

**STATE UNIVERSITY OF NEW YORK
COLLEGE OF TECHNOLOGY
CANTON, NEW YORK**



MASTER SYLLABUS

PHTA 102 – Functional Anatomy

CIP Code: 51.0806

**Created by: Dr. Jennifer McDonald
Updated by: Dr. Jennifer McDonald**

**Science, Health, and Criminal Justice
Physical Therapist Assistant
Spring 2026**

A. TITLE: Functional Anatomy

B. COURSE NUMBER: PHTA 102

C. CREDIT HOURS (Hours of Lecture, Laboratory, Recitation, Tutorial, Activity):

# Credit Hours per Week	4
# Lecture Hours per Week	2
# Lab Hours per Week	4
Other per Week	

D. WRITING INTENSIVE COURSE:

Yes	
No	x

E. GER CATEGORY:

Does course satisfy a GER category(ies)? If so, please select all that apply.

[1-2] Communication	
[3] Diversity: Equity, Inclusion & Social Justice	
[4] Mathematics & Quantitative Reasoning	
[5] Natural Science & Scientific Reasoning	
[6] Humanities	
[7] Social Sciences	
[8] Arts	
[9] US History & Civic Engagement	
[10] World History & Global Awareness	
[11] World Languages	

F. SEMESTER(S) OFFERED:

Fall	
Spring	x
Fall and Spring	

G. COURSE DESCRIPTION:

In this course, students apply knowledge of origins, insertions, actions and innervations of extremity and trunk musculature as they relate to functional human movement. Students will apply this knowledge to analysis of the gait cycle and posture as well as in data collection related to the musculoskeletal system, to include manual muscle testing, goniometry, and muscle length testing. They are introduced to orthopedic special tests as well as the implementation of standardized functional outcome measures for physical therapy practice.

H. PRE-REQUISITES: PHTA 100, PHTA 101, Grade of C or better in BIOL 217
CO-REQUISITES: N/A

I. STUDENT LEARNING OUTCOMES:

Course Student Learning Outcome [SLO]	Program Student Learning Outcome [PSLO]	GER	ISLO & Subsets
1. Describe principles of kinesiology as related to the skeletal, muscular, and nervous systems, arthrokinematics, and biomechanics.	PSLO #6 Demonstrate competence in implementing and adjusting selected components of interventions identified in the plan of care established by the physical therapist. PSLO #7 Demonstrate competency in performing components of data collection skills essential for carrying out the plan of care.		ISLO 5 Industry, Professional, Discipline Specific Knowledge and Skills
2. Identify the origins, insertions, innervations, and actions of extremity and trunk musculature	PSLO #6 Demonstrate competence in implementing and adjusting selected components of interventions identified in the plan of care established by the physical therapist. PSLO #7 Demonstrate competency in performing components of data collection skills essential for carrying out the plan of care.		ISLO 5 Industry, Professional, Discipline Specific Knowledge and Skills

<p>3. Correlate gross anatomical muscle and bony structures to surface anatomy</p>	<p>PSLO #6 Demonstrate competence in implementing and adjusting selected components of interventions identified in the plan of care established by the physical therapist.</p> <p>PSLO #7 Demonstrate competency in performing components of data collection skills essential for carrying out the plan of care.</p>		<p>ISLO 5 Industry, Professional, Discipline Specific Knowledge and Skills</p>
<p>4. Describe functional movement patterns throughout the body in terms of joint motion and muscle activity.</p>	<p>PSLO #6 Demonstrate competence in implementing and adjusting selected components of interventions identified in the plan of care established by the physical therapist.</p> <p>PSLO #7 Demonstrate competency in performing components of data collection skills essential for carrying out the plan of care.</p>		<p>ISLO 5 Industry, Professional, Discipline Specific Knowledge and Skills</p>
<p>5. Describe components of the gait cycle including joint motions and muscle actions.</p>	<p>PSLO #6 Demonstrate competence in implementing and adjusting selected components of interventions</p>		<p>ISLO 5 Industry, Professional, Discipline Specific Knowledge and Skills</p>

	<p>identified in the plan of care established by the physical therapist.</p> <p>PSLO #7 Demonstrate competency in performing components of data collection skills essential for carrying out the plan of care.</p>		
6. Describe kinesiological concepts of normal posture in a variety of positions.	<p>PSLO #6 Demonstrate competence in implementing and adjusting selected components of interventions identified in the plan of care established by the physical therapist.</p> <p>PSLO #7 Demonstrate competency in performing components of data collection skills essential for carrying out the plan of care.</p>		ISLO 5 Industry, Professional, Discipline Specific Knowledge and Skills
7. Demonstrate competence in data collection skills to include manual muscle testing, goniometry, and muscle length testing	<p>PSLO #7 Demonstrate competency in performing components of data collection skills essential for carrying out the plan of care.</p>		ISLO 5 Industry, Professional, Discipline Specific Knowledge and Skills
8. Accurately document findings related to musculoskeletal data assessment	<p>PSLO #10 Complete accurate and timely documentation in accordance with</p>		ISLO 5 Industry, Professional, Discipline Specific Knowledge and Skills

	regulatory guidelines to support the delivery of physical therapy services.		
9. Recognize common orthopedic special tests used in physical therapy practice	PSLO #7 Demonstrate competency in performing components of data collection skills essential for carrying out the plan of care.		ISLO 5 Industry, Professional, Discipline Specific Knowledge and Skills
10. Effectively implement selected standardized functional outcome measures	PSLO #7 Demonstrate competency in performing components of data collection skills essential for carrying out the plan of care.		ISLO 5 Industry, Professional, Discipline Specific Knowledge and Skills

KEY	<u>Institutional Student Learning Outcomes</u> <u>[ISLO 1 – 5]</u>
ISLO #	ISLO & Subsets
1	Communication Skills Oral [O], Written [W]
2	Critical Thinking <i>Critical Analysis [CA], Inquiry & Analysis [IA], Problem Solving [PS]</i>
3	Foundational Skills <i>Information Management [IM], Quantitative Lit, /Reasoning [QTR]</i>
4	Social Responsibility <i>Ethical Reasoning [ER], Global Learning [GL], Intercultural Knowledge [IK], Teamwork [T]</i>
5	Industry, Professional, Discipline Specific Knowledge and Skills

J. APPLIED LEARNING COMPONENT:

Yes	x
No	

If yes, select [X] one or more of the following categories:

Classroom / Lab	x	Community Service	
Internship		Civic Engagement	
Clinical Practicum		Creative Works/Senior Project	
Practicum		Research	
Service Learning		Entrepreneurship [program, class, project]	

- K. **TEXTS:**
Clinical Kinesiology & Anatomy, 7th edition, L. Lippert, F.A. Davis Co. 2023
- L. **REFERENCES:**
Laboratory Manual for Clinical Kinesiology & Anatomy, 5th edition, Lippert & Minor, F.A. Davis Co. 2023
Visible Body Courseware
https://courseware.visiblebody.com/courses/40667/join?join_course_token=jhAFdtQNs4GfwLZmKdvAvQQK&site_license=false
Daniels and Worthingham's Muscle Testing, Hislop HJ, Avers D, Brown M, 9th Edition, Elsevier, 2014.
Measurement of Joint Motion, Norkin CC, White DJ, 5th ed, FA Davis, Philadelphia, 2016.
Therapeutic Exercise: Foundations and Techniques, 8th edition, Kisner and Colby, FA Davis, Philadelphia, 2023.
PhysioU <https://www.physiou.health/>
- M. **EQUIPMENT:** Physical Therapy Lab Equipment & Supplies
- N. **GRADING METHOD:** A-F as per PTA program standards
The grading scale for the Physical Therapist Assistant program is as follows:
A = 90-100 C+ = 75-79 D = 60-64
B+ = 85-89 C = 70-74 F = below 60
B = 80-84 D+ = 65-69
To meet PTA program requirements, PTA students are required to achieve a grade of C+ or higher in this course.
- O. **SUGGESTED MEASUREMENT CRITERIA/METHODS:**
Quizzes, Assignments, Unit Exams, Final Exam, Lab competencies
- P. **DETAILED COURSE OUTLINE:**
- I. Introduction to Functional Anatomy
 - A. Skeletal, Muscular, Nervous System Review
 - B. Arthrokinematics
 - C. Biomechanics
 - II. Introduction to Musculoskeletal Data Collection
 - a. Manual Muscle Testing
 - b. Goniometry
 - c. Special Tests
 - d. Standardized Functional Outcome Measures
 - i. Questionnaires
 - III. Lower Extremity Functional Anatomy, Kinesiology, and Data Collection
 - A. Hip
 - B. Knee
 - C. Ankle/Foot
 - IV. Upper Extremity Functional Anatomy, Kinesiology, and Data Collection
 - a. Shoulder Girdle
 - b. Shoulder Joint
 - c. Elbow/Forearm
 - d. Wrist/Hand

- V. Neck/Trunk Functional Anatomy, Kinesiology, and Data Collection
 - a. Neck and Head
 - i. Respiration
 - ii. TMJ
 - b. Trunk
- VI. Gait
- VII. Posture

Q. **LABORATORY OUTLINE:**

- I. Introduction to Functional Anatomy & Data Collection
 - a. Concepts of basic movement analysis
 - b. Introduction to palpation/visual observation of the human body
- II. Lower Extremity
 - a. Hip and Pelvis
 - i. Observation and palpation of bony landmarks
 - ii. Palpation of muscular origins and insertions
 - iii. Analysis of functional movements
 - iv. Goniometry
 - v. Manual Muscle Testing
 - vi. Special Tests
 - b. Knee
 - i. Observation and palpation of bony landmarks
 - ii. Palpation of muscular origins and insertions
 - iii. Analysis of functional movements
 - iv. Goniometry
 - v. Manual Muscle Testing
 - vi. Special Tests
 - c. Ankle/Foot
 - i. Observation and palpation of bony landmarks
 - ii. Palpation of muscular origins and insertions
 - iii. Analysis of functional movements
 - iv. Goniometry
 - v. Manual Muscle Testing
 - vi. Special Tests
 - d. Shoulder Girdle
 - e. Shoulder Joint
 - f. Elbow/Forearm
 - g. Wrist/Hand
- III. Neck/Trunk
- IV. Gait
 - a. Observe and describe components of the gait cycle
 - b. Implement outcome measures related to gait – TUG, 10-meter walk test
- V. Posture
 - a. Observe and describe posture in standing and sitting positions