Course Name: Physiology of Exercise
Course Number: KINE 4312.002
Location: IH 263
Professor: Dr. Dan Newmire PhD CSCS, CISSN
Meeting Time: M, W, F 12:00-12:50, 01/21-05/14
Office: IH 371
Office Hours: Make an appointment by email
Phone: (361)-825-3693
Email: Daniel.Newmire@tamucc.edu
Departmental Administrative Assistant: Liz Perez (361)-825-6072

I. COURSE DESCRIPTION
(KINE 4312.02, Physiology of Exercise) Provide the student with knowledge of the physiological changes and residues of exercise with emphasis on muscular analysis and practical applications for conditioning and therapeutic exercises.

Prerequisites:
1. Requires Department Approval
2. Prerequisite course required-BIOL2401 or Prerequisite course required-KINE2325 and Prerequisite course required-KINE1320 or Prerequisite course required-KINE2313 and Prerequisite/Co-Requisite course required- KINE4112

Note: Grades in this course are not related to, nor are they affected by grades in KINE 4112, Physiology of Exercise Lab.

II. RATIONALE
The primary goal of this class is to acquaint students with a basic working-knowledge, understanding, and value of the study of how exercise influences the structure and function of the human body, both during exercise, as well as after long term exposure to repeated exercise participation.

III. STATE ADPOTED PROFICIENCIES FOR TEACHERS
AND/OR ADMINISTRATORS/COUNSELORS
A. LEARNER-CENTERED KNOWLEDGE: The teacher possesses and draws on a rich knowledge base of content, pedagogy, and technology to provide relevant and meaningful learning experiences for all students
B. LEARNER-CENTERED INSTRUCTION: To create a learner-centered community, the teacher collaboratively identifies needs; and plans, implements, and assesses instruction using technology and other resources.
C. EQUITY IN EXCELLENCE FOR ALL LEARNERS: The teacher responds appropriately to diverse groups of learners.
D. LEARNER-CENTERED COMMUNICATION: While acting as an advocate for all students and the school, the teacher demonstrates effective professional and interpersonal communication skills.

E. LEARNER-CENTERED PROFESSIONAL DEVELOPMENT: The teacher, as a reflective practitioner dedicated to all students’ success, demonstrates a commitment to learn, to improve the profession, and to maintain ethics and personal integrity.

IV. TExES COMPETENCIES

- **Competency 002** - Physical education teacher applies principles and concepts of fitness and fitness development/maintenance to evaluate, select, and adapt activities that help learners achieve and maintain appropriate fitness levels.
- **Competency 003** - The teacher appreciates human diversity, recognizes how diversity in the classroom and the community may affect learning and creating a classroom environment in which both the diversity of groups and the uniqueness of individuals are recognized and celebrated.
- **Competency 004** - Fitness-related health, nutrition, and safety. The physical education teacher knows health, nutrition, and safety principles and practices related to fitness/performance and encourages learners to apply these principles and practices.
- **Competency 011** - Legal, ethical, medical, and safety issues. The physical education teacher understands legal, ethical, medical, and safety issues relating to physical education programs and applies this understanding in a variety of contexts.

V. COURSE OBJECTIVES/LEARNING OUTCOMES

*Given lectures, discussions, videos and/or field experiences, the student will be able to:*

A. Demonstrate knowledge of the structure and function of the body as it relates to physical activity.
B. Demonstrate knowledge of the integrative nature of the physiological systems under the stress of exercise.
C. State representative values of the various body systems at rest, submaximal exercise, and maximal exertion.
D. Identify functional changes in response to a session of exercise.
E. Identify laboratory procedures with respect to exercise physiology.
F. Identify the scientific body of knowledge in exercise physiology.

VI. COURSE TOPICS

*The major topics to be considered are (not in sequence):*

A. Energy systems relationship to exercise and training
B. Carbohydrate, protein and fat breakdown and utilization
C. Neuromuscular physiology and adaptations to exercise and training;
D. Mechanisms of muscular strength, hypertrophy, endurance, and power
E. Cardiovascular physiology and adaptations to exercise and training
F. Mechanisms of cardiovascular adaptations;
G. Maximal oxygen uptake and adaptations to training
H. Acid base balance and adaptations to training
I. Adaptations to aerobic and resistance training
J. Methods of determining nutritional needs in response to exercise
K. Nutritional needs before, during, and after exercise to accommodate exercise and training adaptations
L. The science and practice of body composition

VII. INSTRUCTIONAL METHODS AND ACTIVITIES
A. Traditional lecture via power point, classroom discussion, independent learning, and online instruction/readings.
B. Classroom participation activities

VIII. EVALUATION AND GRADE ASSIGNMENT
The method of evaluation and the criteria for grade assignment are:
A. Requirements and point values:
The total number of quizzes and in-class point opportunities are tentative. Therefore, the point values listed may vary.
1. Quizzes, approximately 5-10 at ~10 pts each (~50-100 points)
2. Exams, 4 at ~50-70 pts each (~200-280 points) (50%)
3. LearnSmart Assignments, ~40-60 points (~400-600 points)
   - Assignments are online study assignments (30-70 questions each) in which the student will answer to enhance learning and test preparation.
   - Points, test values, and numbers of assignments may be altered to best reflect the needs of the class.

B. Course Weighted Evaluation:
1. LearnSmart and other assignments (30%): Throughout the semester, assignments will be given that correspond topics discussed during lecture. These assignments will be turned in at the beginning of the class period or online on the dates assigned. Late assignments will not be accepted and will be assigned a grade of zero (0), unless student can present proof of an excused absence. NO EXCEPTIONS WILL BE MADE.
2. Quizzes (20%): Throughout the semester, quizzes will be given reviewing topics discussed within the lecture. All quizzes may be individually completed or with other students. They will be unannounced and given during the first 5-10 minutes of class. No make-up quizzes will be permitted for students that arrive late to class or who do not have an officially excused absence.
3. Exams (50%): There will be 4-5 examinations given during the semester. ALL Exams will be completed in the classroom on the scheduled date unless the student has made prior arrangements with the instructor. The final WILL NOT BE COMPREHENSIVE. Please contact the professor if any additional needs are to be taken for exams.

C. Grading Scale:
   □ 90-100% = A
   □ 80-89% = B
   □ 70-79% = C
   □ 60-69% = D
   □ 59% and below = F

Note Regarding Rounding Grades:
This is not a normal procedure and completely at the discretion of the instructor. Please do not email inquiring if your grade may be rounded up to a higher grade until you have considered the following:

1. Made a concerted effort to contact the instructor (in person) for help on a regular basis
2. Completed all assignments and extra credit point opportunities (if able)
3. Interacted regularly in class discussions
4. Attended class every class unless an absence was excused by the instructor

**Note Regarding Quality of Work**
If any work completed on behalf of this class is not performed at a standard expected of a junior or senior in college, it may not be graded. I will not give partial credit for a partially completed assignment, an unprofessionally prepared or sloppy assignment, an assignment that was obviously completed in a big hurry to beat a deadline, or because you didn’t read the instructions. You will simply receive a zero. These assignments will not be allowed to be made up once the grade is assigned. You can avoid this problem by simply doing a quality job the first time and planning ahead. For class quizzes, which will be done first thing at the beginning of class, your writing must be legible. If I can’t read something, it is wrong (please don’t make me guess).

**Note Regarding Submission of Assignments**
All work in this class is to be submitted as an attached word document unless otherwise specified. It is your job to save your documents in a format that can be opened by the instructor.

**IX. COURSE POLICIES**

**Academic Integrity/Plagiarism.**
University students are expected to conduct themselves in accordance with the highest standards of academic honesty. Academic misconduct for which a student is subject to penalty includes all forms of cheating, such as illicit possession of examinations or examination materials, falsification, forgery, complicity or plagiarism. (Plagiarism is the presentation of the work of another as one’s own work.) In this class, academic misconduct or complicity in an act of academic misconduct on an assignment or test will result in the actions listed below at the discretion of the instructor:

**Penalties that may be applied to individual cases of academic dishonesty include one or more of the following:**
A. Written reprimand;
B. Requirement to re-do work in question;
C. Requirement to submit additional work;
D. Lowering of grade on work in question;
E. Assigning grade of “F” to work in question;
F. Assigning grade of “F” for course;
G. Recommendation for more severe punishment.

If the instructor determines that assigning a grade of “F” to the course is the appropriate penalty and this disciplinary action occurs prior to the deadline for dropping courses, the student forfeits his/her right to drop the course in question. The faculty member may file a record of cases of academic dishonesty, including a description of the disciplinary action taken, along with any materials involved, with his or her college dean and the Office of Student Affairs. The office of the academic dean of the college in which the offense took place will maintain records of all cases of academic dishonesty reported for a period of not more than two years. Any student who has been penalized for academic dishonesty has the right to appeal the judgment or the penalty assessed.
What is also considered dishonest with reference to this class?
1. using an assignment from a previous semester, no matter where it came from, to produce your own (my electronic checker will catch this)
2. file swapping with a partner to produce your work, loaning your work to another person to "model" as the borrower may take more than you think putting you both in trouble
3. changing a few words on someone else’s assignment and submitting it as your own
4. failure to properly cite resources in your lab report or assignments
5. using any form of outside help other than your mind on any test or quiz, calculators without Internet or note-taking capabilities might be allowed at the professor’s discretion.
6. unethically obtaining copies of exams etc.
7. photographing or copying ANY quiz or test materials for any purpose with ANY device
8. anything else that falls under the umbrella of dishonest conduct that common sense would dictate as unethical

Dropping a Class
I hope that you never find it necessary to drop this or any other class. However, events can sometimes occur that make dropping a course necessary or wise. Please consult with your academic advisor, the Financial Aid Office, and me, before you decide to drop this course. Should dropping the course be the best course of action, you must initiate the process to drop the course by going to the Student Services Center and filling out a course drop form. Just stopping attendance and participation WILL NOT automatically result in your being dropped from the class. The last day to drop a class with an automatic grade of “W” is (November 8th)

Preferred methods of scholarly citations
APA formatting will be the preferred method of citation and formatting (https://owl.purdue.edu/owl/research_and_citation/apa_style/apa_formatting_and_style_guide/general_format.html)

Classroom/professional behavior
Texas A&M University-Corpus Christi, as an academic community, requires that each individual respect the needs of others to study and learn in a peaceful atmosphere. Under Article III of the Student Code of Conduct, classroom behavior that interferes with either (a) the instructor’s ability to conduct the class or (b) the ability of other students to profit from the instructional program may be considered a breach of the peace and is subject to disciplinary sanction outlined in article VII of the Student Code of Conduct. Students engaging in unacceptable behavior may be instructed to leave the classroom. This prohibition applies to all instructional forums, including classrooms, electronic classrooms, labs, discussion groups, field trips, etc.

Statement of Civility
Texas A&M University-Corpus Christi has a diverse student population that represents the population of the state. Our goal is to provide you with a high-quality educational experience that is free from repression. You are responsible for following the rules of the University, city, state and federal government. We expect that you will behave in a manner that is dignified, respectful and courteous to all people, regardless of sex, ethnic/racial origin, religious background, sexual orientation or disability. Behaviors that infringe on the rights of another individual will not be tolerated.

Grade Appeals*
As stated in University Procedure 13.02.99.C0.03, Student Grade Appeals, a student who believes that he or she has not been held to appropriate academic standards as outlined in the class syllabus, equitable evaluation procedures, or appropriate grading, may appeal the final grade given in the course. The
burden of proof is upon the student to demonstrate the appropriateness of the appeal. A student with a complaint about a grade is encouraged to first discuss the matter with the instructor. For complete details, including the responsibilities of the parties involved in the process and the number of days allowed for completing the steps in the process, see University Procedure 13.02.99.C0.03, Student Grade Appeals. These documents are accessible through the University Rules Web site at http://academicaffairs.tamucc.edu/rules_procedures/index.html. For assistance and/or guidance in the grade appeal process, students may contact the Dean’s office in the college in which the course is taught or the Office of the Provost.

Disabilities Accommodations*
The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you believe you have a disability requiring an accommodation, please call or visit Disability Services at (361) 825-5816 in Corpus Christi Hall 116. If you are a returning veteran and are experiencing cognitive and/or physical access issues in the classroom or on campus, please contact the Disability Services office for assistance at (361) 825-5816.

Statement of Academic Continuity
In the event of an unforeseen adverse event, such as a major hurricane and classes could not be held on the campus of Texas A&M University–Corpus Christi; this course would continue through the use of Blackboard and/or email. In addition, the syllabus and class activities may be modified to allow continuation of the course. Ideally, University facilities (i.e., emails, web sites, and Blackboard) will be operational within two days of the closing of the physical campus. However, students need to make certain that the course instructor has a primary and a secondary means of contacting each student.

X. TEXTBOOK

Note: This class will use an online version of LearnSmart for assignments that will be connected to Blackboard. For a cost, you do have an option of also acquiring a paperback version that will be complimentary to the ebook.

XI. BIBLIOGRAPHY

XII. COURSE SCHEDULE
This schedule is tentative and may change due to the needs of the class or other uncontrolled reasons such as inclement weather.

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