

BIOLOGY OF HUMAN CANCER -- MCB 132 – FALL 2013

Three hours of lecture and one hour of discussion per week [4 units]

Prerequisites: 102 or 110 (may be taken concurrently); Biology 1A, 1AL, 1B.

Lectures:

Tu, Thu 2:00 - 3:30, 100 GPB

Discussion sections: (Note: no discussion sections first week)

101: Tues 12 - 1 pm, 107 GPB (Kristin Owyang)

102: Wed 10 - 11 am, 130 Wheeler (Kristin Owyang)

103: Tues 12-1 pm, 151 Barrows (Kunitoshi Chiba)

104: Wed 3-4 pm, 2062 Valley LSB (Kunitoshi Chiba)

Web-site:

<http://bSpace.berkeley.edu>. Log on with your CalNet ID and click the MCB 132 tab.

Text:

The Biology of Cancer, R.A. Weinberg, 2nd edition (Garland Science, 2014)

Instructors:

Kunxin Luo

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Lin He

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Office Hours: Fridays 1 - 2:30pm (or by appointment)

GSIs:

Kristin Owyang

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Office Hours: Tuesdays 10:30am - 12pm (LKS 2nd floor lobby)

Kunitoshi Chiba

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Office Hours: Wednesdays 4 - 5pm (LKS: 1st floor lobby)

MCB 132 – FALL 2013 – SCHEDULE

Wk	Date	Lec	Lecturer	Topic	Textbook Chapter
1	Thu Aug 29	1	KL	Introduction to cancer	2
2	Tue Sep 3	2	KL	Experimental approaches to cancer	2
	Thu Sep 5	3	KL	Tumor viruses	3
3	Tue Sep 10	4	KL	Oncogenes I	4
	Thu Sep 12	5	KL	Oncogenes II	4
4	Tue Sep 17	6	KL	Growth factors and their receptors	5
	Thu Sep 19	7	KL	Ras and Growth factor receptor signaling	5, 6
5	Tue Sep 24	8	KL	Oncogenes/tumor suppressors in development	6
	Thu Sep 26	9	KL	DNA tumor viruses	3
6	Tue Oct 1			MIDTERM 1	
	Thu Oct 3	10	KL	Tumor suppressors I	7
7	Tue Oct 8	11	KL	Tumor suppressors II	7
	Thu Oct 10	12	KL	Cell cycle regulation; Rb; the restriction point	8
8	Tue Oct 15	13	KL	P53	9
	Thu Oct 17	14	KL	Regulation of apoptosis	9
9	Tue Oct 22	15	KL	Telomeres and telomerase	10
	Thu Oct 24	16	KL	Genomic instability I	12
10	Tue Oct 29	17	KL	Genomic instability II	12
	Thu Oct 31	18	LH	Tumor progression I	11
11	Tue Nov 5			MIDTERM 2	
	Thu Nov 7	19	LH	Tumor progression II	11
12	Tue Nov 12	20	LH	Tumor invasion and metastasis I	14
	Thu Nov 14	21	LH	Tumor invasion and metastasis II	14
13	Tue Nov 19	22	LH	Tumor-host interactions	13
	Thu Nov 21	23	LH	Tumor immunology	15
14	Tue Nov 26	24	LH	Normal Stem cells and Cancer Stem cells	
	Thu Nov 28			THANKSGIVING	
15	Tue Dec 3	25	LH	Cancer therapy I	16
	Thu Dec 5	26	LH	Cancer therapy II / Review	16
16	Dec 9 - 13			REVIEW WEEK	
	Tue Dec 17			FINAL EXAM (9:00 - 10:30 AM)	

MCB 132 - GRADING AND COURSE POLICIES - FALL 13

GRADING

1. Midterms and Final

Midterm 1 will have questions based on material covered in Lectures 1 - 8. It will be worth **120 points**.

Midterm 2 will have questions based on material covered in lectures 9 - 17. It will be worth **120 points**.

Midterm 1 and Midterm 2 will be held during normal class hours.

The **final examination** is **NOT** accumulative and will be worth **120 points**.

The final will be held on Tuesday December 17 (9:00-10:30 am). Please check the "schedule of classes" for location. **We cannot reschedule the final for students who have other exams on the same day: so check the final exam calendar in the online schedule .**

ADVICE FROM INSTRUCTORS

A biochemistry/molecular course, either MCB 102 or MCB 110 is required (may be taken concurrently). All students in MCB 132 must have completed such a course before enrolling or be taking the course this semester.

The single most important element in doing well with this material is keeping up to date. Reviewing your notes before the next lecture and looking at the assigned reading the same day as the lecture has proven to make an enormous difference in the final result. Do not hesitate to ask the instructors questions. Reviewing the material only before exams is a very poor strategy, since each lecture in turn uses the material in previous lectures. Since we assume you have mastered the previous material, it is easy to get left behind.

PLEASE ASK QUESTIONS IN SECTION AND OFFICE HOURS. We will be happy to answer them. The best time to ask them is after reviewing your notes just after each lecture. Email should only be used for administrative purposes.

COURSE MECHANICS

1. **Missed midterms:** The two Midterms and the Final are on announced firm dates. Grades will be posted as soon as possible in announced locations. **There are no make-ups for any of the midterms or finals. Students will not be penalized for missing midterms if BOTH of the following conditions are met:**

a. The student makes the request in writing, no later than 2 days after the date of the midterm, and provides acceptable reasons for missing the exam. The request must be supported by appropriate documentation eg a doctor's note. Examples of acceptable excuses for a missed examination are incapacitating illness or accident or a serious illness or death in the immediate family. **Professional or Medical school interviews should not be arranged for Midterm dates since such interviews are not regarded as an acceptable excuse.**

b. The midterm that was missed is completed satisfactorily as a take-home problem set, which can be completed with the aid of notes and texts. This will be due in the hands of the relevant instructor no later than 5 p.m. of the third day after the midterm was given. To be completed satisfactorily, the student's score on the take-home test must be at or above the class median for the examination. If the exam is completed satisfactorily and the excuse was acceptable, the missed exam will not count against the student's final grade, i.e. the student's final grade in the course will be based on his/her performance on the other midterm and the final examination. If

the missed exam is not completed satisfactorily as a problem set, or if the excuse was not acceptable, a score of zero will be assigned, and this zero score will be averaged with the student's scores on the other examinations when the final grade is determined.

An incomplete will be granted if the final is missed for an acceptable and documented reason (see item 3 below).

2. Grading system: We will use a hybrid between standards-referenced grading (absolute grading) and norm-referenced grading (grading on a curve). We will calculate the mean score of the top 10% of the class (which in the past has ranged from 88% to 93%). We will then use the following cut-offs:

A: $\geq 90\%$ of the mean score of the top 10%

B: $\geq 77.5\%$ of the mean score of the top 10%

C: $\geq 65\%$ of the mean score of the top 10%

D: $\geq 50\%$ of the mean score of the top 10%

For the two midterms, we will give you the cut-off percentages. However please note that at the end of the course, before assigning final grades, we will make modest adjustments to the cut-offs after reviewing borderline cases and evidence of improvement over the semester.

3. Regrading: The Midterms will be handed back and may be subject to regrading if substantial errors are found. Midterms must be completed in ink. Contact your GSI, and only during his/her office hours, with your request for regrading of questions. All requests must be submitted in writing with a detailed explanation of the specific questions and items you are contesting. You should be aware that other questions may be regraded and that your score could therefore decrease. The final exam cannot be regraded. Midterms are routinely xeroxed before they are handed back and if an alteration is found on an exam question for which regrading is requested, the student will automatically be assigned a zero for that entire test and the Office of Student Conduct will be notified. Copying another's answers during an exam and other forms of cheating will result in the same penalties. The Final cannot be handed back as it is part of your record, but can be examined on request the next semester.

4. Incompletes: See Professor He as soon as possible if you wish to request an incomplete. These requests are rarely granted and only for exceptional cases of prolonged illness or truly exceptional family emergencies that extend over long periods of time. An incomplete will also be given if a student is unable to attend the final exam because of an incapacitating illness or accident or a serious illness or death in the immediate family. Documentation will be required for all such requests. An incomplete can only be assigned if the work that has been completed is of passing quality. If an incomplete has been granted you can obtain an "I" Grade Report Form and instructions on their use from the staff in 2083 VLSB.

5. Letters of recommendation: Any of the three instructors may be approached for a letter of recommendation and are willing to provide a written evaluation for this purpose. So that we may prepare effective evaluations we ask that you follow the procedure outlined here. Be sure to attend at least 2 of the instructor's office hours. In addition, ask your GSI to write a brief note about your participation in section and email it to the instructor. Sometime after the end of the course, request an interview with the instructor and bring a copy of your complete transcript, your CV (resume), your statement of purpose, the career center confidentiality waiver form, and any recommendation forms that need to be completed.

6. Testing accommodations: Students with disabilities who wish to request testing accommodations should make their request to the Disabled Students' Program (DSP) as early as possible in the semester, so that we can make appropriate proctoring arrangements. It may not be possible to honor requests made at the last minute.