

(Revised 10/10/10)

CHATTANOOGA STATE COMMUNITY COLLEGE
NURSING & ALLIED HEALTH DIVISION

PHYSICAL THERAPIST ASSISTANT COURSE SYLLABUS

PT 123 FUNCTIONAL ANATOMY

CLASS HOURS: 3

CREDIT HOURS: 4

LABORATORY HOURS: 3

CATALOG COURSE DESCRIPTION: A course designed to integrate muscle innervation, position and function of the musculoskeletal system for specific joints and their muscular components. Students are taught palpation skills, joint range of motion, goniometric measurement and manual muscle testing. Biomechanical concepts are also integrated with this course as they relate to simple movement analysis and kinesiology.

ENTRY LEVEL STANDARDS: The student must have a reading level beyond DSPR 0800, a mathematics competency of at least DSPM 0850 and an English grammar competency above DSPW 0800 or have demonstrated through standardized tests the ability to perform at such a level. The student **must exhibit the attitudinal characteristics necessary for this profession.**

PREREQUISITES: Admission in the Physical Therapist Assistant Program.

COREQUISITES: PT 104, PT 115, BIOL 1010, PHYS 1030

TEXTBOOK(S) AND OTHER REFERENCE MATERIAL REQUIRED FOR THE COURSE:

1. Physical Examination of the Spine and Extremities, Stanley Hoppenfeld, Copyright 1976 by Appleton & Lange, division of Prentice-Hall Publisher.
2. Daniels and Worthingham Muscle Testing, Hislop, 8th edition, Copyright 2007 by Elsevier Science/W.B. Saunders.
3. Clinical Kinesiology and Anatomy, 4th edition, Lippert, Copyright 2006 by F.A. Davis.
4. Measurement of Joint Motion, 3rd Edition, Norkin, Copyright 2003 by F.A. Davis.
5. Trail Guide to the Body, 3rd edition, Biel, Copyright 2005 by Books of Discovery,.
6. Trail Guide to the Body, Student Handbook, Copyright 2005 by Books of Discovery
7. CSTCC Student Packet

CHATTANOOGA STATE INSTITUTION STUDENT LEARNING OUTCOMES (ISLOs):

Chattanooga state has identified its college-level competencies and the student learning outcomes that it expects the graduates of its educational programs to have attained at appropriate levels for each program. These outcomes reflect the knowledge, skills and attitudes that a community college graduate is expected to have developed, including:

- **Effective Communication (COM):** includes speaking, writing and graphic presentation skills
- **Analytical and Critical Thinking Skills (CT):** includes skills of categorization, decoding significance, clarifying meaning, examining ideas, detecting arguments, and analyzing arguments into their component elements. Purposeful, self-regulatory judgment which results in interpretation, analysis, evaluation, and inference, as well as explanation of the evidential, conceptual, methodological, criteriological, or contextual considerations upon which that judgment is based.
- **Information Technology Skills (TEC):** includes use of computers, online learning, information seeking, and use of new technologies.
- **Societal & Cultural Awareness (CUL):** includes awareness of how societal and cultural differences affect an individual's life, focusing on diversity and collaboration.
- **Foundational Knowledge in a Specialty (KNO):** the specialty-specific competencies that each graduate of the program is expected to achieve.
- **Work Ethic (WE):**

PTA PROGRAM STUDENT LEARNING OUTCOMES (PSLOs):

By the completion of the program, in addition to the college ISLO, Chattanooga State PTA Program Graduates will display the following physical therapy competencies/outcomes which link to Chattanooga State's ISLOs:

A. Decision Making: (College ISLO: KNO, CT, TEC, CUL, COM)

- A.1 When necessary, modify intervention or data collection appropriate to changes in patient/client condition to achieve goals established by the PT and within the scope of practice of a PTA .
- A.2. Use knowledge and information available to make reasonable and appropriate decisions regarding patient care.

B. Communication/Teaching: (College ISLO: COM, TEC, KNO)

- B.1 Appropriately use medical language and physical therapy language in verbal and written or electronic communication
- B.2. Communicate with the patient/client to relay relevant instructions regarding the physical therapy interventions.
- B.3 Communicate with the physical therapist and/or other members of the health care team regarding patient/client status, progress, or need for re-evaluation by the PT.
- B.4. Educate others about physical therapy and the role of the PTA.
- B.5. Provide patient/client education about their physical therapy intervention and any additional instructions.

C. Providing Physical Therapy Interventions: (College ISLO: KNO, COM, TEC)

- C.1. Provide physical therapy interventions and data collection in a time efficient manner with all necessary documentations.

- C.2. Identify and describe background theory, pathological conditions, surgical conditions, and other issues that may influence the patient/client's physical therapy.
 - C.3 Effectively and safely provide physical therapy interventions under the supervision of a physical therapist and as outlined by the physical therapist in the plan of care established for the patient/client.
- D. Displaying Professional Behavior:** (College ISLO: COM, CUL, CT, ANA, KNO , WE)
- D.1 Recognize importance of lifelong learning and resources available for development opportunities
 - D.2. Comply with APTA's core values of accountability, altruism, compassion/caring, cultural competence, duty, integrity, and social responsibility.
 - D.3. Display behavior consistent with APTA's Standards of Ethical Conduct for the Physical Therapist Assistant.
 - D.4 Abide by state practice act in the provision of physical therapy.
 - D.5 Display a work ethic that aligns with Chattanooga State's college expectations as well as those of the Division of Allied Health and Nursing and the PTA Program.

Required Student Learning Outcomes: Program Student Learning Outcomes(PSLOs) and Course Student Learning Outcomes (CSLOs) with specific indicators or instructional objectives.

PTA program student learning outcomes (PSLOs) consist of four broad outcome statements (with additional descriptors for each) that describe the abilities of the graduates of the Chattanooga State PTA Program.

The following list of Course Student Learning Outcomes (CSLOs) represents specific objectives and includes skills, knowledge and attitudes that the student will obtain or be able to perform upon completion of the course. These CSLOs and instructional objectives (IOs) or indicators are linked to the overall PTA Program Student Learning Outcomes (PSLOs). Collectively, the CSLOs from all program courses enable students to achieve the program student learning outcomes. The student is required to perform at a minimal competency of 70% on the specific CSLO.

PSLO # 1: Decision Making:

CSLO #1: When necessary, modify intervention or data collection appropriate to changes in patient/client condition to achieve goals established by the PT and within the scope of practice of a PTA .

1. Describe or recognize when alternative testing methods for MMT and goniometry are needed.

2. Observe “patient's” condition prior to each data measurement and make appropriate clinical decisions concerning proceeding with interventions.

CSLO#2: Use knowledge and information available to make reasonable and appropriate decisions regarding patient care.

1. Recognize appropriate data to report to the physical therapist.
2. Recognize and identify or describe patient condition changes that require further action by the PT or other health care personnel.

PSLO #2: Communication/Teaching

CSLO #3: Appropriately use medical language and physical therapy language in verbal and written or electronic communication

Define and use medical language and physical therapy terms.

1. Document relevant data related to muscle function, joint ROM, and strength.
2. Recognize when communication is appropriate with patient/client and with supervising physical therapist and choose appropriate communication methods.

CSLO #4: Communicate with the patient/client to relay relevant instructions regarding the physical therapy interventions. This CSLO is additionally defined via the following **indicators or instructional objectives** :

1. Communicate to lab partner in a patient/client scenario by introducing self as a Chattanooga State PTA student, giving instructions, describing the intervention or data gathering technique to be done, gaining patient consent to proceed, and soliciting patient questions about the process.
2. Verify patient/client identify (of lab partner) prior to beginning any intervention in a practical or check off assessment.

PSLO #3: Providing Physical Therapy Interventions

CSLO # 5 : Provide physical therapy interventions and data collection in a time efficient manner with all necessary documentations. In particular, perform data collection techniques of manual muscle testing for a given muscles at a given MMT grade of trunk and/or extremities and document correct muscle grade for this data collection.

CSLO # 6: Identify and describe background theory, pathological conditions, surgical conditions, and other issues that may influence the patient/client’s physical therapy. This CSLO is additionally defined via the following **indicators or instructional objectives** :

1. Identify and describe methods for assisting with initial and ongoing patient evaluation by the physical therapist.

2. Identify and list normal ranges of motion and kinesiology for each of the following joints:
 - a. Hip and Pelvis
 - b. knee
 - c. foot and ankle
 - d. shoulder girdle
 - e. elbow/wrist/hand
 - f. trunk, spine and face/TMJ
3. Identify surface anatomy, bony landmarks, muscles, tendons, nerves, joint lines, and superficial ligaments on a diagram, chart or anatomical model or skeleton for hip and pelvis, knee, foot and ankle, shoulder girdle, elbow, wrist, hand, trunk, spine, and cranium.
4. Describe or list proper posture or positioning in standing, sitting, or supine and critique posture of lab partner.
5. Describe the relationship of anatomical structures in normal and abnormal movement via directional terms (including medial, lateral, superior, inferior, caudal) and planes of movement (including frontal/coronal, sagittal, and transverse).
6. Recognize or list specifics of muscle location, origin (or proximal attachment) , insertion (or distal attachment), innervation and function for given muscles of the extremities and trunk.
 - a. Hip and Pelvis
 - b. knee
 - c. foot and ankle
 - d. shoulder girdle
 - e. elbow/wrist/hand
 - f. trunk and cervical spine
 - g. face
7. Define manual muscle testing (MMT) grades and compare numerical grades with zero, trace, poor, fair, good, and normal descriptions. (PGO: A.2)
8. Identify nerve supply, arterial supply and dermatomes of the trunk, upper and lower extremity.
9. Describe basic biomechanical concepts and how they influence human movement.
10. Discriminate concentric versus eccentric muscle contractions during movement and identify the associated muscles responsible for the movement.
11. Label the brachial and lumbar plexus and arteries in Upper and Lower Extremities.
12. Define and give example positions for passive and active insufficiency in UE and LE muscles.
13. Recognize and avoid substitutions common during MMT.
14. Identify factors that may limit joint motion when measuring with goniometer.
15. Describe functional losses at joints associated with pathology.

16. Correlate surface area with dermatome chart or peripheral nerve distribution area.
17. Identify tight muscle that limits joint ROM.

CSLO # 7: Effectively and safely provide physical therapy interventions under the supervision of a physical therapist and as outlined by the physical therapist in the plan of care established for the patient/client. This CSLO is additionally defined via the following **indicators or instructional objectives** :

1. Apply safety techniques when positioning patients for palpation of specific surface anatomy, performing manual muscle test (MMT) , or Goniometric Measurements.
2. Perform and document goniometric measurements on a given joint of your lab partner, report expected normal measurements for the joint, and recognize abnormal joint movement.
3. Observe standard precautions when interacting with lab partner in lab and in practical examinations or check offs by using gloves, mask, gown as necessary, cleaning treatment surfaces as required, and by washing hands or using hand sanitizer before and after intervention.
4. Measures functional ROM and performs functional muscle testing on lab partner when given a case scenario.
5. Perform simple movement analysis for individual joints and combined joint movement.
6. Identify surface anatomy and be able to palpate bony landmarks, muscle, tendons, joint lines, and superficial ligaments on self or lab partner.
7. Palpate pulse at carotid, brachial, ulnar, median, dorsalis pedis, posterior tibial, femoral, and radial arteries on lab partner.
8. Measures leg length of lab partner from ASIS to medial malleolus.
9. Measures and documents limb girth of lab partner and compare to contralateral extremity.
10. Palpate muscle mass of given muscle and compare size to contralateral side.
11. Determine end feel (hard, empty, spongy,etc) of joint.

PSLO #4: Displaying Professional Behavior

CSLO # 8: Comply with APTA's core values and Standards of Ethical Conduct for the PTA.

1. Demonstrate personal characteristics in line with APTA's Standards of Ethical Conduct for the Physical Therapist Assistant.

2. Honors APTAs core values of accountability, altruism, compassion/caring, cultural competence, duty, integrity, and social responsibility when planning for patient/client contact in the laboratory setting.
3. Demonstrate respect for lab partner's right for physical privacy, confidentiality and dignity, and by respecting draping and HIPPA procedures.
4. Show respect that honors individual and cultural differences to classmates and instructors when asking questions or performing interventions or data collection.

CSLO # 9 : Display a work ethic that aligns with Chattanooga State's college expectations as well as those from the Division of Allied Health and Nursing and the PTA Program.

EVALUATION/ASSESSMENT PROCEDURES:

- A. PRECOURSE ASSIGNMENT:** A pre-course assignment is sent to students approximately 2 weeks before the semester begins. It provides beginning information to prepare for class, definitions, and muscle, bone, and joint diagrams. Students must complete this by the first day of class for homework credit and in review for a quiz. (
- B. WRITTEN EXAMS:** Objective typewritten tests will be given following each section for a total of 6 tests(each determines 8.25% of final grade). These exams will cover any material previously presented in lecture, lab, text, or homework.
 - EXAM 1:** (PSLO 1, CSLO 1,2) (PSLO 2, CSLO 3) (PSLO 3, CSLO 5,6,7)
 - EXAM 2:** (PSLO 1, CSLO 1,2) (PSLO 2, CSLO 3) (PSLO 3, CSLO 5,6,7)
 - EXAM 3:** (PSLO 1, CSLO 1,2) (PSLO 2, CSLO 3) (PSLO 3, CSLO 5,6,7)
 - EXAM 4:** (PSLO 1, CSLO 1,2) (PSLO 2, CSLO 3) (PSLO 3, CSLO 5,6,7)
 - EXAM 5:** (PSLO 1, CSLO 1,2) (PSLO 2, CSLO 3) (PSLO 3, CSLO 5,6,7)
 - EXAM 6:** (PSLO 1, CSLO 1,2) (PSLO 2, CSLO 3) (PSLO 3, CSLO 5,6,7)
- C. FINAL EXAM:** A cumulative final exam will be given (determines 18% of grade). (PSLO 1, CSLO 1,2) (PSLO2, CSLO 3,4) (PSLO 3, CSLO 5,6,7)
- D. LABORATORY EXAMINATIONS:** Two Lab Practical examinations will be given (each determines 12% of final grade). Two lab practical examinations will be given during the semester. Students will be evaluated for competency in goniometric measurement; manual muscle testing; joint range of motion; attachments, innervation and function of muscles; and palpation of landmarks on fellow student(s). They will also be expected to perform critical elements of safety including identifying themselves as PTA students, identification of patient, description of procedure, obtaining consent for treatment, using standard safety precautions and infection control techniques while maintaining their lab partners dignity and privacy. Each student must complete each lab practical with a minimum of 70% competency. If a student performs at less than 70% one additional lab practical exam will be given— usually within one week and after remediation time is spent with the instructor. If the

student fails to pass the additional laboratory exam with 70% competency, the student cannot continue in PT 123 and will receive an "F" in the course. They will be dismissed from the PTA program and must follow Chattanooga State's withdrawal policy for their remaining PTA courses. For students who pass the additional practical, the original grade and the repeat grade will be documented on the exam. However, the recorded grade will be a 70 and averaged with all other evaluation methods to determine the final grade. No make-up practical will be given for unexcused absences. (PSLO 3, CSLO 6,7) (PSLO 4, CSLO 8)

- E. QUIZZES:** Quizzes may be given on material being covered at that time or at any time previous (average of quizzes determines 5% of final grade). (PSLO 3, CSLO 5,6,7)
- F. CLASS PARTICIPATION/PREPARATION:** Class participation and preparation for class is of utmost importance for successful completion of this course. Your preparation as evidenced by your ability to answer questions orally in class, participation in discussions, group cooperation and participation, effective use of lab time and problem solving will account for 3.5% of your final grade. (PSLO 4, CSLO 8)

The final grade for the course must be 70% or better to continue in the Physical Therapist Assistant Program.

- G. FIELD WORK:** Students are expected to participate in arranged lab experiences/observations @ UTC's Cadaver lab. Usually students go 2 times during the semester—once for review of prosected upper extremities and once for lower extremities/ trunk. (PSLO 4, CSLO 9) (PSLO 3, CSLO 6)
- H. OTHER EVALUATION METHODS:** Student's final grade will be lowered due to more than 3 unexcused absences (as defined in the PTA Student Handbook). Tardiness is considered a partial absence and three tardies equals one absence. (PSLO 4, CSLO 9)

CSLO/Assessment Alignment:

CSLO:	CSLO#1	CSLO#2	CSLO#3	CSLO#4	CSLO#5	CSLO#6	CSLO#7	CSLO#8	CSLO#9
PT 123 assessments	Exam 1-6, Final exam, Lab Prac 1,2 Class participation	Pre-course assignment, Exam 1-6, Final exam, lab prac 1,2,	Pre-course assignment, Exam 1-6, Final exam, lab prac 1,2,	Exam 1-6, Final Exam, Lab prac 1,2, Class participation	Pre-course assignment, Exams 1-6, Final Exam, Lab prac 1,2, Quiz 1-26, Class participation	Pre-course assignment, Exams 1-6, Final Exam, Lab prac 1,2, Quiz 1-26, Class participation, Cadaver lab @ UTC	Pre-course assignment, Exams 1-6, Final Exam, Lab prac 1,2, Quiz 1-26, Class participation	Lab Prac 1,2, Attendance	Lab Prac 1,2, Attendance

I. GRADES:

Exams (6 @ 8.25% each)	= 49.5%
Lab Practical (2 @ 12% each)	= 24.0%
Final Exam	= 18.0%
Quizzes	= 5.0%
Class participation	= <u>3.5%</u>
	100%

A = 90-100

B = 80-89

C = 70-79

D = 60-69

F = < 60

For successful completion of all PTA courses, the student must have an overall grade of at least a "C". Students who do not earn at least a "C" will be subject to the program dismissal policy as described in the PTA student handbook.

WEEK/UNIT/TOPIC BASIS: A systematic and orderly list of activities and/or events that will comprise the total allotted time for the course.

WEEK	UNIT	TOPIC BASIS
1-2	Part I	Skeletal, Muscular and Nervous System Overview , Basic Biomechanics, Principles of Manual Muscle Testing, Goniometry and palpation
3-4	Part II	Structure and Function of the Hip and Pelvis
5 -6	Part III	Structure and Function of the Knee
7-8	Part IV	Structure and Function of the Foot and Ankle
9		Lab practical/exam
10-11	Part V	Structure and Function of the Shoulder Girdle
12-13	Part VI	Structure and Function of the Elbow/Wrist/Hand
14	Part VII	Structure and Function of the Trunk, Spine and Face/TMJ
15		Final exam

METHODOLOGY/INSTRUCTIONAL ACTIVITIES (IA): The strategies, methods, and processes that will occur within the course to provide students with an opportunity to achieve the stated course competencies are identified in the course schedule and include these activities:

- IA.1. Lecture/discussion
- IA 2. E-Learn news items
- IA 3. Comparison and discussion using diagrams and models
- IA 4. Student critiques of case examples of data collection techniques
- IA 5. Student self instruction/review with faculty guidance.
- IA 7. Homework
- IA 8. Laboratory practice with lab partner

COURSE DELIVERY FORMAT:

This course is most closely aligned with the college **Standard Format**—This format is the traditional format and may use an online format to provide access to “static” materials which include the syllabus, course material, contact information, and presentations. Faculty must make available when requested a copy of syllabus and any other instructor provided course materials, including their contact information. Faculty may require on-line activities and assignments to include online testes and submission of all written and on-line

communications. The extent of on-line activities/assignments may vary by course but will be specified on the syllabus.

COLLEGE POLICIES

This class is governed by the policies and procedures stated in the current Chattanooga State Student handbook. Additional or more specific guidelines may apply such as those located in the Allied Health Division Handbook and in the Physical Therapist Assistant Program Handbook.

ADA statement

Students who have educational, psychological, and/or physical disabilities may be eligible for accommodations that provide equal access to educational programs and activities of Chattanooga State. These students should notify the instructor immediately, and should contact Disabilities Support Services within the first two weeks of the semester in order to discuss individual needs. The student must provide documentation of the disability so that reasonable accommodations can be requested in a timely manner. All students are expected to fulfill essential course requirements in order to receive a passing grade in a class, with or without reasonable accommodations.

Disruption Statement

The term “classroom disruption” means--student behavior that a reasonable person would view as substantially or repeatedly interfering with the activities of a class. A student who persists in disrupting a class will be directed by the faculty member to leave the classroom for the remainder of the class period. The student will be told the reason (s) for such action and given an opportunity to discuss the matter with the faculty member as soon as practical. The faculty member will promptly consult with the division dean and the college judicial officer. If a disruption is serious, and other reasonable measures have failed, the class may be adjourned, and the campus police summoned. Unauthorized use of any electronic device constitutes a disturbance. Also, if a student is concerned about the conduct of another student, he or she should please see the teacher, department head, or division dean.

Affirmative Action

Students who feel that he or she has not received equal access to educational programming should contact the college affirmative action officer.

Academic Integrity/Academic Honesty

In their academic activities, students are expected to maintain high standards of honesty and integrity. Academic dishonesty is prohibited. Such conduct includes, but is not limited to, an attempt by one or more students to use unauthorized information in the taking of an exam, to submit as one's own work, themes, reports, drawings, laboratory notes, computer programs, or other products prepared by another person, or to knowingly assist another student in obtaining or using unauthorized materials. Plagiarism, cheating, and other forms of academic dishonesty are prohibited. Students guilty of academic misconduct, either directly or indirectly through participation or assistance, are immediately responsible to the instructor of the class. In addition to other possible disciplinary sanctions, which may be imposed through the regular institutional

procedures as a result of academic misconduct, the instructor has the authority to assign an "F" or zero for an activity or to assign an "F" for the course.

The instructor reserves the right to modify this syllabus in writing during the course of the semester.

PROGRAM/COURSE POLICY AND PROCEDURES:

- A. Refer to the PTA Program Handbook for additional program policies that may apply to this and other PTA courses. --Such as attendance, lab expectations, etc. **The instructor reserves the right to modify this syllabus in writing during the course of the semester.**
- B. Students are expected to attend, actively participate in and make constructive use of all laboratory experiences. Lab time is to be used only to study material from PT 123; materials from other courses are not to be reviewed or studied during this class period. It is further expected that each individual will conduct themselves in a professional manner, with respect for the instructor and fellow classmates during laboratory settings. Appropriate lab attire, as outlined in PTA student handbook, will be worn during lab sessions.

FALL SEMESTER, 2010 PT 123 FUNCTIONAL ANATOMY (student copy)

**CLASS SCHEDULE: Monday, Wednesday, Friday
9:00 - 9:55 a.m.**

**LABORATORY SCHEDULE: Monday, Wednesday, Friday
10:00 - 10:55 a.m. or 11:00 – 11:55 a.m.
(due to testing situations, hours may be altered)**

CLASSROOM: HSC 2029 and LABORATORY: HSC 2042

**CLASS INSTRUCTOR: Donna Shipley, PTA
LABORATORY INSTRUCTOR: Donna Shipley, PTA**

Student Signature

Date

FALL SEMESTER, 2010 PT 123 FUNCTIONAL ANATOMY (instructor copy)

**CLASS SCHEDULE: Monday, Wednesday, Friday
9:00 - 9:55 a.m.**

**LABORATORY SCHEDULE: Monday, Wednesday, Friday
10:00 - 10:55 a.m. or 11:00 – 11:55 a.m.
(due to testing situations, hours may be altered)**

CLASSROOM: HSC 2029 and LABORATORY: HSC 2042

CLASS INSTRUCTOR: Donna Shipley, PTA

LABORATORY INSTRUCTOR: Donna Shipley, PTA

Student Signature

Date