

KINE 5550/6550

Exercise Technology II

Fall 2013

Prerequisites: KINE 5500 – Exercise Technology I

Instructor: Dr. Jim McDonald

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Office: Room 169, Kinesiology building, 301 Wire Road

Office Hours: Tues & Thurs

Office Phone: 844-1922

1:00 – 3:00 pm

5550/6550 TEXTBOOKS

ACSM's Resources for the Health Fitness Specialist, Lippincott, Williams & Wilkins, 2013, ISBN 978-1-4511-1480-5

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

Supplemental Textbooks:

ACSM's Certification Review, Lippincott, Williams & Wilkins, 3rd Edition, 2009, ISBN 0-7817-6901-9

ACSM's Health-Related Physical Fitness Assessment Manual, Lippincott, Williams & Wilkins, 3rd Edition, 2007, ISBN 0-7817-7549-6

Practical ECG for Exercise Science and Sports Medicine, G. Whyte and S. Sharma, Human Kinetics, 2010, ISBN 978-0-7360-8194-8

COURSE DESCRIPTION

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. 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 conducted to a client and will be able to interpret the results of the various tests. The student will be capable of explaining test results and making exercise prescription recommendations.

Specific outcomes:

1. Use pre-test 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.
2. Understand basic safety considerations for an exercise facility and for exercise testing. Understand basic treatment for common injuries seen in a exercise facility
3. Demonstrate proficiency in techniques to assess muscular fitness, flexibility, and balance.
4. Be capable of explaining principles of body composition testing to a client. Demonstrate proficiency with techniques to estimate body composition using the skin-fold methods, bioelectrical impedance, DEXA and anthropometrical techniques.
5. Demonstrate proficiency using a stethoscope and sphygmomanometer to measure systolic and diastolic blood pressures at rest and during exercise.
6. Demonstrate proficiency at conducting sub-maximal graded exercise tests for the purpose of examining cardiovascular responses to exercise and determining exercise capacity
7. Demonstrate proficiency using metabolic calculations to determine body composition, estimates of cardiovascular capacity, exercise energy expenditure and exercise workloads.
8. Demonstrate proficiency preparing a client for a 12-lead electrocardiogram. And be familiar with a normal ECG reading at rest and during a graded exercise test.
9. Know the ASCM guidelines for exercise prescription for normal populations and how these are modified for young, old, pregnant and diseased populations.
10. Demonstrate proficiency at all stations in TigerFit
11. Prepare and complete client reports that include testing results, health and physical fitness evaluations and have a basic exercise prescription.
12. Prepare to take the ACSM Health and Fitness Specialist certification.

Grading Scale

Your course grade will be determined by your performance during the TigerFit clinics, your preparation of client reports, your quiz grades and your final exam. The quizzes are worth 15% of your final grade, your final exam is worth 15% of your final grade and your performance in the TigerFit clinics and reports is worth 70% of your grade. Grading Scale: A = > 90%; B = 89.9% - 80%; C = 79.9% - 70%

Quizzes – 100 points worth 15% of your final grade

There will be 10 quizzes 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 Health/Fitness Specialist 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.

TigerFit Lab Performance and report preparation - 200 points worth 70% of your final grade

TigerFit testing dates are scheduled on 10 weeks throughout the semester with two of the weeks being practice sessions. Each weekly evaluation will be worth normalized to 20 points. You will be evaluated during the **TigerFit** sessions on professionalism, competency and teamwork in assigned duties either at a specific work station or as a client host. You will be responsible for accurately recording and interpreting client results and then completing a report for the client. You will be evaluated by the primary instructor and the graduate assistant on your ability to accurately explain the various tests, your conduct of the tests and your ability to interpret the test for the client. You will be graded on your ability to manage data, calculate and record health estimates from physiologic measurements and then develop an exercise prescription for the client. You will have the opportunity to review and discuss your weekly evaluation during the week following each assessment session.

Final Exam - 100 points worth 15% of your final grade.

The final exam will cover all aspects of ACSM's exam to become a Certified Health Fitness Specialist.

Class Policies

Attendance: Attendance is required for scheduled **TigerFit** sessions. Missing clinic hours will not only hurt the individual student but is detrimental to the **TigerFit** program and our clients. Therefore, students who miss a scheduled **TigerFit** session have a one grade reduction in their final grade, 3 sessions will result in an "FA" in the class. Because our **TigerFit** clinics have clients with appointments you need to be at your assigned position ready to work before the appointment time, punctuality is paramount. If you are late to your scheduled work time you will lose a 6 points out of a possible 20 for the session. Excused absences as defined in the Student Policy eHandbook, 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>