Texas A&M University-Corpus Christi
Physiology of Exercise Lab

Professor: Don Melrose PhD CSCS*D
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Office Hours: M 11-12, W 1-3, F 10-11, TR 2-3

KINE 4112.001
Meeting Time: M 10:00-10:50a.m.
Location: IH 146

YOU MUST ATTEND YOUR REGISTERED SECTION OF THIS LAB. DO NOT ATTEND ANY OTHER SECTION WITHOUT INSTRUCTOR PERMISSION!

Departmental Administrative Assistant: Liz Perez 825-6072

I. COURSE DESCRIPTION

(KINE 4112.01, 02, 03, 04) The required laboratory course with KINE 4312. Demonstration and hands-on learning will introduce students to the scientific basis, techniques, and methods used in exercise physiology. Lab activities will compliment lecture materials from KINE 4312.

Prerequisites: 1. Prerequisite/Co-Requisite course required-KINE4312;

Note: Grades in this course are not related to, nor are they affected by grades in KINE 4312, Physiology of Exercise.

II. RATIONALE

The goal of this lab is to familiarize the student with the skills involved in obtaining muscular, cardiovascular, body composition, and performance data collection and their analysis. Emphasis will be placed on the interrelationships of these factors.

III. STATE ADOPTED PROFICIENCIES FOR TEACHERS AND/OR ADMINISTRATORS/COUNSELORS

A. LEARNER-CENTERED KNOWLEDGE: The teacher possesses and draws on a rich knowledge base of content, pedagogy, and technology to provide relevant and meaningful learning experiences for all students.

B. LEARNER-CENTERED INSTRUCTION: To create a learner-centered community, the teacher collaboratively identifies needs; and plans, implements, and assesses instruction using technology and other resources.
C. EQUITY IN EXCELLENCE FOR ALL LEARNERS: The teacher responds appropriately to diverse groups of learners.

D. LEARNER-CENTERED COMMUNICATION: While acting as an advocate for all students and the school, the teacher demonstrates effective professional and interpersonal communication skills.

E. LEARNER-CENTERED PROFESSIONAL DEVELOPMENT: The teacher, as a reflective practitioner dedicated to all students’ success, demonstrates a commitment to learn, to improve the profession, and to maintain ethics and personal integrity.

IV. TeXeS COMPETENCIES & CAATE COMPETENCIES & PROFICIENCIES

A. TExES COMPETENCIES

Competency 002 - Physical education teacher applies principles and concepts of fitness and fitness development/maintenance to evaluate, select, and adapt activities that help learners achieve and maintain appropriate fitness levels.

Competency 003 - The teacher appreciates human diversity, recognizes how diversity in the classroom and the community may affect learning and creating a classroom environment in which both the diversity of groups and the uniqueness of individuals are recognized and celebrated.

Competency 004 - Fitness-related health, nutrition, and safety. The physical education teacher knows health, nutrition, and safety principles and practices related to fitness/performance and encourages learners to apply these principles and practices.

Competency 011 - Legal, ethical, medical, and safety issues. The physical education teacher understands legal, ethical, medical, and safety issues relating to physical education programs and applies this understanding in a variety of contexts.

B. NATIONAL COMPETENCIES & PROFICIENCIES FOR ATHLETIC TRAINING (CAATE 4th Ed.)

Diagnosis Competencies Taught & Evaluated:

DI-C3: Describe the physiological and psychological effects of physical activity and their impact on performance.

Psychosocial Competencies Taught & Evaluated:

PS-C2: Explain the stress-response model and the psychological and emotional responses to trauma and forced inactivity.

PS-C3: Describe the motivational techniques that the athletic trainer must use during injury rehabilitation and reconditioning.
PS-C4: Describe the basic principles of mental preparation, relaxation, visualization, and desensitization techniques.

PS-C5: Describe the basic principles of general personality traits, associated trait anxiety, locus of control, and patient and social environment interactions.

PS-C6: Explain the importance of providing health care information to patients, parents/guardians, and others regarding the psychological and emotional well being of the patient.

PS-C9: Explain the basic principles of counseling (discussion, active listening, and resolution) and the various strategies that certified athletic trainers may employ to avoid and resolve conflicts among superiors, peers, and subordinates.

PS-C12: Describe the basic signs and symptoms of mental disorders (psychoses), emotional disorders (neuroses, depression), or personal/social conflict (family problems, academic or emotional stress, personal assault or abuse, sexual assault, sexual harassment), the contemporary personal, school, and community health service agencies, such as community-based psychological and social support services that treat these conditions and the appropriate referral procedures for accessing these health service agencies.

Nutrition Competencies Taught & Evaluated:

NU-C14: Describe disordered eating and eating disorders (i.e., signs, symptoms, physical and psychological consequences, referral systems).

V. COURSE OBJECTIVES/LEARNING OUTCOMES

Given lectures, discussions, videos and/or field experiences, the student will be able to;

A. Demonstrate knowledge of the structure and function of the body as it relates to physical activity.

B. Understand and be able to apply the basic concepts and terminology associated with exercise physiology.

C. Demonstrate knowledge of the integrative nature of the physiological systems under the stress of exercise

D. State representative values of the various body systems at rest, submaximal exercise, and maximal exertion.

E. Identify functional changes in response to a session of exercise.

F. Identify laboratory procedures with respect to exercise physiology.

G. Identify the scientific body of knowledge in exercise physiology
VI. COURSE TOPICS

The major topics to be considered are:

A. Testing, and analyzing relationships between various physical characteristics such as: muscular strength, muscular endurance, muscular power, muscle cross-sectional area,

B. The responses of heart rate, systolic and diastolic blood pressure, partial pressure, mean arterial pressure, body composition, isometric exercise, dynamic exercise, aerobic exercise, aerobic power, valsalva maneuvers.

VII. INSTRUCTIONAL METHODS AND ACTIVITIES

A. Traditional lecture via power point, classroom discussion, independent learning, and online instruction/readings.

B. Hands-on collection, analysis, and interpretation of exercise physiology lab data.

VIII. EVALUATION AND GRADE ASSIGNMENT

The method of evaluation and the criteria for grade assignment are:

A. Requirements and point values. The total number of quizzes and in-class point opportunities are tentative. Therefore, the point values listed may vary.

1. Four labs@ 80 pts each 240 total points

*Points, test values, and numbers of assignments may be altered to best reflect the needs of the class

Lab reports consist of you the student, collecting physically derived data, putting it into a data bank along with other classmates, analyzing it statistically, then presenting your data in a written format.

Here’s the deal on your labs. Regardless of what you have been doing in your other classes, you will be required to utilize the full extent of your education to produce your lab reports. Half done lab labs, obviously hurried labs, and labs that did not follow instructions will be given a zero. Its either done and done well or it will be met with significant reductions. "A" and "B" grades will only be given to truly excellent performance that is above the average. Average and just meeting all basic requirements will receive a "C" at best.
B. Grading Scale:

90-100% = A
80-89%  = B
70-79%  = C
60-69%  = D
59% and below = F

**NOTE REGARDING YOUR GRADES:** At the end of the semester, I will not even consider rounding up your grade or passing you on a close grade unless you have done the following: a) seen me (in person) for help on a regular basis, b) completed all point opportunities, and c) bothered to ask questions regularly in class.

**IX. COURSE SCHEDULE AND POLICIES**

*Note: Topics may be altered without notice.*

A. If you forgotten the professors name, office, phone, class meeting place and office hours, they are located at the beginning of the syllabus.

- **Weeks 1-4**
  
  Lab 1: Upper and lower body muscular strength in relation to muscular cross-sectional area and body composition.

- **Weeks 4-7**
  
  Lab 2: Relationships between muscular strength, endurance, and power to multimodal muscular performance

- **Weeks 7-9**
  
  Lab 3: Cardiovascular responses to multimodal forms of exercise

- **Weeks 9-14**
  
  Lab 4: Comparisons of maximal and sub-maximal aerobic testing

B. Class Policies

1. Attendance in class is absolutely required. Since each student contributes to the data to be disseminated for analysis, it is considered vital that you contribute. Failure to contribute to the data pool will result in your assignment link being closed without a submitted lab report. Missing just one of the four lab reports will put your grade in jeopardy, likely leading to a non-passing grade.

Furthermore, should you choose to come to lab, but not participate as necessary, it will be considered the same as an absence. Please, only attend your registered lab section. Do not attend other labs without your instructor's permission.
2. The highest level of professional decorum is expected in the lab. The equipment in the lab is VERY EXPENSIVE and was not designed for any other purpose than its proper use. Please don't use it as a place to lean, sit, store stuff, or mess around. Please conduct yourself accordingly.

3. Please turn off your cell phones in class unless you are using it for a legitimate lab function like looking up something, using a calculator, or using a metronome. Any violation of this policy will be considered disruption and will be reported.

4. While most people know smoking is not allowed in class, too many haven’t figured out that smokeless tobacco is not allowed either, as per university policies. No smokeless tobacco in class. While not currently addressed by university policy, I do not allow the use of mechanical cigarettes in class, even if they only emit water vapor.

5. Lastly, any liquids in the lab must be kept in the classroom portion of the class (in the projector and screen area). These liquids must also be contained in a sealable container.

Lab Report Assignments

NOTE REGARDING QUALITY OF YOUR WORK: If any work done on behalf of this class is not performed at a standard expected of a junior or senior in college, it either will not be graded or it will be severely penalized. I will not give partial credit for a partially completed assignment, a sloppy assignment, an assignment that was obviously completed in a big hurry to beat a deadline, or because you didn’t read the instructions. You will simply receive a zero. These assignments will not be allowed to be made up once the grade is assigned. You can avoid this problem by simply doing a quality job the first time. I do realize this is a 1 credit course, but it is also a 4000 level course. You should be showing your best work at this point.

NOTE REGARDING SUBMISSION OF YOUR ASSIGNMENTS: All work in this class is to be submitted as an attached word document unless otherwise specified. It is your burden to work with the instructor during the first assignment to get your format correct and then use it consistently throughout the semester. Word Perfect (.wps) files, some Mac formats, and the newest Windows programs do not open on most university computers. We currently use Windows 2007. It is your job to save your documents in a format that can be opened by the instructor.

X. TEXTBOOK

There is no textbook for this lab. All materials are provided online through the Physiology of Exercise Blackboard account. The book designated for the lecture portion of this class is a valuable source of information for this lab.

XI. BIBLIOGRAPHY

XII. GRADE APPEALS

As stated in University Rule 13.02.99.C2, Student Grade Appeals, a student who believes that he or she has not been held to appropriate academic standards as outlined in the class syllabus, equitable evaluation procedures, or appropriate grading, may appeal the final grade given in the course. The burden of proof is upon the student to demonstrate the appropriateness of the appeal. A student with a complaint about a grade is encouraged to first discuss the matter with the instructor. For complete details, including the responsibilities of the parties involved in the process and the number of days allowed for completing the steps in the process, see University Rule 13.02.99.C2, Student Grade Appeals, and University Procedure 13.02.99.C2.01, Student Grade Appeal Procedures. These documents are accessible through the University Rules Web site at http://www.tamucc.edu/provost/university_rules/index.html. For assistance and/or guidance in the grade appeal process, students may contact the Office of Student Affairs.

Academic Honesty

University students are expected to conduct themselves in accordance with the highest standards of academic honesty. Academic misconduct for which a student is subject to penalty includes all forms of cheating, such as illicit possession of examinations or examination materials, forgery, or plagiarism. (Plagiarism is the presentation of the work of another as one’s own work.)

Disciplinary action for academic misconduct is the responsibility of the faculty member assigned to the course. The faculty member is charged with assessing the gravity of any case of academic dishonesty, and with giving sanction to any student involved. Penalties that may be applied to individual cases of academic dishonesty include one or more of the following:

A. Written reprimand;

B. Requirement to re-do work in question;

C. Requirement to submit additional work;

D. Lowering of grade on work in question;

E. Assigning grade of “F” to work in question;
F. Assigning grade of “F” for course;

G. Recommendation for more severe punishment.

If the faculty member determines that assigning a grade of “F” to the course is the appropriate penalty and this disciplinary action occurs prior to the deadline for dropping courses, the student forfeits his/her right to drop the course in question.

The faculty member may file a record of cases of academic dishonesty, including a description of the disciplinary action taken, along with any materials involved, with his or her college dean and the Office of Student Affairs. The office of the academic dean of the college in which the offense took place will maintain records of all cases of academic dishonesty reported for a period of not more than two years. Any student who has been penalized for academic dishonesty has the right to appeal the judgment or the penalty assessed (See XII above).

**What is considered dishonest?**

A. using a lab report from a previous semester, no matter where it came from, to produce your own (my electronic checker will catch this), you will both be in trouble

B. file swapping with a partner to produce your lab report, you will both be in trouble

C. loaning your lab report to be used as a "model" only to have them "appropriate" more than you thought, thereby getting you both in trouble (happens every semester). Don't do it.

D. failure to properly cite your lab report (APA format)

**XIII. DISABILITIES AND ACCOMMODATIONS**

**Americans with Disabilities Act (ADA)** - The ADA is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disability. If you believe you have a disability requiring an accommodation, please call or visit Disability Services at (361) 825-5816 in Corpus Christi Hall (CCH) 116.

If you are a returning veteran and are experiencing cognitive and/or physical access issues in the classroom or on campus, please contact the Disability Services office for assistance at (361) 825-5816.