Course Name: Physiology of Exercise  
Course Number: KINE 4312.001  
Location: IH 263  
Professor: Dr. Dan Newmire PhD CSCS, CISSN  
Meeting Time: May 29th – June 29th M, T, W, Th @ 12:00 – 1:55PM  
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 4312.01, 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 physical exercise as related to fitness and performance.

III. State Adopted 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
E. Traditional lecture via power point, classroom discussion, independent learning, and online instruction/readings.
F. 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, 5 at 50-70 pts each (200-280 points) (50%)
   3. LearnSmart Assignments, 40-60 points (400-600 points)
      o Assignments are online study assignments (30-40 questions each) in which the student will answer to enhance learning and test preparation.
      o Points, test values, and numbers of assignments may be altered to best reflect the needs of the class, especially if many students are having grade issues.

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 examinations given during the semester. 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

D. NOTE REGARDING YOUR GRADES: I don’t normally round grades. At the end of the semester, however long, I will not even consider rounding up your grade or passing you on a close grade unless you have done the following: a) seen me (in person) for help on a regular basis, b) completed all point opportunities, and c) interacting regularly in class.

E. NOTE REGARDING QUALITY OF YOUR 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 (don’t make me guess). Lastly, I don’t allow you to leave short answer questions blank on a test. Writing a note to me on your test saying you don’t know the answer is the same as not attempting an answer. If you do that, I will give you a zero on all available short answer points. I don’t allow educated people to fail to try.

F. NOTE REGARDING SUBMISSION OF YOUR 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
A. Lack of attendance, for any reason (legit or not), will hurt your grade. There is no credit for coming to class. If you must be absent or do have a conflict, take responsibility for yourself for all missed class materials by obtaining notes and make arrangements as needed. Quizzes will regularly be given at the beginning of class and will not be given outside of class. This is NOT an online class. We meet in person and you will be glad we do so after you see the content. If you are one of those people who believe you can pass the class without ever showing up to class, you may want to rethink that plan. Exercise Physiology is one of your top tier classes. Regular class material requires clarification on many points. To that end, it will require your attendance.

B. If you have a conflict that will take you away from class for a significant period of time, you should contact Student Affairs. They will formally document your situation and request that instructors allow you the ability to finish if possible.

C. The highest level of personal and professional decorum is expected in the classroom. Please conduct yourself accordingly. If you are tired and feel like sleeping, please stand and take your notes to the side of the class or excuse yourself if you must.

D. Please put away your cell phones in class. If you are expecting an emergency call or
text, notify the instructor and discretely excuse yourself and handle your business. Feel free to come back in if you can. Please wait until class is over to text (yes, you can make it). If you choose to text in class, I will kindly ask you not to. If that doesn’t work, I will ask you to leave the class. Further action will be taken if necessary.

E. You may not use a computer in class for anything other than taking notes. If you are not using the computers in the classroom for note-taking, please push the screen down into the desk. Use of computers for any other function during class will be considered disruptive. If you are one of those people who like taking notes on the computer during class and surfing elsewhere between notes (yah, it’s easy to see), please cease this practice and exercise some self-control.

F. During all tests; 1) you are only allowed to have a writing utensil and a blank sheet of paper in your possession (paper will generally be provided by instructor), 2) all bags and purses will be placed along either the front or back of the classroom, 3) your cell phone should either be in the bag, purse, or on the instructor’s desk. Putting the phone in your lap, under your leg, or between your legs on the chair is a bad idea. Please do the right thing. Anybody found using any outside electronic or more primitive resources designed to aid them in passing their tests will be automatically assigned a zero for that exam.

G. All assignments submitted in this class are to be original productions. This means you created it 100% without any other student’s class materials from this semester or any previous semester. If the assignment is not 100% your production, it will be subject to the University’s Academic Integrity policies. For more information see section XII below. ANY infraction will be reported.

H. Course Conflicts
   1. While it is highly advised that you take the lecture and lab simultaneously, if you feel you must drop the lecture class (KINE 4312), be aware you DO NOT have to drop the lab (KINE 4112) as well. Likewise, if you must drop the lab, you DO NOT have to drop the lecture. Either way, you MUST officially drop the class with the University. You are not dropped from the class by not coming to class. Instructors cannot drop you from a class. Failure to officially drop the course will force the instructor to give you an F.

   2. If for some reason, you are unable to attend any class due to life circumstances beyond your control, it is highly advisable that you contact Student Affairs to document your situation. They will be able to request that professors help you if possible. If not, they may be able to help you with refunds or other resources.

I. Tests, Quizzes, and Assignment Policy:
   1. In order to get you to class and to keep you sharp, quizzes will be given regularly at the beginning of class. Yes, this is how I keep you coming to class and consistently preparing. If you miss class or are late on a regular basis you will soon find yourself in grade trouble. I don't allow make ups on these quizzes unless the University has issued an excused absence for you.
2. Tests will be taken on the designated or arranged test dates and times only, no last-minute reschedules. Late tests will not be allowed unless prior arrangements are made. Tests taken with testing services should be arranged well in advance of exams.

3. Any class assignments will be sent as documents over Blackboard and on-time. No assignment will be written or copied into the submission box on Blackboard, no matter what any other instructor in your past has done.

X. Textbook

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

Grade Appeals*
As stated in University Rule 13.02.99.C2.01, Student Grade Appeal Procedure, 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 Rule13.02.99.C2.01, Student Grade Appeal Procedure. These documents are accessible through the University Rules Web site at [http://academicaffairs.tamucc.edu/rules_procedures/index.html](http://academicaffairs.tamucc.edu/rules_procedures/index.html). For assistance and/or guidance in the grade appeal process, students may contact the Office of Student Affairs.

XIII. 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 CCH 117. 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.
XIV. Academic Honesty
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 a penalty includes all forms of cheating, such as illicit possession of examinations or examination materials, forgery, or plagiarism. (Plagiarism is the presentation of the work of another as one's own work.)

http://catalog.tamucc.edu/content.php?catoid=13&navoid=458#Academic_Honesty

XV. Classroom Conduct
Students and faculty each have responsibility for maintaining an appropriate learning environment. Faculty has the professional responsibility to treat students with understanding, dignity and respect, to guide classroom discussion and to set reasonable limits on the manner in which students express opinions. Disruptive students in the academic setting hinder the educational process. Disruption, as applied to the academic setting, means behavior that a reasonable faculty member would view as interfering with normal academic functions. Examples include, but are not limited to, persistently speaking without being recognized or interrupting other speakers, behavior which distracts the class from the subject matter or discussion, or in extreme cases, physical threats, harassing behavior or personal insults, or refusal to comply with faculty direction. Students are expected to refrain from disruptive behavior at all times. Students who fail to adhere to behavioral standards may be subject to disciplinary action.

XVI. 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 gender, ethnic/racial origin, religious background, age, sexual orientation or disability. Behaviors that infringe on the rights of another individual will not be tolerated.

XVII. 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.

XIV. Course Schedule
A. This schedule is tentative (next page) and may change due to the needs of the class or other uncontrolled reasons such as inclement weather.
<table>
<thead>
<tr>
<th>Day</th>
<th>Date</th>
<th>Lecture</th>
<th>Assignments</th>
</tr>
</thead>
<tbody>
<tr>
<td>M</td>
<td>28-May</td>
<td><strong>No Class Memorial Day</strong></td>
<td></td>
</tr>
<tr>
<td>T</td>
<td>29-May</td>
<td>Chapter 1: Common Measures of Exercise</td>
<td></td>
</tr>
<tr>
<td>W</td>
<td>30-May</td>
<td>Physiology</td>
<td></td>
</tr>
<tr>
<td>Th</td>
<td>31-May</td>
<td>Chapter 2: Control of Internal Environment</td>
<td>Chapter 3: Bioenergetics</td>
</tr>
<tr>
<td>M</td>
<td>4-Jun</td>
<td><strong>Exam I</strong></td>
<td>Chapter 1-3</td>
</tr>
<tr>
<td>T</td>
<td>5-Jun</td>
<td>Chapter 4: Exercise Metabolism</td>
<td>Due</td>
</tr>
<tr>
<td>W</td>
<td>6-Jun</td>
<td>Chapter 5: Cell Signaling and the Hormonal</td>
<td></td>
</tr>
<tr>
<td>Th</td>
<td>7-Jun</td>
<td>Responses to Exercise</td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>11-Jun</td>
<td><strong>Exam II</strong></td>
<td>Chapter 4-6</td>
</tr>
<tr>
<td>T</td>
<td>12-Jun</td>
<td>Chapter 7: The Nervous System: Structure</td>
<td>Due</td>
</tr>
<tr>
<td></td>
<td></td>
<td>and Control of Movement</td>
<td></td>
</tr>
<tr>
<td>W</td>
<td>13-Jun</td>
<td>Chapter 8: Skeletal Muscle - Structure and</td>
<td></td>
</tr>
<tr>
<td>Th</td>
<td>14-Jun</td>
<td>Function</td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>18-Jun</td>
<td><strong>Exam III</strong></td>
<td>Chapter 7-9</td>
</tr>
<tr>
<td>T</td>
<td>19-Jun</td>
<td>Chapter 10: Respiration During Exercise</td>
<td>Due</td>
</tr>
<tr>
<td>W</td>
<td>20-Jun</td>
<td>Chapter 11: Acid-Base Balance During Exercise</td>
<td></td>
</tr>
<tr>
<td>Th</td>
<td>21-Jun</td>
<td>Chapter 12: Temperature Regulation</td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>25-Jun</td>
<td><strong>Exam IV</strong></td>
<td>Chapter 10-12</td>
</tr>
<tr>
<td>T</td>
<td>26-Jun</td>
<td>Chapter 13: The Physiology of Training:</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Effect on VO_{2max}, Performance, and</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Strength</td>
<td></td>
</tr>
<tr>
<td>W</td>
<td>27-Jun</td>
<td>Chapter 18: Nutrition and Body Composition</td>
<td></td>
</tr>
<tr>
<td>Th</td>
<td>28-Jun</td>
<td>Chapter 21: Training for Performance</td>
<td></td>
</tr>
<tr>
<td>F</td>
<td>29-Jun</td>
<td><strong>Final Exam</strong></td>
<td>Chapter 13, 18, 21</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Due</td>
</tr>
</tbody>
</table>