who wish to miss a lab for observance of a religious holy day should be aware of the University's policy on such absences, published at: <https://orl.usc.edu/life/calendar/absences/>. Requests for such absences should be made by email addressed to the Admin TA ([ratib@usc.edu](mailto:ratib@usc.edu)) at least 2 weeks in advance of the absence. If the absence is approved, the instructors will determine a reasonable accommodation for the student.

Student-athletes who must miss occasional labs for legitimate reasons should bring or email the SAAS excuse letter to the Lab Manager at least 2 weeks in advance so alternatives can be arranged. Please note that no lab make-ups will be allowed during the week prior to a holiday, spring break and for school-unrelated activities.

#### LAB SCORES

You can find scores for all of your lab assignments on Blackboard: <https://blackboard.usc.edu>. Your lab scores will be posted under your LAB SECTION. Be sure to check for additional postings on a regular basis. It is the student's responsibility to immediately notify his/her Lab Instructor or Lab Manager in the event of any mistakes, so please check your Blackboard scores weekly.

#### LAB SCORE NORMALIZATION

The lab scores will be normalized at the end of the semester by the Lab Manager to correct for differences in grading between Lab Instructors. In this procedure, the mean total score of all students in each Lab Instructor's lab section is compared to the mean total score of the entire class and each student's score is adjusted.

#### STUDENTS WITH DISABILITIES

Students requesting academic accommodations based on a disability are required to register with the Office of Disability Services and Programs (DSP) each semester. A letter of verification for approved accommodations can be obtained from DSP. Be sure that the letter is delivered to the Laboratory Manager as early in the semester as possible, preferably by January 25, 2019. DSP is located in GFS 120 and is open from 8:30 a.m. to 5:00 p.m., Monday through Friday. Their telephone number is 213-740-0776. If a student's approved accommodation is limited to extra time on examinations, the teaching staff of BISC 120 will provide the accommodation. For any other accommodation, such as a private room, reader or a scribe, students must make prior arrangements with the DSP office 2 weeks before the exam date. For more information please visit the following website: <https://dsp.usc.edu/>.