

## AANT 318 (8819)

### Human Anatomy and Physiology II

Spring 2012

<b>Instructor:</b>	Dr. Robert McCarthy	<b>Time:</b>	MW 11:30-12:25
<b>Office:</b>	AS 107	<b>Place:</b>	LC 2
<b>Phone:</b>	(518)442-4715	<b>Format:</b>	Lecture and lab
<b>E-mail:</b>	<a href="mailto:rmccarthy2@albany.edu">rmccarthy2@albany.edu</a>		
<b>Office hours:</b>	M 1-3, T 12-2, W 1-3		

<b>TAs</b>	Jordan Karstens	Amanda Spriggs	Kiersten Yates Westbrook
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<b>Office hours:</b>	W 5-7	TW 10:30-11:30	M 12:30-2:30
<b>Labs:</b>	8820 AS	T 11:45 am – 1:45 am	All labs will be held in AS 11, in the basement of the Arts and Sciences building
	8821 KW	T 2 pm – 4 pm	
	8822 JK	W 12:35 pm – 2:35 pm	
	8823 JK	W 2:45 pm – 4:45 pm	
	8824 AS	R 11:45 am – 1:45 pm	
	8825 KW	T 4:15 pm – 6:15 pm	

**Course objectives:** This course provides an introduction to human anatomy and physiology. These topics refer to the form and function of the human body, and are presented together in an integrated two-semester course sequence. This course is the second in that sequence, and focuses on the gastrointestinal tract, digestion, the urogenital, reproductive and endocrine systems, the cranial nerves, the visual, olfactory and auditory systems, and the musculoskeletal system of the lower limb, head and neck. This course sequence provides a foundation for students interested in human biology, biological anthropology, medicine, and allied health professions.

**Learning goals:** At the end of this two-semester course sequence, you will be able to (1) use appropriate terminology to communicate information related to anatomy and physiology; (2) recognize anatomical structures and explain the physiological functions of body systems; (3) explain the principle of homeostasis; (4) use anatomical knowledge to predict physiological consequences, and use knowledge of function to predict the features of anatomical structures; (5) explain the interrelationships within and between anatomical and physiological systems of the human body; (6) synthesize ideas to make a connection between knowledge of anatomy and physiology and real-world situations; (7) demonstrate laboratory procedures used to examine anatomical structures and evaluate physiological functions of each organ system; (8) interpret graphs of anatomical and physiological data (adapted from HAPS Learning Outcomes Project, 2010).

**Course requirements:** Four multiple-choice exams. The first three exams are NOT cumulative, and are each worth 15% of your grade. The final exam IS cumulative and makes up 30% of your grade.

In addition, there are weekly lab assignments and quizzes that are collectively worth 25% of your grade.

Textbooks and readings:

- (1) Grine, Frederick E. (2008). *Regional Human Anatomy: A Laboratory Workbook for Use with Models and Prosections*, 4<sup>th</sup> Ed. McGraw-Hill.
- (2) Fox, Stuart I. (2009). *Fundamental of Human Physiology*. McGraw-Hill.
- (3) Schneider, Roy E. et al. (2011). *Anatomy and Physiology Revealed v. 3.0*. McGraw-Hill.

In addition to reading the textbooks, students will be expected to read supplemental handouts posted on Blackboard. Please be sure to check Blackboard regularly, as there will be new announcements, articles, handouts, and grades posted throughout the semester.

Expectations: We have a lot of material to cover in this course and a very short amount of time to cover it. Students will be expected to (1) prepare for class by reading the book(s) and supplemental readings; (2) come to class on time, prepared to take notes and participate in discussions; (3) study outside of class; (4) regularly attend labs and participate in lab activities. Attendance will not be taken in the lecture, but students will find it difficult to do well in this course without attending lecture regularly. Students will be expected to follow rules of common courtesy, including turning off your cell phone and only using computers to look at Powerpoint lectures. Students who disrupt the class will be given one warning before being asked to leave.

Advice – how to learn and study: Recent research shows that students learn best by active learning. What does this mean? First, it is important to recognize that there is a difference between studying and learning. Students who “cram” for a test may retain a relatively small amount of information for a few hours or days, whereas students who actively learn retain information for years. Students learn best when they are engaged by the material and motivated to think about it in different ways. Part of this is our job, but it is up to you to become an “expert learner.” One recent study (McGuire, 2005) suggests the following strategy:

- (1) Preview material to be covered in class;
- (2) Go to class – listen, take notes, participate when appropriate;
- (3) Review and process class notes, as soon after class as possible;
- (4) Implement intense study sessions
  - a. For every hour spent studying, spend 2-5 minutes setting goals and planning;
  - b. 45 minutes studying with FOCUS and ACTION – making study cards, running through problems, quizzing yourself or others, etc.
  - c. 5 minute break, then 5 minute review;
- (5) Repeat;
- (6) Once per week, review the entire week’s work.

If you follow this strategy you will have no problem with this or any other class.

## COURSE SCHEDULE

Day	Date	Topic	Reading	Activity/Lab
W	1/18	Introduction to the course	-	NO LAB
M	1/23	(1) The abdominal wall	G 314-320	Abdominal viscera
W	1/25	(2) Abdominal viscera	G 321-334, 344-347, 370-371	
M	1/30	(3) Digestive system	F Ch. 14	Digestion
W	2/1	(4) Physiology of digestion I	F Ch. 14	
M	2/6	(5) Physiology of digestion II	F Ch. 14	<b>EXAM</b>
W	2/8	EXAM 1, lectures 1 – 5		
M	2/13	(6) The portacaval system	G 340-341	Pelvis
W	2/15	(7) The urogenital system	G 344-349, 370-371	
M	2/20	(8) Renal physiology I	F Ch. 13	Renal physiology
W	2/22	(9) Renal physiology II	F Ch. 13	
M	2/27	(10) Male reproductive system	G 372-381	NO LAB
W	2/29	(11) Female reproductive system	G 382-391	
M	3/5	(11) Reproductive physiology	F Ch. 15	<b>EXAM</b>
W	3/7	EXAM 2, lectures 6-12		
M	3/12	NO CLASS – SPRING BREAK		
W	3/14	NO CLASS – SPRING BREAK		
M	3/19	(13) Endocrine system	F Ch. 8	Lower limb
W	3/21	(14) Lower limb	G 92-99, 356-359	
M	3/26	(15) Musculature of gluteal region and thigh, movements of the hip and knee	G 116-129	Bipedalism
W	3/28	(16) Musculature of leg and foot, movements of ankle and toes	G 130-137	
M	4/2	(17) Ligaments of the lower limb joints	G 100-105	Skull osteology
W	4/4	(18) Innervation of the pelvis and lower limb	G 106-115	
M	4/9	NO CLASS		<b>EXAM</b>
W	4/11	EXAM 3, lectures 13-18		
M	4/16	(19) The skull	G 180-193	Brain and CN
W	4/18	(20) The brain and meninges	G 208-223	
M	4/23	(21) Cranial nerves	G 224-237	Sense reflexes
W	4/25	(22) Olfaction, vision, hearing	G 198-199, 225-226, 232, 252-263	
M	4/30	(23) Movements of the eye	G 227, 240-251	OM muscles
W	5/2	(24) Taste, swallowing, development of the tongue	G 194-197, 230, 233, 237	
M	5/7	(25) Vocalization	G 144-149, 162-167, 234-235	NO LAB
W	5/9	Reading day		
<b>M</b>	<b>5/14</b>	<b>FINAL EXAM 3:30 – 5:30 (50% lectures 1-18, 50% lectures 19-25)</b>		<b>EXAM</b>

G=Grine (2008), *Regional Human Anatomy*; F=Fox (2009), *Fundamental of Human Physiology*.