SUL ROSS
Department of Kinesiology and Human Performance

KES 4303
Fitness Testing
and Prescription
Fall 2020

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Kinesiology

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Office Hours: M, W, Th 2:30-3:30 or **by appointment**
Meeting: On-line via Blackboard

Required Textbook
Haff, GG, and Triplett, NT, eds. Essentials of Strength Training and Conditioning, 4th ed. Champaign, IL: Human Kinetics, 2016.

Course Description
This undergraduate-level course provides an overview of strength and conditioning. Emphasis is placed on the exercise sciences (including anatomy, exercise physiology, and biomechanics) and nutrition, exercise technique, program design, organization and administration, and testing and evaluation.

Purpose of the Course
The major emphasis is placed on the student gaining knowledge, understanding, and skills to be able to test, evaluate, and prescribe safe and effective exercise for individuals.

Course Objectives
1. Apply scientific knowledge to train athletes and clients for the primary goals of improving athletic performance and fitness.
2. Learn how to conduct sport-specific testing sessions.
3. Learn how to demonstrate and teach proper exercise techniques.
4. Learn how to design and implement safe and effective strength training and conditioning and personal training programs.
5. Learn how to provide guidance regarding nutrition and performance-enhancing substances.
6. Apply exercise prescription principles for training variation, injury prevention, and reconditioning.

Program Learning Outcomes
1. The Kinesiology and Sport Science students will understand the principles of motor learning; understand the practice for developing motor skills; apply knowledge to biomechanical principles; apply knowledge of individual and teams sports and understand the principles of dance, personal performance activities, recreational activities and outdoor pursuits (Movement Skills and Knowledge Domain).

2. The Kinesiology and Sport Science students will understand major body systems, principles of physical fitness and benefits of a healthy lifestyle; understand the principles and activities for developing cardiovascular endurance; understand principles and activities for developing and maintaining flexibility, muscular strength and endurance; and understand health and wellness concepts (Health-Related Physical Fitness Domain).

3. The Kinesiology and Sport Science students will know how to use effective instruction and assessment to prepare physically educated individuals; understand factors relevant to learning and performance in physical education and use knowledge to promote students' development; understand the structure and purposes of physical education programs; and understand legal issues and responsibilities of physical education teachers (The Physical Education Program Domain)

Learning Objectives

Upon successful completion of this course students will:

1. The Kinesiology and Sport Science students will understand the principles of motor learning; understand the practice for developing motor skills; apply knowledge to biomechanical principles; apply knowledge of individual and teams sports and understand the principles of dance, personal performance activities, recreational activities and outdoor pursuits Movement Skills and Knowledge Domain).

2. The Kinesiology and Sport Science students will understand major body systems, principles of physical fitness and benefits of a healthy lifestyle; understand the principles and activities for developing cardiovascular endurance; understand principles and activities for developing and maintaining flexibility, muscular strength and endurance; and understand health and wellness concepts (Health-Related Physical Fitness Domain).

STUDENT LEARNING OUTCOMES

At the conclusion of the course each student will be able to:

1. Differentiate between physical activity, exercise, and physical fitness.
2. Contrast and compare various definitions of physical fitness.
3. Contrast and compare various definitions of physical fitness.
4. Describe the differences between sport-related and health-related fitness.
5. Demonstrate the ability to select and utilize accepted screening protocols to safely and effectively prescribe exercise.
6. Be able to select, evaluate, and use various submaximal VO2 tests to classify individual fitness levels.
7. Describe concepts of methods to determine body composition and desirable levels.
8. Demonstrate skills in utilizing several methods to determine body composition and prescribe exercise to improve unhealthy levels.
9. Be able to select, administer, and evaluate various musculoskeletal tests that affect health-related fitness.
10. Demonstrate knowledge of the ACSM guidelines for total fitness in prescribing exercise for health-related fitness.
11. Identify the principles of a prudent diet for health-related fitness.
12. Identify the risk CHD factors and prescribe methods to offset them.
13. Explain the types of cancer that can be prevented by exercise and diet.
14. Differentiate between Type I and Type II diabetes and related the effects of exercise and diet on prevention and control.
15. Explain the causes and health risks of obesity and the impact that exercise and diet can play in prevention and improvement.
16. Identify mental health problems that can be prevented and improved through effective exercise.
17. List the health effects of aging and how exercise can slow down and improve them.

Course Requirements

I. **ATTENDANCE/PARTICIPATION.** Participation in this class is mandatory, students must complete each week's assignments (quizzes and possible labs and tests) by Sunday 11:59 pm. Any student not making progress towards completion of the class by the midway point of the semester may be dropped at the professor's discretion. **NO LATE ASSIGNMENTS WILL BE ACCEPTED. ALSO, NO CREDIT WILL BE GIVEN FOR ANY LATE ASSIGNMENTS.**
II. **INTRODUCTION POST**. An introductory discussion post will be assigned. This will be your personal bio. It is worth 10 points.
III. **WEEKLY QUIZZES**. 24 weekly quizzes will be based on the chapters and reading completed. Reviewing and analyzing the PowerPoint presentation for each chapter will help select important concepts to understand and answer quiz questions. Each quiz will be completed and submitted on Blackboard. Each quiz will be worth 10 points for a total of 240 points.
IV. **QUARTERLY TEST.** There will be four tests given throughout the semester accounting for 75 points each. The quarterly test will be over 6 chapters.
V. **FINAL EXAM.** Will be worth 200 points possible. Cumulative Exam.
VI. **LAB ACTIVITIES**. There will 10 lab activities given throughout the semester totaling 150 points.
VII. **PROGRAM DESIGN PROJECT.** The final project will be worth 100 points.

Course Grading

Introductory Post	10
Quizzes (24 x 10 points each)	240
Quarterly exams (4 x 75 points each)	300
Final exam	200
Lab Activities (10 × 15 points each)	150
Program Design Project	100
	1,000 total

Grading Scale

A	90-100%	1,000-900 points
B	80-89	890-800 points
C+	76-79	790-760 points
C	70-75	750-700 points
D	60-69	690-600 points
F	<60	0-600 points

Tentative Course Outline

This schedule is subject to change. Please check Black Board for updates.

The lab activities are not always intended to match the content of the chapters, but they may be completed during the corresponding weeks shown in this table.

WEEK	REQUIRED TEXTBOOK READING		QUIZ/LAB ACTIVITY
	Chapter	Chapter title	
1		Introductory Post	
	1	Structure and Function of Body Systems	Quiz 1
	2	Biomechanics of Resistance Exercise	Quiz 2
2	3	Bioenergetics of Exercise and Training	Quiz 3
	4	Endocrine Responses to Resistance Exercise	Quiz 4
3	5	Adaptations to Anaerobic Training Programs	Quiz 5
	6	Adaptations to Aerobic Endurance Training Programs	Lab 1: Anaerobic Capacity Testing Quiz 6
1st Quarterly Exam (Unit 1 Test)			
4	7	Age- and Sex-Related Differences and Their Implications for Resistance Exercise	Quiz 7 Lab 2: Aerobic Capacity Testing
	8	Psychology of Athletic Preparation and Performance	Quiz 8
5	9	Basic Nutrition Factors in Health	Quiz 9
	10	Nutrition Strategies to Maximize Performance	Lab 3: Anthropometry and Body Composition Quiz 10
6	11	Performance-Enhancing Substances and Methods	Quiz 11 Lab 4: Exercise Testing for Athletes
	12	Principles of Test Selection and Administration	Quiz 12

	2nd Quarterly Exam/(Unit 2 Test)		
7	13	Administration, Scoring, and Interpretation of Selected Tests	Quiz 13
8	14	Warm-Up and Flexibility Training	Quiz 14 Lab 5: Techniques of Exercise (Flexibility Exercise Techniques)
9	15	Exercise Technique for Free Weight and Machine Training	Quiz 15 Lab 6: Techniques of Exercise (Resistance Exercise and Spotting Guidelines)
9	16	Exercise Technique for Alternative Modes and Nontraditional Implement Training	Quiz 16 Lab 7: Muscular Strength and Power Testing
10	17	Program Design for Resistance Training	Quiz 17
10	18	Program Design and Technique for Plyometric Training	Quiz 18
	3rd Quarterly Exam/(Unit 3 Test)		Lab 8: Techniques of Exercise (Plyometric Exercise Techniques)
11	19	Program Design and Technique for Speed and Agility Training	Quiz 19
11	21	Periodization	Quiz 21 Lab 9: Speed and Agility Technique and Testing
12	20	Program Design and Technique for Aerobic Endurance Training	Quiz 20 Lab 10: Muscular Endurance Testing
	22	Rehabilitation and Reconditioning	Quiz 22
13	23	Facility Design, Layout, and Organization	Quiz 23
	24	Facility Policies, Procedures, and Legal Issues	Quiz 24
4th Quarterly Exam (Unit 4 Test)			
15		Course review *Due:* program design project	
Final examination covering lecture and laboratory			

Program Design Project

The program design project provides experience in administering athletic performance tests and designing a resistance training program to meet the goals and needs of an athlete. Throughout this course, you must decide on four appropriate performance tests to administer to the athlete. You must then recruit a subject to serve as the athlete. After administering the performance tests to the athlete and evaluating the results from the tests, you must design an off-season, preseason, in-season, and postseason resistance training program for the athlete. Areas of emphasis for the evaluation of the program will include (a) selection of appropriate performance tests, (b) selection of appropriate program design variables for resistance training (exercise selection, training frequency, exercise order, training load, and repetitions, volume, and rest periods), and (c) appropriate rationale for each selection.

Academic Honesty

Students are expected to do their own work. Cheating in any form will be subject to disciplinary action that can result in dismissal from the class with a grade of F. This includes plagiarism.

All of the following are considered plagiarism: (taken from: http://www.plagiarism.org/)

- turning in someone else's work as your own
- copying words or ideas from someone else without giving credit
- failing to put a quotation in quotation marks
- giving incorrect information about the source of a quotation
- changing words but copying the sentence structure of a source without giving credit
- copying so many words or ideas from a source that it makes up the majority of your work, whether you give credit or not

Academic Integrity Statement

Academic integrity represents the choice to uphold ethical responsibility for one's learning within the academic community, regardless of audience or situation.

Academic Civility Statement

Students are expected to interact with professors and peers in a respectful manner that enhances the learning environment. Professors may require a student who deviates from this expectation to leave the face-to-face (or virtual) classroom learning environment for that particular class session (and potentially subsequent class sessions) for a specific amount of time. In addition, the professor might consider the university disciplinary process (for Academic Affairs/Student Life) for egregious or continued disruptive behavior.

Academic Affairs Service Statement

Sul Ross faculty, staff, and students are expected to model responsible citizenship through service activities that promote personal and academic growth while enhancing the university, local, regional, national, and global communities. These activities will foster a culture of academic/public engagement that contributes to the achievement of the university's mission and core values.

Academic Excellence Statement

Sul Ross holds high expectations for students to assume responsibility for their own individual learning. Students are also expected to achieve academic excellence by:

- Honoring the core values of Sul Ross.
- Upholding high standards of habit and behavior.
- Maintaining excellence through class attendance and punctuality.
- Preparing for active participation in all learning experiences.
- Putting forth their best individual effort.
- Continually improving as independent learners.
- Engaging in extracurricular opportunities that encourage personal and academic growth.

- Reflecting critically upon feedback and applying these lessons to meet future challenges.

ADA Statement

Sul Ross State University is committed to equal access in compliance with the Americans with Disabilities Act of 1973. It is the student's responsibility to initiate a request for accessibility services. Students seeking accessibility services must contact Mary Schwartze, M. Ed., L.P.C., in Counseling and Accessibility Services, Ferguson Hall, Room 112. The mailing address is P.O. Box C-122, Sul Ross State University, Alpine, Texas 79832. Telephone: 432-837-8691. E-mail: mschwartze@sulross.edu.