BIOH463 Syllabus Spring 2016

Tutoring Human Anatomy and Physiology for Health Professions II

Course Information:

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**** Pre-requisite: Grade of B- or higher in BIOH370, consent of instructor**

Course Structure

- Lecture, discussion and preparation of teaching materials for BIOH 370.
- Weekly meetings to discussing teaching strategies effective for undergraduate BIOH 370 course.
- Supervised running of review sessions of lecture-based material for BIOH370.

Required materials:

Principles of Anatomy and Physiology 14th 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 2nd edition of the Gilroy atlas or the electronic edition (available from www.thieme.com)

Course Goals, Objectives and Outcomes:

The two-semester sequence is divided as follows:

BIOH 461	BIOH 463
Body Plan & Organization Homeostasis Chemistry & Cell Biology Review Histology Integumentary System Skeletal System & Articulations Muscular System Nervous System Special Senses	Endocrine system Cardiovascular System Lymphatic System and Immunity Respiratory System Digestive System Metabolism Urinary System Fluid/Electrolytes and Acid/Base 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 (BIOH370/370). Enrolled students will integrate principles learned in BIOH370/370 *(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.

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 BIOH370 lectures as an observer (questions to Dr. Minns must be communicated outside of scheduled class times).
- Provide on 2-hour review session each week.
- 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) in addition to the weekly review session.
- 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.
- Assist in writing exam questions based on review session experiences.
- Monitor and respond to student questions in the Moodle Student question forum.

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 review sessions 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 BIOH370 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.

Syllabus:

Important course dates will follow the syllabus for BIOH370 below:

Day of the week	Dates	Monday	Readings
Monday	Jan. 25	Review Syllabus and Course Policies Introduction to BIOH370	T Chap. 18
Lab 1	1/26-28	The Endocrine System	T. Chap. 18 Gilroy Atlas
Wednesday	Jan. 27	The Endocrine System	T Chap. 18
Friday	Jan. 29	Endocrine System	T Chap. 18
Sunday	Jan. 31	Lecture Chapter 18 Quiz due	
Monday	Feb. 1	Endocrine System	T Chap. 18
Lab 2	2/2-2/4	Blood	T Chap. 19
Wednesday	Feb. 3	Endocrine System	T Chap. 18
Friday	Feb. 5	The Cardiovascular System: Blood	T Chap. 19

Sunday	Feb. 7	Lecture Chapter 19 Quiz due	
Monday	Feb. 8	The Cardiovascular System: Blood	T Chap. 19
Lab 3	2/9-2/11	Heart Anatomy	T. Chap. 20, G
Wednesday	Feb. 10	The Cardiovascular System: The Heart	T. Chap. 20
Friday	Feb. 12	The Cardiovascular System: The Heart	T. Chap. 20
Sunday	Feb.14	Lecture Chapter 20 quiz due	
Monday	Feb. 15	No Class- President's Day	
Lab 4	2/16-2/18	Heart Physiology and Blood Pressure Lab Physiology demo- ECG's and interpreting rhythm strips Physiology of Circulation	T. Chap. 20 Gilroy Atlas
Wednesday	Feb. 17	The Cardiovascular System: The Heart	T. Chap. 20
Friday	Feb. 19	In class- Tutor Review Session (Chap. 18-20)	T. Chap. 18-20
Sunday	Feb. 21	Lecture Chapter 21 Quiz due	
Monday	Feb. 22	The Cardiovascular System: Blood vessels and hemodynamics	T. Chap. 21
Lab 5	2/23-2/25	Blood Vessels Vessels of the Head, Neck and Upper Extremity Case Study 1: Cardiology Case Study Due 2/26 on Lab Moodle Page	T. Chap. 21 Gilroy Atlas -
Wednesday	Feb. 24	The Cardiovascular System: Blood vessels and hemodynamics	T. Chap. 21
Friday	Feb. 26	The Cardiovascular System: Blood vessels and hemodynamics	T. Chap. 21
Monday	Feb. 29	Lecture Exam 1	Chap. 18-21
Tuesday	March 1	Lecture Chapter 22 Quiz due	
Lab 6	3/1-3/3	Blood Vessels Vessels of the Abdomen and Lower Extremity	T. Chap. 21 Gilroy Atlas
Wednesday	March 2	The Lymphatic System and Immunity	T. Chap. 22

Friday	March 4	The Lymphatic System and Immunity	T. Chap. 22
Monday	March 7	The Lymphatic System and Immunity	T. Chap. 22
Lab Practical	3/8-3/10	****Lab Practical #1**** (labs 1-6)	
Wednesday	March 9	The Lymphatic System and Immunity	T. Chap. 22
Friday	March 11	The Respiratory System	T. Chap. 23
Sunday	March 13 daylight savings	Lecture Chapter 23 Quiz due	
Monday	March 14	The Respiratory System UGTA Applications for 2016-2017 year are due March 15 by 5pm in the DBS office	T. Chap. 23
Lab 7	3/15-3/17	Lymphatics and Immune System	T. Chap. 22
Wednesday	March 16	The Respiratory System	T. Chap. 23
Friday	March 18	The Digestive System: Dr. Stacey Simmons guest lecture	T. Chap. 24
Sunday	March 20	Lecture Chapter 24 and 25 Quiz due	
Monday	March 21	The Digestive System Montana State Science Fair (judging 12:30-4:30pm Adams Center-great extra credit opportunity)	T. Chap. 24
Lab 8	3/22-3/24	Anatomy of the Respiratory System	T. Chap. 23 Gilroy Atlas
Wednesday	March 23	The Digestive System	T. Chap. 24
Friday	March 25	Nutrition and Metabolism	T. Chap. 25
Monday	March 28	Nutrition and Metabolism	T. Chap. 25
Lab 9	3/29-3/31	Physiology of Respiration Physiology demo: Spirometric testing and interpretation Case Study 2: Respiratory Physiology due April 1 on Moodle	T. Chap. 23 Gilroy Atlas
Wednesday	March 30	Lecture Exam 2	T. Chap. 22-25
Thursday	March 31	Lecture Chapter 26 Quiz due	
Friday	April 1	The Urinary System	T. Chap. 26
Mon-Friday	April 4-8	Spring Break- No classes!	
Monday	April 11	The Urinary System	T. Chap. 26
Lab 10	4/12-4/14	Digestive System	T. Chap. 24 Gilroy Atlas
Wednesday	April 13	The Urinary System	T. Chap. 26
Friday	April 15	Tutor Review Session on the Urinary	T. Chap. 26

		System UMCUR	
Sunday	April 17	Lecture Chapter 27 Quiz due	
Monday	April 18	The Urinary System/ Fluid, Electrolyte and Acid-Base Balance	T. Chap. 26 T. Chap. 27
Lab 11	4/20-4/22	Urinary System Physiology demo: Urinalysis testing and interpretation	T. Chap. 26-27 Gilroy
Wednesday	April 20	Fluid, Electrolyte and Acid-Base Balance	T. Chap. 27
Friday	April 22	Fluid, Electrolyte and Acid-Base Balance	T. Chap. 27
Sunday	April 24	Lecture Chapter 28 quiz due	
Monday	April 25	The Reproductive System	T. Chap. 28
Lab 12	4/26-4/28	Reproductive System – Male and Female	Tortora 1041-1088 Gilroy
Wednesday	April 27	The Reproductive System	T. Chap. 28
Friday	April 29	The Reproductive System	T. Chap. 28
Sunday	May 1	Lecture Chapter 29 quiz due	
Monday	May 2	Development and Inheritance	T Chap. 29: 1105-1127
Lab Practical	5/3-5/5	****Lab Practical #2**** (labs 7-12)	
Wednesday	May 4	Development and Inheritance Lecture Post-term Assessment Due	T Chap. 29: 1105-1127
Friday	May 6	Development and Inheritance	T Chap. 29: 1105-1127
Finals Week	Friday May 13	10:10am-12:10pm	Semi-cumulative (Chap. 18-25: ~20 questions), and Chap. 26-29: ~40 questions