

Introduction to Exercise Science

KINE 1400 Lecture and Laboratory

Fall 2009

Lecture Instructor: Rhonda Prisby

Phone: 817-272-3120

e-mail: prisby@uta.edu

Office: 116 MAC

Hours: Thurs 2:00-3:30

Or By Appointment

ATTENTION: Communication via email will only be done through UTA accounts. Emails sent from other accounts such as hotmail, gmail, etc. will not be answered!

Web site:

Lecture Co-Instructor: John B. Buckwalter, Ph.D.

e-mail: buckwalter@uta.edu

Course: KINE 1400 Introduction to Exercise Science

Credit: 4 semester credit hours

Time and Place of Class Meetings: MAC Lone Star, Tu-Th 9:30-10:50.

Labs meet in room Exercise Science Laboratories, MAC 150

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 a 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 is required (scientific calculator not necessary)**

GRADING:

Exam 1	Thursday, September 17 th	15%
Exam 2	Thursday, October 15 th	20%
Exam 3	Tuesday, November 17 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%
<u>Special Lectures (9/30, 12 pm, other TBA) or</u>		
<u>Article Review Assignment</u>		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 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:

No video or audio recording allowed

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

No headphones with music players are allowed.

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

During the lab students are required to:

Have cell phones and all other electronic devices turned off and put up. No text messaging will be allowed.

No laptop computers will be allowed except for graphing in lab.

No headphones with music players are allowed.

Pay attention and take notes, especially during the lab lecture. It is the instructor's discretion if you get your participation points for the lab. Sleeping in lab, talking, working on other assignments, reading the paper and other inattentive activities will result in you receiving a zero for the lab assignment that day.

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. Capri pants, jeans, full spandex outfits are not acceptable.

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 class so that you can have access to the Mavericks Activities Center (MAC) when needed and for test day. You are not allowed access to the Exercise Science Research Labs in open toe shoes.

University approved absences: In addition to the letter from the Athletic Department (or other Departments), please remind your instructor prior to the day(s) you will be absent so they may set aside any assignments. University excused absences must be received seven days prior to the absence.

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 being stapled and having 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: The department will not warn students nor drop students for excessive absences. It is the responsibility of the student to complete **ADDING, DROPPING** or withdrawing from school within the appropriate time frame established by the University Registrar (deadlines to be found in the Schedule of Classes). 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 federal equal opportunity legislation; reference Public Law 92-112 - The Rehabilitation Act of 1973 as amended. With the passage of federal legislation entitled *Americans with Disabilities Act (ADA)*, pursuant to section 504 of the Rehabilitation Act, there is renewed focus on providing this population with the same opportunities enjoyed by all citizens.

As a faculty member, I am required by law to provide "reasonable accommodations" to students with disabilities, so as not to discriminate on the basis of that disability. Student responsibility primarily rests with informing faculty of their need for accommodation and in providing authorized documentation through designated administrative channels. Information regarding specific diagnostic criteria and policies for obtaining academic accommodations can be found at www.uta.edu/disability. Also, you may visit the Office for Students with Disabilities in room 102 of University Hall or call them 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.

"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." (Regents' Rules and Regulations, Series 50101, Section 2.2)

Student Support Services Available: The University of Texas at Arlington supports a variety of student success programs to help you connect with the University and achieve academic success. These programs 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.

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
- Learner-centered environment
- Research-based
- Collaboration
- Diversity
- Technology
- Field Experiences
- 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 an 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.

FALL 2009 - KINE 1400 Lab Schedule
All Labs Will Be In Room 150MAC Except Weeks 5 & 6

<u>Date</u>	<u>Topic</u>	<u>Assignment</u>
<i>Week 1</i>		
August 24-27	Lab #1 , Resting Heart Rate and Blood Pressure Page 2	Complete 5 blood pressure checks (100 points)
<i>Week 2</i>		
August 31-September 3	Lab #2 , Flexibility Overview, Page 7 Tues, Weds, Thurs Labs Only	(100 points) Complete 5 blood pressure checks
<i>Week 3</i>		
September 7-10	Lab #3 , Fitness Pre-Testing, Page 10	(100 points) Complete 5 blood pressure checks
<i>Week 4</i>		
September 14-17	BLOOD PRESSURE PRACTICAL , Page 58	(2.5%)
<i>Week 5</i>		
September 21-24	Lab #4 , Spreadsheet Lab, Page 11 Page 11, *Room 221 & 222 MAC	(100 points)
<i>Week 6</i>		
September 28-Oct. 1	Lab #5 , Reliability and Validity, Page 15 Page 15, *Room 221 & 222 MAC	(100 points)
<i>Week 7</i>		
October 5-8	Lab #6 , Heart Rate and Blood Pressure Responses to Exercise Page 18	(100 points)
<i>Week 8</i>		
October 12-15	Lab #8 , Estimation of Body Composition from Skinfolds Page 27	(100 points)
<i>Week 9</i>		
October 19-22	Lab #9 , Anaerobic Power, Page 31	(100 points)
<i>Week 10</i>		
October 26-29	Lab #10 , Ventilatory Response to Exercise, Page 35	(100 points)
<i>Week 11</i>		
November 2-5	Lab #11 , Prediction of VO ₂ max and Metabolic Responses Page 40	(100 points)
<i>Week 12</i>		
November 9-12	BODY COMPOSITION PRACTICAL , Page 59	(2.5%)
<i>Week 13</i>		
November 16-19	Lab #12 Introduction to Muscle Physiology, Page 45	(100 points)
<i>Week 14</i>		
November 23	Lab #2 , Flexibility Overview, Page 7 Monday Lab Only	(100 points)
<i>Week 15</i>		
November 30-Dec. 3	Lab #13 Fitness Post Testing. Page 48	(100 points)

Fall 2009 - KINE 1400 Lecture Schedule

<u>Date</u>	<u>Topic</u>	<u>Assignment</u>
<i>Week 1</i>		
August 25, 27	Introduction; Chapter 1 – Physical Activity and Health, Chapter 2 – Physical Fitness and Performance & Terms, Chapter 3 – Health Appraisal	
<i>Week 2</i>		
September 1, 3	Chapter 28 – Exercise Physiology	Assignment
<i>Week 3</i>		
September 8, 10	Chapter 28 – Exercise Physiology Chapter 24 – Exercise Related to ECG & Medications	Assignment
<i>Week 4</i>		
September 15, 17	Chapter 24 – Exercise Related to ECG & Medications Test 1 – Thursday, September 17th (15%)	Test 1 (15%) - Thursday (17th) Intro, Chs. 1-3, 24, 28
<i>Week 5</i>		
September 22, 24	Test Review, Chapter 10 – Exercise Prescription for Cardiorespiratory Fitness	Assignment Tues (24th); Review Paper Topic Due by 10 minutes after class starts or -10 on paper.
<i>Week 6</i>		
Sept 29, Oct. 1	Chapter 10 – Exercise Prescription for CRF	Assignment
<i>Week 7</i>		
October 6, 8	Chapter 12 – Exercise Prescription for Resistance Training	
<i>Week 8</i>		
October 13, 15	Chapter 15 - Exercise and Children and Youth Test 2 – Thursday, October 15th (20%)	Assignment Test 2 (20%) - Thursday (15th) Chs. 6, 10, 12, 15, ECG
<i>Week 9</i>		
October 20, 22	Chapter 6 – Body Composition & Test Review Chapter 6 – Body Composition	Assignment
<i>Week 10</i>		
October 27, 29	Chapter 19 – Exercise and Obesity Anaerobic Power Lecture	
<i>Week 11</i>		
November 3, 5	Chapter 21 - Exercise, Asthma, and Pulmonary Disease Chapter 16 – Exercise and Older Adults	Article Review Assignment due (5%) Thurs (5th) due by 10 minutes after class stars or -10 on paper.
<i>Week 12</i>		
November 10, 12	Chapter 18 – Exercise and Coronary Heart Disease Chapter 18 – Exercise and Coronary Heart Disease	Assignment
<i>Week 13</i>		
November 17, 19	Test 3 – Tuesday, November 17st (15%) 23 rd Guest Lecture & test review	Chs. 16, 18-21, Anaerobic Power, ECG Test 3 (15%) - Tuesday, 17th
<i>Week 14</i>		
November 24, 26	Chapter 20 – Exercise and Diabetes, Thanksgiving Break	
<i>Week 15</i>		
December 1, 3	Chapter 7 – Nutrition Chapter 27 – Functional Anatomy and Biomechanics & Kinesiology Review for Final Supplements Lecture (not in textbook)	Assignment
<i>Week 16</i>		
December 5-10	Final Exam (20%) – Date TBA	Assignment Final Exam (20%)

KINE 1400 – ARTICLE REVIEW ASSIGNMENT (5% OF TOTAL GRADE)

Topic Due: September 24th, Tuesday (Due by 12:00pm typed on a sheet of paper with name, -10 points for every day the topic is not turned in).

Assignment is Due: Thursday, November 5th at 9:40am, or it is a ZERO. **You may turn it in early. IF YOU FAIL TO TURN IN A PAPER, YOU GET AN INCOMPLETE FOR THE CLASS.**

Paper is due within 10 minutes of the beginning of class; otherwise your grade is a ZERO.

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 November 5th at 9:40am.