COLLEGEWIDE COURSE OUTLINE OF RECORD

TMAS 210, BIOMECHANICS

COURSE TITLE: Biomechanics
COURSE NUMBER: TMAS 210
PREREQUISITES: TMAS 140 Massage Technician Training II and APHY 102 Anatomy and Physiology II
SCHOOL: Health Sciences
PROGRAM: Therapeutic Massage
CREDIT HOURS: 3
CONTACT HOURS: Lecture: 2   Lab: 2
DATE OF LAST REVISION: Summer, 2011
EFFECTIVE DATE OF THIS REVISION: Fall, 2011

CATALOG DESCRIPTION: This course provides a basic understanding of joint movement and body motion. Addresses muscle action, origin and insertion, muscle synergists, antagonists, and evaluations of forces on each body region. Entry-level biomechanical principles with the structure, function and kinesiology of each body region will be explored.

MAJOR COURSE LEARNING OBJECTIVES: Upon successful completion of this course the student will be expected to:

1. Demonstrate ability to identify and palpate muscles, their origins and insertions.
2. Discuss basic physics of joint and body movement.
3. Demonstrate knowledge of principles of biomechanics.
4. Demonstrate ability to evaluate gait.
5. Discuss types of muscle contractions.
6. Demonstrate ability to isolate muscle dysfunction in joint movement assessment.
7. Identify agonist, antagonist and synergist muscles for major joints and their roles in joint movement.
8. Identify normal posture and common postural abnormalities.

COURSE CONTENT: Topical areas of study include –

Positional release techniques
Mobility vs. stability
Muscle firing patterns
Range of motion
Proper body alignment
Planes of the body
Gait assessment
Introduction to measurement techniques
Documentation of assessment
Muscle testing
Progress evaluation
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The Ivy Tech Library is available to students’ on- and off-campus, offering full text journals and books and other resources essential for course assignments. Go to http://www.ivytech.edu/library/ and choose the link for your campus.

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The College is committed to academic integrity in all its practices. The faculty value intellectual integrity and a high standard of academic conduct. Activities that violate academic integrity undermine the quality and diminish the value of educational achievement.

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