



**BIOL 3411 – Pathophysiology  
FALL 2017**

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**WAYLAND MISSION STATEMENT:** Wayland Baptist University exists to educate students in an academically challenging, learning-focused and distinctively Christian environment for professional success, lifelong learning and service to God and humankind.

**CATALOG DESCRIPTION:** Application of knowledge of normal anatomy and physiology to promote a clear understanding of disease processes. Introduces the student to common body responses and manifestations of disease that result from imbalances in homeostasis of the body.

**PREREQUISITES:** **BIOL 3408, BIOL 3409, and BIOL 3410** - you really NEED 2 semesters of A&P prior!

**TEXT:** McCance, L. K. and Huether, S. E. (2014). *Pathophysiology: The Biologic Basis for Disease in Adults and Children*. (7<sup>th</sup> Edition). Mosby. ISBN 9780323088541

**Case Studies Text:** Brashers, Valentina (2006) *Clinical Applications of Pathophysiology*, (3rd) Mosby ISBN 9780323045308

**Blackboard:** All materials and interactions will be done on Blackboard. It is REQUIRED that each student activate their student email accounts – **this is the official means of communication between faculty and students**. (Wayland email). If you email me using an alternate email address (yahoo, google, etc.) it goes to my junk mail and I will not respond. **So USE your WAYLAND email. Announcements come to your Wayland email**, and I put out at least one announcement per week. Information is in the classroom under "Start Here". If you require assistance in getting this done, please contact the IT department at [itsupport@wbu.edu](mailto:itsupport@wbu.edu).

**COURSE OUTCOME COMPETENCIES:**

At the conclusion of this course, the student will be able to:

1. Analyze cellular and molecular biology as a prerequisite to understanding disease.
2. Examine the cooperation of various systems of the body resulting in fluid, electrolyte and acid-base balance.
3. Analyze how environment and lifestyle affect pathophysiological processes.
4. Evaluate the body's inflammatory response to tissue injury and the organs and systems adaptations to inflammation.
5. Differentiate between a functioning and nonfunctioning immune system.
6. Compare and contrast normal physiologic and abnormal pathophysiological adaptation of various organs and systems across the lifespan.
7. Analyze symptoms, laboratory data, other measures of function, and knowledge of pathophysiological processes to formulate diagnostic hypotheses for clients across the lifespan

## **PARTICIPATION POLICY:**

**Your attendance is based on wikis, case studies, quizzes, and lecture exams.**

Your classmates will depend on you to help construct an understanding of the material in the discussion boards. It is essential that you be in the classroom several times a week to truly participate. Failure to meet posted deadlines may result in a grade of zero. **Any assignments that are accepted by the instructor after the due date will lose 10% of the grade per day (24hr period).** Submissions are time-stamped in Blackboard (discussion or assignments).

**Exams and quizzes will not be reopened!!!** Be sure to watch due dates and participation times and not miss deadlines.

- All times and due dates will be US Central Time (CDT)

**Case Studies constitute the 'lab' portion of our course.** You must complete the case studies to get credit for the lab. This is 28% of your grade. Failure to participate and complete the lab components of the course can result in automatic failure. The last 3 case studies will be video presentations. You can use your phone and upload the MP4 into Kaltura - and upload the assignment via Kaltura.

## **DISABILITY STATEMENT:**

"In compliance with the Americans with Disabilities Act of 1990 (ADA), it is the policy of Wayland Baptist University that no otherwise qualified person with a disability be excluded from participation in, be denied the benefits of, or be subject to discrimination under any educational program or activity in the university. The Coordinator of Counseling Services serves as the coordinator of students with a disability and should be contacted concerning accommodation requests at (806) 291- 3765. Documentation of a disability must accompany any request for accommodations."

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## **Elements of Success:**

Pathophysiology is a course which builds on previous knowledge from Anatomy and Physiology, and cell biology. You must have a good foundation in those to be able to move quickly through the large amount of material covered in 11 weeks in this course. Taking an on-line pathophysiology course will require a firm commitment to learning and personal discipline in scheduling study and participation times. Although you will not be required to attend traditional lecture or laboratory sessions, you will be expected to understand through personal study the same concepts and terms required of students in the traditional lecture class. The advantage of an on-line course is the greater scheduling flexibility it affords the student, but if you are not attentive to course assignments this will probably be reflected in a lower grade for the course. So, given the nature of on-line learning and the demands of the course, it would be wise to heed the following advice!

**1. TIME COMMITMENT - This course has an extensive time commitment.** If this course were taken in a traditional 15 week face to face classroom, classes would meet for about 4 hours per week. A good rule of thumb is that students should reserve at least as many hours outside of class as they spend in-class to review material and complete assignments. While virtual campus students have the benefit of flexibility in scheduling when they will review lecture and project materials, the content of this course is NOT reduced from the traditional format and will require AT LEAST the same level of effort as the in-class version of the course!

**Therefore – to succeed in this course, students should be prepared to invest a MINIMUM of 8 hours per week, with additional effort required to study for case study assignments, quizzes and exams.**

**2. READ AND STUDY ASSIGNED BOOK CHAPTERS AND ALL ADDITIONAL PAPERS OR OTHER MATERIALS** – Even though the on-line format precludes traditional lecture presentation of course

material, some lecture notes, Power Point, and audio resources will be included. The notes will help guide your study of the textbook and related materials (i.e., readings and/or web links relevant to the topic covered). Effective preparation for lecture exams and participation in discussion sessions will require thorough attention to all assigned readings. Do the readings first and early in the week. DO NOT try to read and do assignments on a weekend only, or 2 times a week basis. There is just too much to assimilate for understanding. Better to read on the weekends, and then do a little studying, discussion, reading, and concept mapping each day of the week.

**3. PARTICIPATE IN ALL CLASS WIKIS** – There will be many wiki questions posted on Blackboard for each chapter we study. These are designed to help you focus on major concepts and topics and to engage you in the learning process by sharing your discoveries and observations with your classmates and your professor. In order to effectively participate in the wikis, you will need to keep up with reading assignments. Your participation/discussion grade will be assigned based on the quality of your participation in posted wikis. (See rubric for details)

**4. COLLABORATING** – I would like to set up office hours / class discussion time on Collaborate so we have some real time/ see you / interactions. I know not everyone would be free at the same time. So this is not mandatory – but suggested you attend a least a couple of times to see if it helps you out.

**5. DO NOT MISS DEADLINES FOR QUIZZES or PROCTORED EXAM** – There will be several exams given during the course. Exam formats will vary. The final exam will be given in a proctored environment. To set up a proctor on site, or remotely click on the Services Tab at the top of Blackboard. NOTE that because of the nature of an on-line course, MAKE UP EXAMS WILL BE GIVEN ONLY UNDER THE MOST EXTENUATING CIRCUMSTANCES.

#### **COURSE EVALUATION AND GRADING:**

The final grade in the course will be derived as follows:

Quizzes - total score to equal 1 lecture exam	8%
4 Lecture exams (~every two weeks)	32%
<b>Proctored</b> Final exam	16%
Case Studies (5 of them)	28%
Wiki / Discussion Boards	16%

University grading system

**A** 90-100    **B** 80-89    **C** 70-79    **D** 60-69    **F** below 60    **I** incomplete    **W** withdrawal

#### **Important Dates**

Aug 21	Fall term begins
Sep 4	Labor Day Holiday
Sep 6	Census Date (Last day to drop without record) (25% tuition refund)
Oct 13	Last day to drop course w/ "W" (no tuition refund)
Oct 20	Last day to drop course w/ "WP/WF"
Nov 4	Last day of the term

\* **Quizzes – Weekly** - a few questions will be structure/function but concentrate on Alterations to normal physiology when studying and reviewing.

\***Exams** (4 of them) **will be available from Saturday (noon) to Monday (11:59pm) at the end of the assigned week** Except for the first one on Labor Day weekend shifted to Friday-Sunday.

\***Case Studies** We will be doing weekly case studies starting in Week 4. The first two will be in groups. The rest done individually. Assignment of those case studies will be done in the weekly modules **beginning with week 4.**

**Scroll down for Schedule**

Date	Topic	Chapters	Assignments	Due Dates
Week 1	Cellular Adaptation Fluid Balance and Electrolytes	Chapter 2: Altered Cellular and Tissue Biology Chapter 3: The Cellular Environment	Chapter 1 review Quizzes (chapters 2,3)	
Week 2	Genetic Basis of Disease and Genetic Disorders	Chapter 4. Genes and Genetic Diseases Chapter 5. Genes, Environment and Common Diseases	Quizzes (4,5)	
	<b>EXAM 1</b>	<b>Chapters 2-5</b>	<b>Friday noon- Sunday 11:59pm</b>	
Week 3	Immunity and Immune System Disorders	Chapter 7. Inflammation Chapter 8. Adaptive Immunity Chapter 9. Alterations in Immunity and Inflammation	Quizzes (7,8,9)	
Week 4	Infection and Disease	Chapter 10. Infection Chapter 11. Stress and Disease	Quizzes (10,11)	
	<b>EXAM 2</b>	<b>Chapters 7-11</b>	<b>Sat. noon - Monday 11:59pm</b>	
Week 5	Hematologic System and Blood Disorders	Chapter 27. Structure & Function of Hematologic System Chapters 28, 29. Alterations of Red and White Blood Cells, and Hemostatic Function	Quizzes (27-29)	
Week 5-6	Physiological Basis of the Cardiovascular Examination and Cardiovascular Disorders	Chapter 31. Structure and Function of Cardiovascular and Lymphatic System Chapter 32. Alterations in Cardiovascular Function	Quizzes(31,32)	
Week 6	Physiological Assessment of the Pulmonary System and Respiratory Disorders	Chapter 34. Structure and Function of Pulmonary System Chapter 35. Alterations in Pulmonary Function	Quizzes (34,35)	
	<b>EXAM 3</b>	<b>Chapters 27,28,29,31,32,34,35</b>	<b>Sat noon - Monday 11:59pm</b>	
Week 7	Assessment of the Renal Function and Renal and Urologic Disorders	Chapter 37. Structure and Function of Renal and Urologic Systems Chapter 38. Alterations of Renal and Urinary Tract	Quizzes (37-38)	
Week 8	Physiological Assessment of the Digestive System and Digestive System Disease	Chapter 40. Structure and Function of Digestive System Chapter 41. Alterations of Digestive Function	Quizzes (40-41)	
	<b>EXAM 4</b>	<b>Chapters 37,38,40,41</b>	<b>Sat noon - Monday 11:59pm</b>	
Week 9	Quick Touch on Musculoskeletal system and Reproductive System.	Chapters 44,44:Topics of Alterations: Musculoskeletal  Chapter 26: Sexually transmitted Infections	Quizzes (42,43 and 23)	
Week 10	Physiological Assessment of Nervous System with Neurologic overview	Chapter 17. Alterations in Cognitive Systems, Hemodynamics, Motor function Chapter 18. Disorders of CNS, PNS, and NMJ (brief)	Quizzes (16-17)	
Week 11		<b>Final Proctored Exam - Comprehensive</b>	<b>Monday 8am - Saturday 11:59pm</b>	<b>Nov 4</b>

