

MARTIN COMMUNITY COLLEGE
COURSE SYLLABUS
Semester/Year: Spring 2011

COURSE NUMBER: PTA 120 (5W1)	INSTRUCTOR: Dr. Jean Lambert
COURSE TITLE: Functional Anatomy	OFFICE NO: Building 3, Room 45
CREDIT HOURS: 3	OFFICE/VIRTUAL HOURS: MW 8:00-9:00
CONTACT HRS/WK: 8 (2 class, 6 lab)	PHONE NO: 252-792-1521 extension 237
PREREQUISITES: Enrollment in the Physical Therapist Assistant Program	FAX: 252-792-0826
COREQUISITES: PTA 140	E-MAIL: jlambert@martincc.edu

COURSE DESCRIPTION: This course provides an organized study of anatomy and kinesiology. Emphasis is placed on the integration of structure and function of the skeletal, articular, muscular, nervous, and circulatory systems. Upon completion, students should be able to describe the components and demonstrate function of these systems as applied to physical therapy.

PROGRAM LEARNING OUTCOMES:

1. Perform duties and patient care activities appropriate for a skilled PTA.
2. Apply the knowledge, skills and techniques learned in the PTA didactic courses to safe and effective patient care.
3. Recognize the needs of the patient, family and caregivers as well as document changes in the patient's condition and communicate these changes to the PT.
4. Effectively and accurately communicate information relevant to patient status, progress, and safety in the patient's record, to the supervising physical therapist and with the patient's health care team.
5. Demonstrate ethical, legal, safe, and professional conduct appropriate in a health care setting.

COURSE LEARNING OUTCOMES:

1. Identify and demonstrate all joint motions and muscle actions.
2. Name the major muscles responsible for each joint action, their bones or origin and insertion and their topical location and common dysfunction.
3. Identify the innervations of all major muscles responsible for joint actions, including dysfunction of muscle action and sensory loss with nerve injury.

ADDITIONAL COURSE OBJECTIVES: Specific objectives are given for each chapter in the textbook.

Upon completion of this course, as determined by tests, quizzes and assignments with a minimum passing grade of 77%, the student will be able to:

1. Name, describe and demonstrate all osteokinematic and arthrokinematic joint motions and muscle actions of the head, trunk and extremities.
2. Describe and utilize basic mechanical principles including levers, mechanical advantage, lines of pull, and vectors as it relates to function.
3. Describe the physiological structure, types of contractions, length-tension relationship, force-velocity relationship, of skeletal muscle contraction as it relates to function.
4. Describe bone anatomy, types of bones as it relates to function. Identify bones and identify/palpate bony landmarks of the skeletal system.

5. Describe the structure, classification and mechanics for major joint complexes using muscle function and arthrokinematic principles. Name major ligaments and bursa associated with joint function. Describe common dysfunction of joints, bursa and ligaments.
6. Name the major muscles responsible for each joint action, their bony landmarks of origin and insertion, their topical location and common dysfunction.
7. Describe central and peripheral nervous system divisions. Describe role of sensory feedback in the control of movement. Identify the innervation of muscles responsible for joint actions, including dysfunction of muscle action and sensory loss with nerve injury. Describe function of cranial nerves associated with sensory function and movement. Perform UE and LE screening exams while identifying myotomes. Perform selected testing of dermatomes, peripheral nerve sensory nerve loss and peripheral motor nerve loss.
8. Identify the major arteries and veins associated with circulation of the trunk and extremities. Locate superficial arteries and palpate for pulse.
9. Describe the neuromuscular processes controlling UE/LE/Trunk movement during gross movement of functional tasks and gait, fine motor activities (ADLs), mastication and ventilation. Discuss the effects of loss of muscle function on the gait cycle.
10. Discuss the application of functional anatomy to clinical problem solving and patient treatment.

REQUIRED TEXTBOOKS: Mansfield, Neumann. (2008). Essentials of kinesiology for the physical therapist assistant. St. Louis: Elsevier/Mosby. ISBN: 978-0-323-03616-0.

SUPPLEMENTAL RESOURCES: (1) Floyd. (2007). Manual of structural kinesiology (16th ed.). Chicago: MCG. ISBN: 0-07-302873-8.(2) Neumann. (2002). Kinesiology of musculoskeletal system (2nd ed.). Philadelphia: Elsevier/Mosby. ISBN: 0-8151-6349-5. Netter, Frank. (most recent). Atlas of Human Anatomy, 2nd edition, ISBN 0-914168-08-0.

LEARNING/TEACHING METHODS: Lecture, powerpoints, handouts, video, palpations, skeleton models, electrical stimulation, internet, outside reading assignments.

ASSESSMENTS/METHODS OF EVALUATION:

1. Written Exams 40%
2. Laboratory Exams 15%
3. Quizzes (18 of 22) 44%
4. Assignments 1%
5. Outside Reading Assignments: Averaged as a quiz grade.

GRADING POLICY: A 93-100
 B 85-92
 C 77-84
 D 70-76
 F below 76

Students must maintain at least an average of 77% in this class to remain in the PTA program.

COURSE OUTLINE:

WEEK ONE	Introduction to Skeleton, Muscles, Joints, Nervous System, Circulatory System
WEEK TWO	(Continue)
WEEK THREE	(Continue)
WEEK FOUR	Principles of Kinesiology and Biomechanics
WEEK FIVE	(Continue)

WEEK SIX	(Continue)
WEEK SEVEN	Normal and pathology associated with Skeletal structure, muscles, nerves, and circulation of the neck and trunk
WEEK EIGHT	(Continue)
WEEK NINE	(Continue)
WEEK TEN	Normal and pathology associated with Skeletal structure, muscles, nerves, and circulation of the upper extremity
WEEK ELEVEN	(Continue)
WEEK TWELVE	(Continue)
WEEK THIRTEEN	Normal and pathology associated with Skeletal structure, muscles, nerves, and circulation of the lower extremity
WEEK FOURTEEN	(Continue)
WEEK FIFTEEN	Exercise/Gait

STUDENT ATTENDANCE POLICY: The College has a specific absence policy for all courses, which states that students are expected to attend a minimum of 80% of the total hours of the class, which includes classes, labs, and shops. Students must be present at least one class during the first 10% of a course in order to be considered enrolled in the class. If a student has not attended at least one class by the 10% census date, the instructor will administratively withdraw the student. This program abides by the MCC policy. When an absence is unavoidable in a program course, the student is to notify the class instructor by telephone prior to the scheduled class time as to the reason for the absence. Upon return, the student is to meet personally with that instructor to discuss the class(es) missed and identify make-up work. This is the student's responsibility and must be done in a timely manner.

Experience has shown that a person with frequent absences or tardy arrivals as a student demonstrates this same behavior as a worker. A potential employer usually inquires as to the student's behavior in regard to absences or tardiness as it reflects a possible problem as a worker. In a physical therapy department, workers depend on each other to be present and on time to get the work done without imposing a hardship or overload on others. The PTA program is preparing you to be employed in physical therapy departments. We want you to be dependable and reliable as employees, thus as students.

REQUEST FOR EXCUSED ABSENCES FOR RELIGIOUS OBSERVANCES

*In compliance with G.S. 115D-5, MCC policy permits a student to be excused, with the opportunity to make-up any test or other missed work, a minimum of two excused absences per academic year for religious observances required by the student's faith. The policy limits the excused absences to a maximum of two days per academic year. Students who wish to be excused for a Religious Observance required by their faith must complete and submit a request form to the instructor(s) prior to the census date of each class. The *Request for Excused Absences for Religious Observances* form can be picked up from Student Services. This does not supersede the college-wide attendance policy as outlined in the college catalog or syllabus, with the exception of a reasonable accommodation for the make-up of missed course work.

COURSE POLICIES: Make-up Policy: Make-up exams are allowed with permission of the instructor. Contact Instructor before the exam. Exams will be taken on the first day you return to class following an absence. Assignments are due on the date assigned; a letter grade will be deducted for each day that an assignment is late. Quizzes cannot be made up.

If you cannot reach your instructor, you may contact Dr. Phyllis Broughton, Dean of Academic Affairs and Student Services at (252)792-1521 extension 246 by phone, pbroughton@martincc.edu by e-mail, or in person at her office in Building 2, Room 33.

To access the Martin Community College Career Catalog for policies and curriculum requirements, please go online to www.martincc.edu.

If you have a need for a disability-related accommodation, please notify the Student Services counselor at (252) 792-1521, ext. 293.