

KINE 4329/5329 Strength and Conditioning (3 hours) – Spring 2011

Name: Stephen Newhart, M.S., CSCS

Course Location and Time: MWF 9:00 AM – 9:50 AM, MAC 206

Office Number: PEB 304

Office Telephone Number: N/A

Email Address: Newhart@uta.edu

Office Hours: By Appointment

The mission of The University of Texas at Arlington is to pursue knowledge, truth and excellence in a student-centered academic community characterized by shared values, unity of purpose, diversity of opinion, mutual respect and social responsibility. The University is committed to lifelong learning through its academic and continuing education programs, to discovering new knowledge through research and to enhancing its position as a comprehensive educational institution with bachelor's, master's, doctoral and non-degree continuing education programs.

MISSION: To develop and deliver an educational program that ensures the highest teacher, administrator and allied health science preparation and performance.

To be a recognized contributor in the field of educational and allied health science research and practice through effective teaching, quality research and meaningful service.

The Educator and Administrator Preparation units' collaboratively developed shared vision is based on these **CORE VALUES**, dispositions and commitments to:

- Excellence
- Learner-centered environment
- Research-based
- Collaboration
- Diversity
- Technology
- Field Experiences
- Life-long Learning

Each candidate in the Educator and Administrator Unit of the College of Education of UT-Arlington will be evaluated on **PROFESSIONAL DISPOSITIONS** by faculty and staff. These dispositions have been identified as essential for a highly-qualified educator. Instructors and program directors will work with candidates rated as "unacceptable" in one or more stated criteria. The candidate will have an opportunity to develop a plan to remediate any deficiencies.

Demonstrates excellence

- Meets stated expectations of student performance.
- Keeps timelines. Arrives on time for class and other activities.
- Produces significant artifacts of practitioner evidence.
- Possesses a willingness to set goals.
- Attends all classes/trainings and practicum experiences.
- Completes activities as assigned.
- Has appropriate personal appearance and/or hygiene for professional setting.

Participates in a learner centered environment and shows respect for self and others

- Uses appropriate and professional language and conduct.
- Supports a "high quality" learning environment.
- Shows respect and consideration for the thoughts and feelings of others.

Research-based pedagogy

- Has an awareness of and willingness to accept research-based concepts.
- Identifies important trends in education.
- Demonstrates interests in learning new ideas and strategies.
- Relates class discussions and issues to current events in education.

Participates in on-going collaboration with peers and professionals

- Demonstrates kindness, fairness, patience, dignity and respect in working with peers, staff and instructors.
- Works effectively with others.
- Assists others in the university classroom or practicum setting.
- Demonstrates an openness to assistance from others.
- Receives feedback in a positive manner and makes necessary adjustment.

Exhibits stewardship of diversity

- Shows appropriate stewardship and tolerance to diverse people, environments, and situations.

Advocates use of technology

- Uses and applies existing technologies sufficiently in work.
- Shows a willingness to use and apply emerging technologies in work.

Shows interest in the learner and the learning-process

- Demonstrates significant learning improvement over time.
- Shows interest in the learning process and demonstrates the necessary amount of time, energy, and enthusiasm for becoming better learners, teachers, and practitioners.

Description of Course Content: KINE 4329/5329 STRENGTH AND CONDITIONING

This course covers the physiology and biomechanics of strength training and conditioning. Additional topics include: testing and evaluation of athletes, resistance training techniques, training program design, and organization and administration of a strength training facility. This course is designed to prepare students to take the CSCS certification examination and apply the skills needed to be a leader in Strength and Conditioning.

To earn the CSCS credential, candidates must pass an exam composed of two sections.

The Scientific Foundations section, which is 1.5 hours in length, consists of 90 multiple-choice questions designed to assess a candidate's knowledge in the areas of exercise sciences (58 questions on anatomy, exercise physiology, biomechanics, etc.) and nutrition (22 questions).

The Practical/Applied section, which is 2.5 hours in length, consists of 120 multiple-choice questions. Forty of these are in conjunction with a video, which mainly assesses competencies in exercise techniques, functional anatomy and testing procedures. This section contains 39 questions on program design, 39 questions on exercise techniques, 22 questions on testing and evaluation and 10 questions on organization/administration.

Course Learning Goals/Objectives:

Upon completion of this course students will be able to:

Critically analyze the energy and strength requirements for athletic events.

Demonstrate and critic proper weight lifting technique.

Demonstrate their ability to apply exercise prescription for aerobic and anaerobic Athletic Teams.

Demonstrate their knowledge of administration and organization of a strength training facility.

This course addresses the following *Athletic Training Educational Competencies*, 4th ed., published by the NATA Education Council.:

Risk Management: C11-C14

11) Explain the importance and use of standard tests, test equipment, and testing protocol for the measurement of cardiovascular and respiratory fitness, body composition, posture, flexibility, muscular strength, power, and endurance.

12) Explain the components and purpose of periodization within a physical conditioning program.

13) Identify and explain the various types of flexibility, strength training, and cardiovascular conditioning programs. This should include the expected effects (the body's anatomical and physiological adaptation), safety precautions, hazards, and contraindications of each.

14) Explain the precautions and risks associated with exercise in special populations.

Risk Management: P1-P3

1) Instruct the patient how to properly perform fitness tests to assess their physical status and readiness for physical activity Interpret the results of these tests according to requirements established by appropriate governing agencies and/or a physician. These tests should assess: Flexibility, Strength, Power, Muscular endurance, Agility, Cardiovascular endurance, Speed

2. Develop a fitness program appropriate to the patient's needs and selected activity(s) which meet the requirements established by the appropriate governing agency and/or physician for enhancing: Flexibility, Strength, Power, Muscular endurance, Agility, Cardiovascular endurance, Speed

3. Instruct a patient regarding fitness exercises and the use of weight training equipment to include correction or modification of inappropriate, unsafe, or dangerous lifting techniques.

Prerequisites:

Current CPR certification, KINE 3300, KINE 3301, KINE 3315, or permission of the instructor.

Required Textbooks and Other Course Materials: Thomas Baechle & Roger Earle. (2000). **Essentials of Strength Training and Conditioning 3rd Edition**, Human Kinetics, ISBN 0-7360-0089-5.

Course Schedule

* Most Friday Meetings will be reserved for exercise presentation labs.

Week 1: Introduction

Week 2: Ch. 2 Bioenergetics of Exercise and Training

Ch. 11 Principles of Test Selection and Administration

Week 3: Ch. 12 Administration, Scoring, and Interpretation of Selected Tests

Testing Day 1

Week 4: Ch. 13 Warm-Up and Stretching

Ch. 14 Resistance Training and Spotting Techniques

Week 5: Ch. 15 Resistance Training

Ch. 4 The Biomechanics of Resistance Exercise

Weight Room Day

Week 6: Review & Exam 1

Week 7: Ch. 16 Plyometric Training

Ch. 17 Speed, Agility, and Speed-Endurance Development

Ch. 18 Aerobic Endurance Exercise Training

Week 8: Ch. 5 Adaptations to Anaerobic Training Programs

Ch. 6 Adaptations to Aerobic Endurance Training Programs

Ch. 1 Structure and Function of the Muscular, Neuromuscular, Cardiovascular, and Respiratory Systems

Week 9: Spring Break

Week 10: Ch. 19 Training Variation: Periodization

Ch. 20 Rehabilitation and Reconditioning

Week 11: Review & Exam 2

Week 12: Ch. 21 Facility Organization and Risk Management

Ch. 22 Developing a Policies and Procedures Manual

Weight Room Day

Week 13: Chapter 10: Nutritional Factors in Health and Performance

Graduate Presentations

Week 14: Chapter 3: Endocrine Responses to Resistance Exercise

Chapter 7: Age- and Sex-Related Differences and Their Implications for Resistance Exercise

Chapter 8: The Psychology of Athletic Performance: The Mental Management of Physical Resources

Chapter 9: Performance-Enhancing Substances: Effects, Risks, and Appropriate Alternatives

Week 15: Review & Exam 3

Programs Due

Finals Week: Final Examination

Undergraduate Grade Calculation:

Exams (3) 100 pts each = 300

Athlete Training Program = 50 pts

Lifting Exercise Project / Group Participation = 50 pts

Total = 400

A = 90% (360); B = 80% (320); C = 70% (280); D = 60% (240); F = 59% and below

Assignments:

Participation in lecture and class projects is expected.

Schedule is subject to change to ensure all course objectives are met. Additional assignments will be announced throughout the semester

Both undergraduates and graduate students will be required to develop a comprehensive training program for the sport of their choice. The training program will cover a one year period, pre-season, in-season and off-season. The principles of overtraining and periodization must be incorporated.

Both undergraduates and graduate students will teach a 1) lift technique; 2) Stretch/warm-up

Graduate students will be required to conduct a review of literature and then write a review paper. The structure of this course paper must conform to the Author Guidelines for the *Journal of Strength and Conditioning Research*.

Graduate students will present their paper to the class.

CSCS Certification Dates and Locations:

Website: <http://www.nscac.org/cscs/register.html>

CSCS Exam Cost

NSCA Member Early Registration Deadline Registration Cutoff

Initial registration \$260 / Non-Member \$395 (Early Registration)

NSCA Student Membership Fee: \$95

Attendance Policy: Students can make up assignments from excused absences.

Make-up Policy: Students may make up work from excused absences.

Cell Phone Policy: Cell phones must be off during exams and quizzes. If you choose to bring your cell phone to class, please turn the ringer off. If you have an emergency during class which requires you to answer your phone, please discretely excuse yourself. Also, text messaging during class will not be tolerated.

Drop Policy: Students may drop or swap (adding and dropping a class concurrently) classes through self-service in MyMav from the beginning of the registration period through the late registration period. After the late registration period, students must see their academic advisor to drop a class or withdrawal. Undeclared students must see an advisor in the University Advising Center. Drops can continue through a point two-thirds or the way through the term or session. It is the student's responsibility to officially withdrawal if they do not plan to attend after registering. **Students will not be automatically dropped for non-attendance.** Repayment of certain types of financial aid administered through the University may be required as the result of dropping classes or withdrawing. Contact the Financial Aid Office for more information.

Americans with Disabilities Act: The University of Texas at Arlington is on record as being committed to both the spirit and letter of federal equal opportunity legislation; reference Public Law 92-112 - The Rehabilitation Act of 1973 as amended. With the passage of federal legislation entitled *Americans with Disabilities Act (ADA)*, pursuant to section 504 of the Rehabilitation Act, there is renewed focus on providing this population with the same opportunities enjoyed by all citizens.

As a faculty member, I am required by law to provide "reasonable accommodations" to students with disabilities, so as not to discriminate on the basis of that disability. Student responsibility primarily rests with informing faculty of their need for accommodation and in providing authorized documentation through designated administrative channels. Information regarding specific diagnostic criteria and policies for obtaining academic accommodations can be found at www.uta.edu/disability. Also, you may visit the Office for Students with Disabilities in room 102 of University Hall or call them at (817) 272-3364.

Academic Integrity: 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, Series 50101, Section 2.2)

Student Support Services Available: The University of Texas at Arlington supports a variety of student success programs to help you connect with the University and achieve academic success. These programs 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.

Electronic Communication Policy: The University of Texas at Arlington has adopted the University “MavMail” address as the sole official means of communication with students. MavMail is used to remind students of important deadlines, advertise events and activities, and permit the University to conduct official transactions exclusively by electronic means. For example, important information concerning registration, financial aid, payment of bills, and graduation are now sent to students through the MavMail system. All students are assigned a MavMail account. **Students are responsible for checking their MavMail regularly.** Information about activating and using MavMail is available at <http://www.uta.edu/oit/email/>. There is no additional charge to students for using this account, and it remains active even after they graduate from UT Arlington. To obtain your NetID or for log on assistance, visit <https://webapps.uta.edu/oit/selfservice/>. If you are unable to resolve your issue from the self-service website, contact the Helpdesk at helpdesk@uta.edu.

Final Review Week: A period of five class days prior to the first day of final examinations in the long sessions shall be designated as Final Review Week. The purpose of this week is to allow students sufficient time to prepare for final examinations. During this week, there shall be no scheduled activities such as required field trips or performances; and no instructor shall assign any themes, research problems or exercises of similar scope that have a completion date during or following this week unless specified in the class syllabi. During Final Review Week, an instructor shall not give any examinations constituting 10% or more of the final grade, except makeup tests and laboratory examinations. In addition, no instructor shall give any portion of the final examination during Final Review Week. Classes are held as scheduled during this week and lectures and presentations may be given.

Librarian to Contact: Antoinette Nelson, UT Arlington Science & Engineering Library, nelsona@uta.edu - 817.272.7433, <http://library.uta.edu/sel>

E-Culture Policy: The University of Texas at Arlington has adopted the University email address as an official means of communication with students. Through the use of email, UT-Arlington is able to provide students with relevant and timely information, designed to facilitate student success. In particular, important information concerning registration, financial aid, payment of bills, and graduation may be sent to students through email. All students are assigned an email account and information about activating and using it is available at www.uta.edu/email. New students (first semester at UTA) are able to activate their email account 24 hours after registering for courses. There is no additional charge to students for using this account, and it remains active as long as a student is enrolled at UT-Arlington. Students are responsible for checking their email regularly.

Grade Grievance Policy: Students should first consult with instructor to review grade concerns.