

**Lecturer:** Mike Meighan is from the Department of MCB.

**Contact information/office hours:** Mike Meighan. 642-4110, 2088 VLSB, mailbox outside 2088 VLSB, e-mail is {[mmeighan@berkeley.edu](mailto:mmeighan@berkeley.edu)}. Scheduled Office hours are M 11-12, W 11:30-12:30 and by appointment\*. I am available for advice on study habits, techniques, and on matters of scheduling, laboratory operations, exams, etc.. \* Office hours and location may be revised.

**Graduate Student Instructors:** The GSI's instruct the laboratory sections. A GSI will be available in the GSI office; 2084 VLSB on Monday from 2-4 PM and typically one hour before the start of each lab. Messages may be left in your GSI's mailbox in 2084 VLSB.

**GSI Office Hours:** M 2-4, T 8:<sup>30</sup>-9:<sup>30</sup>, 1-2, 5:<sup>30</sup>-6:<sup>30</sup>, W 1-2, 4-6:<sup>30</sup>, Th. 8:<sup>30</sup>-9:<sup>30</sup>, 1-2, 5:<sup>30</sup>-6:<sup>30</sup> PM, F 1-2. (may change, see bSpace).

1. **LAB LECTURE:** Lab lectures are normally held on Mondays from 5-6:30 PM in 1 Pimentel and simulcast in 10 Evans. Due to the holiday on September 1<sup>st</sup> there will be no lab lecture held in Pimentel (or Evans) on September 1<sup>st</sup> but instead there will be a link on bSpace for the first lecture. Note that **prior** to each lab lecture there is a required Learn Smart assignment. It is due by 5 PM on each Monday (including 9/1).
2. **LABORATORY:** Lecture begins Monday Sept. 1st and labs begin Tuesday Sept. 2<sup>nd</sup>. The first lab will cover Safety and Equipment. The various files are available via bSpace (or purchase from Replica Copy). Watch the webcast linked from bSpace due to the Sept. 1<sup>st</sup> holiday. Don't forget the Learn Smart homework is due before 5 PM on Monday 9/1. Each lab requires a completed pre-lab, a 3 point quiz given at the start of lab, and a worksheet.
3. **bSpace/email:** We will routinely email students important announcements approximately weekly using the email address listed in the CalNet Directory. Please update it to the email account that you check most frequently. If you are enrolled and have not received any emails yet then there is a problem with your listed email address. bSpace will be used frequently please check the bSpace site frequently.
4. **ADDING: See and use TeleBears.** For more information click under enrollment information on our URL: <http://mcb.berkeley.edu/courses/bio1a/>.
5. **Attendance:** You must attend your scheduled lab. However it may be possible to reschedule, a particular lab during the same week (but only if absolutely necessary, see "Reschedule lab" #6).
6. **SWITCHING LAB (Permanent Switch):** On bSpace click on "Click Here to Switch Lab Sections" for a link to a page with instructions on how to switch. You need to switch sections via TeleBears. The deadline is Monday September 1<sup>st</sup>.
7. **Emergency Reschedule:** You must attend your normally scheduled lab. As such avoid scheduled conflicts (exams, trips, doctors appointments, etc.). If current conflicts exist, then request a permanent switch. Avoid future conflicts! If an unavoidable or unexpected conflict or illness should occur (that directly interferes with lab), it **may** be possible to reschedule your lab. Rescheduling will only be approved **when absolutely necessary** and the scheduled conflict or illness is verifiable and unavoidable and we have space to make the switch. To reschedule check with the staff in 2083B VLSB or send an email to [bio1alab@berkeley.edu](mailto:bio1alab@berkeley.edu). Include your full name, your lab section, reason for rescheduling, and a list of other lab times during the same week (see page 3 for times) that you can make. We will usually email you back within one business day.

8. **Lab Exams:** Lab exam 1: Th. Oct 23<sup>rd</sup> from 7:30-9:30 PM. This exam will be only multiple-choice format (no short answer). Room(s) to be arranged. Lab Exam 2 will be held Thursday Dec. 4<sup>th</sup> from 8:30-10:00 PM. There are no make-up lab exams. Exam handouts will be given for each exam. In the case of disruption of an exam (fire alarm, bomb threat, etc.) alternative arrangements have been made. These may include moving the exam to another location, and/or extending the time, and/or arranging an alternative exam date or format.
9. **Learn Smart:** Assignments are **due by 5 PM on the Monday of each scheduled lecture/review**. There are 12 assignments—including the September 1<sup>st</sup> assignment. You can earn a maximum of 23 points (of a possible 26). They will on average take around 35 minutes. The scores will be pro-rated. There are 390 minutes assigned and 390 Learn Smart Points. Questions are randomized per student. 390 Learn Smart points = 26 points. Points will be weighted (each Learn Smart point will be about 0.0667 Bio 1AL point [26/390]. Since you can earn a maximum of 23 points a Learn Smart score of 345 or above is 23 points. (23/26 X 390).
10. **Quizzes:** Each lab will have 3 quiz questions – one from each level of difficulty (easy, medium, harder). Each lab period will take the same quiz. The questions will be selected randomly. You will have three potential questions for each level—calculations and parameters may vary. You will be given a list of the potential questions about one week before the lab lecture. Know the logic or concept behind the question. Answers will not be provided. An important part of the learning process is determining the answers. Don't necessarily memorize an answer as it is the logic/concept that will be tested. For example the potential question might read calculate the weight of "X"  $\mu$ l of water but the actual question you get may be calculate the weight of "Y"  $\mu$ l of water.

### **LAB MATERIALS**

**Textbook: Biology, Raven et al. 10<sup>th</sup> edition.** The textbook is a custom edition for UCB and includes access to Learn Connect. Only the 10<sup>th</sup> edition is compatible with the electronic resources.

**Lab Manual:** Download from bSpace or purchase from Replica Copy, at 2138 Oxford. You must bring it with you to lab (an electronic resource doesn't work very well in a lab setting due to chemical solutions, limited desktop space, etc.).

**Pre-labs and worksheets.** Download from bSpace or purchase from Replica Copy, at 2138 Oxford.

**Exam Reader:** Download from bSpace or purchase from Replica Copy, at 2138 Oxford. The exam reader contains exams from previous semesters. In addition you will find these questions separated by topic but this is only available on bSpace (not at Replica Copy).

**Lecture Reader:** Download from bSpace or purchase from Replica Copy, at 2138 Oxford.

**Learn Smart:** You will have required assignments due at the **start** of lecture. The code to purchase electronic access is packaged with the textbook.

**GRADING PROCEDURE:** Grades will be determined numerically as follows:

Laboratory & Discussion as follows:	
Lab Exam 1, 10/23 7:30-9:30 PM (covering labs 1 - 7)	100 points
Lab Exam 2, 12/4 8:30– 10 PM– (covering labs 8 - 10)	50 points
Lab Quizzes - 3 points given at the start of each lab (10 labs x 3 points). The lowest score will be dropped, hence 9 X 3.	27 points
Learn Smart –26 points (max = 23), lecture and reviews.	23 points
Total: 200 points	

**Changes to the syllabus may occur. We will inform you of any changes.**

Grades are based upon EARNED points. The guaranteed grades are:

A (some form)	100-90%	C (some form)	79-70%	F	59-00%
B (some form)	89-80%	D (some form)	69-60%		

However, in the event that some examinations have been unusually difficult, the cut offs for letter grades may be lowered (but only by a few percentage points, and as deemed necessary). Historically over 60% of the class EARN A's and B's.

**QUIZ ADJUSTMENTS:** The quiz scores will be adjusted as necessary for each lab period. This will ensure that no lab period has an advantage or disadvantage. They will be adjusted based upon how the entire lab period does on lab exams and quizzes. Points will be adjusted such that all sections will be adjusted to the easiest of the lab periods. This adjustment may be very minor (1-3 points).

**INCOMPLETE (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 the student presents 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 of 2015, without including the course for units on the study list, or the I lapses to an F.

**CHEATING:** UC Berkeley has 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. The rare student found cheating in the course will be reported to the University. The student will be given an F course grade. Cheating is not tolerated! This includes ALL work—Learn Smart, pre-labs, worksheets, quizzes, and exams. Students repeating the class must do the work this semester and cannot turn in work from previous semesters.

## **HOW TO DO WELL**

We want you to succeed in this class. You have a team of instructors working to help you and many resources. Below are a few tips that may help you.

1. Come prepared. Do the reading before lecture. This includes the readings in the lab manual and the Biology textbook.
2. Attend all lecture and take notes. Make sure you review your notes.
3. Keep up with the material. Seek help if needed
4. Clarify topics you do not understand by coming to office hours, forming a study group, or emailing your questions to your GSI or the instructor.
5. Use the exam reader and take the exams under exam conditions (time yourself). Grade the exam and make sure you understand the reasoning behind the answers.
6. Be prepared for lab and be prepared to think.

## **BIOLOGY 1AL STUDY RESOURCES**

The following is a partial list. Please take advantage of these resources. Additional opportunities such as faculty & graduate student reviews may also occur during the semester. Further information is available in the lab manual and the Exam Reader.

**Lecturer's Office Hours:** Office hours are typically held in 2084 or 2088 VLSB. M 11-12 AM, W 11:30-12:30 PM. Typically additional office hours will be held prior to exams as announced.

**Graduate Student Instructors Office Hours (2084 VLSB):** Usually M 2-4, Tuesday 8:30-9:30, 1-2, 5:30-6:30, Wed 1-2, 5:30-6:30, Th. 8:30-9:30, Th. 1-2 PM, F 1-2 PM. Refer to bSpace for up to date hours.

**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.

**General comments:** Science demands close attention to details, yet requires application of those details to broad concepts. At times it is easy to get lost in the details and also very frustrated. Please keep in mind that the biology series (1A/1AL/1B) serves as a foundation for upper division. During your upper division studies you can focus on particular areas that really interest you. There will be material in 1A/1AL/1B that you may not like, or you may question the value of but realize your viewpoints may be very different than your fellow students. For Bio 1AL this applies in particular to the dissections. Some students find them to be the absolutely most fascinating part whereas other students find them to be gross, disgusting and a waste of time. This is a reflection of the diversity not only found at Cal but throughout the world.

**Stress:** UC has an excellent reputation because of the quality of the students and also because of the demands placed upon those students. When the learning objectives are set high students work hard to reach those objectives. 1A and 1AL are both hard classes. A small percentage of the students find them to be very easy but the vast majority of students have to work really hard. Don't forget about your personal health. Your attitude towards studying can make a big difference in your learning outcome and more importantly your overall health – both physically and mentally. Take breaks as needed. Try not to fall behind. When you need help with material please come to office hours of the GSIs and the Lecturer. When you need emotional support don't forget about the resources available to you. <http://uhs.berkeley.edu/students/counseling/>

### Room Assignments

	Tues.	VLSB		Wed.	VLSB		Th.	VLSB		Fr.	VLSB	
213	9 <sup>30</sup> -12 <sup>30</sup>	2113		313	9-12	2113	413	9 <sup>30</sup> -12 <sup>30</sup>	2113	513	9-12	2113
<del>215</del>	<del>9<sup>30</sup>-12<sup>30</sup></del>	<del>2095</del>		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
223	2 - 5	2113		323	2-5	2113	423	2-5	2113	523	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	2-5	2097	527	2-5	2097
235	6 <sup>30</sup> - 9 <sup>30</sup>	2095										
237	6 <sup>30</sup> - 9 <sup>30</sup>	2097										

Changes to the syllabus may occur but you will be informed of any changes.

<i>Date</i>	<i>Lecture Topic</i>	<i>Biology 10<sup>th</sup> edition.</i>	<i>Lab Manual (Fall 2014)</i>
Week 1 9/1-5	<b>Lab 1 Lecture: Safety, Equipment. Watch webcast from Spring 2014.</b>	Ch. 3.3, 4.1. (Intro to DNA structure)	Pages 1-28.
9/5	Drop Deadline.		
Week 2 9/8-12	<b>Lab 2:. Cells, <i>Vibrio</i> isolation.</b>	Ch. 4.1-4.5	Pages 29-42, 43-56* (focus on 43-46).
Week 3 9/15-19	<b>Lab 3: Enzymes, Microbiology-<i>Vibrio</i> streaking.</b>	Ch. 3.1- 2, 3.4, Ch. 6 (all of it)	Pages 57-76, 43-56* (focus on 46).
Week 4 9/22-26	<b>Lab 4: Photosynthesis and <i>Vibrio</i> streaking,</b>	Ch. 8.1-8.5	Pages 77-92, 43-56* (focus on 46).
9/26	Deadline to change NP/P to grade.		
Week 5 9/29-10/3	<b>Lab 5: Genetics &amp; Mol. Biol. I, Complementation I, and PCR.</b>	Ch. 10.1-10.5, Chapter 11 Ch. 14.2- 4. 3, Ch 17.3, Ch. 18.2	Pages 101-110, 43-56*, 93-100**, (*focus on page 47-48, focus on pages 93-95)
Week 6 10/6-10	<b>Lab 6: GMB. II, Complementation II, PCR analysis and DNA electrophoresis.</b>	Ch. 12 (all of it), Ch. 15.1 Ch. 17.1	Pages 111-124, 43-56*, 93-100**. (*focus on pages 48-51, ** p. 96-98)
Week 7 10/13-17	<b>Lab 7: Bioinformatics and Complementation III.</b>	Ch. 15.2 Ch. 18.2	Pages 125-128 + update on bSpace, 43-56 51-56, 93-100*, (*focus pages 51-56, 99-100)
Week 8 10/20	Monday – Review, LAB EXAM 1 on Thursday 7:30-9:30 PM	See handout.	<b>Lab Exam 1 Th 10/ 23</b>
<b>10/23</b>	Thursday		<b>10/ 23 7:30-9:30 PM (night)</b>
Week 9 10/27- 31	<b>Lab 8: Anatomy.</b>	Ch. 35.2, Ch. 42.1, 42.6, Ch. 46.1, Ch. 47.1-47.4, Ch. 48.1, 48.3, Ch. 49.3, 50.1, 50.2, 50.4-5 (overview), 52.3-4,	Pages 129-148
10/31	Deadline to change to P/NP.		
Week 10 11/3-7	<b>Lab 9: Invertebrates.</b>	Ch. 48.2, 49.2, 50.3, 34.1-2, 34.4, 34.6, 34.9	Pages 149-168.
11/10-14	<b>No lab lecture. No lab.</b>		
Week 12 11/17-21	<b>Lab 10 Reproduction and Development.</b>	Ch. 52.1-4, 53.1-3.	Pages 169-180
12/1	12/1 = Lect. Review = Q & A. 12/4 Lab exam 2 on Thursday	See Exam Handout	<b>Lab Exam II 8:30-10 PM on Thursday night – December 4<sup>th</sup>. Be on time.</b>