I. COURSE DESCRIPTION

The course is an introduction to the fundamental principles of human physiology and their application to kinesiology.

II. RATIONALE

The course provides students with a foundational knowledge of the human physiology system and its application to human movement. The course content is fundamental to all upper division kinesiology courses.

III. STATE ADOPTED PROFICIENCIES FOR TEACHERS AND/OR ADMINISTRATORS/COUNSELORS

1. 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.

2. 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.

3. EQUITY IN EXCELLENCE FOR ALL LEARNERS: The teacher responds appropriately to diverse groups of learners.

4. LEARNER-CENTERED COMMUNICATION: While acting as an advocate for all students and the school, the teacher demonstrates effective professional and interpersonal communication skills.

5. 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 & CAATE COMPETENCIES & PROFICIENCIES
a. TEExES COMPETENCIES

Domain II - HEALTH-RELATED PHYSICAL FITNESS
Competency 006 - The teacher understands major body systems, principles of physical fitness development and training, and the benefits of a healthy, active lifestyle.

b. NATIONAL COMPETENCIES & PROFICIENCIES FOR ATHLETIC TRAINING (CAATE 4th Ed.)

Diagnosis Competencies Taught & Evaluated

DI-C1: Demonstrate knowledge of the systems of the human body.
DI-C5: Describe the principles and concepts of body movement including functional classification of joints, arthrokinematics, normal ranges of joint motion, joint action terminology, and muscle groups responsible for joint actions (prime movers, synergists), skeletal muscle contraction, and kinesthesia/proprioception.

V. COURSE OBJECTIVES AND OUTCOMES

As a result of successfully completing this course, the student will:

1. Understand the mechanical properties of cells and tissues and how cells are compartmentalized and form tissues within the body.

2. Discover how biological energy is acquired, transferred, and used to do biological work, how molecular interactions play a major role in protein function, and how compartmentation of enzymes is essential for organizing and separating metabolic processes.

3. Explain how substances move across cellular membranes in response to gradients and molecular interactions.

4. Understand that functional control systems require efficient communication using a combination of chemical and electrical signals.

5. Know how the endocrine system plays a major role in communication and control of physiological processes via hormonal interactions and pathways.

6. Learn how the nervous system is responsible for maintaining homeostasis and how the divisions of the nervous systems (including the central nervous system, the sensory systems, and efferent division) correlate with the different steps in a reflex pathway.
7. Understand the structure-function relationships and mechanical properties of muscles.

8. Exemplify the importance of the cardiovascular system, blood flow, and the control of blood pressure.

9. Analyze the cellular and protein components of blood and their functions.

10. Understand the mechanics of the respiratory system and how these demonstrate mass flow, homeostatic balance, mass balance, and the law of mass action.

11. Learn that the urinary and renal systems play a vital role in human physiology in terms of absorption, excretion, and filtration.

12. Understand that energy balance and metabolism are dependent upon intake, output, and the glucose that powers the brain.

13. Discover how the digestive system maintains mass balance and homeostasis through the process of secretion, absorption, and movement of nutrients and molecules across membranes.

14. Develop a basic understanding of the endocrine system, its function on growth and metabolism, and how each hormone has stimuli that initiate its secretion and feedback signals that modulate its release.

15. Know that the function of the immune system is based on chemical communication and molecular interactions between receptors, antibodies, and antigens that work together to fight pathogens.

VI. COURSE TOPICS

1. The Human Body: An Orientation
2. Basic Chemistry
3. Cells and Tissues
4. Skin and Body Membranes
5. The Skeletal System
6. The Muscular System
7. The Nervous System
8. Special Senses
9. The Endocrine System
10. Blood
11. The Cardiovascular System
12. The Lymphatic System and Body Defenses
13. The Respiratory System
14. The Digestive System and Body Metabolism
15. The Urinary System
16. The Reproductive System

VII. INSTRUCTIONAL METHODS AND ACTIVITIES

A. Traditional Experiences: readings, discussions, exams.
B. Online Experiences: presentations, written assignments, videos, interactive learning activities, Interactive Anatomy CD-ROM, quizzes, exams.

VIII. EVALUATION AND GRADE ASSIGNMENTS

COURSE REQUIREMENTS

1. Complete all assigned readings.
2. Complete all weekly assignments and associated learning activities.
3. Complete all quizzes and exams.
4. Complete all written assignments.
5. Demonstrate computer proficiency through the use of WebCT and the Internet.
6. **NOTE:** Late assignments will not be accepted. All written work must exhibit a college level competency in spelling, grammar, punctuation, and style. Written work with significant mechanical flaws will not be accepted.

EVALUATION

1. Tests (4) 100 pts. ea. 50%
2. Quizzes (16) 15 pts. ea. 30%
3. Chapter Review Assignments (16) 10 pts. ea. 20%

GRADING SCALE

90-100% A
80-89% B
70-79% C
60-69% D
59% or less F

IX. COURSE SCHEDULE AND POLICIES

Week 1-4

The Human Body: An Orientation

Basic Chemistry
Cells and Tissues

Skin and Body Membranes

Test I: Chapters 1-4

Week 5-8

The Skeletal System

The Muscular System

The Nervous System

Special Senses

Test II: Chapters 5-8

Week 9-12

The Endocrine System

Blood

The Cardiovascular System

The Lymphatic System and Body Defenses

Test III: Chapters 9-12

Week 13-16

The Respiratory System

The Digestive System and Body Metabolism

The Urinary System

The Reproductive System

Test IV: Chapter 13-16

ATTENDANCE POLICY

Students are required to punctually attend all class meetings (when applicable) and complete all assignment deadlines. Excused absences are limited to
participation in a TAMUCC sanctioned event or participation in a religious holy
day as outlined in the University catalog. Any assignment, quiz, or test missed
due to a TAMUCC sanctioned event must be completed prior to the absence.
Coursework, assignments, and quizzes may not be made up due to tardiness.
**Consistent attention to assignment instructions and submission deadlines is critical to the successful completion of this course.**

**STUDENT CONDUCT**

Professional behavior is expected of all students. Inappropriate course conduct
(cursing, disruption, etc.) may result in a reduced final grade or failure of the
course.

**NOTE: Printing online tests and/or quizzes is strictly prohibited.**

**X. TEXTBOOK**


Benjamin Cummings. Note: an electronic version of the text (eTextbook) is available at http://www.coursesmart.com/9780321720481.

**XI. BIBLIOGRAPHY**


XII. GRADE APPEALS

As stated in University Rule 13.02.99.C2, 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 Rule 13.02.99.C2, Student Grade Appeals, and University Procedure 13.02.99.C2.01, Student Grade Appeal Procedures. These documents are accessible through the University Rules Web site at http://www.tamucc.edu/provost/university_rules/index.html. For assistance and/or guidance in the grade appeal process, students may contact the Office of Student Affairs.

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 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.) Disciplinary action for academic misconduct is the responsibility of the faculty member assigned to the course. The faculty member is charged with assessing the gravity of any case of academic dishonesty, and with giving sanction to any student involved. Penalties that may be applied to individual cases of academic dishonesty include one or more of the following:

1. Written reprimand;
2. Requirement to re-do work in question;
3. Requirement to submit additional work;
4. Lowering of grade on work in question;
5. Assigning grade of “F” to work in question;
6. Assigning grade of “F” for course;
7. Recommendation for more severe punishment.
If the faculty member 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 (See XII above).

XIII. DISABILITIES ACCOMMODATIONS

Americans with Disabilities Act (ADA) - The 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 disability. 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.