KINE 6550

Exercise Technology II Laboratory - TigerFit

Ex Tech II

Spring 2017

Prerequisites:  KINE 6500 – Exercise Technology I

Syllabus revised: December 2016

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**5550 TEXTBOOKS**

**ACSM's Guidelines for Exercise Testing and Prescription,** Lippincott, Williams & Wilkins, 9th Edition, 2013, ISBN 978-1-60913-955-1

**Supplemental Textbooks:**

**ACSM’s Health-Related Physical Fitness Assessment Manual**, Lippincott, Williams & Wilkins, 4th Edition, 2013, ISBN 978-1-4511-1568-0

**COURSE DESCRIPTION**

This course has been designed to develop your skills and abilities using the knowledge you have gain in KINE 6500. Your lab will help you be better able to function as an exercise professional in fitness and clinical exercise settings.  This class provides practical experience in health and fitness testing and evaluation including; cardiorespiratory, muscular fitness, body composition and flexibility testing, interpretation of exercise test results, exercise prescription and health risk classification. Additionally, the course will prepare the student to take the ACSM’s Certified Exercise Physiologist examination. CPR certification must be current.

**Student Learning Outcomes:**

After successfully completing this course, you will be able to:  Perform health and fitness assessments in a clinical environment.  The student will be able to conduct pulmonary function, body composition, cardiorespiratory fitness, muscular fitness, flexibility and balance testing.  The student will be able to: clearly explain the tests and why they are being conduct to a client; interpret the results of the various tests and explain the results to a client; and provide a basic individualized exercise prescription based on the test results.

**Specific outcomes:**

1. Use the wavier of liability and informed consent to council clients on the testing procedures and their rights and responsibilities before conducting health and fitness testing
2. Analyze the pre-test health screening to determine the appropriateness of exercise, exercise testing, and cardiovascular disease risk classification based on blood pressure, cholesterol levels, physical activity or other factors.
3. Understand and apply basic safety considerations for an exercise facility and for exercise testing.  Understand basic treatment for common injuries seen in an exercise facility
4. Identify the basic legal requirements for exercise testing including: HIPAA requirements; individual liability; and Client privacy.
5. Explain the principles of body composition testing and why this is important to a client.  Demonstrate proficiency with techniques to estimate body composition using the skin-fold methods, bioelectrical impedance, DEXA and anthropometrical techniques.
6. Demonstrate proficiency using a stethoscope and sphygmomanometer to measure systolic and diastolic blood pressures at rest and during exercise.
7. Demonstrate proficiency at conducting sub-maximal and maximal graded exercise tests for the purpose of examining cardiorespiratiory responses to exercise and determining exercise capacity
8. Demonstrate proficiency using metabolic calculations to determine body composition, estimates of cardiorespiratory capacity, exercise energy expenditure and exercise workloads.
9. Demonstrate proficiency preparing a client for a 12-lead electrocardiogram.  Recognize a normal ECG reading at rest and during a graded exercise test. Recognize common abnormal ECG readings.
10. Demonstrate proficiency in techniques to assess muscular fitness, flexibility, and balance.
11. Apply the ASCM guidelines for exercise prescription for normal populations and how these are modified for young, old, pregnant and diseased populations.
12. Demonstrate proficiency at all stations in TigerFit
13. Prepare and complete client reports that include testing results, health and physical fitness evaluations and have a basic exercise prescription.

**Grading Scale**

Your course grade will be determined based on the combination of three scores by your performance during your preparation for and as a member of the Tiger*Fit* clinic team.

Grading Scale: A ≥ 90%; B = 89.9% - 80%; C = 79.9% - 70%

**Quizzes and Homework – 140 points worth 30% of your final grade**

There will be 13 quizzes and one homework assignment given throughout the semester, each worth 10 points.  The quizzes will be based on ACSM's certification guide and the practice questions for the ACSM’s Exercise Physiologist - Certified certification.  This will be discussed in class.  The quizzes will be comprehensive in that they will cover topics you have had during your undergraduate studies.  The best method to prepare for the quiz is to review the specific section of the Certification Review for the quiz.  This will be announced before the quiz is given.

**Final Exam - 100 points worth 30% of your final grade.**

The final exam will cover all aspects of ACSM's exam to become an Exercise Physiologist - Certified

**Tiger*Fit* Lab Performance and report preparation - 20 points per TigerFit worth 40% of your final grade. Tiger*Fit*** dates and number of sessions will be schedule based on client load and student preparation. There will be two graded practice **Tiger*Fit*** sessions.  Each session you will be evaluated on your knowledge, professionalism, procedural competence, personal interaction and exercise prescription. Specific guidelines will be discussed in class the general guidance is listed below.  There are a maximum of 20 points for each session. Approximate letter grades for each session correspond to the following point totals: A = 18 - 20; B = 17 – 15; C = 11 – 14; 6 - 10 = D; 5 or less is an F. Final Lab grade in will be based on the cumulative scores from TigerFit, based on 10 Tigerfit sessions this would be: A= 180 – 200 points; B = 150 – 179 pts; C = 110 – 149; D = 60 – 100; F is less than 99.

**Grading criteria**

You will be graded on the items below. Each item is worth 4 points and the points are given as follows: 4 points – mastery of item; 3 points – minor errors or omissions for this item; 2 points – major errors or omissions not requiring the instructor to intervene; 1 point – major error or lack of ability to complete a task requiring the instructor to intervene.

1. Knowledge – 4 points. This is how well you know not just the procedures for a particular test but the safety considerations, reasons for performing the test and interpretation of the test results, including the underlying physiology. Example: if you are running the treadmill tests you would be expected to know the contra-indications to conducting the test, the criteria for stopping the test, why the test is being conducted and what the results indicate.
2. Professionalism – 4 points. In the TigerFit clinic you are working with clients so you are expected to be on time, prepared and presentable. You will be given an arrival time for each session and you are expected to be early or on time. **If you are late you will receive a zero in this category.** Are you dressed appropriately, a blue or orange polo shirt, slacks, and closed toed shoes, neat appearance. Do you arrive prepared to work your station or host? Do you review your procedures prior to the arrival of your client or do you just surf the web. Do you look to assist your fellow classmates when you are not working at your position?
3. Procedural competence – 4 points. Do you know the procedures for each test as described in the TigerFit procedures file? Do you analyze the client’s health form, including drugs used and make recommendations to the instructor concerning limits to testing? Are you capable of running the test procedures without error or guidance from the instructor? Can you assist your classmates if they are having troubles with a test? Do you complete the appropriate portion of the form for the test you are conducting?
4. Personal interaction – 4 points. Do you meet your client when they arrive and help them get started on their assessment? Do you clearly explain the Wavier of Liability and what the client can expect from the assessment? Can you clearly explain the details and procedures of the test being conducted? Do you answer the client’s questions about the assessment, the reason for the test or any concerns that they might have? Do you ensure that each client is guided through the entire process?
5. Report Preparation – 4 points. Each host will complete their individual clients TigerFit report with exercise prescription. You will be graded on accuracy of the report, errors and appropriate exercise prescription for the client’s current health state. If you are not a host for the week your grade will be figured with 1 point additional for each of the other blocks.

**Class Policies**

Attendance: Attendance is required for scheduled **Tiger*Fit*** sessions.  Missing clinic hours will not only hurt the individual student but is detrimental to the **Tiger*Fit*** program and our clients.  Therefore, students who miss a scheduled **Tiger*Fit*** session without a valid excuse will have a one grade reduction in their final grade, 3 sessions will result in an "FA" in the class.   Excused absences as defined in the Student Policy eHandbook, [www.auburn.edu/studentpolicies](http://www.auburn.edu/studentpolicies), will not result in lost points.

Accommodations: Students who need accommodations are asked to electronically submit their approved accommodations through AU Access and to arrange a meeting during office hours the first week of classes, or as soon as possible if accommodations are needed immediately. If you have a conflict with my office hours, an alternate time can be arranged. To set up this meeting, please contact me by e-mail. If you have not established accommodations through the Office of Accessibility, but need accommodations, make an appointment with the Office of Accessibility, 1228 Haley Center, 844-2096 (V/TT).

Honesty Code: Students are expected to do their own work and cheating will not be tolerated.  Please see University policies at https://sites.auburn.edu/admin/universitypolicies/default.aspx

**Course content outline:**

Week 1 – 11 Jan Syllabus & introduction

Week 2 – 18 Jan Health Screening & Risk Classification; Quiz #1

Week 3 – 25 Jan          Fitness testing; Quiz #2

 Week 4 – 2 Feb           Electrocardiogram; Quiz; #3

 Week 5 – 9 Feb         Behavior Change; Quiz #4

Week 6 – 16 Feb          No class; Quiz #5

Week 7 – 23 Feb           Weight Management; Quiz #6

 Week 8 – 2 Mar Exercise prescription; Quiz #7

Week 9 – 9 Mar           Metabolic Calculations; Quiz #8

 Week 10 – 16 Mar          No Class; Homework

 Week 11 – 23 Mar        Exercise prescription, special populations; Quiz #9

 Week 12 – 30 Mar        Environmental considerations for exercise; Quiz #10

Week 13 – 6 Apr           Clinical consideration – CVD & Pulmonary; Quiz #11

Week 14 – 13 Apr         Clinical considerations - chronic diseases; Quiz #12

Week 15 – 20 April       Program Management and safety; Quiz #13

Week 16 – 27 April            **TBD**