COURSE OUTLINE

Course Number	Course Title	Credits
PTA 206	**Motor Development**	**2**
Hours: Lecture/Lab/Other	**Co- or Pre-requisite**	**Implementation Semester & Year**
2/0/0	**Pre = PTA 210, PTA 214 Co = PTA 217**	**Fall 2023**

Catalog description:
Introduces developmental milestones, lifespan motor development, motor control, motor learning, recovery of function, neuroplasticity, reflexes and reactions, adaptive equipment and various treatment approaches used to treat neurological impairments.

General Education Category:
Not GenEd

Course coordinator: (Holly Kaiser, 609-570-3478; KaiserH@mccc.edu)

Required texts & Other materials:

Author	Title	Ed	Publisher	Date	ISBN
Fruth**	Fundamentals of the Physical Therapy Exam	1st	Jones & Bartlett	2014	978-1-4496-5268-5
Martin S	Neurologic Intervention for PTA	4th	Elsevier/Saunders	2007	0-7216-0427-7

Course Student Learning Outcomes (SLO):

Following the successful completion of this course with a grade of C+ or higher, the learner will be able to:

1. Recognize that there is interaction among multiple body systems in the performance of movement to accomplish specific functions.
2. Explain the changes that occur within the motor system across the lifespan and the variability of motor performance between individuals.
3. Discuss how genetic, congenital, and acquired disorders can impact the development of motor skills
4. Discuss the physical therapy approaches to interventions with the patient with neuro-motor deficits.

Course-specific Institutional Learning Goals (ILG):

Institutional Learning Goal 1. Written and Oral Communication in English. Students will communicate effectively in both speech and writing.

Institutional Learning Goal 3. Science. Students will use the scientific method of inquiry, through the acquisition of scientific knowledge.
Institutional Learning Goal 4. Technology. Students will use computer systems or other appropriate forms of technology to achieve educational and personal goals.
Institutional Learning Goal 9. Ethical Reasoning and Action. Students will understand ethical frameworks, issues, and situations.
Institutional Learning Goal 10. Information Literacy: Students will recognize when information is needed and have the knowledge and skills to locate, evaluate, and effectively use information for college level work.
Institutional Learning Goal 11. Critical Thinking: Students will use critical thinking skills understand, analyze, or apply information or solve problems.

Program Learning Outcomes for Physical Therapist Assistant PLO

Units of study in detail – Unit Student Learning Outcomes:

		ILG	Learning Objectives
Unit 1	Motor Control	1, 3, 4, 9, 10, 11	C1.1, C1.2, C2.1, C3.1, C3.2, C3.3, C3.7, C4.1, P1, P2, A1.1-1.9
Unit 2	Motor Learning, Recovery of Function, Neuroplasticity	1, 3, 4, 9, 10, 11	C1.1, C1.3-1.5, C1.13, C1.14, C2.2, C2.3, C2.6, C3.1, C3.2, C3.4-3.6, C4.2, C4.3, C5.1, C6.1, A1.1-1.9 C1.1, C1.7-1.9, C2.3-2.5, C3.1, C3.2, C4.4, C4.5, C5.2, A1.1-1.9
Unit 3	Motor Development, Reflexes/Reactions	1, 3, 4, 9, 10, 11	C1.1, C1.7-1.9, C2.3-2.5, C3.1, C3.2, C4.4, C4.5, C5.2, A1.1-1.9
Unit 4	Adaptive Equipment	1, 3, 4, 9, 10, 11	C1.10-1.12, C3.1, C3.7, A1.1-1.9
Unit 5	Life Span Motor Development	1, 3, 4, 9, 10, 11	C1.6, C1.15, C2.7-2.9, C3.1, A1.1-1.9
Unit 6	Treatment Approaches	1, 3, 4, 9, 10, 11	C1.16, C3.1, C3.7, A1.1-1.9
Unit 7	Development and Aging	1, 3, 4, 9, 10, 11	C3.1, P3, P4, P5

Program Learning Outcomes:

Cognitive:

The learner will be able to successfully:
C1. Knows specific facts (Remember)
C1.1 Define motor control, motor learning and motor development
C1.2 Describe the stages of motor control
C1.3 Describe plasticity and discuss its relationship to recover of function
C1.4 Describe Fitts & Posner's three-stage theory of motor learning
C1.5 Describe the differences between recovery and compensation
C1.6 Define the life span concept of motor development
C1.7 Identify important motor accomplishments for the first three years of life[X]

C1.8 Describe the acquisition and refinement of fundamental movement patterns during childhood[X]
C1.9 Describe the purpose of a reflex[X]
C1.10 Identify factors considered when choosing adaptive equipment for the school-based population
C1.11 Compare and contrast adaptive equipment options for the school-based population
C1.12 Identify functional limitations, potential precautions and contraindication, and treatment options related to pediatric case studies
C1.13 Define neuroplasticity
C1.14 Define contextual interference
C1.15 List complications of bed rest
C1.16 Recall methods of treating a variety of neurological impairments

C2. Comprehends basic concepts and principles (Understand)
C2.1 Describe how factors related to the individual, the task, and the environment affect the organization and control of movement
C2.2 Summarize factors that have an impact on the structure of practice and describe their effect on performance versus learning
C2.3 Relate pathophysiology to the process of motor learning
C2.4 Understand the relationship between cognition and motivation to motor development
C2.5 Discriminate between normal and abnormal reflex responses from a child[X]
C2.6 Gives an example of how contextual interference can be used to maximize rehabilitation outcomes
C2.7 Describe changes that occur with the aging process and outcome measurement tools appropriate for various patient populations
C2.8 Differentiate between symptoms of depression, delirium and dementia in older adults
C2.9 Differentiate between medically complex elders and frail elders
C3. Applies basic concepts and principles to new situations (Apply)
C3.1 Integrate knowledge from PTA 105, 107, 112, 201, 227, 210 and 211 into the new material in this PTA 205 course during, classroom case studies, quizzes and written exams
C3.2 Relates motor development, motor control and motor learning to each other
C3.3 Relate motor control to the clinical treatment of patients with movement pathology
C3.4 Define intrinsic versus extrinsic feedback, give examples of each, and discuss their importance in teaching motor skills
C3.5 Relate the concept of neuroplasticity to rehabilitation
C3.6 Determine which components of a treatment session can be adjusted to maximize motor learning and how adjustments can be made
C3.7 Correlate a given diagnosis with motor function, positioning needs, and treatment techniques to address the probable impairments and functional limitations

C4. Demonstrates the ability to analyze procedures to determine if organizational principles are being followed (Analyze)
C4.1 Compare and contrast the following theories of motor control: reflex, hierarchical, systems and ecological
C4.2 Analyze the similarities and differences between learning, performance and recovery of function
C4.3 Compare and contrast implicit and explicit forms of learning and give examples of each
C4.4 Differentiate between types of reflexes[X]
C4.5 Observe a stretch reflex in multiple subjects and identify consistent characteristics

C5. Applies thinking skills when judging data and performance (Evaluate)
C5.1 Evaluate a treatment session from the first clinical affiliation course for its effectiveness in its practice structure
C5.2 Describe how developmental reflexes relate to developmental milestones and functional movement patterns[X]

C6. Uses knowledge to create new methods necessary to gather data (Create)

C6.1 Rearrange a treatment session from the first clinical affiliation course to maximize effectiveness of the practice structure

Psychomotor:

The learner will be able to successfully:

P1. Identify the four stages of motor control by watching videos of various movement tasks
P2. Create a treatment plan to address a physical therapy goal while utilizing the four stages of motor control
P3. Observe normal movements and describe it in terms of initiation, weight shift, direction, sequence, dissociation, and prime movers
P4. Research a provided topic and present findings to the class
P6. Utilize patient-sensitive language in verbal and written communication[×]
P7. Identify a home assessment checklist for falls reduction, add three checklist items to maximize thoroughness, and use it to assess a real home[X]

Affective

The learner will be able to successfully:

A1. Receive Phenomenon
- A1.1 Listen to others with respect
- A1.2 Receive feedback professionally
- A1.3 Attend class consistently
- A1.4 Arrive to all classes and clinicals prior to the start time

A2. Respond to Phenomenon
- A2.1 Participate in class
- A2.2 Know the safety rules and practice them
- A2.3 Respond to feedback in a professional manner
- A2.4 Prepare for lectures, labs and clinicals ahead of time

A3. Value
- A3.1 Demonstrate sensitivity to individual and cultural differences
- A3.2 Show an ability to solve problems
- A3.3 Inform PTAP faculty of matters one feels strongly about

A4. Organize
- A4.1 Recognize the need for balance between educational and personal priorities
- A4.2 Accept professional ethical standards, as evidenced by following them
- A4.3 Prioritize times effectively to meet educational and personal needs
- A4.4 Complete and submit all assignments, assessments, and required documents on time

A5. Internalize
- A5.1 Show self-reliance when working independently
- A5.2 Cooperate in group activities
- A5.3 Revise judgments and changes behavior in light of new evidence and feedback
- A5.4 Value people for who they are, not how they look
- A5.5 Identify sources of stress and implement effective coping behaviors
- A5.6 Demonstrate a commitment to the physical therapy profession
  - A5.6A Complete a community service project

× = Documented in CAPTE Standards

Evaluation of student learning:

% of grade	Activity	# within course
60	Written Exams	3
NA	Quizzes	0
NA	Article Reviews	0
20	Assignments	2
15	Presentation(s)	1
5	Generic Abilities Assessment	Continuous
NA	Practical Exam	0
NA	Competency Tests	0