

Introduction to Exercise Science

KINE 1400 Lecture

Spring 2012

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Office: 116 MAC
Hours: Mon, Wed 3:30-4:30

Course: KINE 1400 Introduction to Exercise Science
Credit: 4 semester credit hours
Time and Place of Class Meetings: MAC Lone Star, Tues-Thurs 8:00-9:20.
Labs meet in room Exercise Science Laboratories, MAC 150

Free tutoring for KINE 1400 will be provided by the Department of Kinesiology. The instructor will inform students of the schedule.

Description of Course Content: Lectures, labs and assignments are designed to introduce students to the field of exercise science and resources outside the classroom available for additional study. An overview includes topics on acute and chronic physiological responses to exercise, nutrition, biomechanics, health-related concepts and physical fitness, as well as statistics. Students will also gain knowledge in the use of spreadsheets for analyzing data and creating charts.

Student Learning Outcomes:

- The student will be able to perform blood pressure and body fat analysis as part of fitness testing program.
- The student will be able to develop a cardiovascular and strength training program for a client.
- The student will be able to explain the acute and chronic effects of exercise on the cardiovascular system.
- The student will be able to explain the acute and chronic effects of exercise on the musculoskeletal system.
- The student will be able to identify the different effects that exercise has on special populations, such as, children, elderly, diseased and the elite athlete.
- The student will be able to understand the different effects that exercise has on male and females.
- The student will be able to explain and identify statistical terms and their use in Kinesiology
- The student will be able to obtain data in the lab and evaluate that data through graphing.
- The student will be able to identify the three main planes of movement.

Requirements: Basic computer skills and an understanding of the Microsoft Excel

program. Students are required to attend lectures and participate in all laboratory assignments.

Required Text:

1. Howley & Franks (2007). Fitness Professionals Handbook, 5th Edition. Publisher: Human Kinetics.
2. Introduction to Exercise Science Lab Manual - KINE 1400. This may be obtained at the UTA bookstore.

* Basic calculator will be provided (scientific calculator not necessary)

GRADING:

Exam 1 Thursday, February 9 th	15%
Exam 2 Thursday, March 8 th	20%
Exam 3 Thursday, April 5 th	15%
Final Date TBA	20%
Weekly Lab Assignments-Due in lab, or the next week	20%
Lab Practicals (2) – 2.5% each - See lab schedule	5%
Special Lecture – Monday April 9th @ Noon or	
Article Review Assignment	5%

(A = 90-100%, B = 80-89%, C = 70-79%, D = 60-69%, F <60%)

It is not the instructor's responsibility to compute your grade throughout the semester. To compute your grade, take the total points earned for a specific part of the evaluation (exams, etc.) divided by points possible and multiply the points allotted for that part of the course by the percentage of total point earned in that section. Do the same for each part of the course grade and add the parts together, that is your score out of 100%.

Major Exams (15, 20, 15%) & Final (20%): There will be no make-ups for missed major exams, except for university excused absences that must be turned in one week prior to the exam. However, in cases of extreme emergencies contact the instructor before the exam and your situation will be considered for approval or denial. Without notification, your absence on exam day gives you a zero grade for the exam. Unless you have a university excused absence, even with notification there is no guarantee that you will be allowed to make up the exam.

You will need your UTA ID, a Scantron (882-E) and a #2 pencil for each of the major exams.

*Bring the minimum to class on exam days. You will leave all of your belongings outside of the room.

No hats, head coverings, players or cell phones will be allowed on exam days.

Cheating is not allowed. Cheating will result in a zero grade for the exam.

GUEST LECTURE PARTICIPATION

(-30 on next exam)

Thirty points will be taken away for disruptive behavior and lack of participation during guest lectures. Each guest lecturer in class will be speaking about different disciplines within the Kinesiology Department at UTA. Students must pay attention and remain in their seats during the duration of the lecture.

Examples of improper participation include, but are not limited to:

Leaving class early before the instructor dismisses class. Sleeping, reading the paper, working on other assignments, organizing calendars or other inattentive activity.

CONDUCT IN LECTURE: Failure to comply with conduct guidelines will result in expulsion from the class that day or a zero on the lab assignment that week.

During the lecture students are expected to:

Have cell phones turned off and put up. No text messaging will be allowed.

No headphones with music players are allowed.

Laboratory Attendance Policy: Lab attendance is mandatory. You must be present in lab to obtain data for the assignments. Lab data will not be given to students who do not attend lab unless they have a documented & approved University excused absence.

Examples of Lab Absences include, but are not limited to the following:

- Not attending or arriving >10 minutes late. If you arrive late for lab you will not be allowed to participate.
- Leaving lab early before the instructor dismisses class.
- Not being properly dressed out for lab. Loose T-shirt or tank top, above the knee shorts, and running/tennis shoes are required for lab.
- Refusal to participate in lab activities (example: exercising, taking blood pressures and body fat analysis, being a subject for others, etc.).

NOTE: Leaving lab early will result not only in an absence for the day but also a zero on the assignment you are to turn in the following week.

NOTE: Documentation for absences will not be accepted more than one week after the absence.

It is your responsibility to bring your student ID with you to every lab class so that you can have access to the Mavericks Activities Center when needed and for test day. You are not allowed access to the Exercise Science Research Lab in open toe shoes.

WEEKLY LAB ASSIGNMENTS (20%): All lab assignments will be turned in at the beginning of the class period on the due date. Lab assignments will not be accepted without a cover sheet. Lab assignments will always be due at the beginning of class one week from the date of completion of the data collection. **NO LAB ASSIGNMENTS WILL BE ACCEPTED AFTER THE FIRST 10 MINUTES OF THE LAB**

CLASS. IF YOU MISS A LAB WITH AN UNEXCUSED ABSENCE YOU WILL GET A ZERO FOR THAT ASSIGNMENT.

A university excused absence or documentation (i.e., University approved activity, proof you were in jail, doctor's note on appropriate letterhead with appropriate signature) is required in order to have consideration for make-up of a lab absence.

TWO LAB PRACTICALS (2.5% each, or 5%):

Attendance is required for the two lab practicals. Absences will follow the same guidelines as outlined for major exams in this syllabus.

OPTION #1 SPECIAL LECTURES (5%)

You will receive credit for attending special guest lectures outside of normal class time. You will be required to sign in and show your student id to receive credit.

OPTION #2 ARTICLE REVIEW ASSIGNMENT & SUBMISSION OF 3 ARTICLES (5%):

An Article Review Assignment may be done this semester. In order to ensure appropriate articles are used, a topic must be chosen and approved by the instructor. In addition, when the paper is turned in, the 3 refereed journal articles referenced for the paper must be turned in for review by the professor. Both the paper and review articles must be turned in at the beginning of class (within the first 10 minutes) on the due date or you will receive a ZERO for the assignment. **IF YOU DO NOT TURN IN THE ARTICLE REVIEW ASSIGNMENT YOU WILL RECEIVE AN INCOMPLETE FOR THE COURSE UNTIL ONE IS TURNED IN.** Please note: this assignment may be turned in anytime before the due date as well.

GRADE REQUIREMENTS FOR KINESIOLOGY CLASSES:

As stated in the undergraduate catalog, if you are on track to obtaining a Bachelor of Science in Exercise Science or a Bachelor of Arts (all level teacher certification) degree, you are required to earn a C or better in Kinesiology 1400 to maintain your status as a Kinesiology major. Therefore, you will be required to retake Kinesiology 1400 if you earn a D or F. This class must be taken at UTA. If you have any questions regarding this policy, please contact your academic advisor. Additional information may be found at: <http://www.uta.edu/catalog/departments/education/kinesiology>

KINESIOLOGY DEPARTMENT DROP POLICY: Students may drop or swap (adding and dropping a class concurrently) classes through self-service in MyMav from the beginning of the registration period through the late registration period. After the late registration period, students must see their academic advisor to drop a class or withdraw. Undeclared students must see an advisor in the University Advising Center. Drops can continue through a point two-thirds of the way through the term or session. It is the student's responsibility to officially withdraw if they do not plan to attend after registering. Students will not be automatically dropped for non-attendance. Repayment of certain types of financial aid administered through the University may be required as the result of dropping classes or withdrawing. Contact the Financial Aid Office for more

information. Any student that does not officially drop the class by the appropriate drop dates will be given an “F” for the course.

AMERICANS WITH DISABILITIES ACT: The University of Texas at Arlington is on record as being committed to both the spirit and letter of all federal equal opportunity legislation, including the Americans with Disabilities Act (ADA). All instructors at UT Arlington are required by law to provide "reasonable accommodations" to students with disabilities, so as not to discriminate on the basis of that disability. Any student requiring an accommodation for this course must provide the instructor with official documentation in the form of a letter certified by the staff in the Office for Students with Disabilities, University Hall 102. Only those students who have officially documented a need for an accommodation will have their request honored. Information regarding diagnostic criteria and policies for obtaining disability-based academic accommodations can be found at www.uta.edu/disability or by calling the Office for Students with Disabilities at (817) 272-3364.

Academic Integrity: It is the philosophy of The University of Texas at Arlington that academic dishonesty is a completely unacceptable mode of conduct and will not be tolerated in any form. 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. According to the UT System Regents' Rule 50101, §2.2, "Scholastic 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."

Student Support Services Available: [Suggested language; new verbiage as of Fall 2010] The University of Texas at Arlington provides a variety of resources and programs designed to help students develop academic skills, deal with personal situations, and better understand concepts and information related to their courses. These resources include tutoring, major-based learning centers, developmental education, advising and mentoring, personal counseling, and federally funded programs. For individualized referrals to resources for any reason, students may contact the Maverick Resource Hotline at 817-272-6107 or visit www.uta.edu/resources for more information.

Electronic Communication Policy: [Suggested language] The University of Texas at Arlington has adopted the University “MavMail” address as the sole official means of communication with students. MavMail is used to remind students of important deadlines, advertise events and activities, and permit the University to conduct official transactions exclusively by electronic means. For example, important information concerning registration, financial aid, payment of bills, and graduation are now sent to students through the MavMail system. All students are assigned a MavMail account. Students are responsible for checking their MavMail regularly. Information about activating and using MavMail is available at <http://www.uta.edu/oit/email/>. There is no additional charge to students for using this account, and it remains active even after they graduate from UT Arlington.

To obtain your NetID or for logon assistance, visit <https://webapps.uta.edu/oit/selfservice/>. If you are unable to resolve your issue from the Self-Service website, contact the Helpdesk at helpdesk@uta.edu.

FINAL REVIEW WEEK: A period of five class days prior to the first day of final examinations in the long sessions shall be designated as Final Review Week. The purpose of this week is to allow students sufficient time to prepare for final examinations. During this week, there shall be no scheduled activities such as required field trips or performances; and no instructor shall assign any themes, research problems or exercises of similar scope that have a completion date during or following this week unless specified in the class syllabi. During Final Review Week, an instructor shall not give any examinations constituting 10% or more of the final grade, except makeup tests and laboratory examinations. In addition, no instructor shall give any portion of the final examination during Final Review Week. Classes are held as scheduled during this week and lectures and presentations may be given.

E-CULTURE POLICY: You may email me at any time if you need information.

The University of Texas at Arlington has adopted the University email address as an official means of communication with students. Through the use of email, UT-Arlington is able to provide students with relevant and timely information, designed to facilitate student success. In particular, important information concerning registration, financial aid, payment of bills, and graduation may be sent to students through email.

All students are assigned an email account and information about activating and using it is available at www.uta.edu/email. New students (first semester at UTA) are able to activate their email account 24 hours after registering for courses. There is no additional charge to students for using this account, and it remains active as long as a student is enrolled at UT-Arlington. Students are responsible for checking their email regularly.

TIMELINE FOR GRADE GRIEVANCES: The student has one calendar year from the date a grade is assigned to initiate a grievance. The normal academic channels are 1) Department Chair, 2) Academic Dean, and 3) the Provost.

The University of Texas at Arlington College of Education

Mission, Core Values and Professional Dispositions

MISSION: To develop and deliver an educational program that ensures the highest teacher, administrator and allied health science preparation and performance and

To be a recognized contributor in the field of educational and allied health science research and practice through effective teaching, quality research and meaningful service.

The Educator and Administrator Preparation units' collaboratively developed shared vision is based on these CORE VALUES, dispositions and commitments to:

- Excellence • Diversity
- Learner-centered environment • Technology
- Research-based • Field Experiences
- Collaboration • Life-long Learning

Each candidate in the Educator and Administrator Unit of the College of Education of UT-Arlington will be evaluated on PROFESSIONAL DISPOSITIONS by faculty and staff. These dispositions have been identified as essential for a highly-qualified educator. Instructors and program directors will work with candidates rated as “unacceptable” in one or more stated criteria. The candidate will have an opportunity to develop a plan to remediate any deficiencies.

Demonstrates excellence

- Meets stated expectations of student performance.
- Keeps timelines. Arrives on time for class and other activities.
- Produces significant artifacts of practitioner evidence.
- Possesses a willingness to set goals.
- Attends all classes/trainings and practicum experiences.
- Completes activities as assigned.
- Has appropriate personal appearance and/or hygiene for professional setting.

Participates in a learner centered environment and shows respect for self and others

- Uses appropriate and professional language and conduct.
- Supports a “high quality” learning environment.
- Shows respect and consideration for the thoughts and feelings of others.

Research-based pedagogy

- Has an awareness of and willingness to accept research-based concepts.
- Identifies important trends in education.
- Demonstrates interests in learning new ideas and strategies.
- Relates class discussions and issues to current events in education.

Participates in on-going collaboration with peers and professionals

- Demonstrates kindness, fairness, patience, dignity and respect in working with peers, staff and instructors.
- Works effectively with others.
- Assists others in the university classroom or practicum setting.
- Demonstrates openness to assistance from others.
- Receives feedback in a positive manner and makes necessary adjustment.

Exhibits stewardship of diversity

- Shows appropriate stewardship and tolerance to diverse people, environments, and situations.

Advocates use of technology

- Uses and applies existing technologies sufficiently in work.
- Shows a willingness to use and apply emerging technologies in work.

Shows interest in the learner and the learning-process

- Demonstrates significant learning improvement over time.
- Shows interest in the learning process and demonstrates the necessary amount of time, energy, and enthusiasm for becoming better learners, teachers, and practitioners

Attention Athletic Training Majors

University of Texas at Arlington Course Matrix

5th Edition

Code	Description	Course 1 Instructed	Course 1 Evaluated	Course 2 Instructed	Course 2 Evaluated
PHP-25.0	Describe the role of exercise in maintaining a healthy lifestyle and preventing chronic disease.	KINE 1400	KINE 1400	KINE 2420	KINE 2420
PHP-26.0	Identify and describe the standard tests, test equipment, and testing protocols that are used for measuring fitness, body composition, posture, flexibility, muscular strength, power, speed, agility, and endurance.	KINE 1400	KINE 1400	KINE 4329	KINE 4329
PHP-27.0	Compare and contrast the various types of flexibility, strength training, and cardiovascular conditioning programs to include expected outcomes, safety precautions, hazards, and contraindications.	KINE 1400	KINE 1400	KINE 4329	KINE 4329
PHP-28.0	Administer and interpret fitness tests to assess a client's/patient's physical status and readiness for physical activity.	KINE 1400	KINE 1400	KINE 4329	KINE 4329
PHP-29.0	Explain the basic concepts and practice of fitness and wellness screening.	KINE 1400	KINE 1400	KINE 4329	KINE 4329
PHP-30.0	Design a fitness program to meet the individual needs of a client/patient based on the results of standard fitness assessments and wellness screening.	KINE 1400	KINE 1400	KINE 4329	KINE 4329
PHP-43.0	Describe the principles and methods of body composition assessment to assess a client's/patient's health status and to monitor changes related to weight management, strength training, injury, disordered eating, menstrual status, and/or bone density status.	KINE 1400	KINE 1400	HEED 3301	HEED 3301
PHP-44.0	Assess body composition by validated techniques.	KINE 1400	KINE 1400		
PHP-45.0	Describe contemporary weight management methods and strategies needed to support activities of daily life and physical activity.	KINE 1400	KINE 1400	HEED 3301	HEED 3301

Course Objectives

1. To provide athletic training students with the knowledge of techniques related to prevention and health promotion that are necessary for effective performance as an athletic trainer (AT). These clinical competencies will be instructed and evaluated in KINE 4100 and are contained in the Athletic Training Education Competencies (5th ed).

a. Athletic Training Education Competencies (5th) - Prevention and Health Promotion (PHP)

i. 25.0, 26.0, 27.0, 28.0, 29.0, 30.0, 43.0, 44.0, 45.0

Spring 2012 - KINE 1400 Lecture Schedule

Week 1: Jan 17, 19	Introduction Chapter 1 – Physical Activity and Health,
Week 2: Jan 24, 26	Chapter 2 – Physical Fitness and Performance & Terms Chapter 3 – Health Appraisal Terms
Week 3: Jan 31, Feb 2	Chapter 28 – Exercise Physiology
Assignment Due: Review paper assignment (optional); topic due Feb 7, before class	
Week 4: Feb 7, 9	Chapter 28 – Exercise Physiology, Test Review
Test 1 – Thursday, February 9th (15%); Ch. 1-3, 28	
Week 5: Feb 14, 16	Review Exam 1, Chapter 24 – Exercise Related to ECG & Medication
Week 6: Feb 21, 23	Chapter 24 – Exercise Related to ECG & Medication Chapter 10 – Exercise Prescription for CRF
Week 7: Feb 28, March 1	Chapter 12 – Exercise Prescription for Resistance Training Chapter 15 - Exercise and Children and Youth
Week 8: March 6, 8	Chapter 15 - Exercise and Children and Youth, Test Review
Test 2 – Thursday, March 8th (20%); Ch. 24, 10, 12, 15	
Week 9: March 13, 15	Spring Break
Week 10: March 20, 22	Review Exam 2, Anaerobic Power Lecture Chapter 6 – Body Composition
Week 11: March 27, 29	Chapter 19 – Exercise and Obesity Chapter 21 – Exercise, Asthma and Pulmonary Disease
Assignment Due: Article Review Assignment due (5%) April 3rd, beginning of class	
Week 12: April 3, 5	Chapter 21 – Exercise, Asthma and Pulmonary Disease, Test Review
Test 3 – Thursday, April 5th (15%): Anaerobic, Ch. 6, 19, 21	
Week 13: April 10, 12	Review Exam 3, Chapter 16 – Exercise and Older Adults Chapter 16 – Exercise and Older Adults
Week 14: April 17, 19	Chapter 18 – Exercise and Coronary Heart Disease Chapter 18 – Exercise and Coronary Heart Disease
Week 15: April 24, 26	Chapter 20 – Exercise and Diabetes Chapter 7 - Nutrition
Week 16: May 1, 3	Chapter 7 – Nutrition Test Review
Week 17: May 5-11	Final Exam (20%) – Date TBA: Chs. 16, 18, 20, 7 & cumulative KINE 1400 – ARTICLE REVIEW ASSIGNMENT (2.5% OF TOTAL GRADE)
Topic Due: Tuesday, February 7th (Due before class - must be typed on paper with name, -10 points for every late day the topic is not turned in).	

Assignment is Due: Tuesday, April 3rd before class or you will receive a ZERO. **You may turn it in early.** IF YOU FAIL TO TURN IN A PAPER, YOU GET AN **INCOMPLETE** FOR THE CLASS.

The purpose of the assignment is for the student to select a topic within exercise physiology that is of particular interest to them. After selecting a topic, the student will write a review utilizing a **MINIMUM** of 3 articles selected from refereed journals. **NOTE: Finding the right 3 articles can be very difficult.**

The 3 articles must be original experimental research. Summary articles, review papers, position stands, meta-analysis, or case studies will not be accepted. Each article must be broken down into the following headings: **Introduction, Methods/Procedure, Results, Discussion & Conclusion.**

The paper length should be **2-4 pages MINIMUM, TYPED, DOUBLE-SPACED (do not double space the references page).** *The page number does not include the title page or the references page.*

How to turn the paper in: The paper should be stapled. Each of the 3 articles should be separately stapled with your name written on the first page of each. Lastly, all 4 separate parts of this assignments should be bound together either in a folder or by a large clip.

Potential Topics: Blood pressure control during exercise, Skeletal muscle hyperemia, Epidemiology and Exercise, Immune function and Exercise, Effect of Aging on skeletal muscle, Cardiac Rehabilitation, Anaerobic Threshold, Ergogenic Aids, Steroid Abuse in Athletes, Gender Differences in Exercise, Effects of Environmental Conditions on Performance, Effects of Altitude on Performance, Comparison of Cross Training Methods, Effects of Overtraining, Childhood Obesity, **Note: This is not an exhaustive list.**

GRADING SCALE:

10 points - Title Page: Title, Name, Course Name, Section #, Instructor's Name, Date

10 points - Spelling, grammar, **or less than 2 pages.**

20 points - **Review** of the 3 articles under the following headings: (all section headings below must be included in the body of the text and **bolded**):

Introduction

Methods/Procedure

Results

Discussion & Conclusion

20 points - References Page –Must be labeled “References List” - Must use ACSM style of reference

20 points - Reference within the body of the paper – Must use ACSM style of reference – see handouts

20 points - Failure for any of the 3 articles not to be experimental research, as well as for each article that is turned in without the full text, ex: abstract only

You will receive a zero if:

- 1) A research paper is written and not a review of the three articles.
- 2) You write 3 separate review papers on the three separate articles.
- 3) You turn in the paper after the due date & time of April 3rd at 8:10 am.