

# MARIAN UNIVERSITY

## Indianapolis

**Credit:** 5 semester hours

**Semester and Year:**

**Email:** Please contact via Canvas email

**Prerequisite:** None, but BIO 225 and CHE 100 are strongly recommended

**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.

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

Human Physiology, 2/E, Derrickson, 2017, Wiley Publishers  
Loose-Leaf – ISBN: 9781119497783 (includes access code)

OR

Stand Alone Access Code- ISBN: 9781119497752 (includes access to e-text)

### **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 <https://www.marian.edu/current-students/library> (Links to an external site.)

Upon successful completion of this course, students will be able to:

## Course Outcomes

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.

### Course Learning Objectives

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

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

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

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

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

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

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

### Methods of Assessment

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

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

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

Chapter Assessment 10, Final Exam

Discussion: Special Senses, Chapter Assessment 9, Final Exam

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

Chapter Assessment 14 & 15, Effect of Exercise on Cardiac Output Lab,

they function	Lab Exam 1, Final Exam
Describe the function of formed elements and proteins in blood	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	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	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	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	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	Chapter Assessment 17, Final Exam
Relate the functions of the male and female reproductive systems to their associated anatomical structures	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 pertain to material covered in the online computer simulations found on the PowerPhys lab activities. Therefore, it is greatly to your advantage to work through the computer simulations in their entirety. To help you prepare for 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

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’s). 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 NOT the overall best scoring attempt.

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% = 9/15 points

0%-40% = 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.

## Grading Scale

Proposed Grading Scale: Total points = 1120

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:

## Student Code of Rights and Responsibilities:

The student is responsible for reading and abiding by the policies, philosophies of conduct, and expectations of MAP and Marian University as stated in the MAP Student Handbook and the Student Code of Rights and Responsibilities Handbook. The Handbook can be found on the MAP website at [www.marian.edu/MAP](http://www.marian.edu/MAP) ([Links to an external site.](#)) . The Student Code of Rights and Responsibilities is also available at the Office of Student Life.

## Academic Integrity:

The search for truth, the transmission of knowledge, and the facilitation of moral development are the avowed goals of institutions of higher education around the world. Members of the Marian University community are expected to maintain the highest level of honesty in every phase of their academic lives and to help create and promote an ethical atmosphere in which the goals of the University can be fully realized. All Marian University students are responsible for knowing and avoiding academically dishonest behaviors. If you are not familiar with the guidelines, please refer to the University Code of Students' Rights and Responsibilities.

<http://www.marian.edu/map/documents/studentcodebook.pdf> ([Links to an external site.](#))

Plagiarism (using the ideas and/or words of someone else without proper reference) and other forms of cheating are not tolerated. *Students guilty of plagiarism or other forms of cheating are subject to disciplinary action that may include failure in the course or expulsion from the University.* For more details on plagiarism, see reference materials posted in the Introduction module, or refer to the Student Handbook. All assignments will be scanned with TurnItIn, which will successfully detect plagiarism. Thus, be sure to properly cite and reference all sources used.

## Academic Misconduct:

The Marian University guidelines for penalties and procedures will be strictly adhered to. If you are not familiar with the guidelines, please refer to the University Code of Students' Rights and Responsibilities. <http://www.marian.edu/map/documents/studentcodebook.pdf> (Links to an external site.)

## Withdrawal:

It is the responsibility of the student to know and follow the University policies on academic integrity and class withdrawal.

## Students with Disabilities:

Students with disabilities who have proper documentation must contact the Director of Academic Support Services in the Counseling and Consultation Services office to set up a documentation review. If after the review, accommodations are deemed appropriate, an accommodation plan will be developed. As per the ADA (Americans with Disabilities Act) no accommodations can be provided until this process is complete. Contact Marj Batic, Director of Academic Support Services ([mbatic@marian.edu](mailto:mbatic@marian.edu) ; 317.955.6150; or stop by the office in Clare Hall). Note: Students who may require assistance in emergency evacuations should consult with the instructor as to the most appropriate procedure to follow. If there are questions regarding such a procedure, contact Ruth Rodgers, Vice President, Student Success and Engagement/Dean of Students @ [rrodgers@marian.edu](mailto:rrodgers@marian.edu) or the Director of Academic Support Services for additional information.

## All Other Policies and Procedures:

Refer to MAP Student Handbook.

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