

SYLLABUS

BIOL 3460 – Pathophysiology

Meeting Times: MW 1:00 – 2:50 PM

Instructor: Jim Harper, Ph.D.

Office Hours: Just find me if you need me

Office Location: LDB 134

Phone: 936-294-1543

Email: jmharper@shsu.edu

Recommended Text

Kumar, Abbas & Aster - Robbins and Cotran Pathologic Basis of Disease, 9th Edition

- Note: the textbook is an excellent reference but is not the primary source of lecture material

Course Overview

Course material emphasizes the mechanistic basis of disease at all levels of physiological organization; *i.e.* the genetic, biochemical, cellular, organ/organ system and whole-animal level. In addition, students will learn the etiology of select pathological conditions. Although the course focuses on human pathology, data generated in model organisms (e.g., nematodes, flies, mice & rats) will be presented and discussed as appropriate.

Course objectives

- To learn the mechanisms and pathological consequences of systems level dysfunction
- To learn the genetic, cellular and biochemical mechanisms governing disease processes
- To better understand complex disease states via an integrative approach

Particulars (also see Sam Houston State University Student Handbook and Appendix)

- Attendance: Attendance is not mandatory; however, it is likely in your best interest to come to lecture
- Lecture Notes: I will make ppt slides available on Blackboard but they only provide an overview; details are provided during lecture
- Grading: Final grades will be assigned based on ***your cumulative point total*** earned on the following:
 1. **Homework Assignments**: Beginning the third week of class (9/6/17) and every two weeks thereafter you will be given a 5-question assignment covering the previous two weeks' material. For example, the first assignment (9/8/17) will have questions relevant to any and all material covered on 8/23, 8/28, 8/30 AND 9/6. The second assignment (9/22/17) will have questions from the material covered 9/11 – 9/20 and so on. You may complete the homework assignments alone or with a small group of your peers (≤ 3 people total) using any resources you like. Assignments will be made available on Blackboard and are due ***one week later by 11:59 PM***. All assignments should be submitted via Turnitin on Blackboard. **NO LATE ASSIGNMENTS WILL BE ACCEPTED.** Over the course of the semester there will be 7 such assignments; all 7 will be graded but the lowest of the seven grades will be dropped prior to determining your final grade.
 2. **Term Paper**: Each student will write a paper on the ***molecular basis*** of a specific pathophysiological condition to be chosen and assigned by me. There are no constraints in terms of page limits but you should aim for a final paper with 6 – 8 pages. Paper topics will be assigned the first day of class and the final paper is due on the first day of finals week (Dec 4)
 3. **Extra Credit**: Each homework assignment will contain a case study for your “diagnosis” that is worth up to 5 points (partial credit is possible). In total, you may earn up to 30 points toward your final grade, which is equal to almost 10% of the possible points in the course (an entire letter grade). Completing the extra credit

questions is optional, but there **will be no makeup opportunities** if you fail to complete the question on a given assignment. The extra credit points associated with the 6 assignments used toward your final grade will be used whether they are the 6 highest extra credit grades or not. No additional extra credit will be made available during the course of the semester.

POINTS BREAKDOWN

Category	Number	Points Each	Total Points (possible)
Homework Assignments	6*	60	360
Paper	1	100	100
			460

*The lowest of 7 grades will be dropped

FINAL GRADE

Letter grades will be assigned based upon **total** points earned as follows:

Letter Grade	Number of Points
A	≥414
B	368 – 413
C	322 – 367
D	276 – 321
F	≤275

COURSE OVERVIEW/SCHEDULE*

Unit	Topics
	Class Introduction
Molecular Basis for Disease	Genes & Signal Transduction
	Oxidation, DNA & the Proteasome
Molecular & Cellular Pathology	Cellular Response to Injury
	Apoptosis, Necrosis & Necroptosis
	Neoplastic Disease
	Immunopathology: Innate Immunity & Inflammation
	Wound Healing
	Immunopathology: Adaptive Immunity
	ER Stress & Pathophysiological Function
Systems Pathology	Integumentary Pathophysiology
	Musculoskeletal Pathophysiology
	Neuropathology
	Endocrine Pathophysiology
	Urogenital Pathophysiology
	Cardiopulmonary Pathophysiology
	Gastrointestinal Pathophysiology & Metabolic Disorders
	Xenobiotic Metabolism & Toxicopathology
If time allows	Mitochondrial Disease
	Ciliopathies

*Lecture material may change due to time/interest constraints

APPENDIX – ACADEMIC CALENDAR/CLASS POLICIES/STUDENT CONDUCT

ACADEMIC CALENDAR

http://www.shsu.edu/~reg/www/academic_calendar/

RESIGNATION NOTE:

Students may resign with a "W" grade from the 13th class day through the last class day, but prior to any final exams being taken or course completion.

DROP NOTE:

Courses may be dropped without a grade of "F" through the last class day, but prior to any final exams being taken or course completion. Students wishing to drop courses after the term's online drop deadline must submit a drop request form, signed by the professor, to the Registrar's Office. To process a "Q" drop after the online drop closes, students must come to the Registrar's Office, Estill Building Rm. 331 between the hours of 8:00 a.m. and 5:00 p.m. No schedule changes may be made after the deadline specified in the Academic Calendar.

I take violations against the Sam Houston State University Code of Student Conduct very seriously and will pursue all available options in the event of a violation. Students are expected to engage in a manner that is above reproach and are expected to maintain complete honesty and integrity in the academic experiences both in and out of the classroom. Any student found guilty of dishonesty in any phase of academic work will be subject to disciplinary action **at my discretion**. The university and its official representatives may initiate disciplinary proceedings against a student accused of any form of academic dishonesty including, but not limited to, cheating on an examination or other academic work which is to be submitted, plagiarism, collusion and the abuse of resource materials.

SAM POLICY: <http://www.shsu.edu/students/guide/>

Academic Honesty: All students are expected to engage in all academic pursuits in a manner that is above reproach. Students are expected to maintain complete honesty and integrity in the academic experiences both in and out of the classroom. Any student found guilty of dishonesty in any phase of academic work will be subject to disciplinary action. The university and its official representatives may initiate disciplinary proceedings against a student accused of any form of academic dishonesty including, but not limited to, cheating on an examination or other academic work which is to be submitted, plagiarism, collusion and the abuse of resource materials.

Visitors in the classroom: Only registered students may attend class. Exceptions can be made on a case-by-case basis by the professor. In all cases, visitors must not present a disruption to the class by their attendance. Students wishing to audit a class must apply to do so through the Registrar's Office.

Students with Disabilities: It is the policy of the university that no otherwise qualified disabled student shall, solely by reason of his/her handicap, be excluded from participation in, or denied benefits of, or be subject to discrimination under any academic or Student Life program or activity. Disabled students may request help with academically related problems stemming from individual disabilities by contacting their instructor, school/department chair, or by contacting the university Chair of the Committee for Continuing Assistance for Disabled Students/ Director of Counseling Center. A student with a disability is encouraged to register with the university Counseling Center, as well as contacting their instructor about assistance needs. Accommodation cannot be made until the student has initiated the request with the Counseling Center. Every semester that the student desires accommodations, it is the student's responsibility to complete a Classroom Accommodation Request Form at the Counseling Center and follow the stated procedure in notifying faculty. Accommodations for disabled students are decided upon documentation and need on a case-by-case basis by the Counseling Center. All requests are handled with confidentiality according to university procedures.

Religious Holy Days Policy: Section 51.911(b) of the Texas Education Code requires that the university excuse a student from attending classes or other required activities, including examinations, for the observance of a religious holy day, including travel for that purpose. A student whose absence is excused under this subsection may not be penalized for that

absence and shall be allowed to take an examination or complete an assignment from which the student is excused within a reasonable time after the absence. University Policy 861001 provides procedures to be followed by the student and instructor. A student desiring to absent himself/herself from a scheduled class in order to observe (a) religious holy day(s) shall present to each instructor involved a written statement concerning the religious holy day(s). This request must be made in the first 15 days of the semester or the first 7 days of a summer session in which the absence(s) will occur. The instructor will complete a form notifying the student of a reasonable timeframe in which the missed assignments and/or examinations are to be completed.

Disruptive Behaviors: You are expected to adhere to the Sam Houston University Code of Student Conduct. I take violations against this code very seriously and will pursue all available options if students violate this code. See below, or your handbook for details. Violations include but are not limited to:

- a. talking out of turn in lecture,
- b. obscene language,
- c. reading the newspaper,
- d. completing assignments other than Biology 134,
- e. cell phones ringing,
- f. answering cell phones,
- g. text messaging,
- h. cheating,
- i. and plagiarism.

Class Attendance

1. Regular and punctual class attendance is expected of each student at Sam Houston State University.
2. Each faculty member will keep a record of student attendance.
3. Each faculty member will announce the policies for accepting late work or providing makeup examinations. Students are expected to show appropriate cause for missing or delaying major assignments or examinations.
4. A student shall not be penalized for three or fewer hours of absences when examinations or other assigned class work has not been missed; however, at the discretion of the instructor, a student may be penalized for more than three hours of absences.
5. Each instructor is obligated to clarify in writing to each student enrolled in class at the beginning of the semester or summer session the instructor's classroom policy regarding absences.
6. Class absences will be recorded and counted only from the actual day of enrollment for the individual student in that specific class.

FINAL NOTE

The Sam Center (http://www.shsu.edu/~sam_web/) is an outstanding resource available to students to assist with a host of academic and personal issues.