

# CANCER BIOLOGY

Biology 6940

Spring 2010

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## COURSE INFORMATION AND POLICIES

**INSTRUCTOR:** Louise A. Russo, Ph.D.

**OFFICE:** Mendel 191C, tel: 610-519-4869; *email:* louise.russo@villanova.edu

**LAB:** Mendel G19

**OFFICE HOURS:** Monday 1:30 – 2:30 PM, Wednesday, 4:30 - 5:30 PM

### REQUIRED READING:

1. Kleinsmith, Lewis, *Principles of Cancer Biology* (First Edition), Benjamin Cummings/Pearson Publishing
2. Instructor-prepared handout materials.

**INTRODUCTION:** This course will overview the biological basis of cancer with an emphasis on cell biology relevant to the understanding of treatment strategies, past, present, and future.

**ATTENDANCE:** Attendance is not required at lectures. If an absence occurs on a day of a lecture examination, you must notify the instructor PRIOR to the absence to be officially excused. In addition to prior notification, excused absences may also require certification of the reason for the missed exam (i.e. doctor's note, official note from the University, police report etc.).

**EVALUATION OF PERFORMANCE:** A total of 500 points will be based upon the following elements:

- I. EXAMINATIONS (125 points each):** There will be a midterm and a final exam. The dates for these examinations are on the course calendar outline. Examinations will not be rescheduled except in an emergency. If you receive an excused absence from an examination, a make-up exam will be scheduled at the instructor's discretion. Examinations will be based upon lecture material as well as information in student presentations given prior to the exam.
- II. Oral Presentation (125 points total):** Each student will prepare materials for presentation of a 15 minute talk that focuses on a particular cancer treatment. The following elements will be essential to this presentation:
  - A. Written Abstract and Bibliography (25 points):** A written abstract/summary of the talk, 500 word maximum, and a relevant bibliography including both primary and secondary sources must be submitted prior to the date of the talk. The abstract will be reviewed, critiqued, and returned so that a final version will be ready for distribution to the entire class in advance of the talk.
  - B. Handout (50 points) –** prepared for distribution to the class in advance of the talk; must be copies of the slides that will be used in the talk

**NOTE:** The abstract/bibliography must be submitted to the instructor two weeks prior to the talk (on a Monday class day). They will be reviewed, critiqued, and returned to you one week later at our scheduled class time. A revised version

along with the powerpoint presentation for the talk must be submitted as email attachments to the instructor NO LATER than 5:00 PM on the Friday prior to the scheduled talk. The instructor will then post these on WebCT and prepare a print handout of the powerpoint slides for distribution to all class members the day of the presentation. It is expected that every class member review these materials as preparation for the talk and, as reference for exam material.

**C. Presentation (50 points):** – instructor and peer evaluations will be completed.

This will be a powerpoint presentation with emphasis on *quality*! This is, in essence, a lecture and you are the instructor. Your goal is to explain the particular cancer treatment in the context of cell biology. You must make clear HOW the treatment is or is expected to be effective (including details on the molecular mechanism), include relevant data if the drug or treatment is currently in use or in clinical trials to show efficacy. Include drawbacks/side-effects of the treatment and relevant information on the future prospects for usage in humans.

As the emphasis will be placed on effective communication skills, the abstract and handout will be critical to ensure comprehension by the peer audience. Things to keep in mind as you prepare the talk:

- i. **Practice:** this cannot be emphasized enough. The most effective talks are those in which the presenter is comfortable verbalizing the material. This is also essential to complete the presentation in the set time frame of 15 minutes. NO time extensions will be granted.
- ii. **Generate interest:** by being well prepared and comfortable with the material itself, you can then relax enough to enjoy the opportunity to teach us about your topic. This will help generate audience interest; if you are interested enough to learn it, so too will the audience. We all know how dreadfully dull some lectures are when the instructor doesn't even seem interested enough to master the material.
- iii. **Ensure comprehension:** prepare good slides that will be informative yet not too cluttered. THIS IS A CRITICAL POINT – the slides are there to help the AUDIENCE to understand the material you are already supposed to understand. Reading off of slides is a strong negative! You are not completing a book report. Text slides should only state key points, not have your entire dialog written on them. When I see all of the text written out on a slide, and the presenter then proceeds to read it, I know immediately that the individual did not take the time to master the material. Handheld notecards are permitted during the talk, but again, NEVER READ OFF OF THEM!
- iv. **Include data** – it is expected that you include figures in the presentation; self-generated figures to illustrate the cell basis of the treatment are encouraged. If you use figures from published sources, be sure to include citation information on the slide. It is also expected that you include data

in the presentation related to efficacy of the treatment in humans, or known effects in animal models.

**III. Roundtable Discussion (125 points total):**

1. **Brief Writing Assignment (100 points)** – you will complete a writing assignment relevant to the content of the roundtable discussion; this will be handed in on the day of the discussion.
2. **Class participation – (25 points)** – the class will be divided into two groups on the final class day. Each group will participate in a roundtable discussion in which individuals present ideas they incorporated in their writing assignments. Each group discussion will be ~45 minutes in length.

**ACADEMIC INTEGRITY:** You are expected to uphold the University policies on academic integrity and to conduct yourselves with honesty. Violations of these policies will not be tolerated. Please read the appropriate pages in the *Blue Book* (Student Handbook) and *Enchiridion* which give an explanation of the University's policies and penalties for dishonesty. If a violation is apparent, appropriate actions will be taken. I am prepared to assess the maximum penalty (an "F" for the course) if warranted.

## TENTATIVE CALENDAR

Date	Topic	Chapter	Presentations
1/11	Introduction – Cancer Trends	1	
1/18	<b>NO CLASS</b> – MLK Day		
1/25	Cancer cell biology	2	
2/1	Cancer metastasis	3	
2/8	Cancer causes	4	
2/15	Chemicals and Cancer	5	2
2/22	<b>Midterm exam (Ch. 1-5)</b>		
3/1	<b>NO CLASS</b> – Spring Break		
3/8	Radiation and cancer	6	
3/15	Infectious agents and cancer	7	3
3/22	Heredity and cancer	8	3
3/29	Oncogenes	9	2
4/5	<b>NO CLASS</b> - Easter		
4/12	Tumor suppressor genes	10	2
4/19	Cancer screening and diagnosis	11	2
4/26	Clinical trials and prevention	12	
4/28 *	<b>Roundtable discussions</b> Session 1: 4:30 – 5:15 PM Session 2: 5:30 – 6:15 PM		<b>Writing assignment due</b>
5/4	<b>Final Exam (Ch. 6-12)</b> (1:30 – 4:00 PM)		

\* **denotes make-up class day:** although it is a Wednesday, a Monday day-class schedule is followed

**Snow cancellation:** as it is possible that class may be cancelled due to inclement weather, a contingency plan will have to be made to ensure that all students have an opportunity to complete their presentations. Therefore it is possible that an adjustment will have to be made in the schedule to accommodate all student presentations.

**CANCER BIOLOGY (Bio 6940)**

**Spring Semester 2010**

**ACKNOWLEDGMENT OF COURSE POLICIES**

Please read and sign this form after you have examined the course syllabus. Detach the signed form and return to your instructor. Your form must be received by the beginning of the first laboratory session of the semester.

I have read the course outline and syllabus for this course and understand all of the policies explained therein. Further, I agree to abide by the policies of the course, and understand that, if I do not, I will be subject to the consequences as stated.

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Name (printed)

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Signature

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Date