

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@uclink4.berkeley.edu.
John Forte	2084 VLSB*	2-1544, 241 LSA, jforte@uclink2.berkeley.edu

* Dr. Malkin will hold additional office hours on T/Th from 9:30-10:30 AM. Dr. Fischer on Th from 10:00 –11:00 and Dr. Forte T 9:30-10:30.

Course Coordinator: Mike Meighan. 2-4110, 2088 VLSB, mailbox in 2084 VLSB, e-mail is {mmeighan@uclink4.berkeley.edu}. Scheduled Office hours are M 9-10, W 10-11, Th. 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.**

Graduate Student Instructors: The GSI's will instruct the laboratory and 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 (Biology 1A is an exempt drop class, the drop deadline is October 17th, 2003).

- Lectures begin August 25^h and end on December 5th. Lectures are held in 1 Pimentel from 8-9 AM. Simulcast will be held in 109 Dwinelle. Lectures will also be available on the web (<http://webcast.berkeley.edu/courses/>). Occasionally, handouts will be given and they will be available at the entrance, and at the front of the room. Lecture and lab handouts are available for purchase at Replica Copy, 2140 Oxford (near Ben & Jerry's). No note taking service is authorized.
- ADDING: Since labs and discussions begin the first week it will be difficult to add biology 1a.** To add Bio 1A, an "ADDING" form (page 7) must be filled out and turned into the mailbox outside of 2088 VLSB by **4:00 PM (Monday August 25th)**. I will process the add forms and post names by **9 AM on Tuesday morning (8/26)**. Your chance of getting the class will be higher if you select several "low demand" times as indicated on the adding form – night labs and Friday afternoon labs. If you want the class, check the glass display case outside of 2084 VLSB on Tuesday morning.
- CHANGING SECTIONS: Since labs and discussions begin the first week it will be difficult to change sections.** If you have an exam that directly interferes with your Tuesday or Wednesday night lab I can switch you into another lab the week of your exam--you do not need to request a section change. I can not switch you the week of Dec. 2nd – 5th (because of your second lab exam). To change sections, a "SECTION CHANGE" form (page 8) must be filled out and turned into the mailbox outside of 2088 VLSB by **4:00 PM on Monday, August 25th**. Very, very few section changes will be permitted. Section assignments will be posted by **9 AM on Tuesday (8/26)**. Check the glass display case outside of 2084 VLSB.
- DISCUSSION begins Monday, August 25th You must show up to your assigned section or you will be dropped. Those adding/changing sections can attend another section the first week only.**
- LABORATORY begins Tuesday August 26th and will cover Safety and Equipment Use.** See pages 1-29 of your Laboratory Manual which you must read before your lab (see p. 2 of the syllabus). If you can not attend, contact Mike Meighan **beforehand**.

6. **Lecture examinations** are scheduled for September 29th and November 3rd at 8 AM. There are no make-up exams. Room(s) to be arranged. If you miss an exam due to illness, you must present a written, verifiable medical excuse to Mike Meighan, and your grade for that exam will be pro-rated. A handout will be given in lecture concerning each exam.
7. 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). **False alarms are a misdemeanor.**
8. Lab exams are scheduled as follows: First lab exam, **Thursday night, October 23rd**. Room(s) to be arranged. Your second Lab Exam will be held on your assigned lab day, within your three hour period (**Dec. 2nd - 5th**). There are no make-up lab exams, nor may you switch from your assigned section. Exam handouts will be given.
8. **Final Examination:** Thursday December 11th 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.).
9. **Attendance:** You are required to attend your normally scheduled lab AND discussion. However, if an exam directly conflicts with your lab it will be possible to reschedule lab during the same week EXCEPT THE week of Dec. 2nd to 5th. TO DO THIS you must see or e-mail Mike Meighan the week prior to your exam conflict (such as Organic Chemistry). You know well in advance when your exams are, therefore, schedule lab changes one week ahead of the conflicting exam. See page 1 for my phone # and e-mail.
10. **Blackboard enrollment:** Biology 1A will use blackboard (for providing information and for submission of work, discussion groups, etc). You are required to create an account by 5 {M on **Wednesday August 27th**. The URL for Blackboard is <http://blackboard.berkeley.edu> (no www in the address). Your name and email address will not be available for others to see unless you participate in the discussion board. Once you have created an account, click OK. You will be sent to your Blackboard homepage. At the top click on "Courses" and under the course catalog click on "Letters and Science", then "Biology" and then "Biology 1A Fall 2003". Click on "enroll" and then "submit" and then "OK" to join the course. The discussion board will be under "Communication". Some lecture handouts may be under "Course Documents". This is our first time using Blackboard so we may be making changes as the semester proceeds.

TEXTBOOKS AND LAB MANUAL

Required textbook: Campbell, **Biology**, 6th edition ONLY, Benjamin-Cummings 2002.

Required Lab Manual: The required lab manual (2003/2004) is available at ASUC and Ned's. This is a new edition and you cannot use previous editions. Buying the lab manual packaged Buying the lab manual with the textbook is much cheaper than buying them separate (in fact is almost as cheap as a used copy of Campbell and the lab manual). Required pre-labs and worksheets are available as a packet at Replica Copy located near Ben & Jerry's on the west side of campus at 2140 Oxford. It is about 70 pages. (\$3.00 plus tax).

Recommended Lab Manual: A Guide to Biology Lab., 3rd ed. T. G. Rust. Southwest Education Enterprise. It is fairly inexpensive for a used copy (about \$12).

Exam Reader: An exam reader with exams from past semesters will be available at Replica Copy, on Sept 16th.

Lecture Handouts: Each lecturer will have a packet of figures, etc. for the lectures. Dr. Malkin's and Dr. Forte's are combined and it is at Replica Copy (2140 Oxford). It is about 150 pages and it is spiral bound (\$9.50 plus tax). Dr. Fischer's will be available at a later date.

GRADING PROCEDURE: Grades will be determined numerically as follows:

Midterm Examinations (2 x 100)	200 pt's.
Laboratory & Discussion as follows:	
Lab Exam 1, 10/23 (covering labs 1 - 7)	90 pt's.
Lab Exam 2, 12/2-5 (covering labs 8 - 12)	75 pt's.
Lab Quizzes - 3 points given at the start of each lab (12 labs x 3 pts). The lowest score will be dropped, hence 11 X 3.	33 pt's.
Library project for Dr. Malkin*	30 pts
Quizzes held in lecture for Dr. Fischer*	30 pts
Final Exam	<u>300 pt's.</u>
Total:	758 pt's.

Dr. Forte may arrange a project or quizzes worth 30 points. Changes to the point distribution, to the reading schedule, and additional changes may occur throughout the semester.

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 2004, 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 two weeks

HOW TO DO WELL IN BIOLOGY 1A

1. Come to lectures (yes, I know they are at 8 A.M.) and take notes and then review them.
2. Keep up with the material. It is essential that you do not fall behind.
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. Seek help, if needed. Do it sooner than later.

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 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 9:30-10:30 AM. Dr. Fischer on Th from 10:00 –11:00 and Dr. Forte T 9:30-10:30.

Academic Coordinator Office Hr's (2088 VLSB): M 9-10, W 10-11, Th. 2-3.

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). Tutoring is generally available MTWTh 9-4 and F 9-12 in the Science Tutoring Area of the Chavez Center. 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. I encourage you to form study groups, either within your lab or with other students. The Student Learning Center has study groups (see above). They fill quickly; usually within two days.

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://blackboard.berkeley.edu> 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	Lab Time	Lab Room	
101	M 11:00–12:00 PM	220 Wheeler	T 9:30–12:30 PM	2095 VLSB	A*
102	M 11:00–12:00 PM	103 Moffitt	T 9:30–12:30 PM	2097 VLSB	A*
103	M 12:00– 1:00 PM	223 Dwinelle	T 2:00– 5:00 PM	2095 VLSB	B
104	M 12:00– 1:00 PM	229 Dwinelle	T 2:00– 5:00 PM	2097 VLSB	B
105	M 12:00– 1:00 PM	105 Dwinelle	T 6:30– 9:30 PM	2095 VLSB	C*
106	M 12:00– 1:00 PM	209 Dwinelle	T 6:30– 9:30 PM	2097 VLSB	C*
107	T 3:00– 4:00 PM	3107 Etcheverry	W 9:00–12:00 PM	2095 VLSB	D
108	T 3:00– 4:00 PM	116 Haviland	W 9:00–12:00 PM	2097 VLSB	D
109	M 3:00– 4:00 PM	2320 Tolman	W 2:00– 5:00 PM	2095 VLSB	E
110	M 3:00– 4:00 PM	215 Dwinelle	W 2:00– 5:00 PM	2097 VLSB	E
111	T 2:00– 3:00 PM	340 Moffitt	W 6:30– 9:30 PM	2095 VLSB	F*
112	T 2:00– 3:00 PM	229 Dwinelle	W 6:30– 9:30 PM	2097 VLSB	F*
113	M 11:00–12:00 PM	2038 VLSB	Th 9:30–12:30 PM	2095 VLSB	G
114	T 11:00–12:00 PM	30 Wheeler	Th 9:30–12:30 PM	2097 VLSB	H
115	T 2:00– 3:00 PM	109 Dwinelle	Th 2:00– 5:00 PM	2095 VLSB	I
116	T 2:00– 3:00 PM	105 Dwinelle	Th 2:00– 5:00 PM	2097 VLSB	I
117	T 12:00– 1:00 PM	229 Dwinelle	F 9:00–12:00 PM	2095 VLSB	J
118	T 11:00– 12:00 PM	2304 Tolman	F 9:00–12:00 PM	2097 VLSB	K
119	M 3:00– 4:00 PM	2301 Tolman	F 2:00– 5:00 PM	2095 VLSB	L*
120	M 3:00– 4:00 PM	209 Dwinelle	F 2:00– 5:00 PM	2097 VLSB	L*

Biology 1A Calendar, Fall, 2003

Lectures 1-14: Professor Malkin

Lectures 15-27: Professor Fischer

Lectures 28-41: Professor Forte

All readings are from the 6th edition of Campbell.

Date	Lect #	Lecture Topic	Reading	Lab, Discussion
Aug. 25	1	Life and the stuff of life	Ch 3 , review 4	Discussion and lab begins! Lab Safety, Microscope Use
Aug. 27	2	The structure and function of macromolecules-#1--proteins and lipids.	Ch 5	
Aug. 29	3	The structure and function of macromolecules-#2--carbohydrates and nucleic acids	Ch 5	
Sept. 1		HOLIDAY		Lab 2: Cells
Sept. 3	4	The structure and organization of the cell-#1	Ch 7	
Sept. 5	5	The structure and organization of the cell-#2	Ch 7	
Sept. 8	6	The structure and organization of biological membranes-	Ch 8	Lab 3: Enzymes
Sept. 10	7	How cells function-an introduction to cellular metabolism and biological catalysts	Ch 6	
Sept. 12	8	The structure and function of enzymes-#1	Ch 6	
Sept. 15	9	The structure and function of enzymes-#2	Ch 6	Lab 4: Photosynthesis
Sept. 17	10	Cellular energy and work	Ch 6	
Sept. 19	11	Photosynthesis-from light to ATP	Ch 10	
Sept. 22	12	Photosynthesis-from CO ₂ to sugars	Ch 10	Lab 5: Genetics & Mol. Biol. I
Sept. 24	13	Cellular combustion and the production of energy-#1-anaerobic processes	Ch 9	
Sept. 26	14	Cellular combustion and the production of energy-#2-aerobic processes	Ch 9	
Sept. 29		MIDTERM 1: Lectures 1-14	See handout.	Lab 6: Genetics & Mol. Biol. II
Oct. 1	15	How Do Cells Divide and Transmit Their Genomes to Daughter Cells (Mitosis) to Gametes (Meiosis).	Ch. 12 up to page 226 (the cell cycle clock), Ch. 13 (all).	
Oct. 3	16	Laws that Govern the Inheritance of Traits - Segregation of Alleles.	Ch. 14 up to page 258 (pleiotropy), page 260 starting at mendelian inheritance to the end of the chapter	
Oct. 6	17	How Are Genes Organized - Linkage on Chromosomes, Recombination, Mapping, Complementation test.	Ch. 15 up to page 279 (errors & exceptions)	Lab 7: Genetics & Mol. Biol. III
Oct. 8	18	What Are Genes Made Of - DNA.	Ch 16 up to page 299 (ends of DNA)	
Oct. 10	19	How Is Genetic Information Read? Transcription of a Gene Into RNA.	Ch 17 (all)	

Date	Lect #	Lecture Topic	Reading	Lab, Discussion
Oct. 13	20	How Is RNA Information Read - Translation of RNA into Protein.	Ch 17 (all)	Lab 8: Invertebrates I
Oct. 15	21	Lessons from Studying the Simplest Organisms	Ch 18 up to page 332 (lysogenic cycle), start page 333 (animal viruses) up to page 335 (causes and prevention), start page 339 (viruses may have) up to page 341 (genetic recombination), page 343 (general characteristics of plasmids section), start page 345 (transposons) to the end of chapter	
Oct. 17	22	Gene Regulation in Prokaryotes	Ch 18 as above	
Oct. 20	23	How To Isolate, Study and Use Genes	Ch 20	Lab 9: Invertebrates II.
Oct. 22	24	How To Isolate, Study and Use Genes	Ch 20	Lab Exam 1. 6:30-8:00 PM Thursday 10/23
Oct. 24	25	Gene Structure & Regulation in Eukaryotes I	Ch 19	
Oct. 27	26	Gene Structure & Regulation in Eukaryotes II	Ch 19	Lab 10: Anatomy
Oct. 29	27	Genetic Regulation of Development	Ch 21	
Oct. 31	28	Multicellularity: Eukaryotic diversity	Chs. 32,33	
Nov. 3		MIDTERM 2: Lectures 15-27	See handout.	Lab 11: Reproduction
Nov. 5	29	Multicellularity: Tissue specialization	Ch 40	
Nov. 7	30	Homeostasis: Digestion & Nutrition	Ch 41	
Nov. 10	31	Homeostasis: Circulation	Ch 42	NO LAB -no disc on Tues.
Nov. 12	32	Homeostasis: Respiration	Ch 42	
Nov. 14	33	Homeostasis: Osmoregulation	Ch 44	
Nov. 17	34	Homeostasis: The body's defenses	Ch 43	Lab 12: Diversity
Nov. 19	35	Homeostasis: The immune system	Ch 43	
Nov. 21	36	Integration: Hormones	Ch 45	
Nov. 24	37	Integration: Sex & reproduction	Ch 46	No lab, yes discussion
Nov. 26	38	Integration: Nerve cells & excitability	Ch 48	
Nov. 28			HOLIDAY	
Dec. 1	39	Integration: Muscle cells & motility	Ch 49 (pg 1075-86)	Lab Exam II - held During your 3 hour lab.
Dec. 3	40	Integration: The nervous system	Ch 48	
Dec. 5	41	Integration: Sensing the environment	Ch 49 (pg 1059-75)	
Dec. 11	Thurs.	FINAL EXAM: 8-11 AM	See handout.	

All reading assignments are from Campbell, Biology, 6th edition, Benjamin, 2002.

ADDING

(Section change form on reverse side)

To add Biology 1A fill out this form **completely** and turn it in to mailbox outside of 2088 VLSB by **4:00 P.M., August 25th**. A list of students, including assigned sections, will be posted in the glass display case outside of 2084 VLSB by **9 AM on Tuesday morning (August 26)**. **Permission is required to post your name and assigned section. Sign the following if you give permission to have your information posted (otherwise you will have to email me at mmeighan@uclink4.berkeley.edu and I will return your email).**

Permission to post section and name. _____

NAME _____ DATE _____
 (Last name), (First name) (Middle name)

PHONE # _____ SID# _____ E-mail _____

YEAR (circle) Frosh Sophomore Junior Senior Concurrent (via extension)

INTENDED MAJOR _____ DECLARED (circle) YES / NO

Have you had Biology 1B? (circle) YES / NO

What chemistry classes have you taken? Please include your grade.

Look below at the available lab & discussion times--they are linked. Select your **four** top choices using the **letters A-L**. **DO NOT put in section numbers from the schedule of classes.** Look over your choices carefully as it will be exceedingly difficult to make additional changes.

Remember you must include 4 choices-- not just one or two. Forms with only one or two choices will be ignored. Your **four** choices must include at least one of the following choices (**C/F/L**) unless you have a work or class conflict with all 4 of these sections. If so, you must explain the conflicts.

1st choice _____ 2nd choice _____ 3rd choice _____ 4th choice _____

M 11:00-12:00 PM	T 9:30-12:30 PM	A
M 12:00- 1:00 PM	T 2:00- 5:00 PM	B
M 12:00- 1:00 PM	T 6:30- 9:30 PM	C*
T 3:00- 4:00 PM	W 9:00-12:00 PM	D
M 3:00- 4:00 PM	W 2:00- 5:00 PM	E
T 2:00- 3:00 PM	W 6:30- 9:30 PM	F*

M 11:00-12:00 PM	Th 9:30-12:30 PM	G
T 11:00-12:00 PM	Th 9:30-12:30 PM	H
T 2:00- 3:00 PM	Th 2:00- 5:00 PM	I
T 12:00- 1:00 PM	F 9:00-12:00 PM	J
T 11:00-12:00 PM	F 9:00-12:00 PM	K
M 3:00- 4:00 PM	F 2:00- 5:00 PM	L*

* Typically low demand

Class or work conflict (list class/work schedule, include employers name/ph. #)

SECTION CHANGE

(Adding form on reverse side)

1. If you have a night class and are in Organic Chemistry you do not need to switch. I will schedule you into another lab time during exam conflicts.
2. To request a change of section, fill out this form and turn it in to the mailbox outside of 2088 VLSB, by **4:00 P.M. MONDAY (8/25th)**.
3. Check outside of 2084 VLSB for changes which will be posted by 9 AM on Tuesday, 8/26. Changes will be made only if sections have room; not all sections have room in them. Be sure you want & need the changes!
4. Attend your previously scheduled discussion (since they meet on Monday) AND your newly assigned discussion section if possible (some may have already met on Monday). **If you do not attend a discussion you will be dropped.**

Permission is required to post your name and assigned section. Sign the following if you give permission to have your information posted (otherwise you will have to email me and I will return your email).

Permission to post section and name. _____

NAME _____ DATE _____
(Last name), (First name) (Middle name)

PHONE # _____ SID# _____ E-mail _____

YEAR (circle) Frosh Sophomore Junior Senior Concurrent (via extension)

Currently Assigned Section Number (don't use the letter code, use your actual section number)

Look below at the available lab & discussion times--they are linked. Select your **four** top choices using the **letters A-L**. **DO NOT put in section numbers from the schedule of classes**. Look over your choices carefully as it will be exceedingly difficult to make additional changes.

Remember you must include 4 choices-- not just one or two. Forms with only one or two choices will be ignored. Your **four** choices must include at least one of the following choices (**C/F/L**) unless you have a work or class conflict with all 4 of these sections. If so, you must explain your conflicts.

1st choice _____ 2nd choice _____ 3rd choice _____ 4th choice _____

M 11:00-12:00 PM	T 9:30-12:30 PM	A
M 12:00- 1:00 PM	T 2:00- 5:00 PM	B
M 12:00- 1:00 PM	T 6:30- 9:30 PM	C*
T 3:00- 4:00 PM	W 9:00-12:00 PM	D
M 3:00- 4:00 PM	W 2:00- 5:00 PM	E
T 2:00- 3:00 PM	W 6:30- 9:30 PM	F*

M 11:00-12:00 PM	Th 9:30-12:30 PM	G
T 11:00-12:00 PM	Th 9:30-12:30 PM	H
T 2:00- 3:00 PM	Th 2:00- 5:00 PM	I
T 12:00- 1:00 PM	F 9:00-12:00 PM	J
T 11:00-12:00 PM	F 9:00-12:00 PM	K
M 3:00- 4:00 PM	F 2:00- 5:00 PM	L*

* Typically low demand

Class or work conflict (list class/work schedule, include employers name/ph. #)