

The University of Texas at Arlington
School of Education

Course Title: Applied Kinesiology

Course Number: KINE 3300

Course Location and Time: M / W 10 – 10:50am

Instructor: Paul McDonough, Ph.D.

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Office Hours: By appointment

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The mission of The University of Texas at Arlington is to pursue knowledge, truth and excellence in a student-centered academic community characterized by shared values, unity of purpose, diversity of opinion, mutual respect and social responsibility. The University is committed to lifelong learning through its academic and continuing education programs, to discovering new knowledge through research and to enhancing its position as a comprehensive educational institution with bachelor's, master's, doctoral and non-degree continuing education programs.

The mission of the UTA School of Education is to develop and deliver an educational program that ensures the highest of teacher and administrator preparation and performance and to be a recognized contributor in the field of educational research and practice through effective teaching, quality research, and meaningful service. The School is committed to the advancement of teaching and learning in all educational environments, at all levels, and for all students. The collaboratively developed shared vision of the University of Texas at Arlington's School of Education is based on core values, dispositions, and commitments of:

- Excellence
- Learner-Centered Environment
- Research-Based
- Collaboration
- Diversity
- Technology
- Field Experiences
- Life-Long Learning

(School of Education Conceptual Framework, 2002)

Course Prerequisites: ZOOL 2043, or BIOL 1013

Required Textbook(s) and Materials:

Thompson, C. & Floyd, R. (2004). Manual of structural kinesiology (15th ed.) McGraw Hill.

Delavier, F. (2001). Strength Training Anatomy. Champaign, IL: Human Kinetics.

Suggested References:

McMinn, R., Hutchings, R., Pegington, J., & Abrahams, P. (1993). A colour atlas of human anatomy (3rd ed.). London: Mosby-Wolfe.

Sieg, K., & Adams, S. (1985). Illustrated essentials of musculoskeletal anatomy (2nd ed.). Gainesville, FL: Megabooks.

Course Description: For majors in occupational therapy and therapeutic recreation. Kinesiological, physiological, and anatomical aspects of the nervous, skeletal, and muscular systems of the human body; psychomotor factors related to motor performance; mechanical principles and their application to human motion.

Course Learning Goals/Objectives:

The student should be able to:

- (1) Outline the organization of the major systems of the body that are affected by exercise
- (2) Define basic anatomical and kinesiological terminology
- (3) Identify actions, skeletal origins & insertions, & nerve supply of major muscles in the body
- (4) Identify bony landmarks and palpation sites of various anatomical structures
- (5) Explain the interaction between anatomical structure, physiological function, mechanisms of injury

This course addresses the following ACSM Objectives:

1.1.0 Knowledge of anatomy as it relates to exercise and health.

1.1.0.1 Knowledge of the basic structures of bone, skeletal muscle, and connective tissues.

1.1.0.4 Knowledge of the definition of the following terms: supination, pronation, flexion, extension, adduction, abduction, hyperextension, rotation, circumduction, agonist, antagonist, and stabilizer.

1.1.1.1 Knowledge to identify the plane in which each muscle action occurs.

1.1.1.4 Knowledge of and skill to demonstrate exercises designed to enhance muscular strength and/or endurance of specific major muscle groups.

1.1.1.7 Knowledge to identify the primary action and joint range of motion for each major muscle group.

2.1.0 Knowledge of functional anatomy and biomechanics.

2.1.0.1 Knowledge of the structure and ability to describe movements for the major joints of the body.

1.8.6 Knowledge of the following terms: progressive resistance, isotonic/isometric, concentric, eccentric, atrophy, hypertrophy, sets, repetitions, plyometrics, Valsalva maneuver.

1.1.0.3 Ability to identify the major bones and muscles. Major muscles include, but are not limited to, the following: trapezius,

pectoralis major, latissimus dorsi, biceps, triceps, < rectus abdominis, internal and external obliques, erector spinae, gluteus maximus, quadriceps, hamstrings, adductors, abductors, and gastrocnemius.

1.1.1.3 Ability to describe the following curvatures of the spine: lordosis, scoliosis, and kyphosis.

1.8.2 Ability to describe exercises designed to enhance muscular strength and/or endurance of specific major muscle groups.

Attendance and Drop Policy: If you miss class, you will be responsible for any work due or any assignments missed. If you have a *University approved absence*, it is also your responsibility to give me notice of your absence and to make arrangements with me immediately following your return for any missed work.

Specific Course Requirements:

Exams: Each lecture exam will count for 100 points of your total grade. Additionally, you will have 2 Lab Practical exams worth 30 points each. Makeup's will not be given for major exams unless there is an **extreme emergency**.

Arrangements must be made prior to the class in which the exam will be administered. If this procedure is not followed, you will receive a 0 (zero) on the exam. Makeup exams are only granted for unusual circumstances.

Notification requires that you a) contact me in advance of the exam, b) we have a face-to-face discussion of your situation, and c) we agree upon a plan for you to complete the makeup exam. An e-mail or voicemail message without a response from me **does not** excuse you from an exam or assignment.

Kinesiology Sponsored Lectures: There will be two kinesiology sponsored lectures throughout the semester.

These lectures will be held on an announced Wednesday at noon. Your attendance will count as part of 1 lab grade per lecture. **There are no make up assignments for these lectures.**

Paper: You will be responsible for completing a research paper during the semester. This paper will analyze a sports specific movement. In your analysis you NEED to include the muscles used in to movement, origin and insertion, as well as the stabilizer, synergist and antagonist muscles. This paper should be detailed, so start early and ask questions so as to ensure a good grade.

Student Support Services: The University supports a variety of student success programs to help you connect with the University and achieve academic success. They include learning assistance, developmental education, advising and mentoring, admission and transition, and federally funded programs. Students requiring assistance academically, personally, or socially should contact the Office of Student Success Programs at 817-272-6107 for more information and appropriate referrals.

Day Date Topic Reading

W 1.21 Introduction **Chapter 1 Floyd**

M 1.26 Ch1: Terminology Planes/Axes

W 1.28 Ch1: Skeletal Considerations **Chapter 2 Floyd**

M 2.2 Ch2: Muscle characteristics

W 2.4 Neuromuscular function

M 2.9 Ch2: Muscle Actions & Roles **Chapter 3 Floyd**

W 2.11 Ch3: Basic Biomechanics

M 2.16 Ch3: Basic Biomechanics

W 2.18 **EXAM 1 Chapter 9 Floyd**

M 2.23 CH9: Hip Joint / Pelvic Girdle **Chapter 6 Delavier**

W 2.25 CH9: Hip Joint / Pelvic Girdle **Chapter 10 Floyd**

M 3.2 CH10: Knee Joint **Chapter 5 Delavier**

W 3.4 CH10: Knee Joint **Chapter 11 Floyd**

M 3.9 CH11: Ankle & Foot

W 3.11 CH11: Ankle & Foot

M 3.16 Lower Extremity Review

W 3.18 **EXAM 2 Chapter 4 Floyd**

M 3.23 Ch4: Shoulder Girdle Basics **Chapter 5 Floyd; Chapter 2 Delavier**

W 3.25 Ch5: Shoulder Joint **Chapter 1 & 3 Delavier**

M 3.30 Ch5: Shoulder Joint **Chapter 6 Floyd; Chapter 4 Delavier**

W 4.1 Ch6: Elbow & Radioulnar Joints **Chapter 7 Floyd**

M 4.6 Ch7: Wrist & Hand Joints **Chapter 8 Floyd**

W 4.8 Upper Extremity Exercises

M 4.13 Upper Extremity Review

W 4.15 **EXAM 3 Chapter 12 Floyd**

M 4.20 CH12: Trunk & Spine **Chapter 7 Delavier**

W 4.22 CH12: Trunk & Spine **Chapter 13 Floyd**

M 4.27 Catch up

W 4.29 Catch up

****SCHEDULE IS SUBJECT TO CHANGE TO ENSURE ALL COURSE OBJECTIVES ARE MET. ADDITIONAL ASSIGNMENTS WILL BE ANNOUNCED THROUGHOUT THE SEMESTER****

Grade Calculation:

- Exams (3) 100 pts each = 300 pts A= 675+
- Labs/Asnmts (12) 20 pts each = 240 pts B= 600 - 674
- Lab exams 30 pts each = 60 pts C= 525 - 599
- Paper = 50 pts D= 450 - 524
- Final Exam = 100 pts

Cell Phone Policy: Yes, I can hear you now. If you choose to bring your cell phone to class, please turn the ringer off. If you have an emergency during class which requires you to answer your phone, please discretely excuse yourself. Also, text messaging during class will not be tolerated.

Americans With Disabilities Act (ADA): If you are a student who requires accommodations in compliance with the ADA, please consult with me at the beginning of the semester. As a faculty member, I am required by law to provide “reasonable accommodation” to students with disabilities, so as not to discriminate on the basis of that disability. Your responsibility is to inform me of the disability at the beginning of the semester and provide me with documentation authorizing the specific accommodation. Student services at UTA include the Office for Students with Disabilities (located in the lower level of the University Center) which is responsible for verifying and implementing accommodations to ensure equal opportunity in all programs and activities.

Academic Honesty: Academic dishonesty is a completely unacceptable mode of conduct and will not be tolerated in any form at The University of Texas at Arlington. All persons involved in academic dishonesty will be disciplined in accordance with University regulations and procedures. Discipline may include suspension or expulsion from the University. “Academic dishonesty includes, but is not limited to, cheating, plagiarism, collusion, the submission for credit of any work or materials that are attributable in whole or in part to another person, taking an examination for another person, any act designed to give unfair advantage to a student or the attempt to commit such acts.” (Regents’ Rules and Regulations, Part One, Chapter VI, Section 3, Subsection 3.2., Subdivision 3.22).

Bomb Threats: If anyone is tempted to call in a bomb threat, be aware that UTA will attempt to trace the phone call and prosecute all responsible parties. Every effort will be made to avoid cancellation of presentations/tests caused by bomb threats. Unannounced alternate sites will be available for these classes. Your instructor will make you aware of alternate class sites in the event that your classroom is not available.

Commitment to Diversity

In our commitment to the furthering of knowledge and fulfilling our educational mission, the School of Education at the University of Texas at Arlington seeks a campus climate that

welcomes, celebrates, and promotes respect for the entire variety of human experience. In our commitment to diversity, we welcome people from all backgrounds. We seek to include knowledge and values from many cultures in the curriculum. Dimensions of diversity shall include, but are not limited to, the following: race, ethnicity, religious belief, sexual orientation, sex/gender, disability, socioeconomic status, cultural orientation, national origin, and age.