

**BIOH461 Syllabus Fall 2016**

*Tutoring Human Anatomy and Physiology for Health Professions I (honors)*

**Course Information:**

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**\*\* Pre-requisite: Grade of B- or higher in BIOH365, consent of instructor**

**Course Structure**

- Lecture, discussion and preparation of teaching materials for BIOH 365/370.
- Weekly meetings to discuss teaching strategies effective for undergraduate BIOH365/370 courses.
- Supervised tutoring of lecture-based material for BIOH365.

**Required materials:**

Principles of Anatomy and Physiology 14<sup>th</sup> edition by Gerard J. Tortora, Bryan H. Derrickson - John Wiley & Sons (2014) – ISBN 978- 1-118-34500-9 plus the Wiley Plus online package (available at the University of Montana Bookstore).

Atlas of Anatomy by Anne M. Gilroy, Brian R. MacPherson, Lawrence M. Ross - Thieme (2008) –ISBN-978-1-60404-062-1 or the 2<sup>nd</sup> edition of the Gilroy atlas or the electronic edition (available from [www.thieme.com](http://www.thieme.com))

**Course Goals, Objectives and Outcomes:**

The two-semester sequence is divided as follows:

BIOH 480	BIOH 481
Body Plan & Organization	Endocrine system
Homeostasis	Cardiovascular System
Chemistry & Cell Biology Review	Lymphatic System and Immunity
Histology	Respiratory System
Integumentary System	Digestive System
Skeletal System & Articulations	Metabolism
Muscular System	Urinary System
Nervous System	Fluid/Electrolytes and Acid/Base
Special Senses	Balance
	Reproductive System

**Course Objectives:**

Upon successful completion of this two-course sequence, you will have mastered the conceptual and practical information regarding the anatomy and physiology of the human organism by providing tutoring based on lecture material covered in the two-semester sequence of Human Anatomy and Physiology for Health Professionals (BIOH365/370). Enrolled students will integrate principles learned in BIOH365/370 (*Human Anatomy and Physiology*) into practice by providing tutoring instruction to current BIOH365 students.

**Learning Objectives:**

Upon completion of this course, a student will be able to:

1. Understand the complex principles associated with the Human Anatomy and Physiology and assist in teaching these concepts to students enrolled in BIOH365.
2. Use a multi-modal instructional approach to help students enrolled in BIOH365 better understand the complex learning material.
3. Understand and discuss the methodology and activities scientists use to gather, validate and interpret data related to natural processes as it applies to Human Anatomy and Physiology.
4. Detect patterns, draw conclusions, develop conjectures and hypotheses regarding normal human physiology and help students anticipate the pathophysiology that could result when homeostasis is lost in humans.
5. Understand and discuss how quantitative measurement, scientific observation, and logical/critical reasoning verify scientific laws and theories as they pertain to advances in medical understanding.

**Learning Outcomes**

1. Demonstrate understanding of chemical and biological principles and knowledge that serve as the foundation for understanding human anatomy and physiology.
2. Understand and analyze cellular processes governing development, growth and normal function of the human body.
3. Understand the processes involved with maintaining homeostasis and anticipate what may occur when homeostatic balance mechanisms are lost.
4. Demonstrate practical knowledge of human gross and microscopic anatomy using human cadavers and prepared histological slides.
5. Identify structures in the body and analyze their relationship with other structures.

6. Describe development, regeneration and normal function of body systems
7. Understand the cellular and physiological mechanisms that drive tissue formation and function.
8. Employ the scientific process for understanding principles of anatomy and physiology.
9. Analyze A&P observations and data and determine the potential physiological consequences.
10. Become familiar with current teaching practices and ways to address the various learning styles of students in the human anatomy and physiology courses.
11. Develop professional behavior and strategies for explaining difficult concepts in human anatomy and physiology to adults with an application in health professions.

To establish and maintain an effective rapport with individual students/small student groups and to design tutor instruction around adult learning principles. Participants are required to:

- Attend at least 60% of the BIOH365 lectures as an observer (questions to Dr. Minns must be communicated outside of scheduled class times).
- Attend Friday 12noon-12:50pm meetings in HS101 with the UGTAs
- Lead at least one 1-2 hour review session on lecture material per week. Some of these dates will occur during class sessions as indicated in the BIOH365 course syllabus.
- Be on time and prepared for all tutoring sessions; communicate any student issues ASAP via email to Dr. Minns regarding tutoring session experiences.
- Carbon Copy (cc) all emails to students to Dr. Minns. If you are unsure how to respond to a student question, forward the emails to me and I will help you construct and appropriate response.
- Proctor exams and assist with grading as needed.
- Maintain open communication with Dr. Minns regarding student issues that may make themselves evident during tutoring sessions.
- Monitor the Moodle course website for important announcements and course materials.
- Post one question and one answer to questions posted on the BIOH480/BIOH461 Moodle page by Mondays at noon.

Optional:

- Tutors may enroll in the Cadaver Dissection course.

Grading:

Students will begin the semester with a grade of a Solid A. If office hours are not maintained (regardless of student attendance at scheduled office hours), then students will lose points that will affect the course grade.

Dr. Minns will periodically check on tutors during scheduled review sessions.

Failure to notify Dr. Minns of any absences prior to scheduled office hours will result in a drop of one letter grade. In the case of an emergency or illness that prohibits tutors from maintaining scheduled office hours, tutors are required to email Dr. Minns so that she may send an announcement to students enrolled in BIOH365 who may have planned on attending office hours.

Safety Considerations:

- All review sessions must occur in UM classrooms with the door open during scheduled review session hours.
- Do not share your personal information with students.
- You are not allowed to tutor students outside of scheduled office hours. Set boundaries and stick with them with regard to time and location of tutoring sessions.
- If you ever feel you are in danger during a study session, notify Campus Security immediately (ext. 4000).
- Notify Dr. Minns if you have any safety concerns.
- Maintain personal space between you and students at all times.
- It is not appropriate to date or obtain personal information from students you are tutoring; maintain a professional demeanor.

Syllabus:

Important course dates will follow the syllabus for BIOH365 below:

<b>Day of Week</b>	<b>Dates</b>	<b>Monday</b>	<b>Readings Tortora and Derrickson</b>
<b>Monday</b>	Aug. 29	Review Syllabus and Course Policies	
<b>Tues-Thurs</b>	Aug. 30- Sep.1	Lab 1: Anatomical terms, Gross and Surface Anatomy, Cellular anatomy and Physiology	(Specific chapters for Tortora text and Gilroy atlas readings are located in each week's lab)

			objectives)
<b>Wednesday</b>	Aug. 31	An Introduction to the Human Body	Chapter 1
<b>Friday</b>	Sept.2	An Introduction to the Human Body	Chapter 1
<b>Sunday</b>	Sept. 4	WileyLS Chap. 1 Quiz is due WileyLS Chap. 2 quiz is due	
<b>Monday</b>	Sept. 5	Labor Day- no class!	
<b>Tues-Thurs</b>	Sept. 6-8	Lab 2: Tissues and the Integumentary System Lab 2 Quiz	
<b>Wednesday</b>	Sept. 7	The Chemical Level of Organization (Chemistry will not be covered in depth in Lecture but you are responsible for comprehending all material in the text)	Chapter 2
<b>Friday</b>	Sept. 9	The Cellular Level of Organization	Chapter 3
<b>Sunday</b>	Sept. 11	WileyLS Chap. 3 quiz is due	
<b>Monday</b>	Sept. 12	The Cellular Level of Organization	Chapter 3
<b>Tues-Thurs</b>	Sept. 13-15	Lab 3: Bone Histology and the Axial Skeleton Lab 3 quiz	
<b>Wednesday</b>	Sept. 14	The Cellular Level of Organization/ Tissue Level of organization	Chapter 3 Chapter 4
<b>Friday</b>	Sept. 16	Tutor-run In-class review session (questions must be emailed to tutors by noon 11/13)	Chapters 1-3
<b>Sunday</b>	Sept. 18	WileyLS Chap.4 quiz is due	
<b>Monday</b>	Sept. 19	The Tissue Level of Organization	Chapter 4
<b>Tues-Thurs</b>	Sept. 20-22	Lab 4: Appendicular Skeleton Lab 4 quiz	
<b>Wednesday</b>	Sept. 21	Embryonic tissue Development and Differentiation * Case Study 1 Due on your Lab Moodle Page*	Chapter 29 Section 1:Embryonic Period

<b>Friday</b>	Sept. 23	Embryonic tissue development and differentiation Integumentary System	Chapter 29 Section 1 Chapter 5
<b>Sunday</b>	Sept. 25	WileyLS Chap. 5 and part of 29 quiz is due	
<b>Monday</b>	Sept 26	Integumentary System	Chapter 5
<b>Tues-Thurs</b>	Sept. 27-29	Lab 5: Articulations and Movement Lab 5 quiz	
<b>Wednesday</b>	Sept. 28	Integumentary System	Chapter 5
<b>Friday</b>	Sept. 30	Tutor In-class review session Students must email tutors questions by noon 9/29	Chapters 1-5, 29.1
<b>Monday</b>	<u>Oct. 3</u>	Lecture Exam 1 (Chapters 1-5, 29.1)	
<b>Tuesday</b>	Oct. 4	WileyLS Chap. 6 quiz is due	
<b>Tues-Thurs</b>	Oct. 4-6	Lab 6: Muscles and innervation of the lower extremity Lab 6 quiz	
<b>Wednesday</b>	Oct. 5	The Skeletal System: Bone Tissue	Chapter 6
<b>Friday</b>	Oct. 7	The Skeletal System: Bone Tissue	Chapter 6
<b>Sunday</b>	Oct. 9	WileyLS Chap. 7 quiz is due	
<b>Monday</b>	Oct. 10	The Skeletal System: The Axial Skeleton	Chapter 7
<b>Tuesday-Thursday</b>	<u>Oct. 11-13</u>	<u>Lab Practical 1</u>	<u>Covers labs 1-6</u>
<b>Wednesday</b>	Oct. 12	The Skeletal System: The Axial Skeleton, The Appendicular Skeleton	Chapter 7 Chapter 8
<b>Friday</b>	Oct. 14	Appendicular Skeleton, Joints	Chapter 8 Chapter 9
<b>Sunday</b>	Oct. 16	WileyLS Chap. 8 quiz and WileyLS Chap. 9 quiz are due	
<b>Monday</b>	Oct. 17	Joints	Chapter 9
<b>Tues-Thurs</b>	Oct. 18-20	Lab 7: Muscles and innervation of the Upper extremity, anterior thorax and superficial posterior thorax	Chap 11
<b>Wednesday</b>	Oct. 17	The Nervous System and Nervous Tissue	Chapter 12

<b>Friday</b>	Oct. 21	The Nervous System and Nervous Tissue	Chapter 12
<b>Sunday</b>	Oct. 23	WileyLS Chap. 12 quiz is due	
<b>Monday</b>	Oct. 24	The Nervous System and Nervous Tissue Muscular Tissue	Chapter 12 Chapter 10
<b>Tues-Thurs</b>	Oct. 25-27	Lab 8: Muscles of the face, muscles and innervation of the neck and deep back Lab 8 quiz	Chap 11
<b>Wednesday</b>	Oct. 26	Muscular Tissue	Chapter 10
<b>Friday</b>	Oct. 28	In class tutor review session (must email questions to tutors by noon 10/27)	Focus on Chap. 12 and 10
<b>Sunday</b>	Oct. 30	WileyLS Chapter 10 and WileyLS Chapter 11 quiz are due	
<b>Monday</b>	Oct. 31	Muscular Tissue The Muscular System	Chapter 10 Chapter 11
<b>Tues-Thurs</b>	Nov. 1-3	Lab 9: Central Nervous System Lab 9 quiz	
<b>Wednesday</b>	Nov. 2	The Muscular System	Chapter 11 328-398
<b>Friday</b>	Nov. 4	The Muscular System	Chapter 11 328-398
<b>Monday</b>	<u>Nov. 7</u>	<u>Lecture Exam 2 (Chapters 6-12)</u>	
<b>Tues-Thurs</b>	8-10	No Labs due to election day holiday-Vote	
<b>Wednesday</b>	Nov. 9	The Brain and Cranial Nerves	Chapter 14
<b>Friday</b>	Nov. 11	Veteran's Day- no class (Thank you for your service and sacrifices!)	
<b>Sunday</b>	Nov. 13	WileyLS Chap. 14 quiz due	
<b>Monday</b>	Nov. 14	The Brain and Cranial Nerves	Chapter 14
<b>Tues-Thurs</b>	Nov. 15- Nov. 17	Lab 10: Spinal Cord, spinal nerves and the PNS and ANS Lab quiz 10	

<b>Wednesday</b>	Nov. 16	The Brain and Cranial Nerves	Chapter 14
<b>Friday</b>	Nov. 18	Sensory, Motor and Integrative Systems	Chapter 16
<b>Sunday</b>	Nov. 20	WileyLS Chap. 16 quiz due Wiley Plus Chap. 13 quiz is due	
<b>Monday</b>	Nov. 21	Sensory, Motor and Integrative Systems The Spinal Cord and Spinal Nerves	Chapter 16 Chapter 13
<b>Tuesday</b>	Nov. 22	Tuesday Open labs in place of regular labs Thanksgiving Holiday week	
<b>Wednesday</b>	Nov. 23	No class-Thanksgiving Holiday	
<b>Friday</b>	Nov. 25	No Class- Thanksgiving Holiday	
<b>Sunday</b>	Nov. 27	Wiley LS Chap. 15 quiz is due	
<b>Monday</b>	Nov. 28	The Spinal Cord and Spinal Nerves	Chapter 13
<b>Tuesday</b>	Nov. 29- Dec.1	Lab 11: Special Senses/ Brachial Plexus/Spinal cord Lab 11 quiz	
<b>Wednesday</b>	Nov. 30	The Spinal Cord and Spinal Nerves The Autonomic Nervous System	Chapter 13 Chapter 15
<b>Friday</b>	Dec. 2	In-class tutor review session (please email questions by noon 12/1 to tutors)	Chapters 13-16
<b>Sunday</b>	Dec. 4	WileyLS Chap. 17 quiz is due	
<b>Monday</b>	Dec. 5	The Autonomic Nervous System	Chapter 15
<b>Tuesday- Thursday</b>	Dec. 6-8	Lab Practical 2 (on labs 7-11)	
<b>Wednesday</b>	Dec. 7	The Special Senses	Chapter 17
<b>Friday</b>	Dec. 9	The Special Senses	Chapter 17
<b>Monday</b>	Dec. 12	The Special Senses	Chapter 17
<b>Wednesday</b>	Dec. 14	Final Exam 8:00am-10:00am	Chapters-13-17 and Semi-cumulative



