Instructor: Deborah Leslie, M.S.
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Office Hours: Tuesday and Wednesday 12:00-1:00pm or by appointment

Email: drleslie@uta.edu

Faculty Web Page: http://www.uta.edu/faculty/drleslie

Class Schedule: 1:00-3:20 pm, PEB 303

Credit: 3 Semester Credit Hours (2-3)

Required Textbooks:


Laboratory Manual for KINE 4316 - must be purchased at University Book Store.

Other resource texts may be presented throughout the semester. Refer to the library for additional resources outlined in the Laboratory Manual. Required journal reading is outlined in the Laboratory Manual.

Prerequisites: Current CPR Certification, KINE 3300, 3315, MATH 1302

Course Objectives: Lecture and laboratory sessions are designed to provide the student with a scientific basis and practical application for exercise prescription for resistance training, cardiovascular conditioning and flexibility programs, health risk appraisal, aspects of fitness leadership, and special populations. This curriculum is designed to prepare the student for the exercise prescription related knowledge, skills and abilities required for the ACSM Health/Fitness Instructor Certification. The following are ACSM KSA’s addressed in this course:
1. Knowledge of and skill to demonstrate exercises for enhancing musculoskeletal flexibility.
2. Basic knowledge of exercise physiology as it relates to exercise prescription.
3. Knowledge of the role of aerobic and anaerobic energy systems in the performance of various activities.
4. Knowledge of the relationship between the number of repetitions, intensity, number of sets, and rest with regard to strength training.
5. Knowledge of and ability to discuss the physiological basis of the major components of physical fitness: flexibility, cardiovascular fitness, muscular strength, muscular endurance, and body composition.
6. Knowledge of the components of fitness: cardiorespiratory fitness, muscular strength, muscular endurance.
7. Demonstrate an understanding of the components of physical fitness, the effects of aerobic and strength and/or resistance training on the fitness components and the effects of chronic disease.
8. Knowledge of the benefits and precautions associated with resistance and endurance training in older adults.
9. Knowledge of common orthopedic and cardiovascular considerations for older participants and the ability to describe modifications in exercise prescription that are indicated.
10. Knowledge of cardiovascular, respiratory, metabolic, and musculoskeletal risk factors that may require further evaluation by medical or allied health professionals before participation in physical activity.
11. Knowledge of cardiovascular risk factors or conditions that may require consultation with medical personnel before testing or training, including inappropriate changes in resting or exercise heart rate and blood pressure, new onset discomfort in chest, neck, shoulder, or arm, changes in the pattern of discomfort during rest or exercise, fainting or dizzy spells, and claudication.
12. Knowledge of respiratory risk factors or conditions that may require consultation with medical personnel before testing or training, including asthma, exercise-induced bronchospasm, extreme breathlessness at rest or during exercise, bronchitis, and emphysema.
13. Knowledge of metabolic risk factors or conditions that may require consultation with medical personnel before testing or training, including body weight more than 20 above optimal, BMI 1 30, thyroid disease, diabetes or glucose intolerance, and hypoglycemia.
14. Knowledge of musculoskeletal risk factors or conditions that may require consultation with medical personnel before testing or training, including acute or chronic back pain, osteoarthritis, rheumatoid arthritis, osteoporosis, tendonitis, and low back pain.
15. Knowledge of common drugs from each of the following classes of medications and describe the principal action and the effects on exercise testing and prescription: antihypertensives, bronchodilators, and hypoglycemics.
16. Knowledge of hypothetical concerns and potential risks that may be associated with the use of exercises such as straight leg sit-ups, double leg raises, full squats, hurdlers stretch, yoga plough, forceful back hyperextension, and standing bent-over toe touch.
17. Knowledge of the health/fitness instructor's responsibilities, limitations, and the legal implications of carrying out emergency procedures.
18. Knowledge of the recommended intensity, duration, frequency, and type of physical activity necessary for development of cardiorespiratory fitness in an apparently healthy population.
19. Knowledge of the principles of overload, specificity, and progression and how they relate to exercise programming.
20. Knowledge of the following terms: progressive resistance, isotonic/isometric, concentric, eccentric, atrophy, hypertrophy, sets, repetitions, plyometrics, Valsalva maneuver.
21. Knowledge to describe the various types of interval, continuous, and circuit training programs.
22. Knowledge to describe various ways a leader can take a position relative to the group to enhance visibility, participant interactions, and communication.
23. Knowledge to describe partner resistance exercises that can be used in a group class setting.
24. Knowledge of the properties of water that affect the design of a water exercise session.
25. Knowledge of basic music fundamentals, including downbeat, 8 count, and 32 count.
26. Skill to teach and demonstrate appropriate modifications in specific exercises for the following groups: older adults, pregnant and postnatal women, obese persons, and persons with low back pain.
27. Skill to effectively use verbal and nonverbal cues in the group exercise setting, including anticipatory, motivational, safety, and educational.
28. Ability to describe specific leadership techniques appropriate for working with participants of all ages.
29. Ability to modify cardiovascular and resistance exercises based on age and physical condition.
30. Ability to characterize the differences in the development of an exercise prescription for children, adolescents, and older participants.
31. Ability to determine those risk factors that may be favorably modified by physical activity habits.
32. Ability to describe the categories of participants who should receive medical clearance prior to administration of an exercise test or participation in an exercise program.
33. Ability to identify the components that contribute to the maintenance of a safe environment.
34. Ability to describe potential musculoskeletal injuries (e.g., contusions, sprains, strains, fractures), cardiovascular/pulmonary complications (e.g., tachycardia, bradycardia, hypotension/hypertension, tachypnea) and metabolic abnormalities (e.g., fainting/syncope, hypoglycemia/hyperglycemia, hypothermia/hyperthermia).
35. Ability to differentiate between the amount of physical activity required for health benefits and the amount of exercise required for fitness development.
36. Ability to describe exercises designed to enhance muscular strength and endurance of specific major muscle groups.
37. Ability to teach the components of an exercise session (i.e., warm-up, aerobic stimulus phase, cool-down, muscular strength/endurance, flexibility).
38. Ability to calculate training heart rates using two methods: percent of age-predicted maximum heart rate and heart rate reserve (Karvonen).
39. Ability to recognize proper and improper exercise technique in the use of cardiovascular conditioning equipment (e.g., steps, cycles, slides).
40. Ability to modify exercise in the group setting for apparently healthy persons of various fitness levels.
41. Ability to teach a progression of exercises for all major muscle groups to improve muscular strength and endurance.
42. Ability to communicate effectively with participants in the group exercise session.
43. Ability to demonstrate techniques for accommodating various fitness techniques within the same class.
44. Knowledge to describe the myotatic stretch reflex.

Athletic Training Competencies:

**Risk Management and Injury Prevention**
- Cognitive: 4, 12-14
- Psychomotor: 6, 10, 11
- Affective: 9, 12

**Pathology of Injuries and Illnesses**
- Affective: 5

**Assessment and Evaluation**
- Cognitive: 3, 17

**Therapeutic Exercise**
- Cognitive: 3, 7, 9 d-e, 10a-c, f-m
- Psychomotor: 4a-d, f-m

**General Medical Conditions and Disabilities**
- Cognitive: 12
Tentative Lecture Schedule:

Risk Factor Stratification
Metabolic Calculations
Written Exam 1
Cardiovascular Exercise Prescription to Improve Health and Aerobic Capacity and Interval Training
Group Exercise Leadership Skills
Written Exam 2
Exercise Prescription for Improving Muscular Strength and Endurance and Flexibility
Group Exercise Prescription Presentation
Exam 3
Laboratory Practical
Exercise Prescription for Selected Special Populations
Resume Writing/Job Search
Take Home Case Studies – Final Exam

Student Evaluation:
1. Written Examinations (3) 30%
2. Anatomy Review Examination (must score 70% to Pass the course – first attempt is used to compute course grade with two attempts to pass allowed) 5%
   Must score 70% by end of week one to continue in course
3. Laboratory/homework assignments/quizzes 25%
4. Case studies (final examination) 15%
5. Group Presentations/Assignments 5%
6. Laboratory Practical Exam 20%
7. Based on the percentages above, grades will be assigned as follows...

<table>
<thead>
<tr>
<th>% of Total Points</th>
<th>Grade</th>
</tr>
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<tbody>
<tr>
<td>90 - 100%</td>
<td>A</td>
</tr>
<tr>
<td>80 - 89.9</td>
<td>B</td>
</tr>
<tr>
<td>70 - 79.9</td>
<td>C</td>
</tr>
<tr>
<td>60 - 69.9</td>
<td>D</td>
</tr>
<tr>
<td>&lt;60</td>
<td>F</td>
</tr>
</tbody>
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It is not the instructor’s responsibility to compute your grade throughout the semester. To compute your grade, take the total points earned for a specific part of the evaluation (exams, etc.) divided by points possible and multiply the points allotted for that part of the course by the percentage of total point earned in that section. For example, if a student has
exam scores of 75% and 82%, 75+82=157, 157/200=78.5, 30X.785=23.6. Do the same for each part of the course grade and add the parts together, that is your score out of 100%.

All students are required to have a uta email account for this course, must be functional by end of first week of classes.

Late assignments will not be accepted unless related to an excused absence with appropriate documentation and instructor notification (leave a message or email instructor before assignment is due).

There is no extra credit work for this course or retaking of exams. My policy is if students cannot get the material in class they do not have time to do extra credit work.

Students are required to participate in laboratory sessions and to demonstrate and teach proper stretching, weight training and cardiovascular exercise form. Dress for exercise during each laboratory session.

Students must complete and score a 75% on their anatomy review exam by Tuesday, June 22, 2004. You may take the test before the semester starts if you like.

Attendance Policy: Attendance and participation in all labs is required for successful completion of this course. Each student is allowed 1 absence, excused or unexcused. For each additional absence, the student will lose 1% off their final grade. For example, a final grade of 80% would be reduced to 77% for 4 absences. There are no make-up exams for lab practica, excused or unexcused. Appropriate documentation must also be presented in order to make up examinations missed for excused absences.

If a student is tardy, he/she is counted absent. Habitual tardiness is disrespectful and unacceptable.

KINE Departmental Grade Policy: The department will not warn students nor drop students for excessive absences. It is the responsibility of the student to complete ADDING, DROPPING or withdrawing from school within the appropriate time frame established by the University Registrar (deadlines to be found in the Schedule of Classes). Any student that does not officially drop the class by the appropriate drop dates will be given an “F” for the course.

Americans with Disability Act: "If you require accommodation based on disability, I would like to meet with you in the privacy of my office the first week of the semester to be sure you are appropriately accommodated."

Timeline for Grade Grievances: The student has one calendar year from the date a grade is assigned to initiate a grievance. The normal academic channels are 1) Department Chair, 2) Academic Dean, and 3) the Provost.

Student Support Services: The University supports a variety of student success programs to help you connect with the University and achieve academic success. They include learning assistance, developmental education, advising and mentoring, admission and transition, and federally funded programs. Students requiring assistance academically, personally, or socially should contact the Office of Student Success Programs at 817-272-6107 for more information and appropriate referrals.

Academic Dishonesty: It is the philosophy of The University of Texas at Arlington that academic dishonesty is a completely unacceptable mode of conduct and will not be tolerated in any form. All persons involved in academic dishonesty will be disciplined in accordance with University regulations and procedures. Discipline may include suspension or expulsion from the University. “Scholastic dishonesty includes but is not limited to cheating, plagiarism, collusion, the
submission for credit of any work or materials that are attributable in whole or in part to another person, taking an examination for another person, any act designed to give unfair advantage to a student or the attempt to commit such acts.” (Regents Rules and Regulations, Part One, Chapter VI, Section 3, Subsection 3.2, Subdivision 3.22).

**Bomb Threats:** If anyone is tempted to call in a bomb threat, be aware that UTA will attempt to trace the phone call and prosecute all responsible parties. Every effort will be made to avoid cancellation of presentations/tests caused by bomb threats. Unannounced alternate sites will be available for these classes. Your instructor will make you aware of alternate class sites in the event that your classroom is not available.

**Changes in Course Content/Format:** As the instructor for this course, I reserve the right to make changes in course content, as deemed appropriate and necessary.

**Cell phones and pagers must be turned off in the classroom. No exceptions!!!**