

**Faculty:** Dr. Malkin and Dr. Fischer are from the Department of Plant and Microbial Biology. Dr. Forte is from the Department of Molecular and Cell Biology. The faculty will hold office hours (while they are lecturing) as follows:

**MWF 9-10****BY APPOINTMENT**

Richard Malkin	2084 VLSB*	2-5959, 421C Koshland, dickm@nature.berkeley.edu.
Robert Fischer	2084 VLSB*	2-1314, 231A Koshland, rfischer@berkeley.edu. <a href="http://epmb.berkeley.edu:8080/facPage/dispFP.php?I=8">http://epmb.berkeley.edu:8080/facPage/dispFP.php?I=8</a> .
John Forte	2084 VLSB*	2-1544, 241 LSA, jforte@berkeley.edu <a href="http://biology.berkeley.edu/bio1a">http://biology.berkeley.edu/bio1a</a>

**Course Coordinator:** Mike Meighan. 510-642-4110, 2088 VLSB, mailbox in 2084 VLSB, e-mail is {[Bio1ACoordinator@berkeley.edu](mailto:Bio1ACoordinator@berkeley.edu)}. Scheduled Office hours are M 11-12, W 10-11, 2-3 and by appointment. I am available for advice on study habits, techniques, lecture material and on matters of scheduling, laboratory operations, exams, etc.. **As you can tell, you have no valid excuse for not getting in touch with either the Course Coordinator, or the Faculty.** Typically any administrative or grading issues should be addressed to the course coordinator.

**Graduate Student Instructors:** The GSI's will instruct the discussion sections. A GSI will be available in the GSI office; 2084 VLSB, between 10-2, M-F. Messages may be left in your GSI's mailbox in 2084 VLSB.

**TIME TABLE**

The drop deadline and the deadline to change grading option is September 28<sup>th</sup>. A \$10 fee applies to drop classes after September 7<sup>th</sup>. A \$5 fee applies to add classes after September 14<sup>th</sup>.

1. Lectures begin August 27<sup>th</sup> and end on December 10<sup>th</sup>. Lectures are held in 1 Pimentel from 8-9 AM. Lectures may be available on the web (<http://webcast.berkeley.edu/courses/>). **They are also simulcast in 145 Dwinelle.** Occasionally, handouts will be given and they will be available at the entrance, and at the front of the room. Lecture handouts are available for purchase at Replica Copy, 2140 Oxford. No note taking service is authorized.
2. Email address: We will routinely email the students about once a week. We will use the email address you have listed in the CalNet Directory. If it isn't the one you check, then you need to change it in the CalNet directory. If you have not received any emails yet, there is a problem with your listed email address.
3. **ADDING:** To add Bio 1A, an "ADD" must be completed and submitted on-line. It is only available on-line at our website. (<http://mcb.berkeley.edu/courses/bio1a>) It is due by **4:00 PM (Tuesday August 28<sup>th</sup>)**. Don't forget that you must also add the lab course – Bio 1AL. Both add forms are available only on-line. In addition to filling out the add form for 1A you must also attend a discussion section on a one-time basis (see p. 4 for a list of times and rooms). Discussion assignments will be posted **on-line by 9 AM on Wednesday (August 29)**. Check! Your chance of getting the class will be higher if you select several "low demand" times as indicated on the adding form (for discussion typically late afternoon, for lab typically the night labs and Friday afternoon labs). If you want either class, please check the listing on Wednesday morning.

4. **CHANGING DISCUSSION SECTIONS: It will be difficult to change sections. Far more students will request changes than can be made.** To change discussion (or lab), a "DISCUSSION CHANGE" form must be completed by Friday, August 31<sup>st</sup> by 5 PM. It is only available on-line at our website. (<http://mcb.berkeley.edu/courses/bio1a>) Very few changes will be made. Discussion assignments will be posted on-line by **noon on Sunday, Sept. 2<sup>nd</sup>**. Note that Monday Sept. 3<sup>rd</sup> is a holiday. If you are added to a Monday discussion section you will be required to email the academic coordinator to verify you have checked the list.
5. **DISCUSSION begins Monday, August 27<sup>th</sup>. You must show up to your assigned discussion or you will be dropped. Those adding/changing discussions can attend another discussion the first week only. Realize you are NOT in that section just because you attend it. Also realize that we may not be able to accommodate your request to switch your discussion section.**
6. **LABORATORY:** For those also enrolled in Bio 1AL (the majority of you) the lab lecture is held on Monday nights from 5-6 PM in 1 Pimentel. The first lab lecture is on August 27<sup>th</sup> and it will cover the first lab, Safety and equipment use. Note that the 8/27 lab lecture will cover the first lab exercise that you will perform the week of September 3<sup>rd</sup>.
7. **Lecture examinations are scheduled for October 1<sup>st</sup> and November 5<sup>th</sup> at 8 AM.** There are no make-up exams. If you miss a scheduled exam due to illness, you must present a written, verifiable medical excuse to Mike Meighan, and your grade for that exam or quiz will be pro-rated. A handout will be given in lecture concerning each exam.
8. 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 (possibly essay).
9. **Final Examination: Friday December 14<sup>th</sup> at 8 - 11 AM.** Room(s) to be arranged. The final exam will be comprehensive and will cover all lectures. You will receive a handout in lecture regarding specific details about the final (point distribution, weighting, etc.).
10. **Attendance:** You are required to attend your normally scheduled lab AND discussion.

#### **LECTURE MATERIALS:**

**Required textbook:** Campbell, **Biology**, 7<sup>th</sup> edition only.

**Required Course Reader:** The required course reader is available at Replica Copy, 2140 Oxford, near Ben & Jerry's.

**Exam Reader:** An exam reader with exams from past semesters is available at Replica Copy.

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

Midterm Examinations (2 x 100)	200 pt's.
Final Exam	300 pt's.
Total:	575 pt's.

**Changes affecting the point distribution, the reading schedule, or other aspects of the syllabus may occur during the semester. We will inform you of any changes.**

Letter grades are based upon the points that you **EARN** (not based upon needs or wants). They are guaranteed as follows.

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

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 around 40-50% of the class **EARN** A's and B's.

**I GRADES:** In keeping with University regulations, the grade of "incomplete" is assigned to a student only if (1) the student has completed at least one-half of the material with a passing grade of C or better and (2) the student presents documented medical evidence of inability to complete the course on schedule. The student assigned an I grade in Biology 1A must complete the work before the first day of classes in the Fall Semester of 2008, without including the course for units on the study list, or the I lapses to an F.

**CHEATING:** The rare student found cheating in the course will be reported to the University for review for dismissal. An automatic 0 will be given on that assignment. Cheating is not tolerated. This includes ALL work—including pre-labs!

**RECOMMENDATIONS:** It is probably better for you to obtain letters from upper division classes, in the future, but we are willing to write letters. Your GSI will write an initial draft of the letter (they know you the best). The course coordinator will edit the letter and a faculty member will sign the edited letter. The course coordinator will then forward your letter to the Placement center. This takes time—at least three weeks

## **HOW TO DO WELL**

1. Come to lectures and take notes. Make sure you review them.
2. Keep up with the material. It is essential that you do not fall behind. Seek help if needed.
3. Clarify topics you do not understand by
  - a. Coming to faculty office hours and ask questions.
  - b. Coming to GSI office hours and ask questions.
  - c. Getting into a study group.
  - d. Reading the book.
  - e. Using email to ask the faculty questions.
4. Use the exam reader, making sure you understand the reasoning behind the answers.
5. Come to the exam review sessions and ask questions.
6. Come to discussion with questions.

## BIOLOGY 1A 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 in the exam reader.

**Faculty Office Hr's:** Office hours are typically held in 2084 VLSB. M, W, F 9 - 10 AM. Dr. Malkin will hold additional office hours on T/Th from 9 -10 AM. Dr. Fischer on Th from 10:00 – 11:00 and Dr. Forte T 9:30-10:30. **These office hours may change.**

**Academic Coordinator Office Hr's (2088 VLSB):** M 11-12, W 1-2.

**Graduate Student Instructors Office Hr's (2084 VLSB):** M- F, 10 - 2.

**Student Learning Center (SLC, 189 Chavez Student Center):** The SLC offers student-led study groups and tutoring. Study groups require registration which can be done on SLC's webpage ([slc.berkeley.edu](http://slc.berkeley.edu)). Tutoring is generally available MTWTh 9-4 and F 9-12. See the SLC's webpage for more information. **Note:** None of the SLC's services are a substitute for lecture, discussion, reading the text, or attending Bio 1A office hours. However, they are an excellent way to get additional assistance and feedback from trained undergraduate tutors who want to assist you in meeting your academic goals.

**STUDY GROUPS:** These are a great way to learn the material. You should form study groups, either within your lab or with other students.

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

**Biology 1A Web Sites:** <http://mcb.berkeley.edu/courses/bio1a> AND <http://biology.berkeley.edu/bio1a> (for Dr. Forte's powerpoint lectures, quizzes) AND <http://webcast.berkeley.edu/courses/>.

## Schedule of Classes

Section	Discussion Time	Discussion Room
101	M 11:00–12:00 PM	106 Moffitt
102	M 11:00–12:00 PM	2304 Tolman
103	M 11:00–12:00 PM	2308 Tolman
104	M 11:00–12:00 PM	200 Wheeler
105	M 12:00– 1:00 PM	229 Dwinelle
106	M 12:00– 1:00 PM	156 Dwinelle
107	M 12:00– 1:00 PM	223 Dwinelle
108	M 12:00– 1:00 PM	121 Wheeler
109	M 1:00– 2:00 PM	103 GPB
110	M 1:00– 2:00 PM	107 GPB
111	M 3:00– 4:00 PM	105 Dwinelle
112	M 3:00– 4:00 PM	106 Moffitt
113	M 3:00– 4:00 PM	2038 VLSB
114	T 12:00– 1:00 PM	156 Dwinelle
115	T 12:00– 1:00 PM	2304 Tolman
116	T 12:00– 1:00 PM	240 Mulford
117	T 3:00– 4:00 PM	340 Moffitt
118	T 3:00– 4:00 PM	116 Haviland
119	T 3:00– 4:00 PM	109 Morgan
120	T 3:00– 4:00 PM	110 Barker
121	M 2:00– 3:00 PM	107 GPB
122	M 1:00– 2:00 PM	110 Barker
123	M 2:00– 3:00 PM	110 Barker
124	M 2:00– 3:00 PM	283 Dwinelle

# Biology 1A Calendar, Fall, 2007

Lectures 1-14: Professor Malkin

Lectures 15-27: Professor Fischer

Lectures 28-41: Professor Forte

All readings are from the 7th edition of Campbell.

<i>Date</i>	<i>Lect #</i>	<i>Lecture Topic</i>	<i>Reading</i>	<i>Bio 1AL Lab, Discussion</i>
Aug. 27	1	Life and the stuff of life	Ch 3 , review 4	Discussion begins! Lab Lecture on safety, equipment use!
Aug. 29	2	Macromolecules structure and function: -proteins and lipids.	Ch 5	
Aug. 31	3	Macromolecules structure and function: -carbohydrates and nucleic acids	Ch 5	
Sept. 3		<b>HOLIDAY</b>		Lab 1: Safety, Equipment Use
Sept. 5	4	Cell structure and organization -#1	7 <sup>th</sup> ed. Ch. 6	
Sept. 7*	5	Cell structure and organization -#2	7 <sup>th</sup> ed. Ch. 6	
		*Deadline to drop without a fee = Sept. 7		
Sept. 10	6	Biological membrane structure & organization	7 <sup>th</sup> ed. Ch. 7	Lab 2: Ligation & Cells
Sept. 12	7	How cells function-an introduction to cellular metabolism and biological catalysts	7 <sup>th</sup> ed. Ch. 8	
Sept. 14	8	Enzyme structure and function -#1	7 <sup>th</sup> ed. Ch. 8	
		*Deadline to add without a fee = Sept. 14.		
Sept. 17	9	Enzyme structure and function -#2	7 <sup>th</sup> ed. Ch. 8	Lab 3: Transform, Enzymes
Sept. 19	10	Cellular energy and work	7 <sup>th</sup> ed. Ch. 8	
Sept. 21	11	Cellular combustion and the production of energy-#1-anaerobic processes	Ch 9	
Sept. 24	12	Cellular combustion and the production of energy-#2-aerobic processes	Ch 9	Lab 4: Colony Isolation, Complementation I, Photosynthesis
Sept. 26	13	Photosynthesis-from light to ATP	Ch 10	
Sept. 28*	14	Photosynthesis-from CO <sub>2</sub> to sugars	Ch 10	
		*Deadline to add/drop and change grading option.		
Oct. 1		<b>MIDTERM 1 Date: Lectures 1-14</b>	See handout.	Lab 5: Plasmid isolation & digestion, Complementation II, Genetics & Mol. Biol. I
Oct. 3	15	How Somatic Cells (Mitosis) and Gametes (Meiosis) Inherit Genomes.	Ch 12, 218-228, Ch 13, all	
Oct. 5	16	The Laws that Govern the Inheritance of Traits - Segregation of Alleles.	Ch 14, 251-262, 265-end	
Oct. 8	17	How Genes Organized on Chromosomes – Linkage, Recombination, Mapping.	Ch 15, 274-288	Lab 6: DNA electrophoresis, Complementation II, Genetics & Mol. Biol. II
Oct. 10	18	Genes Are Made Of DNA.	Ch 16, 293-306	
Oct. 12	19	Gene Expression I - DNA is transcribed into RNA.	Ch 17, 309-319	

<b>Date</b>	<b>Lect #</b>	<b>Lecture Topic</b>	<b>Reading</b>	<b>Lab, Discussion</b>
Oct. 15	20	Gene Expression II – RNA is translated into protein.	Ch 17, 320-end	Lab 7: Invertebrates I
Oct. 17	21	Microbes – Viruses, Bacteria, Plasmids, Transposons.	Ch 18, 334-338, 339-348, 351-352	
Oct. 19	22	Regulation of Gene Expression in Prokaryotes	Ch 18, 352-end	Lab Exam 1. 6:30-8:30 PM Friday 10/19
Oct. 22	23	Gene Structure & Regulation in Eukaryotes I.	Ch 19, 359-369	Lab 8: Invertebrates II.
Oct. 24	24	Gene Structure & Regulation in Eukaryotes II.	Ch 19, 374-end	
Oct. 26	25	How To Isolate, Study and Use Genes.	Ch 20, all	
Oct. 29	26	How To Isolate, Study and Use Genes.	Ch 20, all	Lab 9: Anatomy
Oct. 31	27	Genetic Regulation of Development.		
Nov. 2	28	Introduction to Animals: Tissues and Organs	Chap 40, 820-832	
Nov. 5		<b>MIDTERM 2: Lectures 15-27</b>	See handout.	Lab 10: Reproduction
Nov. 7	29	Homeostasis: Digestion & Nutrition	Ch 41	
Nov. 9	30	Homeostasis: Circulation	Ch 42, 867-883	
Nov. 12		<b>HOLIDAY</b>		No Lab due to 11/12 holiday.
Nov. 14	31	Homeostasis: Respiration	Ch 42, 884-894	
Nov. 16	32	Homeostasis: The body's defenses	Ch 43	
Nov. 19	33	Homeostasis: The immune system	Ch 44	No lab, yes discussion.
Nov. 21	34	Homeostasis: Osmoregulation	Ch 44	
Nov. 23		<b>HOLIDAY</b>		
Nov. 26	35	Integration: Hormones	Ch 45	Lab 11: Diversity
Nov. 28	36	Integration: Sex & reproduction	Ch 46	
Nov. 30	37	Integration: Fertilization & early development	Ch 47, 987-999	
Dec. 3	38	Integration: Nerve cells & excitability	1011-25	<b>Lab Exam II - held During your 3 hour lab.</b>
Dec. 5	39	Integration: Muscle cells & motility	1063-1074	
Dec. 7	40	Integration: The nervous system	1026-38	
Dec. 10	41	Integration: Sensing the environment	1057-1063	
Dec. 14	Friday	<b>FINAL EXAM: 8-11 AM</b>	See handout.	

**All reading assignments are from Campbell, Biology, 7th edition, Benjamin, 2005.**