

BIOL 843
Instructor: Dr. Moghe

Cell Structure & Function, BIOL 843
Online Course (3 credit hours)

Course Description

This course will cover current topics in eukaryotic cell Biology including functions of the membrane, cell organelle functions, cell signaling, cell cycle, and cell movement. This course will also cover the involvement of specific cell organelles and cell functions in human diseases. In this course the emphasis will especially be on animal cells

Learning Objectives

1. Describe the basic properties of eukaryotic cells and their composition
2. List and describe functions of the major biological molecules
3. Describe the function and structure of cellular organelles
4. Describe DNA replication, repair, and expression
5. Describe protein synthesis, processing and regulation
6. Understand cellular signaling as it relates to specific human diseases
7. Understand organelle function as it relates to specific human diseases

Instructor

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 ensure that these questions are general (rather than pertaining to you specifically).

I will respond to emails, inbox messages and discussion board posts within 48 hours.

Course Materials

- **Required Textbook:** Molecular Biology of the Cell (6th Edition) by Alberts et al., 2014
- **Technical Requirements:** Full access to a computer and Internet are required for this course.

Course Structure

I will have all weekly materials up on Canvas by Monday at 12:00pm (CT), and an announcement will always go up at this same time letting you know that all

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materials are up, and provide any information and other details you need to know for that particular week.

Each week the following will be posted:

- Video lectures
- Outline lecture notes corresponding to the lecture videos
- Assigned readings from the textbook or supplemental readings
- Weekly quiz
- Link to the weeks discussion board for questions/concerns/comments
- Possibly occasional short length movies to help understand concepts

Assessments

Your progress in class will be assessed by weekly quizzes and 4 Exams.

- **Quizzes**
 - Weekly, 10pts each (total of 9 quizzes)
 - Multiple-choice, fill in blank, short answer (5-10 questions worth 1-2pts each)
 - 2 attempts allowed, only the score from your final attempt will be recorded
 - 6-day access to each weekly quiz
 - Timed at 10 minutes per quiz
- **Exams**
 - 100pts each (total of 4 Exams)
 - Multiple choice, matching, fill-in the blank, short answer (1-3 sentence answers) questions (~50 questions worth 1-6pts each)
 - 1 attempt only
 - 6-day access to each Exam
 - Timed at 60 minutes per Exam
 - The final Exam is partially comprehensive and all other exams will cover topics from indicated lectures (see class schedule) – timed at 80 minutes

Grades

3 Regular Exams* (100pts each) – 300pts

1 Final Exam** (100pts) – 100pts

1 Introduction post – 5pts

1 Initial writing assignment – 5pts

9 Quizzes – 90pts

TOTAL: 500pts

* Regular Exams will cover topics from indicated lectures

** Final Exam will be partially comprehensive, i.e. 50% comprehensive, 50% focused on topics from indicated lectures

Grade Assignment

Final grades will be assigned using the following grading scale:

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

All grades are final unless there is a calculation error.

Expectations from students

- As students enrolled in this class, it is your responsibility to log in to Canvas every week and keep up with all weekly course materials. Seek help when you need it and do not wait till the last moment to do this.
- You must log on to Canvas at least weekly and keep up with the course. Make sure that you keep up with the Announcements and stay informed about what is happening and going to happen in class.
- It is your full responsibility to complete Exams and Quizzes within the time that they are available. Exams and quizzes are available for 6 days and 2 Quiz attempts are allowed – **with so much flexibility provided to you already, make-up or extensions on quizzes and exams 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)**
- All quizzes and exams (except the final) will be available from noon Tuesday – noon Monday (Central Time). You MUST do your quizzes within this time frame. Once a quiz is closed, it will remain closed. Therefore, please plan ahead to make sure that you get your quiz or exam done in time.
- Understandably, you all have several commitments in your life other than this class. Nonetheless, as a student who has registered for this class, it is absolutely your full responsibility to ensure that you can meet the time requirements any deadlines associated with this class
- You are encouraged to utilize the discussion board not only for any comments/questions/concerns that you may have, but also to interact with your classmates (provided you keep such interactions primarily related to the class). Always be respectful to everyone when using discussion boards.

Class Policies

- **Policy on plagiarism:** Anyone caught plagiarizing any exercise you 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 extenuating and beyond your control, and will require documentation.
- **Extensions or rescheduling** of Exams and quizzes will NOT be possible unless circumstances are exceptional – 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**

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>

Please keep in mind that accommodations become valid only after I sign relevant paperwork, therefore if you require any accommodations please contact me, and the relevant office as soon as possible.

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

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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

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Tentative Class Schedule, BIOL 843

Topic	Assignment/Quiz/Exam	Reading	Week
Cells and Genomes	Introduction post and writing assignment (<i>Due: Jan 16</i>)	Chapter 1	1 (Jan 8)
Cell Chemistry & Biosynthesis	Quiz 1 (Wk 1 material) <i>Available: Jan 16-22 Jan</i>	Chapter 2	2 (Jan 15)
Proteins	Quiz 2 (Wk 2 material) <i>Available: Jan 23-19 Jan</i>	Chapter 3	3 (Jan 22)
DNA, Chromosomes & Genomes	Exam 1 (Wk 1-3 material) <i>Available: Jan 30-Feb 5</i>	Chapter 4	4 (Jan 29)
Replication, Repair & Recombination	Quiz 3 (Wk 4 material) <i>Available: Feb 6-Feb 12</i>	Chapter 5	5 (Feb 5)
Membrane Structure	Quiz 4 (Wk 5 material) <i>Available: Feb 13-Feb 19</i>	Chapter 10	6 (Feb 12)
Membrane Transport	Quiz 5 (Wk 6 material) <i>Available: Feb 20-Feb 26</i>	Chapter 11	7 (Feb 19)
Intracellular Compartments & Protein Sorting	Exam 2 (Wk 4-7 material) <i>Available: Feb 17-Mar 5</i>	Chapter 12	8 (Feb 26)
Protein Transport	Quiz 6 (Wk 8 material) <i>Available: Mar 6-12 Mar</i>	Chapter 12 & 6	9 (Mar 5)
Membrane & Vesicular Traffic	Quiz 7 (Wk 9 material) <i>Available: Mar 13-Mar 19</i>	Chapter 14	10 (Mar 12)
	SPRING BREAK		11 (Mar 19)
Mitochondria Structure	Exam 3 (Wk 8-10 material) <i>Available: Mar 27-Apr 2</i>	Chapter 15	12 (Mar 26)
Cell Signaling	Quiz 8 (Wk 12 material) <i>Available: Apr 3 – Apr 9</i>	Chapter 16	13 (Apr 2)
Cell Cycle & Cell Death		Chapter 17 & 18	14 (Apr 9)
Q & A			15 (Apr 16)
	FINAL EXAM (Wk 2-14 material)		16 (April 23)
FINALS WEEK	FINAL EXAM (Wk 2-14 material)		17 (April 30)

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- All lecture material for each week will be posted every **Monday at noon (CST)**
- Quizzes and Exams will be available from **Tuesday noon (CST) until Monday noon (CST)** of the following week.
- The final Exam will be available on the **noon (CST) Tuesday before finals week until Wednesday noon (CST) of finals week**