

**KIN 216 Applied Human Anatomy
Fall 2007**

- Instructor:** Karin A. Pfeiffer, Ph.D.
- Time and Location:** MW, 12:40-2:00 pm, A219 Clinical Center
- Contact Information:** 3 IM Sports Circle, 353-5222, kap@msu.edu
- Office Hours:** Mondays 4-5 pm, Thursdays 9:30-10:30 am, and by appointment
- Course TA:** Justin Bland, 1 IM Circle, 353-0728, blandjus@msu.edu
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- Website:** <http://www.angel.msu.edu>

Texts and Materials:

Required

- Marieb, E. N. & J. Mallat, Human Anatomy, (4th or 5th Edition), Benjamin-Cummings, San Francisco.
- iClicker (These can be purchased at bookstores)

Recommended:

- Medical Dictionary (Dorland's and Steadman's are both good)

Optional:

- Oliver, M.V, Rapid Review: Anatomy Reference Guide, (1st Edition, 1996), Lippincot, Williams, and Wilkins, Philadelphia.

Academic Course Description:

Structural anatomy of the human body. Interrelationships of structure, function, and human movement.

Course Overview:

KIN 216 teaches the fundamentals of human anatomical structure with an emphasis on application to human movement. A primary goal will be the development of a comprehensive clinical vocabulary, including the learning of Latin and Greek root words underlying medical terminology. Students will progress from a review of the history of anatomy; to the study of anatomy at the microscopic level of cells, organelles and tissues; and finally to the organ systems level. Special emphasis will be given to those systems with direct and major roles in exercise performance, namely the muscular, skeletal, nervous, endocrine, cardiovascular, and respiratory systems. The structure and related function of each of these body systems will be examined in detail, emphasizing the key components related to exercise and training. The major anatomical structures of other body systems (e.g., gastrointestinal) will also be covered.

Identification of specific bones, landmarks, origins/insertions/actions, joint structures, nerves, vessels and organs will be covered in greater detail in KIN 217, a laboratory class, offered during the spring semester in the medical gross anatomy (cadaver) lab in Fee Hall.

Course Objectives:

Upon successful completion of this course, students should be able to:

- 1). Utilize a comprehensive clinical vocabulary and apply acquired knowledge of Latin and Greek roots to understand medical terms beyond those specifically taught and tested in this course.
- 2). Briefly describe the history of anatomical science, understand and utilize the current system of anatomical classification, and use medical/radiological terminology in describing the location of anatomical structures.
- 3). Describe basic cell structure and function, including the fundamentals of cell chemistry and the interrelationship of subcellular organelle structure and function.
- 4). Demonstrate knowledge of the structural characteristics and functions of the various tissue classes.
- 5). Provide an overview of the roles and functions of the skeletal and articular systems, particularly as they relate to human movement.
- 6). Describe muscle architecture and the anatomical and chemical basis of muscular contraction.
- 7). Describe the basic structure and the functional interrelationships of the central and peripheral nervous systems and endocrine glands and explain their roles in human movement.
- 8). Provide an overview of the anatomy of other key systems, such as the gastrointestinal system.
- 9). Apply the knowledge and skills described above to the understanding of information from sources outside of this course, including other coursework, career-related readings, sports and exercise literature, and every day life.
- 10). Use computer technology for the following purposes:
 - utilize email to communicate with instructor and course assistants
 - access and obtain information from the KIN 216 ANGEL website
 - access the Internet for information on anatomy-related topics.

ACADEMIC DISHONESTY POLICY

Any student discovered receiving assistance from or giving assistance to another student on an exam or quiz, or cheating in any other way on any exam or quiz in this class will be given a failing grade for the class. Any such incident will also be reported to the department and to the college and will go on file in the student's academic record. For more information: <http://www.msu.edu/unit/ombud/honestylinks.html>.

Exam Format:

There will be five in-class exams, including the final, each worth 120 points and consisting of 15 true/false, 35 multiple choice, and 10 short answer questions (2 points per question). Each exam will cover 4-6 lectures and reading assignments for 4-6 chapters, as per the attached course schedule. Optional review (question/answer) sessions will be held at a location and time TBD. The final exam is a regular 120 point exam, covering the last chapters and lecture material covered (i.e. it is NOT cumulative). **Anyone arriving more than 20 minutes late (i.e., after 1 pm) to an exam will not be allowed to take the exam.**

Makeup Exams:

Absolutely **NO** makeup exams will be given unless a valid medical excuse is presented and verified with your physician, or unless notification of a conflict with a religious observance or scheduled class field trip or intercollegiate athletic participation is provided at least 2 weeks in advance of the date. In the case of class trips and athletic events, documentation is required. Any makeup that is given must be taken within 48 hours of the normally scheduled exam. **NO** makeup extra credit quizzes will be given for ANY reason.

Homework:

Six homework assignments will be given throughout the semester, worth 5 points each. These will be assignments that you complete individually and will be designed to help you study more important and difficult sections of the course. These will have specific due dates that are listed in the course schedule portion of the syllabus and **CANNOT** be turned in after these due dates. Homework assignments are due at the beginning of class and **WILL NOT** be accepted after 1 pm.

Grading: 5 exams (including final) @ 120 points PLUS 6 homework assignments @ 5 points; Total Points = 630

Grading Scale:	<u>Points</u>	<u>%</u>	<u>Grade</u>
	567	90	4.0
	535.5	85	3.5
	504	80	3.0
	472.5	75	2.5
	441	70	2.0
	409.5	65	1.5
	378	60	1.0
	<378	<60	0.0

Scale will not be curved, but will be supplemented by unannounced, in-class extra credit quizzes that could add an extra 4-5% to attending students' point totals. (Expect 6-7 pop quizzes of about 2-4 points each.) **Absolutely no makeups on these!** Also, ***no extra time will be allotted if you are late to class on a quiz day.***

Attendance Policy and Tardiness:

Attendance is not mandatory for this class, but remember that extra credit quizzes are unannounced. If you are not in class, you cannot obtain the points. Students whose names do not appear on the official class list for KIN 216 may not attend this class. Being late to class will not affect your grade per se (however, see notes on exams and quizzes). If you are late, please be considerate of your classmates and **do not** disrupt class.

Accommodations for Disabilities:

Students with disabilities should contact the Resource Center for Persons with Disabilities to establish reasonable accommodations. For an appointment with a counselor, call 353-9642 or 355-1293 (TTY).

Disruptive Behavior:

Several articles of the Academic Freedom Report (AFR) for students at Michigan State University state "The student's behavior in the classroom shall be conducive to the teaching and learning process for all concerned," and "The student has a right to scholarly relationships with faculty based on mutual trust and

civility." Also, "no student shall . . . interfere with the functions and services of the University (for example, such that the function or service is obstructed or disrupted)". Students whose conduct adversely affects the learning environment in this classroom may be subject to disciplinary action through the Student Faculty Judiciary process. ***If your cell phone rings during class, the instructor reserves the right to ask you to leave.*** An official class policy will be discussed as a group on the first day of class, and students will be expected to follow the resulting policy.

KIN 216 Course Schedule -- Spring 2007

<u>Date</u>	<u>Day</u>	<u>Lecture Topic</u>	<u>Reading Assignment:</u>
8/27	M	Introduction, History, Anatomical Terminology Anatomical Organization	Chap. 1 (skip pg. 15-16)
8/29	W	Cells	Chap. 2
9/3	M	NO CLASS (Labor Day Holiday)	
9/5	W	Cells cont'd., Tissues – Homework #1 due	Chap. 4
9/10	M	Tissues	Chap. 4, 6 (cartilage)
9/12	W	Integumentary System – Homework #2 due	Chap. 5
9/17	M	EXAM 1 (Covers Chapters 1, 2, 4, 5, tiny part of 6 – cartilage only)	
9/19	W	Skeletal System, Axial Skeleton	Chap. 6, 7
9/24	M	Axial and Appendicular Skeleton	Chap. 7, 8
9/26	W	Appendicular Skeleton, Articulations– Homework #3 due	Chap. 8, 9
10/1	M	Articulations	Chap. 9
10/3	W	Muscle Tissue, Fibers	Chap. 10
10/8	M	EXAM 2 (Covers Chapters 6-9)	
10/10	W	Muscles of the Body	Chap. 11
10/15	M	Nervous System Overview, Tissues	Chap. 12
10/17	W	Central Nervous System (CNS)	Chap. 13
**10/16 Wed. Last day to drop a class without receiving a grade **			
10/22	M	CNS, Peripheral Nervous System (PNS)	Chap. 13, 14
10/24	W	PNS – Homework #4 due	Chap. 14
10/29	M	Autonomic Nervous System	Chap. 15
10/31	W	EXAM 3 (Covers Chapters 10-14)	
11/5	M	Endocrine System	Chap. 25
11/7	W	Blood	Chap. 17

<u>Date</u>	<u>Day</u>	<u>Lecture Topic</u>	<u>Reading Assignment :</u>
11/12	M	Heart – Homework #5 due	Chap. 18
11/14	W	Vascular System	Chap. 19
11/19	M	EXAM 4 (Covers Chapters 15, 17-19, 25)	
11/21	W	Lymphatic and Immune Systems	Chap. 20
11/26	M	Respiratory System	Chap. 21
11/28	W	Respiratory System, Digestive System – Homework #6 due	Chap. 21, 22
12/3	M	Digestive System, Urinary System	Chap. 22, 23
12/5	W	Urinary System, Embryology (if there is time)	Chap. 23, 3

12/13 Thursday FINAL EXAM - 12:45 PM, in regular classroom

**** ALL STUDENTS MUST TAKE FINAL AT THIS TIME!! ****

(Final exam covers chapters 20-23, possibly 3 -- it is NOT cumulative)

CAATE Competencies and proficiencies covered in this class:

PA-C1 Describe the essential components of a typical human cell. Include the normal structure and the function of each component and explain the abnormal symptoms associated with injury, illness, and disease.

PA-C2 Explain gross cellular adaptations in response to stress, injury, or disease (e.g., atrophy, hypertrophy, differentiation, hyperplasia, metaplasia, and tumors).

PA-C4 Identify the normal acute and chronic physiological and pathological responses (e.g., inflammation, immune response, and healing process) of the human body to trauma, hypoxia, microbiologic agents, genetic derangements, nutritional deficiencies, chemicals, drugs, and aging affecting the musculoskeletal and other organ systems, and musculoskeletal system adaptations to disuse.

DI-C1 Demonstrate knowledge of the systems of the human body.

DI-C2 Describe the anatomical and physiological growth and development characteristics as well as gender differences across the lifespan.

RM-C15 Describe the components for self-identification of the warning signs of cancer.

MC-C14 Describe and know when to refer common medical conditions of the renal and urogenital systems from trauma, local infection, congenital and acquired disease, nutritional imbalance, and hormone disorder (e.g., kidney stones, genital trauma, gynecomastia, monorchidism, scrotum and testicular trauma, ovarian and testicular cancer, breast cancer, testicular torsion, varicoceles, endometriosis, pregnancy and ectopic pregnancy, female athlete triad, primary amenorrhea, oligomenorrhea, dysmenorrhea, kidney laceration or contusion, cryptorchidism).

RM-C15 Describe the components for self-identification of the warning signs of cancer.

DI-C4 Explain directional terms and cardinal planes used to describe the body and the relationship of its parts.