

SYLLABUS (tentative)
BIMM 134: Biology of Cancer Winter 2021: ONLINE

Instructor: Michael Burg, Ph.D.
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Lectures: Asynchronous

Office Hours: TBD

Course Description: This course covers basic processes of transformation and tumor formation in a two-part format. The first section is focused on molecular and cellular mechanisms of carcinogenesis. The second section discusses tumor pathology and metastasis. Open to upper-division students only. **Prerequisites:** BILD1

Recommended Texts, Materials and Web-Enhancement

TEXTBOOKS ARE NOT REQUIRED!!!!

- Molecular Biology of Cancer: Mechanisms, Targets and Therapeutics; Lauren Pecorino; 4th edition (2016)
- The Biology of Cancer; Weinberg; 2nd Edition (2014). Lectures will be, in part based upon topics covered in these texts. These are available on reserve at Geisel Library
- **Some additional readings will be provided via Canvas**
- All powerpoint lectures, associated handouts, and other relevant material are available **via Canvas**
- **Check for announcements on Canvas**
- **Instructional Assistants/Tutors: Names, sections, and contact information will be posted via Canvas**

Attendance, class ethics, and additional considerations

1. Exams will be based upon material in class, assigned science articles;
- 1- **Academic dishonesty and plagiarism (the unauthorized or uncredited use of someone else's work) will result in a grade of "F" for the assignment. Its continued practice will be reported to the appropriate deans for possible disciplinary action and may result in an "F" for the course.**

Sections: Attendance Recommended but not required

Extra Credit: 4 extra points for >80% CAPE response rate

Exams and other assignments

1. There will be two exams (midterm 100pts; final 120pts) on the material stipulated in the study sheets, text reading, supplementary readings and videos and lectures. All exams count; You must take all exams during the scheduled times. A makeup exam *may* be granted with proper documentation of a hospitalization or death in the immediate family. There are no makeup final exams. Exams will include both multiple choice and short answer
2. There will be several written assignments (worth total 150-200 pts) on material to be explained later

Letter grades will be assigned as follows:

GRADING

Your grade is based upon a percentage of the total points you accumulate during the semester.

- A⁺ = 99% - 100% of the total possible points
- A = 90% - 98.9% of the total possible points
- B⁺ = 89% - 89.9% of the total possible points
- B = 80% - 88.9% of the total possible points
- C⁺ = 79% - 79.9% of the total possible points
- C = 70% - 78.9% of the total possible points
- D = 60% - 69.9% of the total possible points
- F = Less than 60% of the total possible**

Tentative Lecture Schedule (*Subject to change*)

WEEK	Date	Lecture Topic	Pecorino Chapter (Weinberg Biology cancer in para)
1	1/3-1/9	Lecture 1: Introduction	1 (2) + supplemental pdfs

		Lecture 2: Oncogenes:Cell signaling Ras/MAPK/others	4(4-6) + supplemental pdfs
2	1/10-1/16	Lecture 3:Oncogenes: Myc/BCR/ABL	4 (4-6) + supplemental pdfs
		Lecture 4: Oncogenes: Therapeutics	4 (4-6) + supplemental pdfs
3	1/17-1/23	Lecture 5:Tumor suppressor: Rb and cell cycle	5-6 (7-9) + supplemental pdfs
		Lecture 6: Tumor suppressor: P53;Tumor suppressor: Therapeutics	5-6 (7-9) + supplemental pdfs
4	1/24-1/30	Lecture 7: Apoptosis: Pathways/mutations/Therapuetics	3.7, 3.10 (10) + supplemental pdfs
5	1/31-2/6	Review for Exam Online Exam 1 (Oncogene/TS/APOPTOSIS) 2 hour exam available Thursday 2/4 9am-9pm <i>Lecture 8:Cancer experimental methods</i>	
6	2/7-2/13	Lecture 9: Cancer immunology	12 (15) + supplemental pdfs
7	2/14-2/20	Lecture 10:Angiogenesis	12 (15) + supplemental pdfs
8	2/21-2/27	Lecture 11: Metastasis	9 (14) + supplemental pdfs
9	2/28-3/6	Lecture 12: Cancer stem cells	supplemental pdfs
10	3/7-3/13	Finish material and Review for final exam	
Final:	Thursday 3/18	Online Final:3hr exam	