

# BIOLOGY 1AL LABORATORY COURSE SYLLABUS

Fall 2016

**Professor:** Dr. Gian Garriga, Department of Molecular and Cell Biology, Office hours 9-10 AM Mondays and Tuesdays in 174 Koshland Hall. Because of the large number of students in this class, Dr. Garriga will be unable to respond to students' emails.

**Course Coordinator:** Mike Meighan, 2088 VLSB 642-4110, e-mail <mailto:mmeighan@berkeley.edu>. See bCourses for scheduled office hours. Mr. Meighan is available for advice on study habits, techniques, and matters of scheduling, laboratory operations, exams, etc.

**Bio1AL web site:** <http://mcb.berkeley.edu/courses/bio1a/>

**Lectures: Monday 5-6:30 PM, 1 Pimentel beginning August 29** ("Safety and Equipment"). *Simulcast* in 10 Evans. *CourseCapture* will be available, but quality and availability is not guaranteed.

**Evening Exams:** Format: multiple-choice, no short answer. **There are NO make-up exams.**

Exam 1: Th October 6: 9-10 PM.

Exam 2: Th October 27: 8-10 PM.

**Exam 3: Friday December 16 : 3-6 PM . Plan your flights accordingly.**

**Graduate Student Instructors for laboratory sections:** Please see bCourses for the most up to date listing of office hours. These office hours will be held in 2084 VLSB (GSI office for Bio 1A/1AL).

**Correct email address.** We will contact you at your berkeley.edu address as listed on bCourses. Make sure you are receiving messages sent to that address. If you have not received any emails yet, it is likely your listed email address is incorrect. bCourses also requires correct email addresses.

**Adding Bio1AL:** Enroll your self through CalCentral or add to the course waitlist. Email [bio1a-enrollment@berkeley.edu](mailto:bio1a-enrollment@berkeley.edu) or see Erol Kepkep in 2083 VLSB for any questions.

**Attendance:** You must attend your scheduled lab each week.

**Permanent switch of lab sections:** In CalCentral go to "My Academics". Follow the detailed instructions provided on the FAQ file posted on bCourses.

**Rescheduling the lab section you attend due to illness or an emergency:** In the case of an unavoidable conflict, it **may** be possible to reschedule your lab for a particular week. Send an email as soon as possible to [bio1alab@berkeley.edu](mailto:bio1alab@berkeley.edu) with your name, lab section, reason for rescheduling and alternate times during the same week that you can attend or stop by 2083B VLSB.

## Lab times and locations:

	Tues.	VLSB		Wed.	VLSB		Th.	VLSB		Fr.	VLSB
			313	9-12	2095	413	9 <sup>30</sup> -12 <sup>30</sup>	2113	513	9-12	2113
215	9 <sup>30</sup> -12 <sup>30</sup>	2095	315	9-12	2095	415	9 <sup>30</sup> -12 <sup>30</sup>	2095	515	9-12	2095
217	9 <sup>30</sup> -12 <sup>30</sup>	2097	317	9-12	2097	417	9 <sup>30</sup> -12 <sup>30</sup>	2097	517	9-12	2097
			323	2-5	2113	423	2-5	2113			
225	2 - 5	2095	325	2-5	2095	425	2-5	2095	525	2-5	2095
227	2 - 5	2097	327	2-5	2097	427			527	2-5	2097

**Deadlines:** August 28<sup>th</sup> to permanently switch lab sections via CalCentral September 2 to drop the course; Sept. 23 to change grading option.

## REQUIRED LAB MATERIALS

**Course Material Fee:** \$50 course materials fee will be billed via CARS.

**Campbell, *Biology* (10<sup>th</sup> ed) and *Learning Catalytics*:** The UCB textbook store offers substantial discounts on these. *Learning Catalytics* is available separately for \$12 for 6 month access (<https://learningcatalytics.com/pages/pricing>). You do not need *Mastering Biology* (for lab but you need it for Bio 1A).

**Fall 2016 Lab Manual:** Download from bCourses or purchase from Replica Copy (2138 Oxford). You must use the Fall 2016 Lab Manual.

**Pre-lab Assignments and Worksheets.** Download from bCourses or purchase at Replica Copy .

**Course Notes:** Lecture slides will be available on bCourses by 5 PM on the Friday preceding an upcoming Monday lecture.

**Exam Reader:** Representative exam questions from past semesters are available. Download from bCourses or purchase at Replica Copy.

### **GRADES:**

Lab Lecture Quiz (4 X 11, 40 max)	40 pts
Worksheets (2x11)	22 pts
Lab Exam 1	50 pts
Lab Exam 2	50 pts
Final Exam	100 pt
Lab Assessment (required submission)	5 pts
<b>Total</b>	<b>267 pts</b>

### Point Distribution per exam

	Exam 1	Exam 2	Final
Part 1	50 points		15 points
Part 2		50 points	15 points
Part 3			70 points
<b>Total Points</b>	<b>50 points</b>	<b>50 points</b>	<b>100 points</b>

**Pre-lab Assignment.** These provide an introduction and overview of the laboratory exercise for the week. Do not expect to be able read the lab exercise for the first time while actually during lab.

**Monday evening quiz.** Prof. Garriga will ask four questions (1 pt each) during the lecture. You will use *Learning Catalytics* using a WiFi enabled device to submit your answers. **You should log in to AirBears2 (or Cal Visitor) at the start of lecture and log in to Learning Catalytics.**

**Worksheets.** You will complete *Worksheets* during lab. Some are due at the end of lab but others are due at the start of the next lab. One of the worksheet questions (worth 2 pts) will be chosen randomly and graded each week.

**Typical Guaranteed letter grades:** 90-100% = A, 80-89% = B, 70-79% = C, 60-69% = D, <60% = F. If some examinations prove to be unusually easy or difficult, the cut offs for letter grades may be raised or lowered. For those students who are close to the cut-offs their improvement on exams will be considered as well as their work on pre-lab assignments and lab discussion projects.

**I grade:** UC regulations require that a student has completed at least one-half of the material with a passing grade of C or better and also that the student has documented medical evidence of their inability to complete the course on schedule. The student assigned an I grade must complete the work before the first day of classes in the Fall semester 2017, without including the course for units on the study list, or the I lapses to an F.

## **CHEATING**

UC Berkeley has adopted the following Honor Code: "As a member of the UC Berkeley community, I act with honesty, integrity, and respect for others." As a UCB student you pledge to adhere to this code. Any student found cheating will be reported to the University and given an F course grade. Cheating is not tolerated on any work!

## **HOW TO DO WELL**

1. Read the material before lecture and lab.
2. Clarify topics you do not understand by coming to office hours, forming a study group, or emailing your questions to your GSI.
3. Use the exam reader, making sure you understand the reasoning behind the answers.
4. Be prepared for lab and be prepared to think.
5. Seek help if you fall behind.

## **BIOLOGY 1A STUDY RESOURCES**

Please take advantage of available resources. The following is a partial list.

**Office Hours:** See page 1 and the updated list on bCourses.

**Student Learning Center (SLC, 189 Chavez Student Center):** The SLC may offer student-led study groups and tutoring. See their website for more information ([slc.berkeley.edu](http://slc.berkeley.edu)).

**Study groups:** These are usually a great way to learn. I encourage you to form study groups, either within your lab or with students from other sections.

**Tutor Services (fee):** Formal tutoring (variable fees) from individuals may be available as the semester progresses. Contact Mike.

**Faculty reviews** are usually available before exams.

**The Lab Manual and Exam Reader** provide further information.

## **Safe, Supportive, and Inclusive Environment**

Whenever a faculty member, staff member, post-doc, or GSI is responsible for the supervision of a student, a personal relationship between them of a romantic or sexual nature, even if consensual, is against university policy. Any such relationship jeopardizes the integrity of the educational process. Although faculty and staff can act as excellent resources for students, you should be aware that they are required to report any violations of this campus policy. If you wish to have a confidential discussion on matters related to this policy, you may contact the Confidential Care Advocates on campus for support related to counseling or sensitive issues. Appointments can be made by calling [\(510\) 642-1988](tel:5106421988).

The classroom, lab, and work place should be safe and inclusive environments for everyone. The Office for the Prevention of Harassment and Discrimination (OPHD) is responsible for ensuring the University provides an environment for faculty, staff and students that is free from discrimination and harassment on the basis of categories including race, color, national origin, age, sex, gender, gender identity, and sexual orientation. Questions or concerns? Call [\(510\) 643-7985](tel:5106437985), email [ask\\_ophd@berkeley.edu](mailto:ask_ophd@berkeley.edu), or go to <http://survivorsupport.berkeley.edu/>.

## Bio1AL Schedule

<i>Date</i>	<i>Lecture Topic</i>	<i>Campbell, 10th ed.</i>	<i>Lab Manual (Fall 2016)</i>
Week 1 8/29-9/2	<b>Lab 1 Lecture: Safety, Equipment.</b>	Ch. 6 pp 94-96; Figure 10.9	Pages 1-24.
9/4	Drop Deadline.		
Week 2 9/5	<b>HOLIDAY</b>		No Lab Lecture, No lab.
Week 3 9/12-16	<b>Lab 2: Cells, <i>Vibrio</i> isolation.</b>	Figure 6.8; Ciliates 600-01; Green alga & Amoebozoans 603-605.	Pages 24-34, 35-48* (focus on 35-38).
Week 4 9/19-23	<b>Lab 3: Enzymes, Microbiology-<i>Vibrio</i> streaking.</b>	Ch. 5.2, 5.4 & 8.4	Pages 49-62, 35-48* (focus on 38).
9/23	Deadline to change NP/P to grade.		
Week 5 9/26-30	<b>Lab 4: Photosynthesis and <i>Vibrio</i> streaking,</b>	Ch. 6 pp 96-97; Ch. 10.1, 10.2 & 10.3	Pages 63-78, 35-48* (focus on 38-39).
Week 6 10/3-7	<b>Lab 5: Genetics &amp; Mol. Biol. I, Complementation I, and PCR.</b>	Ch. 12.1, 12.2, 13.3, 13.4 % 20.1.	Pages 87-94, 35-48*, 79-86**, (*focus on page 39-40, focus on pages 79-81)
Th 10/6	<b>Lab Exam 1: labs 1-4 = 50 pts.</b>	<b>Thursday 9-10 PM</b>	
Week 7 10/10-14	<b>Lab 6: GMB. II, Complementation II, PCR analysis and DNA electrophoresis.</b>	Ch. 14.2, Ch. 15.1, 15.2 & 15.3	Pages 95-105, 35-48*, 79-86*. (*focus on pages 40-43, ** p. 82-84)
Week 8 10/17-21	<b>Lab 7: Bioinformatics and Complementation III.</b>	Ch. 26.1, 26.2 & 26.3	Pages 107-109 + update on bCourses, 35-48*, 79-86**, (*focus pages 43-47, 85-86)
Week 9 10/24-28	<b>Lab 8: Anatomy.</b>	Ch. 32.1-4, 40.1, 41.1-3, 42.1-3, 42.5, 44.1-3, 46.1, 50.	Pages 111-126
Th 10/27	<b>Lab Exam 2: labs 5-7 = 50 pts.</b>	<b>Thursday 8-10 PM</b>	
10/28	Deadline to change to P/NP.		
Week 10 10/31-11/4	<b>Lab 9: Human genetics and taste perception.</b>	Ch. 11.2, 11.3, 50.1 & 50.4	Pages 127-138
Week 11 11/7-11	<b>HOLIDAY</b>		No Lab Lecture, No lab.
Week 12 11/14-18	<b>Lab 10: Development</b>	Figure 46.11, 47.1 & 47.2	Update on bCourses.
Week 12 11/21-25	<b>HOLIDAY</b>		No Lab Lecture, No lab.
Week 13 11/28	<b>Lab 11: Physiology and exercise plus 10 minutes for evaluations.</b>	Ch. 42.2, 3, 5-6.	Update on bCourses.
Friday 12/16	<b>Lab Exam 3: labs 8-11 (plus the other exams) = 100 pts.</b>	<b>Friday 12/16 3-6 PM</b> <b>Plan accordingly.</b>	