BIOL 319

Introduction to Cell and Molecular Biology

Instructor Information:
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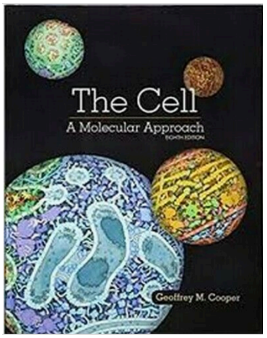
Office hours:
Via Zoom videoconferencing at: https://zoom.us/ (schedule via email)

Course Text:



The Cell: A Molecular Approach, 8th edition by Geoffrey M. Cooper

Previous editions are ok if you need a hard copy. You will have full access to the ebook via the Blackboard site via a fee added to the course.

Other requirements:
As this is an online course, regular and reliable internet service is required. Computer access is also required with Chrome, Firefox or Safari browsers. Chromebooks, tablets and phones will not be sufficient to access all aspects of this online course.

Course Description and Expectations

Introduction to molecular and cellular biology. A special emphasis is placed on nucleic acids and proteins involved in molecular control of cellular activities.

Students are expected to actively participate in online course activities and complete assignments in a timely manner. No late assignments are accepted. All material opens on Sundays and is due the following Sunday. Students are expected to access the course Blackboard site regularly.

Course content will be delivered asynchronously, but due dates are set for online assessments such as problem sets, quizzes, writing assignments, discussions and exams.

Course Objectives

- Learn how the molecules of cells act in structure and metabolism.
- Identify the cellular and molecular mechanisms of drug action.
- Investigate proteins especially in cell structure and function.
- Examine modern biological techniques and models used to study complex nature of biological systems.
- Examine the nature of our genome.

Learning Outcomes

Upon completion of this course, students will be able to:

- Understand and utilize scientific vocabulary used in communicating information about cell and molecular biology.
- Understand and apply key concepts of cell and molecular biology to relevant, specific problems.
- Describe and discuss the properties and biological significance of the central dogma of biology.
- Understand and utilize information found in scientific primary literature.

University Policies:

As a WKU student enrolled in this course you have certain rights and entitlements established by federal law and described in University policies. Information regarding these policies below and others can be found at: https://www.wku.edu/syllabusinfo/

Information regarding **requesting accommodations under the Americans with Disabilities Act** can be found by clicking on the "*ADA Accommodation*" tab.

Information regarding **reporting discrimination or harassment under Title IX** of the Equal Opportunity in Education Act can be found by clicking on the "*Title IX Discrimination/Harassment*" tab.

Students are required to maintain a civil and professional conduct in class. Information regarding **academic integrity and the student code of conduct** as described in the student handbook can be found by clicking the "*Things you should know*" tab.

Cheating and plagiarism, will not be tolerated. Both are taken extremely seriously and have serious consequences. This can be found under "Things you should know" tab.

Grading and Evaluation

We will use the Learning System that accompanies our book that will be linked directly through Blackboard. This will include online problem sets that get you into the chapters. You will be expected to watch the lectures and do the online activities. Engagement with all material will be assessed by a weekly exam. Other points from discussion boards and online problem sets will be used to increase the low stakes grading points to help your grade. Due to this, no extra credit will be offered at the end of the semester. You need to keep up with all activities as they are offered.

Total possible points will be added and grades determined according to the standard scale of:
A = 90-100%
B = 80-89%
C = 70-79%
D = 60-69%
F = < 60%
This grading scale means that an 89% is a B and a 79% is a C. I do not round.

Exams:

Exams will be administered online via Respondus Lockdown Browser. This means you can take them from your own computer instead of going to a testing center. I have chosen this method to make exams less stressful during the already short time period of the class. However, this is a program you will need to download to your computer BEFORE you take your exam. If you have technical difficulties with this program, you will need call WKU IT helpdesk at 745-7000 for assistance. I highly recommend you downloading this well before the date of the exam, in case you need assistance.

Winter Schedule:

This year, the winter term starts before Winter Break and ends earlier in January. This is difficult for several reasons, namely you essentially do not get a winter break. I know that many of you have plans with family and that this time of year is very important. I have not scheduled anything the week of Christmas but I did schedule the following week simply due to the fact that we have to get through the material. I will work with you the best I can during the traditional winter break time to adjust the schedule.

Tentative Schedule for Winter Term			
	Date	**Chapter**	**Topics**
Week 1	12/14/20	1, 2	Overview, proteins in the cell
	12/15/20	3	ATP
	12/16/20	6	DNA and genes
	12/17/20	7	DNA replication
	12/18/20	Exam 1	
Week 2	12/21/20	Break	
	12/22/20	Break	
	12/23/20	Break	
	12/24/20	Break	
	12/25/20	Break	
Week	12/28/20	8	Gene expression
	12/29/20	9	RNA processing
	12/30/20	10	RNA transcription/translation
	12/31/20	11	The nucleus
	1/1/21	Exam 2	
Week 4	1/4/21	12	Eukaryotic organelles
	1/5/21	13	More eukaryotic organelles
	1/6/21	14	Cytoskeleton
	1/7/21	15	Plasma membrane
	1/8/21	Exam 3	
Week 5	1/11/21	16	Extracellular polysaccaride
	1/12/21	17	Cell signaling
	1/13/21	18	Cell division
	1/14/21	19	Cell death
	1/15/21	Exam 4	