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BIOH 463.80: Tutoring Human Anatomy and Physiology II - Honors

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

Instructor: Dr. Laurie Minns

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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 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:

| Fall Semester (Proposed BIOH461) | Spring Semester (Proposed BIOH463) |
|--|--|
| 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 & Immunity Respiratory System Digestive System Metabolism Urinary System Fluid/Electrolytes & 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 (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 |

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| 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 | |

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| 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 | 840-885 |
| | | <u>UGTA Applications for 2014-2015 year</u> <u>are due by 5pm in the DBS office</u> <u>(HS building)</u> | |
| 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 |

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| 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 |