

BIOL 846
Instructor: Dr. Moghe

**Cancer Biology, BIOL 846
Online Course (3 credit hours)
Fall 2018**

Instructor Information

Dr. Saili Moghe

Email: moghes1@unk.edu

Canvas Inbox: you can also use the Canvas inbox to contact me

Canvas discussion boards: general comments/questions/concerns can be posted on weekly discussion boards.

Please use email or Canvas Inbox when you have questions that are specific to you.

I will respond to emails/Canvas inbox/discussion board posts, within 48 hours.

Course Materials

Required Textbook: The Biology of Cancer (2nd edition) by Robert Weinberg

Technical Requirements: Full access to a computer and the Internet

Course Description

This course is designed to give you a comprehensive understanding of the basic biology of cancer, and its pathology. We will also explore classic and emerging cancer treatment modalities, and the biological basis behind them. Finally, we will briefly discuss strategies to prevent cancer incidence.

Course Objectives:

1. Identify the molecular and genetic basis of cancer
2. Recognize the complexity of cancer and the evolution of cancer cells throughout disease progression
3. Provide examples of genes and pathways that are disrupted in cancer cells
4. Describe and determine how different cancer therapeutics and preventative methods work, and discuss scenarios in which they may or may not be effective

Course Structure

Weekly materials will be posted on Canvas on Tuesdays by 12:00pm (CT), and an announcement will always go up at this same time, letting you know that all materials are up, as well as any information or details you need to know for that particular week.

Each week, the following will be posted:

- Video lectures
- Outline notes corresponding to the lecture videos
- Assigned readings from the textbook and/or supplemental readings
- Link to the weekly discussion board for questions/concerns/comments
- Quiz/Exam/Assignment (if scheduled for the week)

Assessments

Your progress in class will be assessed by quizzes, exams, and assignments.

- **Assignments**
 - Typically every other week, 15pts each (total of 5 assignments)
 - 1-3 page short essay question(s)
 - 1 week to complete assignment
- **Quizzes**
 - 5 quizzes
 - Questions will be multiple choice, true/false, and occasionally short answer
 - 6-day access to each quiz
 - Timed at 10 minutes per quiz
- **Regular Exams** 100pts each (total of 2 Exams)
 - 2 parts: multiple choice (70pts) and 2 short essay questions (30pts)
 - 6-day access to each Exam
 - Timed at 60 minutes per Exam
- **Final Exam**
 - 3 parts: comprehensive multiple choice (50pts), comprehensive short essay questions (30pts), multiple choice covering last section of course (70pts)
 - Timed at 70 minutes for comprehensive section, 60 minutes for the rest

All Exams are closed book, and no external help (internet, textbook, etc.) is allowed

Course Points

2 Regular Exams * (100 pts each)	200 pts
1 Final Exam ** (150 pts)	150 pts
5 Online quizzes*** (10 pts each)	50 pts
5 Assignments (15pts each)	75pts
TOTAL POINTS	475pts

*Regular Exams will cover topics from indicated lectures in course schedule

**Final Exam is a partially comprehensive exam and will cover topics from throughout the semester.

*** Optional quiz at the end of the semester can be taken to replace the score of your lowest scoring quiz

Grading

Grades will be assigned using the standard grading scale for the Department of Biology, as follows:

A+ = 97-100%	B+ = 88-89%	C+ = 78-79%	D+ = 68-69%	F = Below 60%
A = 93-96%	B = 83-87%	C = 73-77%	D = 63-67%	
A- = 90-92%	B- = 80-82%	C- = 70-72%	D- = 60-62%	

Expectations

As students enrolled in this course, it is entirely your responsibility to:

- log on to Canvas every week and keep up with all weekly course materials. Make sure that you keep up with the Announcements and stay informed about what is happening and going to happen in class.
- seek help when you need it, and do not wait till the last moment to do this
- complete exams and quizzes within the time that they are available, and submit assignments by the given deadlines. **Make-ups or extensions on quizzes, exams and assignments, will NOT be an option. In the highly exceptional situation that an extension is provided, I will require documentation of a legitimate excuse (fully up to my discretion).**
- ensure that you can meet the time requirements and any deadlines associated with this class.
- be respectful to everyone in the class
- maintain academic integrity throughout the course

Course Policies

- **Academic Integrity and Policy on Plagiarism:** Anyone caught cheating or plagiarizing any exercises will receive a 0 for that exercise; subsequent violations will result in referral to the Vice Chancellor for Academic Affairs for dismissal from the university.
- **Policy on Incomplete:** All students are expected to progress through the requirements for this course in a timely fashion. Incompletes will only be considered if circumstances are exceptional and beyond your control (and will require documentation).
- **Extensions or rescheduling** of Exams, quizzes, assignments will NOT be possible unless circumstances are exceptional and beyond your control – a legitimate excuse (based on my discretion) with provided documentation will be required for such considerations
- **Assignments, quizzes, exams will receive zero (0) points if they are not completed within the given due dates.**

Copyright Statement

All materials from this course are protected by copyright. Material from this course cannot be disseminated, adapted, copied, or published without instructor permission; any violation of this is a violation of copyright law.

Students with Disabilities or Students Who are Pregnant

It is the policy of the University of Nebraska at Kearney to provide flexible, individualized, and reasonable accommodations to students with documented disabilities or students who are

pregnant. To receive accommodation services for a disability, students must be registered with UNK Disabilities Services. Contact David Brandt, in the Academic Success Office, 163 Memorial Student Affairs Building, 308-865-8214 or by email brandtdl@unk.edu to register. For students needing accommodation due to pregnancy, you need to contact Student Health. (The following link provides information for students and faculty regarding pregnancy rights. <http://www.nwlc.org/resource/pregnant-and-parenting-students-rights-faqs-college-and-graduate-students>). Students with disabilities or students who are pregnant need to provide the proper documentation from Disability Services or Student Health to their faculty members in order to receive academic accommodations. Anyone who feels they were not afforded these rights, should contact the campus Title IX/ADA Officer at 308-865-8655. Attached is the link to the above statement for your convenience. <http://www.unk.edu/offices/disabilityservices.aspx?id=13673>

Reporting Student Sexual Harassment, Sexual Violence or Sexual Assault

Reporting allegations of rape, domestic violence, dating violence, sexual assault, sexual harassment, and stalking enables the University to promptly provide support to the impacted student(s), and to take appropriate action to prevent a recurrence of such sexual misconduct and protect the campus community. Confidentiality will be respected to the greatest degree possible. Any student who believes she or he may be the victim of sexual misconduct is encouraged to report to one or more of the following resources:

Local Domestic Violence, Sexual Assault Advocacy Agency 308-237-2599

Campus Police (or Security) 308-627-4811

Title IX Coordinator 308-865-8655

Veterans Services

UNK works diligently to support UNK's military community by providing military and veteran students and families with resources and services to help them succeed. Veterans Services assists with the GI Bill process and acts as a liaison between the student and the Veterans Administration. If you need assistance or would like more information, please contact Lori Weed Skarka at 308-865-8520 or unkveterans@unk.edu.

TENTATIVE COURSE SCHEDULE:

TOPIC	Assignment/Quiz /EXAM	Reading	Week
Introduction to Cancer Biology	Introduction post & Assignment #1 (Due: Aug 27)	Chapter 1 & Chapter 2	1 (Aug 20)
Tumor Viruses	Quiz #1 (Aug 28-Sept 4)	Chapter 3	2 (Aug 27)
Cellular Oncogenes	Assignment #2 (Due: Sept 10)	Chapter 4	3 (Sept 3) 3 Sept – labor day
Growth Factors and Receptors	Quiz # 2 (Sept 11-17)	Chapter 5	4 (Sept 10)
Cytoplasmic Signaling	No exam/quiz/assignment	Chapter 6	5 (Sept 17)
Tumor Suppressors	EXAM I – Wk 1-5 topics (Sept 25-Oct 1)	Chapter 7	6 (Sept 24)
Cell Cycle Clock	Assignment #3 (Due: Oct 8)	Chapter 8	7 (Oct 1)
Apoptosis	Quiz #3 (Oct 9-15)	Chapter 9	8 (Oct 8)
Eternal Life	Assignment #4 (Due: Oct 22)	Chapter 10	9 (Oct 15) Oct 15-16 Fall Break
Multi-step tumorigenesis	Quiz #4 (Oct 23-29)	Chapter 11	10 (Oct 22)
Genomic Integrity and Tumor Heterogeneity	EXAM 2 - Wk 6-10 topics (Oct 30-Nov 5)	Chapter 12	11 (Oct 29)
Angiogenesis	Assignment #5 (Due: Nov 12)	Chapter 13	12 (Nov 5)
Metastasis and Invasion	Quiz # 5 (Nov 13-19)	Chapter 14	13 (Nov 12)
Cancer and the Immune System	No quiz/assignment/exam	Chapter 15	14 (Nov 19) Nov 21-24 Thanksgiving Break
Cancer Prevention & Therapeutics	Optional Quiz (Nov 27-Dec 3)	Chapter 16	15 (Nov 26)
FINALS	FINAL EXAM (PARTLY COMPREHENSIVE)		16 (Dec 3)
FINALS	FINAL EXAM (PARTLY COMPREHENSIVE)		17 (Dec 10-13)

All lecture material for each week will be posted every **Tuesday by noon (CT)**

Quizzes/Exams will be available from **Tuesday noon (CT) till Monday noon (CT)** of the following week.

Final Exam will be available from **Tuesday noon (CT) Dec 5 - Wednesday noon (CT) Dec 12**