COURSE SYLLABUS
BIO 271: Pathophysiology

Instructor: E. Lunsford

Description: This course provides an in-depth study of human pathological processes and their effects on homeostasis. Emphasis is placed on interrelationships among organ systems in deviations from homeostasis. Upon completion, students should be able to demonstrate a detailed knowledge of pathophysiology. *This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.*

Methods: Students will participate in interactive lecture and discussion activities. Other methods of instruction will also be used.

Assumed Competencies: Successful completion of BIO 163, 169 or an equivalent course.

Evaluation: Grades for the class will be computed as follows.

Item	**Weight**
Homework, quizzes	1
Tests	2
Comprehensive final exam	3

Note: A grade of Incomplete (I) will be assigned only in extreme cases and only with prior approval by the instructor.

Grades will be assigned according to the following scale & your course average: 93-100 = A; 86-92 = B; 78-85 = C; 70-77 = D; below 70 = F.

Special Policies

1. Tests: If you are present on the day a test is given you will take the test with the class. Make up tests will be given in class during the last weeks of the semester. The instructor will alert you to the days scheduled for make up tests. When the class has officially ended, all missing test grades will be recorded as "zero."

2. Homework and Class work: All assignments are due at the BEGINNING of class on the specified due date. Five points will be deducted from any late paper per school day late. To avoid this penalty for late work, turn in the assignment early, send it by someone or mail it to me at the school. It is essential that missed class activities be made up as soon as possible. If you are having trouble understanding an assignment, you may ask (in advance) for extra time to complete the assignment. Unless prior arrangements are asked for, arranged and approved, no homework or classwork will be accepted more than two (2) weeks after the due date. At this time, missing grades will be changed to “zero.” When the class has officially ended, all missing homework and classwork grades will be recorded as "zero.”

3. Attendance: Attendance is not counted as part of your course grade. However, regular attendance is usually critical in class success. If you need to arrive late or leave early, please enter or leave the room as quietly as possible. I would much prefer that do this than be absent for an entire class. If you miss a class, in whole or in part, it is your responsibility to be prepared for the next class meetings. Do not assume that you simply

need to copy one person's notes when you are absent. Please do not ask me to photocopy notes for you when you miss a class meeting. I will, however, be happy to meet with you about a class you missed. You should not simply stop attending class at any time during the semester. If you need to drop the course, do so by filling out a drop/add form. Failure to do so will result in a course grade of "F."

4. Scheduling Problems: I am more than willing to work with you when you have a personal emergency or a scheduling problem. Please notify me as far in advance as possible and I will decide what I can do about working around your conflict. I reserve the right to refuse any request.

5. Extra Credit Work: On preplanned occasions, I may offer extra credit point activities to all students who are in class on any given day. Please do not ask me for individual extra credit assignments. This really would be unfair to the rest of the class.

6. Cheating: School policy dictates that students conduct themselves in accordance with generally accepted standards of scholarship and morality. Academic honesty is vital. Cheating will result in a grade of "zero" for the assignment in question. I will work hard to see that any episodes of cheating are brought to the attention of school officials. I consider the following things to be cheating.

1) Use of notes, text or any other source of stored information during any quiz, lab practical or test.
2) Copying anything from another student's paper. This includes homework, tests and quizzes inside or outside of class. This also includes students who have taken the class previously. Copying class notes is acceptable.
3) Giving or receiving any written or verbal communication about a test, quiz or homework assignment inside or outside of class.
4) Copying any information from any published source without giving proper citations. Ask me for help or go to the LAC if you do not understand how to cite published references.
6) Taking copies of tests from the classroom without approval.

7. Quizzes: On occasion, unannounced quizzes may be given on lecture objectives or on class activities.

Success in Class

I very much want each of my students to enjoy this class and to learn as much as possible. I spend a lot of time in an effort to keep up my part of a partnership in learning with my students. Your end of the partnership will also involve a lot of time. Most research on effective study techniques indicates that a student should spend at least 2 hours working outside of class for every hour that they spend in class. This means that the successful student should have a **minimum** of six hours of outside study time per week. Success is measured by understanding, learning and by grades. Here are some things that I would use my outside study time for:

1. **Read the assigned textbook chapters and recommended review readings.** This is essential. Read your assignments before, during when and after they are discussed in class. Be an active reader. Ask questions at the beginning of each section like Who? What? and How? Take notes as you read, use a highlighter and use your class objectives.

Even if the reading seems to be making no sense, do it anyway. You will be surprised how much you actually remember. If your textbook is hard for you to read, look for another book in the library, go to Student Support Services or ask the instructor for suggestions.

2. **Review lecture notes daily.** No matter how busy you are, try to set aside 10-15 minutes **every day** to review your notes. This is a very effective technique. Check for missing information and be ready to ask questions in class. Keep in mind that in-class lecture is only one small part of learning class material. I will assume that you have prepared for lecture beforehand. It is a very bad idea to neglect review and studying until just before a test.

3. **Completing assignments.** Work on assignments ahead of the due date so that you will have time to ask questions before the assignment is due.

4. **Come to Class Prepared:** Know what will be going on in class before you even walk in the room. Be ready to get the most out of class time. Read your assignments. Be ready to ask questions. Lecture is only one tiny part of your class experience.

5. **Make other study aids.** Try making up your own flash cards, study questions, reading notes, etc. People tend to remember and understand information if they see it in a variety of ways.

6. **Use other study references.** Books can be found in the school library. Many web-based resources exist as well.

7. **Participate in study groups.** Study groups can be very effective in that students can share study ideas and hear other students' points of view. If your schedule allows for participation in a study group, this may be very useful to you.

8. **Ask questions.** Be prepared with any questions that you have each day. Ask questions in class or come to see me for individual help as necessary.

9. **Review your class objectives.** They are an effective guide for organizing your study. Tests are based directly on class objectives.

10. **Tutoring:** Ask for a tutor from the Learning Assistance Center in Oaks Hall. The service is free and can be highly useful.

Contacting Me

You are welcome to contact me any time you like. However, please note that you are not required to do so each time you are absent or late. I do encourage you to contact me regarding any extended absences. You may leave a message in my mailbox on the second floor of the Balsam center. Ask the assistant to put your message in my mailbox. You may leave a message on my voice mail (EXT. 351) or you may contact me by electronic mail: elunsford@southwesterncc.edu

Disability Statement

If you have a DOCUMENTED disability and think you may need academic adjustments for

this class, please see the Student Support Services office as soon as possible. An Educational Support Plan, outlining reasonable classroom adjustments, will be initiated as soon as you bring your documentation to the SSS office. **If you will not need academic adjustments, you do not have to disclose your disability.** Institutional responsibilities to provide academic adjustments, as governed by ADA and Section 504 of the Rehabilitation Act of 1973, begin after you disclose your disability to the SSS office.

Assignment Schedule

Test l (topic l) _____
Test 2 (topic 2) _____
Test 3 (topic 3) _____
Test 4 (topic 4,) _____
Test 5 (topic 5) _____
Comprehensive Final Exam _____
Other _____

Reading Guide and Schedule

The "textbook chapters" represent reading assignments. Use your objectives as a guide. The "review reading" topics represent subjects that you have likely studied in previous courses. It is recommended that you briefly review them before each unit. Resources may include previously used A&P textbooks, library resources, internet resources, etc. Also, any page numbers in the current class text that deal with these topics are listed. While completing the review readings, identify any questions you have and ask those questions in class.

Unit Number & Topics	**Required Text Readings (page#s)**	**Recommended Review Readings (page #s in text if applicable)**
Unit I:	Chapter 1	Mitosis (15, 126) Cellular differentiation (15, 155)

Introduction, Cellular, Cancer & Pain	Ch 2 (15-20) Ch 7 (156-171) Ch 10 (267-70)	Nociceptors (254) Basic neuron anatomy (217) Prostaglandins
Unit II: Inflammation & Immunity	Chapter 3 (45, 49-51, 56-58) Ch4 (72-79 & 80, 83-89) Ch 11 (302-303) Ch 17 (460-464)	Basics of Inflammation (39-44) Basics of Immunity (66-72) Basic function of thyroid gland (302) Acetylcholine Alveoli in lungs (311) Basic anatomy of nephron (409) Endocrine function of pancreas (459) Basic anatomy & function of synovial joints (55-56) Basics of gene expression and protein synthesis (123)
Unit III: Fluid & Electrolytes, Urinary, Reproduction & Pregnancy	Chapter 8 (203 – 205) Ch 15 (422-424) Ch 7 (177-179) Ch 2 (29-33) Ch 6 (131-134; 140-4)	Basic anatomy & physiology of urinary system (407-410) Basic structure of the female reproductive system, particularly the uterus; location and function of endometrium Chromosome structure & numbers for humans (123-126; 133) Basic process of mitosis
Unit IV: Musculoskeletal, Endocrine & Digestive	Chapter 3 (55-64) Ch 16 (443-447) Ch 10 (271-2) Ch 11 (285-7) Ch 14 (400)	Bone composition Role of vitamin D in bone (391) Bone resorption & mineral deposition; osteogenesis Epiphyseal plate purpose and activity Basic structure and action of skeletal muscles Difference between genes carried on autosomes & sex chromosomes; dominant & recessive genes (123-129) Basic functions of tendons, ligaments, bursa and tendon sheaths Basic stages of sleep Basic role & purpose of ATP Basic role of serotonin in the nervous & endocrine systems Circadian rhythm Difference between red & white muscle fibers Basic functions of hypothalamus, pituitary, adrenal glands (286) Basic structure & functions of stomach & intestines (380, 383-389)
Unit Five: Cardiovascular, Lymphatic & Respiratory	Chapter 14 (396-398) Ch 3 (60) Ch 6 (136-139) Ch 7 (183-187) Ch 5 (108) Ch 13 (350-371 Ch 12 (315-321, 324, 328-336)	Types and functions of formed elements and of blood plasma Basic mechanisms of blood clotting and role of thrombocytes Basic anatomy of arteries and veins in cross section Lipoproteins in cholesterol transport: HDL, VLDL, LDL Basic pathway of blood flow through heart (p. 345) Intrinsic conduction of heart & cardiac output (345-7) Basics of blood pressure (347-50) Role of rennin, angiotensis & aldosterone in blood pressure Basics of fetal circulation and fetal heart anatomy Basic anatomy & physiology of respiratory system (310-315) Basic process of blood cell formation, particularly erythropoiesis Role of erythropoietin in erythropoiesis Basic anatomy & function of lymph nodes
Unit Six: Integument & Nervous Systems	Ch 16 (437, 451-454) Ch 6 (148-150) Ch 9 (237-242 Ch 10 (275-276)	Basic anatomy of skin including details on dermis Basic structure of DNA (125) Development of the neural tube Basic anatomy of vertebral column, meninges & spinal cord (221-3) Basic anatomy and functions of major brain divisions (220-221) Basic anatomy & physiology of neurons (217-220) Oligodendrocytes (217) Basic stages of sleep Circadian rhythm Role of pons & medulla in respiration Basic anatomy of the ear, particularly the organs of hearing and equilibrium (262-263) Basic anatomy of the eye (257-262)