

STANDARD COURSE OUTLINE

PHTA 2321 Therapeutic Exercise
PHTA 2333 Therapeutic Exercise Lab

PREREQUISITE Successful completion of PTA Semester I (fall classes)

CREDIT HOURS PHTA 2321 1 credit hour / non-transferable
PHTA 2302 2 credit hours / non-transferable

TARGET AUDIENCE Students admitted to the PTA Program

COURSE DESCRIPTION: This course is designed to provide the PTA student with an entry level understanding of the theory and clinical application of various types of exercise and neurophysiological treatment techniques to include NDT, PNF, Rood, and Motor Control Theory. Emphasis on treatment procedures for lesions of the CNS including pediatric disorders, vascular disorders, spinal cord injury, head injury and progressive neurological disorders.

INSTRUCTIONAL MATERIALS

Required:

1. O'Sullivan & Schmitz. Physical Rehabilitation Assessment and Treatment; F.A. Davis Company 4th edition; 2001
2. O'Sullivan & Schmitz. Physical Rehabilitation Laboratory Manual, Focus On Functional Training; F.A. Davis Company
3. Ratliffe, KT. Clinical Pediatric Physical Therapy. St. Louis: Mosby: 1998

COURSE OBJECTIVES

Upon successful completion of this course, the student should be able to:

1. Compare & contrast the following treatment approaches in relation to their theories, goals, treatment techniques, and type signs & symptoms you would use the treatment techniques for:
 - a. PNF
 - b. NDT
 - c. Rood
 - d. Motor Control Theory
 - e. Brunnstrom
 - f. Other (exteroceptive, proprioceptive, & vestibular stimuli)

2. Select and demonstrate the techniques you might use to address commonly occurring neuromotor signs & symptoms utilizing one of the following treatment approaches: PNF, NDT, Rood, Motor Control Theory, Brunnstrom. Provide rationale for your choice based on knowledge of the treatment approaches and signs and symptoms you are treating.
3. Given a mock patient and/or written scenario of a PT Initial Evaluation, with PT goals and POC, demonstrate competence in choosing and implementing treatment strategies to meet goals set by the PT within the parameters of the plan of care based on the patient's functional level and other objective findings. Goals may include: gait training, transfer training, static and dynamic sitting and standing balance training, bed mobility, facilitation for low tone, inhibition for high tone, midline-orientation, stretching, strengthening, ADL's, and progression in the developmental sequence by utilizing treatment techniques from a variety of treatment approaches on one patient, to include NDT, PNF, motor control, facilitation and inhibitory techniques. Provide rationale for your choices based on the objective findings in the evaluation, goals set forth by the PT, parameters of the POC, and indications and effectiveness of the treatments utilized.
4. In writing, during discussions, and with mock patient scenarios assess possible cognitive, emotional, behavioral, and regulatory deficits a patient with neurological impairment may have and provide or demonstrate possible techniques to include verbal and non-verbal communication, and sensory stimulation techniques to deal with a patient's behavioral and communication deficits.
5. Given a mock patient and/or written description of objective findings or a PT evaluation with goals, objective findings, and PT POC, demonstrate ability to assess commonly occurring clinical signs & symptoms and implement appropriate treatment techniques to meet goals set by the PT within the parameters of the plan of care for pediatric and adult patients with neurological impairments. State the clinical sign you are treating, the treatment approach you are utilizing, the expected functional outcome, and your rationale for your treatment approach demonstrating and understanding of the objective findings, effectiveness of the treatment approaches, goals set forth and the POC parameters.
6. Explain and discuss the benefits of a team approach for the neurological involved patient. Identify the possible team members and their roles.
7. Identify community resources which provide services to patients with neurological impairments.
8. Explain the effects of muscle tone, obligatory reflexes, sensory disturbance, weakness, balance and poor coordination may have on movement and performance of ADL's. Assess and demonstrate 2-3 treatment strategies to address each of these clinical signs.

9. Given a mock patient and/or written scenario with a PT evaluation with objective findings, goals, and a POC, demonstrate ability to: implement appropriate treatment strategies, utilize equipment catalogs to determine specific ADL devices, assistive devices & orthotics which may be used to improve functional outcomes and/or safety for ADL's, gait, and mobility.
10. Given a mock patient or written scenario including a PT evaluation with goals, objective findings and a POC, demonstrate ability to assess discharge planning needs as they relate to equipment, patient education, ability of patient and/or caregiver to follow instructions, home modification recommendations, architectural barriers, safety issues ability of patient and/or caregiver to follow instructions and/or care for assistive devices or other equipment, ADL's and functional ability within the parameters set by the PT in the plan of care to meet the short and long terms goals.
11. Be able to define, describe and use appropriate terminology to describe signs and symptoms of patient's with neurological impairment to other health care professionals and the Physical Therapist.
12. Demonstrate knowledge of neuroanatomy by relating type lesion or location of lesion to signs and symptoms the patient presents with.
13. Given a mock patient, demonstrate the ability to utilize verbal and non-verbal communication to establish a therapeutic relationship with the patient and to instruct the patient in treatment to include how to perform exercises, functional tasks, goals and purpose of treatment.
14. Given a mock patient, demonstrate the ability to address the patient's questions regarding their neurological impairment and rationale for treatment techniques in language and terminology they can understand.
15. Demonstrate ability to accurately document treatment techniques utilized, patient's posture at rest and in all functional positions to include midline orientation, associated reactions and synergistic patterns and patient response to treatment in a SOAP note format in a timely, concise, logical and legible format.
16. Demonstrate knowledge of and ability to assess vital signs and an awareness of changes in a patients response to positional changes, such as lying to sit to stand and appropriate actions to take based on your findings.
17. Given a PT evaluation with objective findings, goals, and POC &/or by student performance of ROM &/or MMT, balance assessments for static and dynamic sitting and standing, assistance needed for bed mobility, transitional movements, transfers, balance, w/c mobility and w/c management skills, tone, sensation and

- gait on a mock patient, the student will demonstrate knowledge and understanding of the findings to implement an appropriate, effective treatment plan based on the objective findings to meet the goals set by the PT within the parameters of the plan of care established by the PT. Provide rationale for the treatment strategies, the goals you addressed with your treatment based on knowledge of the developmental sequence, and objective findings.
18. In all written scenarios to include: a PT evaluation with objective findings, goals, and a POC and/or mock patient scenarios, demonstrate the ability to utilize knowledge of the treatment techniques and objective findings to address the goals set by the PT within the parameters of the plan of care established by the PT.
 19. Given a PT evaluation with objective findings, goals, and a POC in written form and /or with a mock patient, demonstrate the ability to utilize PNF, NDT, Motor Control Theory principles, knowledge of development sequence, and inhibition and facilitation techniques to address goals set forth in the plan of care by the PT. Goals may include: independent bed mobility, independent transitional movements, components of a functional activity, good static and dynamic sitting and standing balance, strengthening, transfer training, gait training, and balance and coordination training for ADL's, wheelchair mobility and gait.
 20. Given a written patient scenario, demonstrate ability to recognize changes in a mock patient's cognitive, mental or arousal level and appropriate action to take if there is a change.
 21. Given a written patient scenario, demonstrate ability to recognize when a change in the patient's status to include cognitive, mental, arousal, or functional abilities would indicate any of the following actions: that the treatment should not be performed, that the treatment strategies should be adjusted within the POC, and/or that the supervising PT should be notified.
 22. Demonstrate ability to describe the safety, functional and cognitive status and progression of patients during treatment techniques to include gait, balance, wheelchair management, transfers, safety, balance, coordination, and ability to follow instructions.
 23. Demonstrate knowledge of gross motor milestones and correlate them to the stages of development of initial mobility, stability, controlled mobility, and skill.
 24. Demonstrate ability to recognize when the direction to perform a patient treatment intervention is beyond the scope of the PTA practice act and/or standards of normal and ethical practice and report this to the PT.

25. Given mock patient, written case information and/or in discussion discuss and demonstrate ability to recognize individual and cultural differences and respond appropriately.

PEDIATRIC OBJECTIVES

1. Describe and demonstrate the developmental progression of normal motor behavior in terms of:
 - a. patterns of gross and fine motor development
 - b. reflex development and integration
 - c. righting and equilibrium reactions
 - d. sequence of neurodevelopmental postures
 - e. development of motor control skills
 - f. mobility and ambulation skills
2. Explain in written and verbal form the typical sensory motor characteristics of each of the following diagnosis. Identify common goals and treatment approaches for children with:
 - a. Spastic CP
 - b. Athetoid CP
 - c. Ataxic CP
 - d. Clumsy Child
 - e. Spina Bifida
 - f. Down Syndrome
 - g. Mental Retardation
3. Explore options in the use of equipment and positions for learning and play.
4. List the areas of the child's family life that are considered when implementing a treatment program.
5. Explain the effects of muscle tone, obligatory reflexes, sensory disturbance, weakness, instability and poor coordination on movement. Describe and demonstrate 2-3 treatment strategies to address each of these clinical signs.
6. Identify the rationale and demonstrate appropriate treatment procedures for commonly treated neuromuscular clinical signs of pediatric patients.
7. Demonstrate understanding of pediatric vital signs to include appropriate vital sign ranges.
8. Identify knowledge and expertise in the attainment of pediatric vital signs.
9. Identify various types of orthotics and their indications for use in the pediatric population.

10. Given a case scenario with clinical signs and symptoms, PT GOALS and a POC, select appropriate treatment strategies to meet goals within POC for pediatric patients with a variety of diagnosis.
11. Given a case scenario with clinical signs and symptoms, PT GOALS, and a POC, student demonstrates ability to adjust interventions within the POC.

LAB PRACTICAL COURSE AND MODULE OBJECTIVES: During all Lab Practicals the student will demonstrate the following:

1. Given a mock patient, and PT initial evaluation with PT goals and a POC, demonstrate the ability to assess and implement appropriate treatment techniques for this particular patient and perform them correctly to meet the goals set by the PT within the parameters of the plan of care.
2. Demonstrate good communication skills to include verbal and non-verbal with a mock patient, and the ability to discuss and explain your treatment, the goals your addressing, and your rationale to the supervising PT
3. Demonstrate ability to recognize when the direction to perform a patient treatment intervention is beyond the scope of the PTA practice act and/or standards of normal and ethical practice and report this to the PT.
4. Demonstrate utilizing good body mechanics during mock patient treatments and transfers.
5. Demonstrate conduct that reflects knowledge of practice standards that are legal, ethical, and safe in lab practical examinations and meet standards of care.
6. Demonstrate ability to recognize changes in a patient's cognitive, mental or arousal level and appropriate action to take if there is a change.
7. Demonstrate conduct that reflects knowledge of practice standards that are legal, ethical, and safe in lab practical examinations.
8. Demonstrate safety awareness and correct guarding techniques, keeping the patient safe during all aspects of the treatment session.
9. Demonstrate ability to accurately document treatment in a SOAP note format.
10. Demonstrate ability to establish a therapeutic relationship with the patient using verbal and non-verbal communication, and instructing the patient clearly, and concisely in terminology the patient can understand.
11. Be able to provide the rationale for your treatment selections based on knowledge of the developmental sequence, treatment strategies available, patient's functional level, ADL's, patient's cognitive status, objective findings, PT goals and parameters of the POC.

12. Demonstrate ability to adjust interventions within the POC established by the PT in response to patient clinical indications and changes in patients status and take appropriate action to include reporting to the PT
 13. Demonstrate knowledge and utilization of universal precautions during all laboratory procedures and lab practicals
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