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# BIOH 463.01: Tutoring Human Anatomy and Physiology for Health Professions I (Honors)

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## BIOH463 Syllabus Spring 2018

*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 and Wednesdays 2pm-2:50pm 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

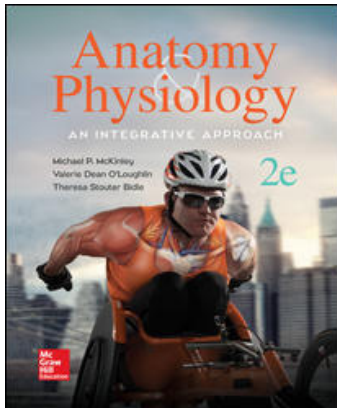
- Lecture, discussion and preparation of teaching materials for BIOH 365/370.
- Weekly meetings to discuss teaching strategies effective for undergraduate BIOH365/370 courses.
- Supervised tutoring of lecture-based material for BIOH370.

### 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 3rd 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.

**Lecture Based Questions:**

For each upcoming exam, lecture peer leaders need to write four original questions from each chapter. The due dates for these exam questions is below:

- Chapters 17, 18 and 19: Due Feb. 5, 2018
- Chapters 20, 21, 22, 23: Due March 5, 2018

- Chapters 24, 25, 26: Due April 4, 2018
- Chapters 28 and 28: Due May 2, 2018

***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.

**Lecture Based Review Sessions:**

One or two times during the semester, lecture peer leaders will provide instruction in the lecture setting for students. Dr. Minns will provide these dates in advance.

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 the week	Dates	Monday	Readings
Monday	Jan. 22	Introduction to BIOH370 The Endocrine System	Chapter 17
Lab 1	1/23-25	The Endocrine System	Chapter 17

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Wednesday	Jan. 23	The Endocrine System	Chapter 17
Friday	Jan. 25	Endocrine System	Chapter 17
Sunday	Jan. 28	Lecture Chapter 17 Connect homework due	
Monday	Jan. 29	The Endocrine System The Cardiovascular System: Blood	Chapter 17 Chapter 18
Lab 2	1/30-2/1	Blood Lab quiz 1	T Chap. 19
Wednesday	Jan 31	The Cardiovascular System: Blood	Chapter 18
Friday	Feb. 2	The Cardiovascular System: Blood The Cardiovascular System: Heart	Chapter 18 Chapter 19
Sunday	Feb. 4	Lecture Chapter 18 and 19 Connect homework	
Monday	Feb. 5	The Cardiovascular System: Heart	Chapter 19
Lab 3	2/6-2/8	Heart Anatomy Lab quiz 2	Chapter 19
Wednesday	Feb. 7	The Cardiovascular System: Heart	Chapter 19
Friday	Feb. 9	The Cardiovascular System: Heart	Chapter 19
Monday	Feb. 12	Lecture Exam 1	Chapters 17, 18, 19,
Lab 4	2/13-2/15	Heart Physiology and Blood Pressure Lab Physiology demo- ECG's and interpreting rhythm strips Physiology of Circulation Lab quiz 3	Chapter 19
Tuesday	Feb. 13	Lecture Chapter 20 Connect homework due	
Wednesday	Feb. 14	Cardiovascular System: Vessels and Circulation	Chapter 20
Friday	Feb. 16	Cardiovascular System: Vessels and Circulation	Chapter 20
Monday	Feb. 19	No Class- President's Day	
Tuesday	Feb. 20	Lecture Chapter 21 Connect homework due Lecture Chapter 22 Connect homework due	
Lab 5	2/20-2/22	Blood Vessels Vessels of the Head, Neck and Upper Extremity Lab quiz 5	Chapter 20
Wednesday	Feb. 21	Lymphatic System	Chap. 21
Friday	Feb. 23	Lymphatic System	Chap. 21

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Monday	Feb. 26	Immunity	Chapter 22
Lab Practical Exam 1	2/27-3/1	Laboratory Practical Exam I	Labs 1-5
Wednesday	Feb 28	Immunity	Chapter 22
Friday	March 2	Immunity	Chapter 22
Sunday	March 4	Lecture Chapter 23 Connect homework due	
Monday	March 5	Immunity:	Chapter 22
Lab 6	3/6-3/8	Lymphatics and Immune System No lab quiz this week	
Wednesday	March 7	The Respiratory System	Chapter 23
Friday	March 9	The Respiratory System <u>UGTA Applications for 2018-2019 year are due March 9 by 5pm in the DBS office</u>	Chapter 23
Monday	March 12	Lecture Exam 2	Chapters 20, 21, 22, 23
Lab 7	3/13-3/15	Anatomy of the Respiratory System Lab quiz 6	Chapter 23
Tuesday	March 13	Lecture Chapter 26 Connect homework due	
Wednesday	March 14	Digestive System	Chapter 26
Friday	March 16	Digestive System	Chapter 26
Monday	March 19	Montana State Science Fair- no Class- be a JUDGE <a href="http://hs.umt.edu/mtsciencefair/">http://hs.umt.edu/mtsciencefair/</a> Judging the Montana State Science Fair counts toward extra credit points in BIOH370.	
Lab 8	3/20-3/22	Physiology of Respiration Physiology demo: Spirometry and interpretation Lab quiz 7	
Wednesday	March 21	Digestive System	Chapter 26
Friday	March 23	Digestive System	Chapter 26
Spring Break	3/26-2/30	No Lecture No Labs, No open labs- Enjoy the break!	
Sunday	April 1	Lecture Chapter 24 Connect homework due Lecture Chapter 25 Connect homework due	
Monday	April 2	Urinary System	Chapter 24
Lab 9	4/3-4/5	Digestive System Lab quiz 8	Chapter 26



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Wednesday	April 4	Urinary System	Chapter 24
Friday	April 6	Urinary System/Fluid and Electrolytes	Chapter 24 Chapter 25
Monday	April 9	Fluid and Electrolytes	Chap. 25
Lab 10	4/10-4/12	Blood Vessels Vessels of the Abdomen and Lower Extremity Lab quiz 8	Chapter 20
Wednesday	April 11	Lecture Exam 3	Chapters 24, 25, 26
Friday	April 13	Reproductive System	Chapter 28
Sunday	April 15	Lecture Chapter 28 Connect homework due	
Monday	April 16	Reproductive System	Chapter 28
Lab 11	4/17-4-19	Urinary System Physiology demo: Urinalysis testing and interpretation Lab quiz 9	Chapter 24
Wednesday	April 18	Reproductive System	Chapter 28
Friday	April 20	Reproductive System	Chapter 28
Sunday	April 22	Lecture Chapter 29 Connect homework due	
Monday	April 23	Development, Pregnancy and Heredity	Chapter 29
Lab 12	4/24-4/26	Reproductive System – Male and Female Lab quiz 10	Chapter 28
Wednesday	April 25	Development, Pregnancy and Heredity	Chapter 29
Friday	April 27	University of Montana UMCUR <a href="http://www.umt.edu/ugresearch/umcur/">http://www.umt.edu/ugresearch/umcur/</a> Attend UMCUR for Extra credit. If you are presenting at UMCUR, please email Dr. Minns	
Monday	April 30	Development, Pregnancy and Heredity	Chapter 29
Lab Practical II	5/1-5/3	****Lab Practical #2**** (labs 6-12)	
Wednesday	May 2	Development, Pregnancy and Heredity	Chapter 29
Friday	May 4	Development, Pregnancy and Heredity	Chapter 29
Finals Week	Thursday May 10	Final Exam 10:10am-12:10pm	Chapters 28 and 29 and Semi-cumulative

Important Skills and Characteristics Expected of all BIOH463 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; provides 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.
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