

**COURSE:** Introductory Cell Biology, BIOL 2440.08, Fall 2017, online lecture

**INSTRUCTOR:** Dr. Joan Hudson

Office: Rm 129 - Lee Drain Building, [jhudson@shsu.edu](mailto:jhudson@shsu.edu), (936) - 294-1541

Office Hours: Available TT: 9:30-10:45 or by appointment, or anytime I am online.

**TEXT:** **Essential Cell Biology** by Bruce Alberts, D. Bray, K. Hopkins, A. Johnson, J. Lewis, M. Raff, K. Roberts and P. Walter. 2010. 3rd ed. Garland Science. It will be to your advantage to have the figures from the book when watching the lecture videos. The lecture videos are based on the 3<sup>rd</sup> edition, 2010, so that edition is recommended. The 4<sup>th</sup> edition will also work.

**COURSE OBJECTIVES:** The objective of this course is to provide a broad overview of cell biology for biology and other science majors. The student will:

- 1) better understand how biological organisms function,
- 2) learn about the four groups of macromolecules present in all life forms,
- 3) learn protein structure, function, and synthesis
- 4) learn nucleic acid chemistry, DNA replication and inheritance,
- 5) learn cell structure and reproduction,
- 6) learn organelle structure and function,
- 7) learn membrane structure, function, and transport,
- 8) learn how cells transform energy and
- 9) be better able to evaluate scientific studies in cell biology.

After taking this course, the student should have a better understanding of cell structure, chemistry and function and be able to use this information in upper level biology classes.

**GRADING:** Four HOURLY exams (100 points each). The fourth exam is the final exam. Lab is 100 points. Total points in this class = 500 points. **There are no extra credit points or activities for extra credit.**

Final grade determination:

A = 90% - 100% (450-500 points)

B = 80% - 89% (400-449 points)

C = 70% - 79% (350-399 points)

D = 60% - 69% (300-349 points)

F = 0% - 59% (0-299 points)

**EXAMS:** The exams will have 50 multiple choice questions (using Scantron 882). Questions will come from lecture notes, lab, and your book. Revising your lecture notes is highly recommended.

**There are no extra credit points.**

**Exams will be given on the designated dates in Rm 214 in the Lee Drain Building at 8:00 am.** The exams will be taken with the face-to-face section.

**MAKE-UP POLICY:** Lecture exams can be taken at a different time if you have a class at 8 am on TTh or you only come to campus on MWF. An alternative time must be approved by Dr. Hudson ahead of time (usually taking the exam on Monday). If the exam is not taken at the scheduled time and no arrangements were made, a completely essay exam will be given as a make-up exam. There are no exceptions.

**ACADEMIC DISHONESTY:** The Student Code and Faculty Handbook will be followed in the event of academic dishonesty. Any form of cheating will not be tolerated.

**LAB:** Lab exercises will be completed and submitted for a total of 100 points. No labs will be dropped. Failure to turn in even one lab, may seriously impact your final grade in this class. Labs must be submitted on or before the due date. Lab materials will not be accepted after the due date. Lab exercises will close on Fridays at 11:59 pm. Students can work in groups of two or three for some of the lab exercises. Students form their own groups. Students are also welcome to work alone on the labs. More information will be provided in lab.

**STUDENTS WITH DISABILITIES:** Students with any type of disability that may prevent them from fully demonstrating their abilities in this class should contact me as soon as possible. We can work together to come up with a plan to assist you with this course. *Any student with a disability that affects his/her academic performance should contact the Office of Services for Students with Disabilities in the SHSU Lee Drain Annex (telephone 936-294-3512, TDD 936-294-3786) to request accommodations.*

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WEEK	Week of:	LECTURE	READING
1	23 August	Introduction, Intro. to Cells	Chapter 1
2	28 August	Intro. to Cells cont., Chem. Components of Cells	Chapters 1, 2
3	4 September	Chemical Components of Cells cont.	Chapter 2
4	11 September	Energy, Catalysis, and Biosynthesis	Chapter 3
5	<b>EXAM 1 - Tuesday, 19 September 2017 - covering weeks 1-4</b> 20 September	Protein Structure and Function	Chapter 4
6	25 September	Membrane Structure	Chapter 11
7	2 October	Membrane Transport	Chapter 12
8	9 October	How Cells Obtain Energy from Food	Ch 13, 14(part)
9	<b>EXAM 2 - Tuesday, 17 October, 2017 - covering weeks 5-8</b> 18 October	Energy Generation in Mitochondria and Chloroplasts	Chapter 14
10	23 October	Energy Generation in Mitochondria and Chloroplasts cont.	
11	30 October	DNA, DNA Replication, Repair and Recombination	Chapters 5,6
12	6 November	From DNA to Protein: How Cells Read the Genome	Chapters 7, 8
13	<b>EXAM 3 - Tuesday, 14 November, 2017 - covering weeks 9-12</b> 15 November	The Cell Division Cycle	Chapter 18
14	20 November	The Cell Division Cycle	Chapter 18
15	27 November	Sex and Genetics	Chapter 19

**FINAL EXAM - EXAM 4 – Finals week**

**Recommendation: Read, Read, Read !!!  
Study, Study, Study!!**