BIOL 830P: Biology of Aging
Online Course (2 credit hours)
Tentative Syllabus

Instructor Information

Dr. Saili Moghe
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You may contact me at any time through email (using your Lopermail account), Canvas inbox messages, or the weekly "questions/concerns/comments" discussion board in the course site on Canvas. I will respond to emails, inbox messages and discussion board posts within 48 hours. If a video/voice call appointment is needed, please email me to set up a time.

Course Description

This course will cover the biological principles of aging and longevity. We will discuss the signaling pathways involved in cellular aging, and the specific pathways that affect the lifespan of different organisms. The progression of age-related physiological changes that occur during a lifespan will be examined to understand the process of aging. We will also explore examples of various age-related diseases and how the rate of aging may be altered.

Course Objectives:

Upon successful completion of the course, students will be able to:

1. Identify the molecular and genetic basis of cellular aging
2. Explain age-related physiological changes that occur during a lifespan
3. List and describe examples of age-related diseases
4. Discuss ways in which the rate of aging may be altered

Course Materials

Required Textbook: The Biology of Aging by Roger B. McDonald (2nd edition)
Technical Requirements: Full access to a computer and the Internet; Respondus LockDown browser (details and link for browser download are posted on Canvas)

Course Structure

Weekly materials will be posted on Canvas every Tuesday by 8:00am. An announcement will also be posted to inform you that all materials are up, as well as provide you any updates or details 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, assignments and exams.

- **Assignments**
  -Thought-based questions or activities
  -May require additional reading related to the topic covered
  -1 week to complete each assignment

- **Quizzes**
  - Quiz questions will be multiple choice, true/false, short answer
  - 1-week access to each quiz
  - Timed at 10 minutes per quiz, closed book, will require LockDown browser

- **Exams**
  -Multiple choice and short essay questions
  -1-week access to each exam
  -Timed at 60 minutes per exam, closed book, will require LockDown browser

Grading Scheme

2 Regular Exams * (75 pts each)	150 pts
6 Online quizzes/assignments (10 pts each)	60 pts
TOTAL POINTS	210 pts

*Regular Exams will cover topics from lectures indicated in course schedule
**Final Exam is a partly comprehensive exam and will cover topics from throughout the semester.

Grading Assignment

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:

- Keep up with all announcements posted on Canvas to stay informed about the course, weekly materials, and assigned materials.
- Complete all readings, listen to all lecture videos, and refer to provided notes and resources.
- Complete exams, quizzes, and assignments by the given deadlines (time and date)
- Maintain academic integrity throughout the course.

- Maintain a professional and respectful mannerism when communicating with all members of the class.
- Because students admitted to the graduate program in biology have significant exposure to biology, related disciplines (math, chemistry, physics, etc.) and general education coursework (English, writing, grammar, geography, history, etc.), it is anticipated that previously developed skills and knowledge will be utilized extensively throughout the course and be reflected in the student's academic performance.
- Seek help when you need it, and do not wait till the last moment to do this.

Understandably, you all have several commitments in your life other than this class. Nonetheless, as students registered for this class, it is your full responsibility to ensure that you can meet the above requirements and commit the needed time for this course.

Course Policies

- **Late work, extensions, or rescheduling:** All students are expected to complete all exams and quizzes by the provided deadlines (date and time). You will not be allowed to submit an exam, quiz or assignment after the deadline; **failure to submit by the given deadlines will result in zero (0) points for that exercise.** Extensions or rescheduling will only possible if you are facing extraordinary circumstances (e.g. hospitalization, family death). Please inform me as soon as you can if you have a valid and legitimate excuse (which can be documented) for missing an exam, quiz or assignment.
- **Academic Honesty:** Anyone caught cheating or plagiarizing any exercises will receive zero (0) points 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). When needed, a request for an Incomplete must be made before the end of the semester.

Copyright Statement

Materials in this course may be protected by copyright and intended only for the use of students enrolled in this course for the purposes of this course. Materials from this course may not be disseminated, adapted, copied, or published. Any violation of this is a violation of Federal copyright law.

University Policies Related to COVID-19

The university community is deeply concerned for the well-being of its students, faculty, and staff. Keeping each other as safe as possible will require commitment from each of us; failure to do so will literally place lives in danger. The full policy relating to mitigation of the spread of infectious diseases can be found at https://www.unk.edu/coronavirus/ Policies that apply to all courses (online, remote, blended, or face-to-face) include:

Students shall monitor their health daily. No student shall attend classes in person while sick. Those who have had contact with positive-tested individuals or show COVID-19 related symptoms must have clearance from the Public Health Center prior to returning to face-to-face classes. There will be no penalties for missing classes for COVID-19 related absences.

Students will still be responsible for course content through alternative attendance or other options arranged with the instructor.

Students with Disabilities

It is the policy of the University of Nebraska at Kearney to provide flexible and individualized reasonable accommodation to students with documented disabilities. To receive accommodation services for a disability, students must be registered with UNK Disabilities Services for Students Office, 172 Memorial Student Affairs Building, 308-865-8988 or by email unkdso@unk.edu

UNK Statement of Diversity & Inclusion:

UNK stands in solidarity and unity with our students of color, our LatinX and international students, our LGBTQIA+ students and students from other marginalized groups in opposition to racism and prejudice in any form, wherever it may exist. It is the job of institutions of higher education, indeed their duty, to provide a haven for the safe and meaningful exchange of ideas and to support peaceful disagreement and discussion. In our classes, we strive to maintain a positive learning environment based upon open communication and mutual respect. UNK does not discriminate on the basis of race, color, national origin, age, religion, sex, gender, sexual orientation, disability or political affiliation. Respect for the diversity of our backgrounds and varied life experiences is essential to learning from our similarities as well as our differences. The following link provides resources and other information regarding D&I: https://www.unk.edu/about/equity-access-diversity.php

Students Who are Pregnant

It is the policy of the University of Nebraska at Kearney to provide flexible and individualized reasonable accommodation to students who are pregnant. To receive accommodation services due to pregnancy, students must contact Cindy Ference in Student Health, 308-865-8219. 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

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) 308-865-8911
Title IX Coordinator 308-865-8655
Retaliation against the student making the report, whether by students or University employees, will not be tolerated. If you have questions regarding this information please contact Mary Chinnock Petroski, Chief Compliance Officer (petroskimj@unk.edu or phone 8400).

Tentative Course Schedule

All times listed on the course site and in course documents are in North American Central Standard Time (CST). For each week, material will be posted on **Tuesday by 8am** and assignments/quizzes /exams will be **due by 11:59pm on the following Tuesday**.

TOPIC	**Quiz/Exam**	**Week**
Introduction	Quiz/Assignment 1	1
Basic Concepts		2
Measuring Biological Aging	Quiz/Assignment 2	3
Evolutionary Theories Related to Aging		4
Cellular Aging	Quiz/Assignment 3	5
Genetics of Longevity		6
	EXAM 1	7
Plant Senescence		8
Human Longevity & Lifespan	Quiz/ Assignment 4	9
Aging & Common Loss of Functions		10
Age-related Disease in Humans	Quiz/ Assignment 5	11
	SPRING BREAK	12
Modulating Human Aging	Quiz/ Assignment 6	13
Q & A		14
	EXAM 2	15
		16