

## BIOH461 Syllabus Fall 2017

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

### Course Information:

Instructor: Laurie Minns, PhD  
Office: BioResearch Building Rm. 106  
Phone: 406-243-6013  
Office Hours: Mondays 9:10am-10:45 or by appointment  
Email: [Laurie.Minns@mso.umt.edu](mailto:Laurie.Minns@mso.umt.edu)

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

### Course Structure

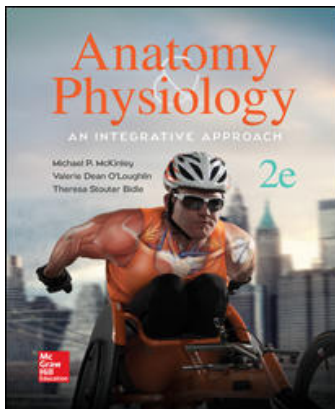
- Lecture, discussion and preparation of teaching materials for BIOH 365/370.
- Weekly meetings to discuss teaching strategies effective for undergraduate BIOH365/370 courses.
- Supervised tutoring of lecture-based material for BIOH365.

### Required materials:

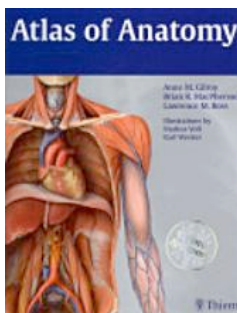
Required Course Materials:

Anatomy and Physiology, an Integrative Approach, 2ed. McKinley, O'Loughlin, Bidle. McGraw Hill, 2016. ISBN 978-0-07-802428-3. McGraw Hill Connect online supplement. Dr. Minns will provide hard copy books to check out and codes that tutors can share to access online materials.

<http://connect.mheducation.com/class/minnsbioh365lecture>



Optional Course Materials:



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> or 3<sup>rd</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 laboratory Peer Leaders.
- 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.

***Students with Disabilities:***

The University of Montana assures equal access to instruction through collaboration between students with disabilities, instructors, and Disability Services for Students. If you think you may have a disability adversely affecting your academic performance, and you have not already registered with Disability Services, please contact Disability Services in Lommason Center 154 or

406.243.2243. I will work with you and Disability Services to provide an appropriate modification.

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:

Day of Week	Dates	Monday	Readings McKinley
Friday	Sep.1	Review Syllabus and Course Policies	
Monday	Sep.4	No Class- Labor Day!	
Tues-Thurs	Sep. 5-7	Lab 1: Anatomical terms, Gross and Surface Anatomy, Cellular anatomy and Physiology	Chapter 1
Wednesday	Sep. 6	An Introduction to the Human Body	Chapter 1
Friday	Sept. 8	An Introduction to the Human Body	Chapter 1
Sunday	Sept. 10	LearnSmart Chap. 1 Assignment due LearnSmart Chapt 2 Assignment due	
Monday	Sept. 11	Chemistry Review: Biologically	Chapter 2

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		relevant molecules (Chemistry will not be covered in depth in Lecture but you are responsible for comprehending all material in the text)	
<b>Tues-Thurs</b>	Sept. 12-14	Lab 2: Tissues and the Integumentary System Lab 2 Quiz	Chapter 5
<b>Wednesday</b>	Sept. 13	Chemistry Review: Biologically relevant molecules	Chapter 2
<b>Friday</b>	Sept. 15	Enzymes and metabolism	Chapter 3
<b>Sunday</b>	Sept. 17	LearnSmart Chap. 3 due Learnsmart Chap. 4 due	
<b>Monday</b>	Sept. 18	Biology of Cell	Chapter 4
<b>Tues-Thurs</b>	Sept. 19-21	Lab 3: Bone Histology and the Axial Skeleton Lab 3 quiz Case Study 1 Due 9/21/17 on your lab's Moodle page	Chapter 7 Chapter 8
<b>Wednesday</b>	Sept. 20	Biology of the Cell	Chapter 4
<b>Friday</b>	Sept. 22	Biology of the cell	Chapter 4
<b>Sunday</b>	Sept. 24	LearnSmart Chap. 5 due	
<b>Monday</b>	Sept. 25	Tissue Organization	Chapter 5
<b>Tues-Thurs</b>	Sept. 26-28	Lab 4: Appendicular Skeleton Lab 4 quiz	Chapter 8
<b>Wednesday</b>	Sept. 27	Tissue Organization	Chapter 5
<b>Friday</b>	Sept. 29	Tissue Organization	Chapter 5
<b>Monday</b>	<b>Oct. 2</b>	<b>Lecture Exam 1</b>	<b>Chapter 1-5</b>
<b>Tuesday</b>	Oct. 3	LearnSmart Chap 6 due	
<b>Tues-Thurs</b>	Oct. 3-5	Lab 5: Articulations and Movement Lab 5 quiz	Chapter 9
<b>Wednesday</b>	Oct. 4	Integumentary System	Chapter 6
<b>Friday</b>	Oct. 6	Integumentary System	Chapter 6

<b>Sunday</b>	Oct. 8	LearnSmart Chap. 7 due	
<b>Monday</b>	Oct. 9	Skeletal System: Bone Structure and Function	Chapter 7
<b>Tues-Thurs</b>	Oct. 10-12	Lab 6: Muscles and innervation of the lower extremity Lab 6 quiz	Chapter 11.9
<b>Wednesday</b>	Oct. 11	Skeletal System: Bone Structure and Function	Chapter 7
<b>Friday</b>	Oct. 13	Skeletal System: Bone structure and function	Chapter 7
<b>Sunday</b>	Oct. 15	LearnSmart Chap. 8 due LearnSmart Chap. 9 due	
<b>Monday</b>	Oct. 16	Skeletal System: Axial and Appendicular Skeleton	Chapter 8
<b>Tuesday-Thursday</b>	<b>Oct. 17-19</b>	<b>Lab Practical 1</b>	<b>Covers Labs 1-6</b>
<b>Wednesday</b>	Oct. 18	Skeletal System: Axial and Appendicular	Chapter 8
<b>Friday</b>	Oct. 20	Skeletal System: Articulations	Chapter 9
<b>Sunday</b>	Oct. 22	LearnSmart: Chap. 10 due	
<b>Monday</b>	Oct. 23	Muscle Tissue	Chapter 10
<b>Tues-Thurs</b>	Oct. 24-26	Lab 7: Muscles and innervation of the Upper extremity, anterior thorax and superficial posterior thorax	Chap 11
<b>Wednesday</b>	Oct. 25	Muscle Tissue	Chapter 10
<b>Friday</b>	Oct. 27	Muscle Tissue	Chapter 10
<b>Monday</b>	<b>Oct. 30</b>	<b>Lecture Exam 2</b>	<b>Chapters 6-10</b>
<b>Tuesday</b>	Oct. 31	LearnSmart Chap. 12 due	
<b>Tues-Thurs</b>	Oct. 31- Nov.2	Lab 8: Muscles of the face, muscles and innervation of the neck and deep back Lab 8 quiz	Chap 11
<b>Wednesday</b>	Nov. 1	Nervous System: Nervous Tissue	Chapter 12
<b>Friday</b>	Nov.3	Nervous System: Nervous Tissue	Chapter 12
<b>Sunday</b>	Nov. 5	LearnSmart Chapter 13 due	

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<b>Monday</b>	Nov. 6	Nervous System: Nervous Tissue	Chapter 12
<b>Tues-Thurs</b>	Nov. 7-9	Lab 9: Central Nervous System Lab 9 quiz Case Study #2 due in your lab Moodle page 11:55pm MST on 11/9/2017	Chapter 13
<b>Wednesday</b>	Nov. 8	Nervous System: Brain and Cranial Nerves	Chapter 13
<b>Friday</b>	Nov. 10	No class- veteran's day Thank you, Veteran's for your service!	
<b>Sunday</b>	Nov. 11	LearnSmart Chapter 14 due	
<b>Monday</b>	Nov. 13	Nervous System: Brain and Cranial Nerves	Chapter 13
<b>Tues-Thurs</b>	Nov. 14-16	Lab 10: Spinal Cord, spinal nerves and the PNS and ANS organization Lab quiz 10	Chapter 14 Chapter 15
<b>Wednesday</b>	Nov. 15	Nervous System: Spinal Cord and Spinal Nerves	Chapter 14
<b>Friday</b>	Nov. 17	Nervous System: Spinal Cord and Spinal Nerves	Chapter 14
<b>Sunday</b>	Nov. 19	LearnSmart Chapter 14 due	
<b>Monday</b>	<b>Nov. 20</b>	<b>Lecture Exam #3</b>	<b>Chapters 11-14</b>
<b>Tues-Thurs</b>	Nov. 21-23	No Labs- Thanksgiving	
<b>Wednesday</b>	Nov. 22	No Class- Thanksgiving	
<b>Friday</b>	Nov. 24	No Class- Thanksgiving	
<b>Sunday</b>	Nov. 26	LearnSmart Chap. 15 due	
<b>Monday</b>	Nov. 27	Nervous System: Autonomic Nervous System	Chapter 15
<b>Tues-Thurs</b>	Nov. 28-31	Lab 11: Special Senses/ brachial plexus Lab 11 quiz	Chapter 14 Chapter 16
<b>Wednesday</b>	Nov. 29	Nervous System: Autonomic Nervous System	Chapter 15
<b>Friday</b>	Dec. 1	Nervous System: Autonomic Nervous System	Chapter 15
<b>Sunday</b>	Dec. 3	LearnSmart Chap. 16 due	



<b>Monday</b>	Dec. 4	Nervous System: Autonomic Nervous System	Chapter 15
<b>Tues-Thurs</b>	<b>Dec. 5-7</b>	<b>Lab Practical Exam 2</b>	<b>Labs 7-11</b>
<b>Wednesday</b>	Dec. 6	Nervous System: Senses	Chapter 16
<b>Friday</b>	Dec. 8	Nervous System: Senses	Chapter 16
<b>Sunday</b>	Dec. 10	WileyLS Chap. 17 quiz is due	
<b>Monday</b>	Dec. 11	The Autonomic Nervous System	Chapter 15
<b>Monday</b>	<b>Dec. 18</b>	<b>Final Exam 8am-10am</b>	<b>Cumulative: Chapter 1-11; 12-16</b>

Important Skills and Characteristics Expected of all BIOH461 Tutors:

SKILL	CHARACTERISTICS
1. Commitment to learning	Demonstrates a positive attitude (motivation) toward learning; identifies and locates appropriate resources; identifies need for further information; prioritizes information needs; welcomes and/or seeks new learning opportunities.
2. Interpersonal skills	Maintain a professional demeanor in all interactions; is non-judgmental about students' lifestyles; communicates with others in a respectful manner; assumes responsibility for own actions; respects cultural and personal differences of others; demonstrates acceptance of limited knowledge and experience; motivates others to achieve; approaches others in a professional manner to discuss differences in opinion.
3. Communication skills	Uses correct grammar, accurate spelling and expression; writes legibly; listens actively; communicates with others in a confident manner; recognizes impact of non-verbal communication and modifies accordingly, maintains open and constructive communication.
4. Effective use of time and resources	Focuses on tasks at hand; recognizes own resource limitations; uses existing resources effectively; uses unscheduled time efficiently; completes assignments in a timely fashion; sets up own schedule; coordinates schedule with others; demonstrates flexibility; plans ahead;

	sets priorities and recognizes when needed; performs multiple tasks simultaneously.
5. Use of constructive feedback	Demonstrates active listening skills; actively seeks feedback and help; demonstrates a positive attitude toward feedback; critiques own performance; maintain two-way information; assesses own performance accurately; develops plan of action in response to feedback; reconciles differences with sensitivity.
6. Problem solving	Recognizes problems; states problems clearly; describes known solutions to problem; analyzes and subdivides large questions into components; accepts that there may be more than one answer to a problem.
7. Professionalism	Abides by U of M Student Conduct Code; projects professional image; demonstrates accountability for personal and professional decisions; maintains confidentiality in all interactions.
8. Responsibility	Demonstrates dependability; demonstrates punctuality; follows through on commitments; accepts responsibility for action and outcomes; p[rovides safe environment for students; recognizes own limits; offers and accepts help; completes projects without prompting.
9. Critical thinking	Raises relevant questions; considers all available information; articulates and formulates new ideas; seeks alternative ideas; exhibits openness to contradictory ideas.
10. Stress management	Maintains professional demeanor in all situations; accepts constructive feedback; recognizes own stressors or problems; maintains balance between professional and personal life; demonstrates effective affective responses in all situations.