

DEPARTMENT OF Kinesiology
KINE 5550 & 6550
EXERCISE TECHNOLOGY II
Summer 2011

Instructor: Jim McDonald

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COURSE DESCRIPTION

This course continues to develop the knowledge, skills and abilities (KSAs) for exercise testing and prescription that were introduced in Exercise Technology I (KINE 5500/6500). Course topics will address special considerations for pre-exercise health evaluations, fitness testing techniques and procedures, data collection, and data interpretation in healthy and clinical populations. Exercise Technology II will apply their competencies by conducting health & fitness assessments as part of the **TigerFit Program**. *The TigerFit Program* has been developed to serve our community by providing comprehensive health & fitness assessments for Auburn University faculty and staff, alumni, members of local running and cycling clubs, and citizens in the surrounding communities.

COURSE OBJECTIVES

After this course, students will be able to:

1. Demonstrate the ability to identify contraindications for exercise testing and participation, stratify individuals based on their cardiovascular disease risk and select appropriate assessment strategies from pre-exercise health appraisal instruments
2. Demonstrate the ability to measure and interpret heart rate, blood pressure, ECGs, RPE, at rest and during exercise
3. Demonstrate the ability to conduct a graded exercise test, including knowing when to appropriately terminate the test and monitor an active cool down.
4. Demonstrate the ability to assess and interpret measures of pulmonary function, cardiovascular fitness, body composition and musculoskeletal fitness in healthy and clinical adult populations
5. Identify abnormal ECGs, particularly common dysrhythmias and conduction disturbances
6. Develop individualized exercise prescriptions from health and fitness assessment results
7. Discuss results and exercise prescription recommendations with clients undergoing health and fitness assessments in the **TigerFit Program**
8. Demonstrate an understanding of program administration fundamentals, including: 1) a basic knowledge of the health & fitness industry; 2) how to develop, measure, and assess program outcomes, and; 3) how to develop, maintain and evaluate program quality

COURSE REQUIREMENTS

Preparation:

You are expected to keep up with all of the assigned readings and course notes in order to be prepared to discuss class topics and practice skills. You must provide a copy of your current CPR certification card by 15 June in order to participate in the **TigerFit Program**. You are also expected to complete various on line courses concerning laboratory safety from the University Risk Management and Safety Office. The courses required will be specified during the first week of class

Presentation:

You are expected to come to class appropriately dressed for the daily assignment. This means wearing appropriate attire for review and practice (e.g., shorts, t-shirt - ladies wear or bring a sport bra, jogging shoes) and bringing a calculator, texts, and the appropriate data collection forms to every class.

You are expected to wear khaki slacks, a casual dress shirt (with collar) and shoes for each of the scheduled health & fitness assessments. In the case that inappropriate attire is worn on a **TigerFit** testing date, you will be asked to leave and return only after you change into appropriate attire.

Attendance:

It is critical that you attend each class session and are punctual. Your attendance in this class is mandatory. During the first few weeks of this course you will be developing and practicing the skills you will need to competently perform the health & fitness assessments in the **TigerFit Program**. During the last several weeks of the semester, your presence in each class is required because you will be responsible for collecting data in some aspect of the assessment process (e.g., serving as a client's host, conducting GXTs, measuring body composition, strength, endurance & flexibility, etc). Everyone involved with these assessments is counting on you to do your job. If you have to miss class for any reason, you are required to inform me at least 24 hours in advance. If the absence is due to an emergency, I expect you to inform me as soon as possible. If the absence is a documented excused absence it will not count against your grade. Excused absences are defined in the Tiger Cub Student Handbook. Twenty five points (-25 pts), ¼ letter grade, will be deducted from your course point total for an unexcused absence from class – unless it is a scheduled **TigerFit** date. Fifty points (-50 pts), ½ of a letter grade, will be deducted from your course point total for an unexcused absence from a **TigerFit** session. Four unexcused absences will result in an FA for the class.

Accommodations:

Students who need accommodations are asked to arrange a meeting with me during my 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 alternative time can be arranged. To set up this meeting, please contact me by e-mail. Bring a copy of your *Accommodation Memo* and an *Instructor Verification Form* to the meeting. If you do not have an Accommodation Memo but need accommodations, make an appointment with the Program for Students with Disabilities at 1244 Haley Center, 844-2096.

TEXTBOOKS

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

Supplemental Textbook:

Advanced Fitness Assessment and Exercise Prescription, Vivian Heyward, Human Kinetics, 6th Edition, 2010, ISBN 978-0-7360-8659-2

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

ACSM's Guidelines for Exercise Testing and Prescription, Lippincott, Williams & Wilkins, 8th Edition, 2009, ISBN 0-7817-6903-7

EVALUATION

Overview:

Your course grade will be determined from the total number of points you earn relative to the 700 total points available to earn in the course. In order to receive an “A”, you must earn $\geq 90\%$ of the total points, 530-600 points. In order to receive a “B”, you must earn between 80 - 89% of the total points, 460 – 529 points. In order to receive a “C”, you must earn between 70 - 79% of the total points 390 - 459.

Quizzes – 100 points

During the first few weeks of the course there will be 5 quizzes given, each worth 20 points. The quizzes will focus on procedures and information you need to know to perform your job during the **TigerFit** sessions. The quizzes will cover the specific topics of a previous lesson.

TigerFit Lab Performance - 300 points

TigerFit testing dates are scheduled on 6 weeks throughout the summer semester. Each weekly evaluation will be worth 50 points. You will be evaluated during the **TigerFit** sessions on professionalism, competency in assigned duties and teamwork. You will be evaluated using a standardized evaluation form posted on *Blackboard*. You should recognize that the grading for each of these areas is somewhat subjective. Therefore, you will have the opportunity to review and discuss your current weekly evaluation form during the week following each evaluation. Weekly evaluation scores will be counted towards your overall course grade one week after the evaluation date (immediately after you have been able to review and discuss your scores with the instructor). Areas that will be evaluated are:

Professionalism & Competency

You are expected to be punctual, come to class prepared, dress appropriately and interact professionally with the **TigerFit** clients. Your ability to explain testing procedures (e.g., explaining why the test is being performed, instructions for completing the tests, what you expect from the client, what they can expect from you during the test, importance of their test results and how they will be used in exercise prescription) will be

evaluated. In addition, you should work with clients in a friendly, appropriate and courteous manner. This includes greeting clients and helping clients with any questions or concerns they might have.

Teamwork

You will be evaluated on their ability to work with your peers. Special attention will be given to your ability to work with classmates assigned to or working at the same testing station. This includes preparing the station for client assessment, collecting and recording client data and station clean-up.

Report Preparation - 300 Points

You will be responsible for accurately recording and interpreting client results during report generation. Each weekly report is worth 50 points. You will be graded on their ability to manage data, calculate and record health estimates from physiologic measurements (e.g., pulmonary function results, skin fold, hydrostatic weighing results, musculoskeletal assessment scores, cardiovascular responses to exercise, blood sample reports) and accurately record the results on client report forms. You will prepare the client's **TigerFit** report based on a template provided on Blackboard. You are expected to input the client's data correctly and ensure the report accurately reflects the results. Additionally, you will be asked to review the exercise prescription and make recommendations

Exercise Tech II Course Schedule

Summer 2011

			Assignment
Week 1	May 19	Class Introduction & Procedures	Syllabus & Intro, BB
Week 2	24 26	Risk Assessment Pulmonary Testing, Resting BP	Chap 2 & 3, HRPFAM Pulmonary, BB
Week 3	31	Muscle testing, Flexibility & Balance	Chap 5 & 6, HRPFAM
Week 3	June 2	Body composition & DEXA	Review DEXA procedures Chap 4, HRPFAM
Week 4	7 9	ECG ECG and Bruce protocol	Chap 1,2,3 & 5, WS Chap 7 & 8 HRPFAM GXT, BB
Week 5	14 16	TigerFit (Practice) Report Preparation	Review all procedures Weekly
Week 6	21 23	TigerFit Clinic Report Preparation	
Week 7	28 30	TigerFit Clinic Report Preparation	
Week 8	July 5 7	TigerFit Clinic Report Preparation	
Week 9	12 14	TigerFit Clinic Report Preparation	
Week 10	19 21	TigerFit Clinic Report Preparation	
Week 11	28 30	TigerFit Clinic Report Preparation	

HRPFAM – ACSM’s Health-related Physical Fitness Assessment Manual, 3rd Edition

BB – Blackboard

WS –Practical ECG for Exercise Science and Sports Medicine, Whyte & Sharma