Exercise Testing and Prescription
KINE 4320.001
Fall 2017

Instructor: John Curtis, M.S.
Credit Hours: 3
Office Number: (940) 565-2212
Class Time: 11:00 – 12:20 T, TH
Office Location: PEB 112
Office Hours: 9:00 – 10:30 T, TH
Email: John.Curtis@unt.edu
or by appointment
Class Location: Gateway 131

Catalog Description: Students who successfully complete this course will have the understanding and
skills necessary to perform sport and fitness testing and exercise prescription. The emphasis is on
testing to measure, and training to improve, characteristics of energy transfer, such as anaerobic
capacity and sustainable aerobic power.

The course is divided into three parts: (i) Metabolic calculations used in exercise testing and
prescription; (ii) Concepts and applications of exercise testing and prescription; and (ii) Concepts and
applications of exercise training.

Prerequisite: The pre-requisite for enrollment in this course is satisfactory completion (i.e., a “C” or
better) of a 3-hour exercise physiology course (e.g., KINE 3080).

Kinetics.

Course Objectives - The student who successfully completes this course will:

1. Complete metabolic equations related to performance, physiological responses, and response to
   training improvements.
2. Demonstrate an understanding between VO2max and testing protocols.
3. Understand submaximal testing for VO2max.
4. Demonstrate anthropometric measures to determine body composition.
5. Determine training methods which could improve maximal and sustainable aerobic power,
   anaerobic power, and capacity.

Class Grading: 500 points maximum total:

- Exam 1: Metabolic Equations 200 points
- Exam 2: Textbook Chapters and Handouts 200 points
- Exam 3: Training Concepts and Application 50 points
- Project: 50 points

At the end of the semester, you will earn a grade of A, B, C, D, or F. If you receive a grade of F, you have not passed this course. The final grade will be based on the successful completion all of the assignments, and test grades.

**Class Information and Requirements:**

- **Communication with your instructor:** We will be using Blackboard for announcements, assignments, notes and handouts. Please use the email John.Curtis@unt.edu to correspond with me electronically. I am available during office hours or before and after class for any face to face communication. If you cannot meet with me during those times, please make an appointment.

- **Attendance:** Attendance will not be taken for points towards a final grade. However, discussions and activities in class will be in addition to the textbook material. Past history has demonstrated that classroom engagement is correlated with performance on exams, however, classroom attendance is not a guarantee of success. If you plan on attending class, arrive on time, and plan to participate. As a reminder, do NOT simply stop coming to class without taking formal steps to drop the course. Students who stop coming to class and do not go through the formal drop procedure will be assigned a grade of “F” at the end of the semester.

- **Cell phone use:** The use of cell phones for talking, texting, or any other purposes during class is prohibited. Any urgent phone-related matters must be attended to outside of the classroom period. Should you be found to be using a cell phone during class time, you will be asked to leave for the remainder of the class.

- **Assignments:** All assignments must be neatly prepared and representative of college level coursework. I will not grade assignments or reply to emails written in text message language.

- **Project:** Detailed instructions will be provided in class. Briefly, students will analyze performance of either a college level or professional level athlete and prepare a report that will include evaluation of the physiological demands and responses during the competitor’s events and discussion of a testing and training program for the athletes

- **No late assignments or missed tests will be accepted without prior permission from the instructor.** If you know you will miss class, turn your assignment in prior to its due date.

- **There will be no negotiation of your final grade in this course. You will receive the grade that you earned...no discussion. I will not communicate with you regarding your grades though email, however I would be happy to discuss them with you in person. Once the final points have been posted to Blackboard, I will no longer answer emails or requests for additional points, or for work to help boost you to a higher grade.**

**Extra Credit:**

There will ONLY be ONE option for extra credit during the semester. All requests for additional credit or for me to change your grade from what you earn will be ignored.

EC opportunity: 5 possible points to your semester point total: SPOT Evaluation. 90% of all class participants must complete the SPOT in order for the class as a whole to receive these points.
Exam protocol:
Bring a couple of #2 pencils, a good eraser, and a hand calculator, for exams. If you miss an exam, your grade is zero. You are expected to arrive on time and no-one may enter after the first student completes the exam and leaves. Should you need to leave once you begin the test, your test will be considered complete at the place you finished before you left. There are no make-ups.

Academic Dishonesty:
Students caught cheating or plagiarizing will receive a "0" for that particular assignment or exam. Additionally, the incident will be reported to the Academic Integrity Office, who may impose further penalty. According to the UNT catalog, the term "cheating" includes, but is not limited to: a. use of any unauthorized assistance in taking quizzes, tests, or examinations; b. dependence upon the aid of sources beyond those authorized by the instructor in writing papers, preparing reports, solving problems, or carrying out other assignments; c. the acquisition, without permission, of tests or other academic material belonging to a faculty or staff member of the university; d. dual submission of a paper or project, or resubmission of a paper or project to a different class without express permission from the instructor(s); or e. any other act designed to give a student an unfair advantage. The term "plagiarism" includes, but is not limited to: a. the knowing or negligent use by paraphrase or direct quotation of the published or unpublished work of another person without full and clear acknowledgment; and b. the knowing or negligent unacknowledged use of materials prepared by another person or agency engaged in the selling of term papers or other academic materials.

Acceptable Student Behavior:
Student behavior that interferes with an instructor’s ability to conduct a class or other students’ opportunity to learn is unacceptable and disruptive and will not be tolerated in any instructional forum at UNT. Students engaging in unacceptable behavior will be directed to leave the classroom and the instructor may refer the student to the Dean of Students to consider whether the student's conduct violated the Code of Student Conduct. The university's expectations for student conduct apply to all instructional forums, including university and electronic classroom, labs, discussion groups, field trips, etc. The Code of Student Conduct can be found at http://deanofstudents.unt.edu.

Access to Information – Eagle Connect:
Your access point for business and academic services at UNT occurs within the my.unt.edu site http://www.my.unt.edu. All official communication from the university will be delivered to your Eagle Connect account. For more information, please visit the website that explains Eagle Connect and how to forward your e-mail: http://eagleconnect.unt.edu/

ADA Statement:
The University of North Texas makes reasonable academic accommodation for students with disabilities. Students seeking accommodation must first register with the Office of Disability Accommodation (ODA) to verify their eligibility. If a disability is verified, the ODA will provide you with an accommodation letter to be delivered to faculty to begin a private discussion regarding your specific needs in a course. You may request accommodations at any time, however, ODA notices of accommodation should be provided as early as possible in the semester to avoid any delay in implementation. Note that students must obtain a new letter of accommodation for every semester and must meet with each faculty member prior to implementation in each class. For additional information see the Office of Disability Accommodation website at http://disability.unt.edu. You may also contact them by phone at (940) 565-4323.
Emergency Notification and Procedures:
UNT uses a system called Eagle Alert to quickly notify you with critical information in the event of an emergency (i.e., severe weather, campus closing, and health and public safety emergencies like chemical spills, fires, or violence). The system sends voice messages (and text messages upon permission) to the phones of all active faculty staff, and students. Please make certain to update your phone numbers at http://www.my.unt.edu. Some helpful emergency preparedness actions include: 1) know the evacuation routes and severe weather shelter areas in the buildings where your classes are held, 2) determine how you will contact family and friends if phones are temporarily unavailable, and 3) identify where you will go if you need to evacuate the Denton area suddenly. In the event of a university closure, please refer to Blackboard for contingency plans for covering course materials.

Retention of Student Records:
Student records pertaining to this course are maintained in a secure location by the instructor of record. All records such as exams, answer sheets (with keys), and written papers submitted during the duration of the course are kept for at least one calendar year after course completion. Course work completed via the Blackboard online system, including grading information and comments, is also stored in a safe electronic environment for one year. You have a right to view your individual record; however, information about your records will not be divulged to other individuals without the proper written consent. You are encouraged to review the Public Information Policy and F.E.R.P.A (Family Educational Rights and Privacy Act) laws and the university's policy in accordance with those mandates at the following link: http://essc.unt.edu/registrar/ferpa.html

Student Evaluation of Teaching (SPOT):
Student feedback is important and an essential part of participation of this course. The Student Evaluation of Teaching (SPOT) is a requirement for all organized classes at UNT. This short survey will be made available at the end of the semester to provide you with an opportunity to evaluate how this course is taught.

Student Success:
Student success requires one to ensure that one is thorough. Should you have read the syllabus this completely, I will award you five extra credit points. This should only be between you and I. It will not be discussed. If I find that you have told others about these points, your points will be removed. Simply email me and tell me that you need your syllabus points, and I will award them to you. Once exam 2 has been given to the class, the window for requesting these points will be closed.

UNT endeavors to offer you a high-quality education and to provide a supportive environment to help you lean and grow. And, as a faculty member, I am committed to helping you be successful as a student. Here’s how to succeed at UNT: Show up. Find support. Take control. Be prepared. Get involved. Be persistent.

To learn more about campus resources and information on how you can achieve success, go to https://succeed.unt.edu.

**REMINDER:** THE INSTRUCTOR MAY CHANGE THIS SYLLABUS AT ANY TIME FOR ANY REASON. CHANGES WILL BE ADDRESS IN CLASS BEFORE IMPLEMENTATION.
### Tentative Class Schedule (Can be subject to change): KINE 4320 – Fall 2017

<table>
<thead>
<tr>
<th>Class Dates:</th>
<th>Topic:</th>
<th>Chapter in Book:</th>
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<tbody>
<tr>
<td>August 28 – September 28</td>
<td>Metabolic calculations and Exercise Prescription calculations.</td>
<td>Handouts</td>
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<td>We will learn about some quantitative relationships between measures of external or mechanical “work” (such as work rate or running velocity), performance (such as time to exhaustion), physiological responses (such as heart rate, VO₂, and caloric expenditure), and response to exercise and training (such as improvements in aerobic fitness parameters or fat loss). We will use these relationships to generate exercise prescriptions to improve fitness and body composition.</td>
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<tr>
<td>October 5</td>
<td>Exam 1: Metabolic Equations</td>
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<td>October 10</td>
<td>Definitions.</td>
<td>Chapter 1</td>
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<td>What are the various definitions, and how and why do we measure this construct.</td>
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<td>October 12 - 17</td>
<td>Direct determination of aerobic power.</td>
<td>Chapter 2</td>
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<td>We will discuss the importance of VO₂max, testing protocols, and underlying physiological assumptions. Emphasis will be put on the criteria for achievement of VO₂max. Also, we’ll evaluate different ways of quantifying exercise intensity.</td>
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<tr>
<td>October 19 - 24</td>
<td>Indirect methods for estimation of aerobic power.</td>
<td>Chapter 3</td>
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<td>VO₂max can be estimated using a variety of submaximal tests. We will discuss the physiological rationale behind these tests, we will explore a few of the tests that we could use in the laboratory, and we will discuss the pro’s and con’s of submaximal tests.</td>
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<tr>
<td>October 26 – October 31</td>
<td>Blood lactate, respiratory, and heart rate markers on the capacity for sustained exercise.</td>
<td>Chapter 5</td>
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<td>We will investigate the physiological significance of the “anaerobic threshold” and we will examine the wide range of testing methodologies used to identify various thresholds.</td>
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<td>November 2 - 9</td>
<td>Testing for anaerobic capacity.</td>
<td>Chapter 6</td>
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<td>Despite the popularity of VO₂max as a measure of physiological function, anaerobic capacity may well be the most important physiological characteristic, at least in athletes. We will critically examine tests of anaerobic power and capacity.</td>
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<td>November 14</td>
<td>Exam 2: Review – Project Assigned</td>
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<td>November 16</td>
<td>Exam 2: over Chapters 1, 2, 3, 5, 6</td>
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<td>Event Description</td>
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<td>November 21</td>
<td><strong>Training Concept:</strong> Overtraining and Detraining.</td>
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<td>November 28</td>
<td><strong>Training Concept:</strong> Adaptations to Resistance Training</td>
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<td>November 30</td>
<td><strong>Training Concept:</strong> Endocrine and Hormonal Responses</td>
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<td>December 5</td>
<td><strong>Project Review:</strong> I will be available in class to review any project, and/or answer any questions related to the project or test.</td>
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<td>December 7</td>
<td><strong>Exam 3: Training Concepts</strong></td>
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<td><strong>Project: Project Due no later than 5:00 today</strong></td>
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<td>This day is the final date to submit projects. Projects must be turned in no later than by close of business (5:00). Any project submitted after this time will not be graded, and will be assessed a &quot;0&quot; for the assignment.</td>
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