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### BIOH 463.80: Tutoring Human Anatomy and Physiology II - Honors

Laurie A. Minns

University of Montana - Missoula, [laurie.minns@umontana.edu](mailto:laurie.minns@umontana.edu)

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#### Recommended Citation

Minns, Laurie A., "BIOH 463.80: Tutoring Human Anatomy and Physiology II - Honors" (2015). *Syllabi*. 3341.

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BIOH463: Tutoring Human Anatomy and Physiology II/Honors  
Course Syllabus and Policies Spring 2015

**Instructor:** Dr. Laurie Minns

**Office:** HS412      **Phone:** 243-6013

**Email:** [Laurie.Minns@mso.umt.edu](mailto:Laurie.Minns@mso.umt.edu)

**Office Hours:** Mondays and Wednesdays 10am-11am (or by appointment)

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

**Course Structure**

- Attend 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:**

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:

<b>Fall Semester (Proposed BIOH461)</b>	<b>Spring Semester (Proposed BIOH463)</b>
<b>Body Plan &amp; Organization Homeostasis Chemistry &amp; Cell Biology Review Histology Integumentary System Skeletal System &amp; Articulations Muscular System Nervous System Special Senses</b>	<b>Endocrine System Cardiovascular System Lymphatic System &amp; Immunity Respiratory System Digestive System Metabolism Urinary System Fluid/Electrolytes &amp; Acid/Base Balance Reproductive System</b>

### ***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 BIOH370 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 BIOH370.
2. Use a multi-modal instructional approach to help students enrolled in BIOH370 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.

### ***Course requirements***

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 12:10-1pm meetings in HS101 with the UGTAs
- Establish a minimum of **two office (tutor) hours per week**. During this time, tutors will provide a led review of the material covered in lecture that week. Tutors should only cover material that has been covered by Dr. Minns in class. Tutors may review material from previous lecture weeks upon request by the human A&P students.
- Proctor exams and assist with grading as needed.
- Provide at least one (1hour) review session the week prior to scheduled Lecture exams (can be in place of one of the regular office hours)
- 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.

### ***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 office hours.

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 tutoring must occur in public conference rooms with the door open during scheduled office hours.
- Do not share your personal information with students.
- You are not required 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.

## **BIOH370 Meeting dates:**

Day of the week	Dates	Monday	Readings
Monday	Jan. 26	Review Syllabus and Course Policies Introduction to BIOH370	
Lab 1	1/27-1/29	The Endocrine System	Tortora pp. 615-660 Gilroy Atlas
Wednesday	Jan. 28	The Endocrine System	615-660
Friday	Jan. 30	Endocrine System	615-660
Sunday	Feb. 1	Pre-term Assessment due Lecture Chapter 18 Quiz due	
Monday	Feb. 2	Endocrine System	615-660

Lab 2	2/3-2/5	Blood	Tortora pp. 661-687
Wednesday	Feb. 4	Endocrine System	615-660
Friday	Feb. 6	The Cardiovascular System: Blood	661-687
Sunday	Feb. 8	Lecture Chapter 19 Quiz due	
Monday	Feb. 9	The Cardiovascular System: Blood	661-687
Lab 3	2/10-2/12	Heart Anatomy	Tortora pp. 688-728 Gilroy Atlas
Wednesday	Feb. 11	The Cardiovascular System: The Heart	757-801
Friday	Feb. 13	The Cardiovascular System: The Heart	757-801
Sunday	Feb. 15	Lecture Chapter 20 quiz due	
Monday	Feb. 16	No Class- President's Day	
Lab 4	2/17-2/19	Heart Physiology and Blood Pressure Lab Physiology demo- ECG's and interpreting rhythm strips Physiology of Circulation	Tortora Chap. 688-728 Gilroy Atlas
Wednesday	Feb. 18	The Cardiovascular System: The Heart	688-728
Friday	Feb. 20	The Cardiovascular System: The Heart	688-728
Sunday	Feb. 22	Lecture Chapter 21 Quiz due	
Monday	Feb. 23	The Cardiovascular System: Blood vessels and hemodynamics	729-799
Lab 5	2/24-2/26	Blood Vessels Vessels of the Head, Neck and Upper Extremity  Cardiology Case Study Due 2/26 on Lab Moodle Page	Tortora pp. 729-798 Gilroy Atlas -
Wednesday	Feb. 25	The Cardiovascular System: Blood vessels and hemodynamics	729-799
Friday	Feb. 27	The Cardiovascular System: Blood vessels and hemodynamics	729-798
Monday	March 2	Lecture Exam 1	

Tuesday	March 3	Lecture Chapter 22 Quiz due	
Lab 6	3/3-3/5	Blood Vessels Vessels of the Abdomen and Lower Extremity	Tortora pp. 729-798 Gilroy Atlas
Wednesday	March 5	The Lymphatic System and Immunity	799-839
Friday	March 7	The Lymphatic System and Immunity	799-839
Monday	March 9	The Lymphatic System and Immunity	799-839
Lab Practical	3/10-3/12	****Lab Practical #1**** (labs 1-6)	
Wednesday	March 11	The Respiratory System	840-885
Friday	March 13	The Respiratory System <u>UGTA Applications for 2014-2015 year</u> <u>are due by 5pm in the DBS office</u> (HS building)	840-885
Sunday	March 15	Lecture Chapter 23 Quiz due	
Monday	March 16	Montana State Science Fair- no class Judge the science fair for extra credit!	
Lab 7	3/17-3/19	Lymphatics and Immune System	Tortora pp. 799-839
Wednesday	March 18	The Respiratory System	840-885
Friday	March 20	The Digestive System	886-939
Sunday	March 22	Lecture Chapter 24 and 25 Quiz due	
Monday	March 23	The Digestive System (Dr. Simmons)	886-939
Lab 8	3/24-3/26	Anatomy of the Respiratory System	Tortora 840- 885 Gilroy Atlas
Wednesday	March 25	The Digestive System	886-939
Friday	March 27	Nutrition and Metabolism	940-978
Monday	March 30	Spring Break- no class	
Wednesday	April 1	Spring Break- no class	
Friday	April 3	Spring Break- no class	
Monday	April 6	Nutrition and Metabolism	940-978
Lab 9	4/7-4/9	Physiology of Respiration Physiology demo: Spirometric testing and interpretation	Tortora pp. 840-885 Gilroy Atlas
Wednesday	April 8	Lecture Exam 2	
Friday	April 10	The Urinary System	979-1022
Sunday	April 12	Lecture Chapter 26 Quiz due	
Monday	April 13	The Urinary System	979-1022
Lab 10	4/14-4/16	Digestive System	Tortora 886- 939 Gilroy Atlas

Wednesday	April 15	The Urinary System	1065-1109
Friday	April 17	UMCUR- no class; attend UMCUR instead (get extra credit!)	
Sunday	April 19	Lecture Chapter 27 Quiz due	
Monday	April 20	The Urinary System/ Fluid, Electrolyte and Acid-Base Balance	979-1022 1023-1040
Lab 11	4/21-4/23	Urinary System Physiology demo: Urinalysis testing and interpretation	Tortora 979-1022 Gilroy
Wednesday	April 22	Fluid, Electrolyte and Acid-Base Balance	1023-1040
Friday	April 24	Fluid, Electrolyte and Acid-Base Balance	1023-1040
Sunday	April 26	Lecture Chapter 28 quiz due	
Monday	April 27	The Reproductive System	1041-1088
Lab 12	4/28-4/30	Reproductive System – Male and Female	Tortora 1041-1088 Gilroy
Wednesday	April 29	The Reproductive System	1041-1088
Friday	May 1	The Reproductive System	1041-1088
Sunday	May 3	Lecture Chapter 29 quiz due	
Monday	May 4	Development and Inheritance	1105-1127
Lab Practical	5/5-5/7	****Lab Practical #2**** (labs 7-12)	
Wednesday	May 6	Development and Inheritance	1105-1127
Friday	May 8	Lecture Post-term Assessment Due	
Thursday	May 14	Development and Inheritance Lecture Final Exam 10:10am-12:10pm	1105-1127