

# MARIAN UNIVERSITY

## Indianapolis

### **BIO 226 General Human Physiology 5 Credits**

Semester and Year: First Five-Weeks, Spring 2021

Online Instructor: Adrea Kelley

Email: Contact via Canvas email

### **Required Textbook(s):**

Human Physiology, 2/E, Derrickson, 2017, Wiley Publishers

Loose-Leaf w/code - 9781119497783

or

Standalone code - 9781119497752

### **Textbook Resources: WileyPLUS**

You **MUST** purchase an "Access Code" to **WileyPLUS** for the course. Many of your assignments are linked to WileyPLUS content within the course

There are two options to purchase an access code:

1. When purchasing the textbook new from the bookstore an access code is also included.
2. Directly from WileyPLUS. When you attempt to access your first WileyPLUS assignment on Canvas you will be prompted to purchase (or enter your already purchased) an access code. When you purchase the access code you will also be given access to the e-text.

## **WileyPLUS Integration Access**

Upon initial introduction to the Canvas course, you will need to establish an account with the WileyPLUS platform. You may do so by following the below instructions:

1. Click the Wiley Course Resources link in the Canvas course
2. Follow WileyPLUS prompts to establish an account
3. Upon accessing the WileyPLUS platform, view the Getting Started with WileyPLUS resource to familiarize yourself with the platform and its resources

### **Additional Resources:**

The Mother Teresa Hacklemeier Memorial Library at Marian University provides various databases <http://www.marian.edu/library/Pages/default.aspx> ([Links to an external site.](#))

- **Marian University requires all work be completed on a laptop or PC; this includes all exams and quizzes.**

### **Course Description**

The content of this course will provide a full description of all the essential aspects of human physiology. This course is designed to provide all the essential physiological content required for anyone going forward into a health profession.

## Student Learning Objectives

### Course Learning Objectives

### Methods of Assessment

Utilize appropriate use of medical terminology associated with the physiology of each organ system

Abstracts 1, 2, 3, & 4, Discussion: Black Market, Discussion: Umbilical Cord Blood

Analyze important concepts including cell structure, protein synthesis, enzyme kinetics, energy production, cell metabolism, and membrane transport

AP 1-5, Chapter Assessments 1-5, Enzyme Activity Lab, Lab Exam 1, Final Exam

Determine the responses of neurophysiology including the propagation of an action potential, the role of ions and the release of neurotransmitters in this process

AP 7, Chapter Assessment 7, Action Potentials Lab, Lab Exam 1, Final Exam

Differentiate similarities and differences between the functioning of the sympathetic and parasympathetic nervous system

AP 10, Chapter Assessment 10, Final Exam

Outline the response of stimuli to the sensory receptors and function of the sense organs associated with each of the special senses

AP 9, Discussion: Special Senses, Chapter Assessment 9, Final Exam

Analyze muscle structure, stimulation of the muscle from a neuron, and the role of muscle tissue contractile proteins during a muscle contraction

AP 11, Chapter Assessment 11, Recruitment & Isotonic & Isometric Contractions Lab, Lab Exam 1, Final Exam

Classify the components of the circulatory system including arteries, veins, and the heart and how they function

AP 14 & 15, Chapter Assessment 14 & 15, Effect of Exercise on Cardiac Output Lab, Lab Exam 1, Final Exam

Describe the function of formed elements and proteins in blood

AP 16, Chapter Assessment 16, Hematocrit & Hemoglobin Concentration and Blood Typing Lab, Lab Exam 1, Final Exam

Analyze the exchange processes of the respiratory and urinary systems

AP 18 & 19, Chapter Assessment 18 & 19, Respiratory Volumes Lab, Lab Exam 2, Final Exam

Demonstrate how the mechanisms of the respiratory and urinary systems contribute to pH balance of the blood	AP 18 & 19, Discussion: Acid-Base Balance, Chapter Assessments 18 & 19, Acid-Base Balance Lab, Lab Exam 2, Final Exam
Analyze the process of digestion of carbohydrates, proteins and lipids	AP 21, Chapter Assessment 21, Blood Glucose Regulation Lab, Lab Exam 2, Final Exam
Describe the role of the endocrine system in communication and relate it to the nervous system as a means by which it directs the functioning of the human body	AP 13, Chapter Assessment 13, Homeostatic Imbalances of Thyroid Function Lab, Lab Exam 2, Final Exam
Analyze the connections between the components of the immune system and its importance in the immunological response	AP 17, Chapter Assessment 17, Final Exam
Relate the functions of the male and female reproductive systems to their associated anatomical structures	AP 23, Chapter Assessment 23, Discussion: Umbilical Cord Blood, Final Exam

## Teaching Strategies

Audios, discussion, assigned readings, web-based lab activities, & assignments.

## Lectures:

All questions on the lecture exam will deal with material covered in the online lectures, presentations and reading assignments. Therefore, it is greatly to your advantage to utilize all resources available to you.

## Laboratory:

All questions on the laboratory exam will deal with material covered in the online computer simulations found on the PowerPhys lab activities. Therefore, it is greatly to your advantage to work thoroughly through the computer simulations. You will understand the online computer simulations if you read through the pages associated with the computer simulation and the “Lab Intro/Review” sheets linked to each of the Modules PRIOR to attempting the simulation.

## Assignments & Assessment Methods:

### Methods of Evaluation

1. The lecture contribution to the overall grade is determined based on the following point total:

5 points: One Assignment Zero-Scavenger Hunt. This is a “quiz” that is taken at the start of the course to help you learn to navigate the course and become familiar with content. This is meant to be a fun activity and can be completed as many times as you wish.

270 points: Eighteen 15-point chapter Adaptive Practices (AP). These are assigned for each chapter and help you gain a mastery of important concepts from each of the chapters.

The AP’s may be completed as many times as you wish (up until the due date) to improve your score. Your most recent score will be recorded in the gradebook at the due date.

Point allotment for this assignment is as follows:

Points for each adaptive practice will be according to the percentage of proficiency of the assignment.

81% - 100% = 15/15 points

61% - 80% = 11.25/15 points

41%-60% = 7.5/15 points

21%-40% = 3.75/15 points

0%-20% = 0/15 points

100 points: Four 25-point Discussion questions. Students are expected to make an initial post responding to the discussion question prompt and then make (2) replies to classmates. A rubric is attached to each discussion question to help you understand the grading criteria.

100 points: Four 25-point Abstract assignments. Students are expected to write a summary of a peer edited article related to material covered within the module that the abstract is assigned. Be sure to review the grading rubric before starting on your abstract. The rubric describes all of the elements you will need to include in the abstract.

360 points: Eighteen 20-point chapter assessments (quizzes). Each quiz consists of 20 primarily multiple-choice or T/F questions. You will have 40 minutes to complete each of the chapter assessments.

100 points: One 100-point Final Exam. This exam will be cumulative and composed of approximately 2-3 questions from each chapter covered in the course. The Final Exam will consist of 50 primarily multiple-choice or T/F questions. You will have 60 minutes to complete the Final Exam.

1. The laboratory contribution to the overall grade is determined based on the following point total:

50 points: Two 25-point exams will be given. These tests will have 25 multiple-choice questions worth one point each. You will have 40 minutes to complete the lab exam.

135 points: Nine 15-point PowerPhys lab report pdf's . The review sheets may also be completed as you are working through your PowerPhys lab stimulation. These sheets are meant to outline important material from the simulations that may be found later on your lab exams. You will only need to answer the questions found on the "Lab Handout" document when completing the PowerPhys lab activity "Lab Report". Once you complete the entire PowerPhys lab activity and the results/discussion questions indicated in the "Lab Handout" document, you will then save a pdf of the lab and submit it for grading.

Total points: 1120

### **Grading Scale**

93% - 100% A

90% - 92.9% A-

87% - 89.9% B+

83% - 86.9% B

80% - 82.9% B-

77% - 79.9% C+

73% - 76.9% C

70% - 72.9% C-

67% - 69.9% D+

60% - 66.9% D

00% - 59.9% F

### **Course Policies:**

**Late Policy & Due Date Extensions:** Acceptance of work submitted past the due date or requests of due date extensions may be considered in the event of unforeseen, documentable events. Examples of such events include medical emergencies, documentable technical issues, death of a loved one, etc. However, simply forgetting, time zone differences, going on vacation, or not performing a well as intended are not acceptable excuses.

**Plagiarism Statement:** Plagiarism is using the words or ideas of another as your own without giving credit to the source author. This also includes taking a paper found online and submitting it as one's own paper and/or cutting and pasting from a website and submitting it as your work product.

Plagiarism is defined in detail in the Code of Student Rights and Responsibilities under Section 8: Academic Conduct Procedures, as well as an extended description of academic dishonesty:

<https://www.marian.edu/docs/default-source/campus-life/codeofstudentrightsandresponsibilities.pdf?sfvrsn=18> (Links to an external site.)

The following are some helpful websites for understanding plagiarism, documentation and citation:

- Marian University's library: <https://www.marian.edu/current-students/library>(Links to an external site.)
- org: <https://plagiarism.org/>(Links to an external site.)
- Purdue OWL: <https://owl.purdue.edu/>(Links to an external site.)

### **Student Handbook**

Please refer to the MAP [Student Resources](#) and [Student Support Resources](#) modules for information regarding academic and school of policies including [Services for Students with Disabilities](#).

**\*\*Any changes to this syllabus will be communicated to the student.**