JEFFERSON COLLEGE
COURSE SYLLABUS

PTA 115
Kinesiology
5 Credit Hours

Prepared by:
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November 2, 2011

Elizabeth Check, Dean, Career and Technical Education
Dr. Mary Beth Ottinger, Division Chair
PTA115 Kinesiology

I. CATALOGUE DESCRIPTION

A. Prerequisite: Introduction to Physical Therapy with a grade of “C” or better
B. Credit hour award: 5
C. Description: This combination lecture-lab course presents fundamental information on the biomechanical basis of human movement, with in-depth study of the structure and function of each joint within the musculoskeletal system and how each works together to allow for postural control and stability as well as dynamic movements seen in gait. By course completion, students will demonstrate safety and competency in the following data collection techniques: palpation, muscle length testing, manual muscle testing, goniometry measurements, and basic analysis of posture and gait. (S)

II. EXPECTED LEARNING OUTCOMES AND ASSESSMENT MEASURES
(Numbers in parentheses refer to CAPTE performance expectations)

<table>
<thead>
<tr>
<th>Expected Learning Outcomes</th>
<th>Assessment Measures</th>
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<tbody>
<tr>
<td>Apply the convex-concave rule of arthokinematic motion to each joint of the body.</td>
<td>Summative Written Examinations</td>
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<td>Classroom Discussion/Activity</td>
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<tr>
<td>Compare and contrast first, second, and third class levers.</td>
<td>Summative Written Examinations</td>
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<td>Classroom Discussion/Activity</td>
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<td>Identify the origin, insertion, action, and innervations of each muscle of the body.</td>
<td>Summative Written Examinations</td>
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<td>Practical Examinations</td>
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<td>Skills Checks</td>
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<td>Class Discussion/Activity</td>
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<td>Written Assignments</td>
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<td>Describe ideal standing, sitting, and supine postures.</td>
<td>Summative Written Examinations</td>
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<td>Practical Examinations</td>
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<tr>
<td>Describe the stance and swing phases and determinants of normal gait.</td>
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<td>Practical Examinations</td>
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<td>Identify potential causes of atypical gait patterns.</td>
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<td>Practical Examinations</td>
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<td>Skills Checks</td>
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<td>Demonstrate appropriate interactions with patients, physical therapists, and other health care professionals in written, verbal, and nonverbal communication. (3.3.2.1.)</td>
<td>Class Discussion/Activity Written Assignments</td>
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<td>Recognize individual and cultural differences and respond appropriately in all aspects of physical therapy services. (3.3.2.2.)</td>
<td>Practical Examinations Class Discussion/Activity Summative Written Examinations Written Assignments</td>
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<tr>
<td>Demonstrate conduct that reflects practice standards that are legal, ethical, and safe as well as reflect a commitment to meet the expectations of those receiving health care services and members of the profession of physical therapy. (3.3.2.3., 3.3.2.4., 3.3.2.5.)</td>
<td>Practical Examinations Skills Checks Class Discussion/Activity</td>
</tr>
<tr>
<td>Demonstrate how to implement the plan of care developed by the physical therapist to achieve short and long term goals and intended outcomes related to transfers and gait. (3.3.2.6.)</td>
<td>Practical Examinations Summative Written Examinations Written Assignments Class Discussion/Activity</td>
</tr>
<tr>
<td>Demonstrate competence in implementing components of the plan of care established by the physical therapist to include functional training, therapeutic exercise for range of motion, postural awareness, stretching, and strengthening as they relate to patients with neurological conditions. (3.3.2.7., 3.3.2.7.5., 3.3.2.7.24-27.)</td>
<td>Practical Examinations Skills Checks</td>
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<tr>
<td>Demonstrate competence in performing components of data collection skills essential for carrying out the plan of care to include muscle length testing, joint integrity via palpation and end feel, muscle performance via manual muscle testing, range of motion via goniometry, posture, and gait as they relate to patients</td>
<td>Practical Examinations Skills Checks</td>
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with neurological conditions. (3.3.2.8., 3.3.2.8.14-17, 3.3.2.8.24-27.)

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<thead>
<tr>
<th>Determine when the direction to perform an intervention is beyond that which is appropriate for a physical therapist assistant and initiate clarification with the physical therapist. (3.3.2.12.)</th>
<th>Class Discussion/Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Explain desired outcomes to the appropriate stakeholders to achieve goals based on the plan of care established by the physical therapist while under the direct supervision of a physical therapist. (3.3.2.13., 3.3.2.14.)</td>
<td>Classroom Activity/Discussion Practical Examinations</td>
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<td>Describe appropriate actions to take in an emergency situation. (3.3.2.15)</td>
<td>Classroom Discussion/Activity Written Assignments Summative Written Examinations Practical Examinations</td>
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<td>Produce thorough, accurate, logical, concise, timely, and legible documentation that follows guidelines and specific documentation formats required. (3.3.2.16.)</td>
<td>Written Assignments Summative Written Examinations</td>
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III. OUTLINE OF TOPICS

A. Skeletal and Articular Systems
   1. Body Segments
   2. Types of Motion
   3. Type of Joints
   4. Planes and Axes
   5. Degrees of Freedom

B. Arthrokinematics
   1. Osteokinematic Motion
   2. End Feel
   3. Accessory Motions and Forces
   4. Convex-Concave Rule
   5. Joint Congruency

C. Muscular System
   1. Attachments
   2. Fiber Arrangement
   3. Length-Tension Relationship
   4. Types of Contraction
5. Angle of Pull

D. Biomechanics
   1. Laws of Motion
   2. Force
   3. Torque
   4. Stability
   5. Levers
   6. Pulleys

E. Joints and Motions, Bones and Landmarks, Ligaments, Muscle Length and Strength, Function, Range of Motion, and Basic Therapeutic Exercise Techniques for Each of the following:
   1. Shoulder Girdle
   2. Shoulder Joint
   3. Elbow Joint
   4. Wrist Joint
   5. Hand
   6. Temporomandibular Joint
   7. Neck and Trunk
   8. Thoracic Cage
   9. Pelvic Girdle
   10. Hip Joint
   11. Knee Joint
   12. Ankle Joint
   13. Foot

F. Posture
   1. Vertebral Alignment
   2. Standing Posture
   3. Sitting Posture
   4. Supine Posture

G. Gait
   1. Stance Phase
   2. Swing Phase
   3. Determinants of Gait
   4. Age-Related Gait Patterns
   5. Atypical Gait

IV. METHOD(S) OF INSTRUCTION

A. Lecture
B. Textbook Readings
C. Supplemental Handouts
D. Active Learning in the classroom setting
E. Case Studies
F. Hands-on interaction during laboratory portion of course in which the students will act as both the patient and the physical therapist assistant to practice skills.
V. REQUIRED TEXTBOOK(S)

D. Interactive Functional Anatomy DVD

VI. REQUIRED MATERIALS

A. A computer with internet access and basic software to include Word and Power Point (available through Jefferson College labs)
B. Course homepage available through Blackboard
C. Appropriate clothing to both lab practice and practical testing experience as defined by student handbook
D. Binder, paper, pens, pencils with erasers

VII. SUPPLEMENTAL REFERENCES

A. Class Handouts
B. Current Library Resources
   1. Supplemental texts
   3. Periodicals
   4. Videos
C. Current Internet Resources
   1. On-line references
   2. Textbook companion website
   3. American Physical Therapy Association (APTA) website

VIII. METHOD OF EVALUATION

A. Summative Written Examinations: 40%
B. Practical Examinations: 30%
C. Skills Checks: 10%
D. Written Assignments: 10%
E. Attendance/Participation: 10%
F. Grading Scale:
   A=92-100%
   B=84-91.9%
   C=75-83.9%
   D=65-74.9%
   F=64.9% and below

IX. ADA STATEMENT

Any student requiring special accommodations should inform the instructor and the Coordinator of Disability Support Services (Library: phone 636-797-3000, ext. 3169).

X. ACADEMIC HONESTY STATEMENT

All students are responsible for complying with campus policies as stated in the Student Handbook. Any student who cheats or plagiarizes will be subject to dismissal from the Physical Therapist Assistant program and will be referred to the college for disciplinary action. (See College website, http://www.jeffco.edu/jeffco/index.php?option=com_weblinks&catid=26&Itemid=84 )