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Ethical Issues in Biology and Medicine
BIOL-206 Fall 2023

Instructor: Gary R. Skuse, Ph.D.
Professor, Thomas H. Gosnell School of Life Sciences

Office hours: Dr. Skuse maintains regular office hours this semester from 11:00am – 12:30pm on Thursdays in CBT 3129. Additional times are always available by appointment so if, for whatever reason, you would like to meet outside of those hours please ask.

Course hours: This semester we will meet on Tuesdays and Thursday from 9:30 – 10:45am in the SHED, room 3350. **However**, until that room is completed, we will meet in Slaughter Hall room 2240-2210.

Learning Assistants: This semester we are fortunate to have two Learning Assistants (LAs) who will help you succeed in this course. I have worked extensively with Katie Chrisbacher (kc2302@g.rit.edu) and Ryanne Carr (rlc5951@rit.edu) and I have full confidence that they will enrich your experience with this foundational course.

Course format: Each week we will meet to explore a topic in molecular biology. I will provide you with weekly quizzes that will help you identify topics you understand and topics you need to work on to increase your understanding. Each week there will also be a voluntary review session so you can ask questions to clarify anything that was unclear during our regular meetings. You are not required to attend the review sessions but I anticipate that they will certainly help you improve your understanding of molecular biology and in doing so they will help you improve your grade in this course.

Required books: There are no books required for this course. Instead, materials to support the topics we discuss will be derived from current literature and appropriate online resources such as the book collection at the National Center for Biotechnology Information (ncbi.nlm.nih.gov/books)

Attendance: With approximately 120 students in this course, I will not take attendance this semester. However, I promise that at each lecture I will tell you about relevant topics that are not easily available from any online resources, including my weekly PowerPoint presentations. Since everything we cover in class will be included in our weekly quizzes and the four exams, if you do not attend all classes you will be at a disadvantage during quizzes and exams.

Grades: Grades will be based on the following criteria.

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Assessment method	Total points	A ≥ 93.5%
		A- 89.5 – 93.4%
Weekly Quizzes (15 x 2 points)	30	B+ 86.5 – 89.4%
Exams (4 x 15 points)	60	B 83.5 – 86.4%
Occasional Assignments (4 x 2.5 points)	10	B- 79.5 – 83.4%
		C+ 76.5 – 79.4%
		C 73.5 – 76.4%
Total	**100**	C- 69.5 – 73.4%
		D 60 – 69.4%
		F < 59.4%

Week	Tuesday	Thursday	Learning Inventory
1 29 Aug	Introduction and Biological Macromolecules	Proteins and DNA	1
2 5 Sep	Molecular Interactions	Membranes and Lipids	2
3 12 Sep	Structure and Function of Genes	Structure and Function of DNA: Epigenetic Regulation	3
4 19 Sep	DNA Topology	Review	4
5 26 Sep	**Exam I**	Structure of Genomes	5
6 3 Oct	Chromatin and Gene Regulation Guest: Dr. Maureen Ferran	Structure of Chromosomes	6
7 10 Oct	Fall Break	Genomics: Evolution and Comparative Genomics	7
8 17 Oct	DNA Replication I	DNA Replication II	8
9 24 Oct	DNA Damage and Repair	DNA Repair Mutations and Cancer Guest: Dr. Kate Wright	9
10 31 Oct	**Exam II**	Mechanism of Transcription	10
11 7 Nov	Transcriptional Regulation	RNA Processing: Caps, Tails and Translocation	11

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12 **14 Nov**	RNA Splicing, Differential Splicing and Editing	Translation	12
13 **21 Nov**	Post-translational Modification Guest: Dr. Andre Hudson	Thanksgiving Day	13
14 **28 Nov**	**Exam III**	Proteomics Guest: Stefan Schultze	14
15 **5 Dec**	CRISPR and Genome Modification Guest: Dr. Elle Barnes	Interesting Facts about Eukaryotes: Operons, Reverse Transcriptase and CRISPR	15
16 **12 Dec**	Reading Day	Final Exam	