



Division of Mathematics and Sciences

## **BIOL3411Fall-CMP2019VC01 – Pathophysiology Syllabus**

### **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.

### **Course Title:**

Biology 3411 – Pathophysiology

### **INSTRUCTOR:**

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### **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! I will check for these in Power Campus.

### **TEXT:**

**NOTE: eTextbook included at registration.** If you want to buy a hard copy that is fine but you must OPT-OUT of the eTextbook in the classroom prior to September 3<sup>rd</sup> or be charged

**McCance, L. K. and Huether, S. E. (2019). Pathophysiology: The Biologic Basis for Disease in Adults and Children. (8th Edition). Mosby. ISBN 9780323583473**

### **Case Studies Text:**

This textbook you must purchase. It is available in the bookstore for purchase.

Brashers, Valentina (2006) Clinical Applications of Pathophysiology, (3rd) Mosby  
ISBN 9780323045308 (used is fine as long as you have the case study questions and information. You will use these as the template for the labs).

### **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

### **ATTENDANCE REQUIREMENTS:**

An absence will be recorded when a student fails to attend class or fails to return after an allowed break during an extended class session (i.e., lab-lecture combos). Students missing more than 25% of scheduled classes may be dropped from the course.

### **PARTICIPATION POLICY:**

**important** - 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. Two case studies (week 7-10) must be video presentations. This involves using the Vidgrid portal uploading the assignment via Vidgrid. Students may do choose other case studies to be written or video per their preference.

### **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."

### **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.

### **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 or under the Help Module on MyBb.

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%
Proctored 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

Students shall have protection through orderly procedures against prejudices or capricious academic evaluation. A student who believes that he or she has not been held to realistic academic standards, just evaluation procedures, or appropriate grading, may appeal the final grade given in the course by using the student grade appeal process described in the Academic Catalog. Appeals may not be made for advanced placement examinations or course bypass examinations. Appeals are limited to the final course grade, which may be upheld, raised, or lowered at any stage of the appeal process. Any recommendation to lower a course grade must be submitted through the Executive Vice President/Provost to the Faculty Assembly Grade Appeals Committee for review and approval. The Faculty Assembly Grade Appeals Committee may instruct that the course grade be upheld, raised, or lowered to a more proper evaluation.

### Important Dates

Aug 19	Fall term begins
Sep 2	Labor Day Holiday
Sep 3	Census Date (Last day to drop without record) (25% tuition refund)
Oct 11	Last day to drop course w/ "W" (no tuition refund)
Oct 18	Last day to drop course w/ "WP/WF"
Nov 2	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

\*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

### Schedule - Subject to change as needed

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)	End of week

Date	Topic	Chapters	Assignments	Due Dates
Week 2	Genetic Basis of Disease and Genetic Disorders	Chapter 4. Genes and Genetic Diseases Chapter 5. Genes, Environment and Common Diseases Chapter 6. Epigenetics and Disease	Quizzes (4,5,6)	End of week
	EXAM 1	Chapters 2-6	Friday noon-Sunday 11:59pm	Sept 1
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)	End of week
Week 4	Infection and Disease	Chapter 10. Infection Chapter 11. Stress and Disease Chapter 12. Cancer Biology	Quizzes (10,11,12)	End of week
	EXAM 2	Chapters 7-12	Sat. noon - Monday 11:59pm	Sept 16
Week 5	Hematologic System and Blood Disorders	Chapter 28. Structure & Function of Hematologic System Chapters 29. Alterations Erythrocyte, Platelet and Hemostatic Function Chapter 30. Alterations in Leucocyte and Lymphoid Function	Quizzes (28-30)	End of week
Week 5-6	Physiological Basis of the Cardiovascular Examination and Cardiovascular Disorders	Chapter 32. Structure and Function of Cardiovascular and Lymphatic System Chapter 33. Alterations in Cardiovascular Function	Quizzes(32,33)	End of week
Week 6	Physiological Assessment of the Pulmonary System and Respiratory Disorders	Chapter 35. Structure and Function of Pulmonary System Chapter 36. Alterations in Pulmonary Function	Quizzes (35,36)	End of week
	EXAM 3	Chapters 28,29,30,32,33,35,36	Sat noon - Monday 11:59pm	Sept 30
Week 7	Assessment of the Renal Function and Renal and Urological Disorders	Chapter 38. Structure and Function of Renal and Urologic Systems Chapter 39. Alterations of Renal and Urinary Tract	Quizzes (38,39)	End of week
Week 8	Physiological Assessment of the Digestive System and	Chapter 41. Structure and Function of Digestive System Chapter 42. Alterations of Digestive Function	Quizzes (41,42)	End of week

Date	Topic	Chapters	Assignments	Due Dates
	Digestive System Disease			
	EXAM 4	Chapters 38,39,41,42	Sat noon - Monday 11:59pm	Oct 14
Week 9	Quick Touch on Musculoskeletal system and Reproductive System.	Chapters 45. Topics of Alterations: Musculoskeletal  Chapter 27. Sexually transmitted Infections	Quizzes (45,27)	End of week  End of week
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 (17,18)	End of week
Week 11	Finals and any needed work	<b>Final Proctored Exam – Comprehensive Must be Proctored.</b>	Monday 8am - Saturday 11:59pm	Nov 2