KINE 6400

Exercise Prescription

Credit Hours: 3 hours

Syllabus revised: Dec 2016

Instructor:  Dr. Jim McDonald               Email: [jrm0013@auburn.edu](mailto:jrm0013@auburn.edu)

Office: Room 169, Kinesiology Building, 301 Wire Road

Office Hours: Tues & Thurs                    Office Phone:  844-1922

3:00 – 4:00 pm

**Required Textbooks**

**Fitness Professional’s Handbook,** Howley, E.T. & Thampson, D.L., Human Kinetics, 2017, 7th Edition, ISBN 978-1-4925-2337-6

**COURSE DESCRIPTION**

This course has been designed to develop the knowledge, skills and abilities to work with clients and develop exercise programs in accordance with **American College of Sports Medicine (ACSM).**

The course will focus the principles and guidelines for exercise programming as laid out the ACSM. Additionally, the course will preview the steps that should take place prior to an exercise prescription including pre-exercise evaluation, exercise testing, and behavior modification. Students will then be asked to work one-on-one with a client to develop an exercise program. The student will over an 8-week period provide guidance and assistance with the exercise prescription and exercise adherence. At the end of 8-weeks the clients will be evaluated using the procedures taught in KINE 6550.

**Student Learning Outcomes:**

**After successfully completing this course, you will be able to:**

1. Understand and use tools for assessing health risk and prescribe activity recommendations to reduce disease development.
2. Understand exercise testing procedures to assess cardiorespiratory function, body composition, muscular fitness (strength and endurance), and flexibility and give suggestions for improvement in these areas.
3. Be familiar with underlying principles of body composition testing and become familiar with techniques to estimate body composition using the skin-fold methods, bioelectrical impedance, DEXA and anthropometrical techniques.
4. Understand and apply basic metabolic calculations to determine energy expenditure at rest and during exercise.
5. Understand and design exercise testing and training modifications normal populations
6. Understand and design training programs for performance outcomes.
7. Understand and design appropriate exercise prescription for normal populations, children, older adults.
8. Understand and design exercise training programs for chronic diseases that include: obesity; diabetes, cardiovascular disease, pulmonary disease and neuromuscular conditions.
9. Understand basic ECG concepts, testing, and analysis.
10. Understand the effects of common medications on physiological responses to exercise testing and training.

**Grading Scale**

Your course grade will be determined your quiz grades, case studies, and your final exam.  Grading Scale: A = > 90%; B = 89.9% - 80%; C = 79.9% -70%

**Homework and Presentation – 10 % of final grade**

Each student will present a 10-minute discussion of a research paper to be assigned throughout the class, details will be provided in class. Additionally, there will be periodic homework assignments.

**Case Studies – 40 % of your final grade**

You will have 4 case studies, each highlighting an exercise prescription during the semester. These case studies will allow you to apply the exercise prescription principles covered in the text and in class. Specific guidelines will be posted to Canvas

**Tests – 50% of your final grade.**

There will be 4 tests given over the course of the semester each worth 50 points. The tests will be scheduled in advance and the topics to be tested will be posted to Canvas

**Class Policies**

Attendance:  You are expected to attend all classes; lectures will not be repeated or recorded.  Students are expected to attend all classes, and will be held responsible for any content covered in the event of an absence. Excused absences are defined in the Student Policy eHandbook, [www.auburn.edu/studentpolicies](http://www.auburn.edu/studentpolicies).

Make up policy: Arrangements to make up a missed examination due to a properly authorized absence must be initiated by the student within one week of the end of the period of the excused absence.  In unusual circumstances such as an extended absence to illness, the make-up exam will occur within two weeks of the absence.

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](https://cas.auburn.edu/owa/redir.aspx?C=bc06a9c32636407d8a7ce9284b94e692&URL=https%3a%2f%2fsites.auburn.edu%2fadmin%2funiversitypolicies%2fdefault.aspx)

**Course content outline:**

Week 1 – 11 Jan Class overview, syllabus and review.

Week 2 – 16 Jan Health, Fitness and Performance - Chapter 1

Health Risk Appraisal– Chap 2

Week 3 – 23 Jan Energy Costs of Physical Activity – Chap 6

Assessment of Cardiorespiratory Fitness – Chap 7

Week 4 – 30 Jan         Assessment of Body Composition – Chap 8

                                    Assessment of Muscular Fitness & Flexibility – Chap 9&10

Week 5 – 6 Feb           FITT-VP – Chap 11

Environmental impacts on physical activity – Chap 11

Test #1

Week 6 – 13 Feb Principles of Training – Chap 13

Week 7 – 20 Feb Resistance Training Prescription – Chap 13

Exercise prescription for Flexibility – Chap 14

Week 8 – 27 Feb Training for Performance – Chap 15

Exercise for Children and Youth – Chap 16

Week 9 – 6 Mar Exercise for Older Adults – Chap 17

Exercise for Older Adults – Chap 17

Test #2

Week 10 Spring Break

Week 11 – 20 Mar Exercise and Women’s Health - Chap 18

Exercise for Chronic Diseases and Disabilities (CDD)

Week 12 – 27 Mar Chronic Conditions Associated with Inactivity

Exercise and Obesity – Chap 20

Week 13 – 3 Apr Exercise for Weight Management – Chap 12

Exercise and Diabetes – Chap 21

Week 14 – 10 Apr Exercise and Heart Disease - Chap 19

Exercise and Heart Disease – Chap 19

Week 15 – 17 Apr Basic ECG at rest and exercise – Chap 24

Exercise and Pulmonary Disease – Chap 22

Week 16 – 25 Apr Exercise and Neuromuscular Disorders