

NDTA Basic Pediatric Course Key to Course Content

Topic: Introduction to NDT History

| Learning outcome(s) that pertain to occupational therapists | Instructional Personnel | Description of occupational therapy content | Activities or Instructional Strategies | Method of Assessment |
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| <p>At the conclusion of this course, participants will be able to:</p> <ol style="list-style-type: none"> 1. List key facts regarding the Bobath's personal/ professional lives and development of the Bobath approach. 2. Identify client populations for which the Bobath's developed the NDT/Bobath approach. 3. Identify principles of NDT treatment developed by Berta Bobath. 4. Identify 7 theoretical assumptions developed by Berta Bobath. 5. Describe evolution of the NDT approach in the US. | <p>Coordinator Instructor (Primary Instructor)</p> <p>OT Instructor</p> <p>PT instructor</p> <p>SLP Instructor</p> | <ul style="list-style-type: none"> • Background/historical information provides the foundation for understanding NDT/Bobath as a treatment approach for children with CNS pathophysiology | <ul style="list-style-type: none"> • Lectures/discussion • Supplemental text material • video | <ul style="list-style-type: none"> • Discussion • Participation • NDTA Exam (pre- and post-test) • Quizzes |

NDTA Basic Pediatric Course Key to Course Content

Topic: Intro to NDT/Terminology

| Learning outcome(s) that pertain to occupational therapists | Instructional Personnel | Description of occupational therapy content | Activities or Instructional Strategies | Method of Assessment |
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| <p>At the conclusion of this course, participants will be able to:</p> <ol style="list-style-type: none"> 1. Define components of NDT relative to: <ul style="list-style-type: none"> • client population • muscle tone • study of typical/atypical development • early intervention • team approach • Parent involvement. 2. Define the terms stability, mobility, center of mass, base of support, alignment, key points of control, tone, facilitation, and inhibition. 3. Identify correct use and application of terminology relative to NDT (e.g. blocks, co-contraction, retraction, protraction). | <p>Coordinator Instructor PT Instructor OT Instructor SLP Instructor</p> | <ul style="list-style-type: none"> • In applying any specific approach to treatment, a comprehensive understanding of theoretical principles, terminology and application is necessary for all disciplines. OT's need to review the terminology relative to biomechanics, body movement principles and characteristics of the musculoskeletal system to apply to their discipline specific assessment and treatment. | <ul style="list-style-type: none"> • Lectures • Discussion • Supplemental written/visual materials • Movement labs • Videos | <ul style="list-style-type: none"> • Discussion • Participation • NDTA Exam (pre- and post-test) • Quizzes |

NDTA Basic Pediatric Course Key to Course Content

Topic: Classification of Different Types of Cerebral Palsy

| Learning outcome(s) that pertain to occupational therapists | Instructional Personnel | Description of occupational therapy content | Activities or Instructional Strategies | Method of Assessment |
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| <p>At the conclusion of this course, participants will be able to:</p> <ol style="list-style-type: none"> 1. Define different types of diagnoses including athetosis, ataxia, dystonia, hypotonicity, hemiparesis, spasticity, and mixed cerebral palsy. 2. Identify the behavioral, sensory, biomechanical and tonal characteristics of different types of CNS pathophysiology 3. Identify and distinguish among different classifications of cerebral palsy 4. Identify impairments related to different diagnoses of CNS pathophysiology | <p>Coordinator Instructor PT Instructor OT Instructor SLP Instructor</p> | <ul style="list-style-type: none"> • NDT is a treatment approach developed to address the unique needs, limitations and impairments of children with cerebral palsy and other neuromuscular disorders. OT's must be able to identify the different classifications of cerebral palsy for assessment, analysis/ problem solving, treatment planning, and treatment. | <ul style="list-style-type: none"> • Lectures • Discussion • Supplemental written/visual materials • Videos/slides • Practicum with children • Demonstrations with children • Paper patient problem solving sessions | <ul style="list-style-type: none"> • Discussion • Participation • NDTA Exam (pre- and post-test) • Quizzes • Instructor(s) observation and feedback |

NDTA Basic Pediatric Course Key to Course Content

Topic: Postural Control

| Learning outcome(s) that pertain to occupational therapists | Instructional Personnel | Description of occupational therapy content | Activities or Instructional Strategies | Method of Assessment |
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| <p>At the conclusion of this course, participants will be able to:</p> <ol style="list-style-type: none"> 1. Identify and describe neuromuscular factors influencing postural control and movement relative to function (e.g. initiation of movement, direction of movement, sustaining, grading and terminating movement, point of stability vs. supporting surface, and the relationship between stable and mobile body segments through the movement sequence). 2. Identify requirements for postural control (anticipatory and preparatory) needed for performance of functional activities. <ol style="list-style-type: none"> a. Describe reasons for typical variations in muscle synergy (e.g. change in base of stability, muscle sequencing, weight shift). b. Describe reasons for variations within a movement strategy (e.g. different transitional movements). 3. Identify and define biomechanical and kinematic factors influencing postural control and movement (typical vs. atypical) for motor skills: <ul style="list-style-type: none"> • postural alignment • base of support/ support surface/center of gravity • musculoskeletal integrity • responses to weight shifts • stability/mobility • interlimb coordination • development of postural control 4. Assess variations in postural alignment, range of motion, flexibility and weight shifting in patients with CNS pathophysiology in static postures and during movement. | <p>Coordinator Instructor</p> <p>PT Instructor (Primary Instructors)</p> <p>OT Instructor</p> <p>SLP Instructor</p> | <ul style="list-style-type: none"> • Postural stability and dynamic alignment are essential for all movement, including movement sequences necessary for the development of performance skills and areas of occupation. • An understanding of basic concepts/ terminology related to postural control is essential in understanding this process, as is an understanding of specific postural control requirements for performing functional activities specific to the OT discipline. • Variations in typical postural control synergies can be observed with attempted function in patients with CNS pathophysiology. An understanding of typical movement vs. atypical movement is necessary for diagnosis and treatment of functional limitations related to upper extremity, and visual motor impairments in the patient population with cerebral palsy. • The OT must present an understanding of the biomechanical and kinematic factors impacting postural control, alignment and movement. | <ul style="list-style-type: none"> • Lectures • Discussion • Supplemental written/visual materials • Videos/slides • Practicum with children • Demonstrations with children • Paper patient problem solving sessions | <ul style="list-style-type: none"> • Discussion • Participation • NDTA Exam (pre- and post-test) • Quizzes • Instructor(s) observation and feedback |

NDTA Basic Pediatric Course Key to Course Content

Topic: Teamwork

| Learning outcome(s) that pertain to occupational therapists | Instructional Personnel | Description of occupational therapy content | Activities or Instructional Strategies | Method of Assessment |
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| <p>At the conclusion of this course, participants will be able to:</p> <ol style="list-style-type: none"> 1. Identify discipline specific areas of emphasis of Speech/Language Pathology, Physical Therapy and Occupational Therapy in the treatment of the child with CNS pathophysiology. 2. Discuss interaction of disciplines in the treatment of the child with cerebral palsy. 3. Participate in co-treatment /multi-disciplinary treatment activities for achieving functional optimal outcomes for the child with cerebral palsy. | <p>Coordinator Instructor PT Instructor OT Instructor SLP Instructor</p> | <ul style="list-style-type: none"> • A clear understanding of the OT's roles/ responsibilities and how to work with other disciplines is necessary in the treatment of the child with CNS dysfunction. • While the therapist approaches assessment and treatment from their own discipline perspective, the child presents with the same set of impairments regardless of the discipline treating. Acknowledging that we are treating the same impairments, interaction of disciplines will enhance optimal facilitation of functional improvement. | <ul style="list-style-type: none"> • Lectures • Discussion • Supplemental written/visual materials • Videos/slides • Practicum with children • Demonstrations with children • Paper patient problem solving sessions • Multi-disciplinary group discussions regarding children in demonstrations and practicum | <ul style="list-style-type: none"> • Discussion • Participation • NDTA Exam (pre- and post-test) • Quizzes |

NDTA Basic Pediatric Course Key to Course Content

Related specifics: Oral motor, respiratory content

| Learning outcome(s) that pertain to occupational therapists | Instructional Personnel | Description of occupational therapy content | Activities or Instructional Strategies | Method of Assessment |
|---|--|---|--|---|
| <p>At the conclusion of this course, participants will be able to:</p> <ol style="list-style-type: none"> 1. In typical development identify major anatomical structures related to oral, pharyngeal and respiratory mechanism 2. Demonstrate an understanding of the physiology of typical oral motor, feeding, respiratory and phonatory functions. 3. Demonstrate an understanding of the impact of typical and atypical alignment upon oral motor, feeding and respiratory/phonatory functions 4. Discuss biomechanical implications of atypical movement on the oral motor, phonatory and respiratory mechanisms 5. Discuss and define typical versus atypical movement patterns within oral motor, phonatory and respiratory systems. 6. Describe through observation atypical oral motor, phonatory and respiratory patterns in children with CNS pathophysiology. 7. Demonstrate an understanding of the process of obtaining information regarding oral motor, feeding, respiratory, phonatory and communication skills in parent interview | <p>SLP Instructor (Primary Instructor)</p> <p>Coordinator Instructor</p> <p>OT Instructor</p> <p>PT Instructor</p> | <ul style="list-style-type: none"> • A thorough knowledge of anatomy and physiology of oral motor, feeding and respiratory systems is necessary to appropriately understand the functional limitations related to the areas of oral motor, feeding and respiratory and phonatory functions. • An understanding of the impact of alignment upon oral motor, feeding and respiratory/phonatory functions is critical in the treatment of children with CNS pathophysiology. • Identification and critical analysis of atypical components of movement and the impact of these atypical components upon oral motor, feeding and respiratory/phonatory functions is essential for effective diagnosis and treatment planning within this population. • Recognize the parent interview as source of information for assessment/analysis and diagnosis. • Demonstrate an understanding of the process of prioritizing impairments following the completion of OT evaluation • Identify and prioritize activity limitations and associated impairments related to oral motor function, feeding, phonatory, respiratory and communication • Describe high priority activity limitations in children with cerebral palsy (i.e. inability to take nutrition by mouth). | <ul style="list-style-type: none"> • Lectures • Discussion • Supplemental written/visual materials • Videos/slides • Practicum with children • Demonstrations with children • Paper patient problem solving sessions • Multi-disciplinary group discussions regarding children in demonstrations and practicum | <ul style="list-style-type: none"> • Discussion • Participation • NDTA exam (pre and post test) • Completion and submission of assessments for assigned pediatric clients in practicum sessions • Instructional observation and feedback during labs and during periodic performance evaluations • Written and/or verbal feedback on practicum assignment |

NDTA Basic Pediatric Course Key to Course Content

Related specifics: Oral motor, respiratory content (Continued)

| Learning outcome(s) that pertain to occupational therapists | Instructional Personnel | Description of occupational therapy content | Activities or Instructional Strategies | Method of Assessment |
|---|-------------------------|---|--|----------------------|
| <p>8. Demonstrate an understanding of individual components of the clinical assessment of the child with CNS pathophysiology by the OT.</p> <p>9. Apply the NDT enablement model to the clinical assessment process.</p> <p>10. Apply the NDT enablement model to goal writing.</p> <p>11. Will be able to apply the NDT Enablement model to planning treatment for children with CNS pathophysiology</p> <p>12. Will be able to apply the NDT Enablement model to the development of performance skills and areas of occupation.</p> | | <ul style="list-style-type: none"> • Apply prioritization of activity limitations and impairments to practicum patients • Participate in discussion of various treatment strategies in relation to the child's age, impairments and activity limitations targeted within a treatment session • Demonstrate an understanding of the application of techniques appropriate to oral/facial musculature, head/neck alignment, shoulder girdle, trunk and respiratory mechanism for function Understand use of oral motor and respiratory/ phonatory strategies with information and knowledge regarding postural mechanism, biomechanics, alignment and motor learning • Within practicum activities, will demonstrate application of strategies appropriate to respective discipline to achieve targeted functional outcomes • Informally evaluate effectiveness of treatment strategies employed within practicum situation • Integration of model using identification of impairments, and selection of treatment strategies appropriate to the child, impairments identified and functional goal targeted • Complete treatment strategy worksheet appropriate to developed functional goals for one patient from practicum | | |

NDTA Basic Pediatric Course Key to Course Content

Topic: Evaluation/Assessment and Treatment Planning

| Learning outcome(s) that pertain to occupational therapists | Instructional Personnel | Description of occupational therapy content | Activities or Instructional Strategies | Method of Assessment |
|--|---|---|---|---|
| <p>At the conclusion of this course, participants will be able to:</p> <ol style="list-style-type: none"> 1. List and define the categories that compose the World Health Organization's ICF Model used in examination and evaluation. 2. Discuss the components of the ICF model. 3. Compile pertinent information from data collection including environmental and personal contextual factors, relevant medical history, general level of function as related by family and client, and a summary of client and family goals. 4. Observe, describe and summarize a client's functional activities and functional activity limitations. 5. Relate a client's functional activities and functional activity limitations to his/her participation restrictions. | <p>Coordinator Instructor</p> <p>OT Instructor</p> <p>PT Instructor</p> <p>SLP Instructor</p> | <ul style="list-style-type: none"> • Understanding the World Health Organization's ICF (International Classification of Function) Model is essential for the OT. The OT must relate these models to the areas of occupation and the performance skills and the relationship of effective and ineffective posture and movement. • Direct use of these models is necessary for an OT in examination, evaluation, and development of a plan of care. | <ul style="list-style-type: none"> • Lectures • Discussion • Supplemental written/visual materials • Videos/slides • Practicum with children • Demonstrations with children • Paper patient problem solving sessions | <ul style="list-style-type: none"> • discussion • participation • NDTA exam (pre and post test) • Completion and submission of assessments for assigned pediatric clients in practicum sessions • Instructional observation and feedback during labs and during periodic performance evaluations • Written and/or verbal feedback on practicum assignment |

NDTA Basic Pediatric Course Key to Course Content

Topic: Evaluation/Assessment and Treatment Planning

| Learning outcome(s) that pertain to occupational therapists | Instructional Personnel | Description of occupational therapy content | Activities or Instructional Strategies | Method of Assessment |
|--|-------------------------|--|--|----------------------|
| <p>At the conclusion of this course, participants will be able to:</p> <ol style="list-style-type: none"> 1. Observe, describe and summarize effective and ineffective posture and movement and their impact on a client's functional activities. 2. List and describe relevant impairments commonly found in the neuromuscular, musculoskeletal, sensory/sensory processing, respiratory, cardiovascular, integumentary, gastrointestinal, perceptual/cognitive, regulatory and limbic body systems. 3. Observe, describe and summarize the integrity and impairments in a client's body systems. 4. Discuss a client's primary and secondary impairments, and potential for additional secondary impairments in the future. 5. Discuss the interaction of function, posture and movement, and system structure and function, and the potential for change in each area in regard to specific clients. 6. Prioritize a client's functional activity limitations and related participation restrictions. 7. Identify impairments and problems in posture and movement that underlie a client's functional activity limitations. 8. Summarize and discuss evaluation results with a pediatric client's parents/guardian. 9. Develop a plan of care with appropriate long-term, short-term and treatment session functional outcomes for a client. 10. Develop a plan of care with appropriate posture and movement goals related to a client's functional activities. | | <ul style="list-style-type: none"> • It is essential that occupational therapists look at specific sensory processing, upper extremity and visual motor impairments as they relate to other body system impairments. This will assist in the development of intervention strategies that look at the total body issues that individuals with neuromotor involvement have as well as the specific areas focused on by the OT. The above information helps OT work with other team members to prioritize each client's needs and make sure that a comprehensive treatment program is developed. | | |

NDTA Basic Pediatric Course Key to Course Content

Topic: Evaluation/Assessment and Treatment Planning

| Learning outcome(s) that pertain to occupational therapists | Instructional Personnel | Description of occupational therapy content | Activities or Instructional Strategies | Method of Assessment |
|--|-------------------------|---|--|----------------------|
| <p>At the conclusion of this course, participants will be able to:</p> <ol style="list-style-type: none"> 11. Develop a plan of care with appropriate impairment-related goals related to a client's functional outcomes / occupational performance. 12. Develop a plan of care that includes strategies/techniques that adequately address posture and movement problems and impairments related to functional outcomes / occupational performance. 13. Develop a plan of care that demonstrates a logical sequence and progression of activities from preparatory strategies to performing functional outcomes / occupational performance. 14. Plan strategies/activities that challenge the client by including opportunities for motor learning, carryover/education, and participation. | | | | |

NDTA Basic Pediatric Course Key to Course Content

Topic Typical Development of Movement and Postural Control

| Learning outcome(s) that pertain to occupational therapists | Instructional Personnel | Description of occupational therapy content | Activities or Instructional Strategies | Method of Assessment |
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| <p>At the conclusion of this course, participants will be able to:</p> <ol style="list-style-type: none"> 1. Identify components of normal movement and how they relate to the development of: <ul style="list-style-type: none"> sensory processing, upper extremity and visual motor function. 2. Describe the impact of fine motor shoulder girdle/upper extremity development on oral motor development and development of cognition/play skills. 3. Describe the developmental aspects of sensory processing and its contribution to function 4. Describe how the components of typical development of movement in the areas of oral motor, respiration and phonation are integrated with movement in the areas of gross motor and fine motor development. | <p>Coordinator Instructor PT Instructor OT Instructor SLP Instructor</p> | <ul style="list-style-type: none"> • An understanding of the inter-relationship of the components of gross motor, fine motor, and oral motor development from birth through 12 months is necessary to be able to assess and treat children with CNS pathophysiology. • An understanding of the development of the postural mechanism (postural alignment, transitional movement, mobility to interact within the environment) is necessary to be able to assess and treat children with CNS pathophysiology. • An understanding of the development of the shoulder girdle/upper extremity (biomechanics, motor components, and sensory development, in relationship to its contribution to function) is necessary to be able to assess and treat children with CNS pathophysiology. • Understanding the development of play skills is necessary to be able to assess and treat children with CNS pathophysiology. • Understanding the development of rib cage and respiratory function as they relate to shoulder girdle and oral mechanism function are essential. • Understanding the integration of body movement for function in the areas of occupation is essential. | <ul style="list-style-type: none"> • Lectures • Discussion • Supplemental written/visual materials • Videos/slides • Observations of typically developing babies • Facilitation and movement labs for problem solving and analysis of movement | <ul style="list-style-type: none"> • Discussion • Participation • NDTA Exam (pre- and post-test) • Instructor(s) observation and feedback • Quizzes |

NDTA Basic Pediatric Course Key to Course Content

Topic: Atypical Development of Movement

| Learning outcome(s) that pertain to occupational therapists | Instructional Personnel | Description of occupational therapy content | Activities or Instructional Strategies | Method of Assessment |
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| <p>At the conclusion of this course, participants will be able to:</p> <ol style="list-style-type: none"> 1. Identify the influence of components of atypical development vs. typical development as it relates to: <ul style="list-style-type: none"> • Postural alignment • Transitional movements • Mobility 2. Describe the influence of atypical movement on: <ul style="list-style-type: none"> • Development of rib cage and respiratory function • Development of shoulder girdle/upper extremity function • Development of oral motor and phonatory function • Development of pelvic/hip/lower extremity function 3. Identify and explain single and multisystem impairments that lead to atypical function. | <p>Coordinator Instructor PT Instructor OT Instructor SLP Instructor</p> | <p>An understanding of the typical and atypical progression of development of postural control and movement (e.g. head/neck, trunk, rib cage, spine, shoulder girdle/UE, LE weight bearing and weight shifting ability, first low and then up against gravity) and how it relates to function is essential to assess and treat children with CNS pathophysiology.</p> <p>It is essential that OT's relate the impact of single and multisystem impairments to the areas of occupation.</p> | <ul style="list-style-type: none"> • Lectures • Discussion • Supplemental written/visual materials • Videos/slides • Demonstrations with children • Paper patient problem solving sessions • Movement labs | <ul style="list-style-type: none"> • Discussion • Participation • NDTA Exam (pre- and post-test) • Quizzes • Instructor(s) observation and feedback |

NDTA Basic Pediatric Course Key to Course Content

Topic: Neurophysiology

| Learning outcome(s) that pertain to occupational therapists | Instructional Personnel | Description of occupational therapy content | Activities or Instructional Strategies | Method of Assessment |
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| <p>At the conclusion of this course, participants will be able to:</p> <ol style="list-style-type: none"> 1. Discuss the neuronal group selection theory as it relates to NDT. 2. Describe how sensory, neuromotor and musculoskeletal systems contribute to postural control and movement. 3. Define feedforward and feedback postural control. 4. Provide discipline specific examples of feedforward and feedback postural control as it relates to function. 5. Define terms of motor control and motor learning. 6. Provide examples of treatment strategies that demonstrate clinical application of motor learning and motor control as it relates to their discipline. 7. Understand tone as a multi-system phenomena. | <p>Visiting Instructor</p> <p>Coordinator Instructor OT Instructor PT Instructor SLP Instructor</p> | <p>In the treatment of the child with CNS pathophysiology, an understanding of motor terminology and current motor theory is necessary for appropriate assessment and development of therapy strategies. Additionally, an understanding of basic nervous system physiology and an understanding of the plasticity of the neurological system as it relates to the developing child provides the OT with information necessary for selection and modification of treatment sequence and strategies.</p> | <ul style="list-style-type: none"> • Lectures • Discussion • Supplemental written/visual materials • Video/slides | <ul style="list-style-type: none"> • Discussion • Participation • NDTA exam (pre and post test) |

NDTA Basic Pediatric Course Key to Course Content

Topic: Analysis/Facilitation/Movement and Treatment Labs

| Learning outcome(s) that pertain to occupational therapists | Instructional Personnel | Description of occupational therapy content | Activities or Instructional Strategies | Method of Assessment |
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| <p>At the conclusion of this course, participants will be able to:</p> <ol style="list-style-type: none"> 1. Analyze postural alignment and weight shift in the sagittal, frontal, and transverse planes of movement in different individuals. 2. Analyze postural/body alignment in prone, supine, sitting, kneeling, and standing. 3. Analyze and facilitate individuals through transitional movements including prone to sit, four-point to sit, sit to stand, and up from the floor. 4. Facilitate movement at/from the trunk and rib cage in different individuals. | <p>Coordinator Instructor</p> <p>OT Instructor</p> <p>PT Instructor</p> <p>SLP Instructor</p> | <ul style="list-style-type: none"> • Understanding how to analyze and facilitate weight shift, and transitional movements is a foundation of NDT assessment and treatment principles. OT's must develop a level of knowledge in how these relate to sensory processing, upper extremity and visual motor functional activities so that they can be more successful in achieving the postural foundation for participation in ADL, IADL, education, work, play and leisure. | <ul style="list-style-type: none"> • Lectures • Discussion • Supplemental written/visual materials • Videos/slides • Practicum with children • Demonstrations with children • Paper patient problem solving sessions • Analysis/ facilitation/ movement and treatment labs | <ul style="list-style-type: none"> • Discussion • Participation • NDTA exam (pre and post test) • Completion and submission of assessments for assigned pediatric clients in practicum sessions • Instructional observation and feedback during labs and during periodic performance evaluations • Written and/or verbal feedback on practicum assignment |

NDTA Basic Pediatric Course Key to Course Content

Topic: Analysis/Facilitation/Movement and Treatment Labs

| Learning outcome(s) that pertain to occupational therapists | Instructional Personnel | Description of occupational therapy content | Activities or Instructional Strategies | Method of Assessment |
|--|-------------------------|--|--|----------------------|
| <p>At the conclusion of this course, participants will be able to:</p> <p>6. Analyze and facilitate movement through the trunk and lower extremities while stimulating abdominal activity, hip abduction/extension, hip extension/lateral rotation, knee extension, and hip musculature activity.</p> <p>7. Analyze and facilitate movement through the shoulder girdle and upper extremities while stimulating thoracic extension, scapular stabilization, humeral external rotation, elbow extension, wrist extension, and different types of grasp.</p> <p>8. Analyze the alignment and structural composition of the trunk and rib cage in typically and atypically developing infants, children, and adolescents.</p> | | <ul style="list-style-type: none"> All typical and atypical movements of the body (upper body, lower body, rib cage, head/neck) influence sensory processing, upper extremity and visual function. Learning to analyze and facilitate all movement (from trunk/rib cage, with locomotion, in shoulder girdle, lower extremities/hips/pelvis) especially in children with neuromuscular involvement will help OT's to create the foundation of active body alignment essential for sensory processing, upper extremity and visual motor functions to be at their most efficient. | | |

NDTA Basic Pediatric Course Key to Course Content

Topic: Analysis/Facilitation/Movement and Treatment Labs

| Learning outcome(s) that pertain to occupational therapists | Instructional Personnel | Description of occupational therapy content | Activities or Instructional Strategies | Method of Assessment |
|--|-------------------------|---|--|----------------------|
| <p>At the conclusion of this course, participants will be able to:</p> <p>9. Facilitate movement through the thoracic/rib cage and trunk while stimulating rib cage mobility, upper chest wall expansion, respiratory function, and active postural stability/alignment in preparation for areas of occupation, activity demands, and functional performance.</p> <p>10. Demonstrate and practice treatment strategies to improve aspects of shoulder girdle and upper extremity alignment/function.</p> <p>11. Demonstrate and practice treatment strategies to improve aspects of distal upper extremity function.</p> <p>12. Demonstrate and practice treatment strategies to improve oral motor function and oral sensory awareness.</p> | | <ul style="list-style-type: none"> • Advanced OT Labs for OT's only look more intensively at aspects of assessment and treatment as they relate to NDT with respect to upper extremity, sensory processing and visual motor function. Additional labs done in a large group labs are provided with all disciplines. All disciplines need to have a base of knowledge in these areas. • Pediatrics covers the range from birth through at least 21 years. Therefore, baby treatment, which has some very specialized techniques / principles, is discussed separately. Important to OT's working in the NICU as well as in Birth-3 Programs. | | |



NDTA Basic Pediatric Course Key to Course Content

Topic: Analysis/Facilitation/Movement and Treatment Labs

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| <p>At the conclusion of this course, participants will be able to:</p> <ul style="list-style-type: none"> 13. Analyze and compare a variety of occupational performance components as seen in typically and atypically developing infants and children in regard to their impairments in performance skills. 14. Demonstrate the use of toys and objects appropriate to facilitate different levels of play by exploring the properties of toys/objects. 15. Demonstrate and practice facilitation strategies applicable in treatment. 16. Analyze, demonstrate, and practice advanced upper extremity handling techniques. | | | | |

NDTA Basic Pediatric Course Key to Course Content

Topic: Practicum with Children with CNS Pathophysiology

| Learning outcome(s) that pertain to occupational therapists | Instructional Personnel | Description of occupational therapy content | Activities or Instructional Strategies | Method of Assessment |
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| <p>At the conclusion of this course, participants will be able to:</p> <ol style="list-style-type: none"> Demonstrate integration of course content information within practicum assignment: <ul style="list-style-type: none"> Postural control Typical/Atypical development Evaluation and Treatment planning Treatment sequencing Analysis and facilitation of movement Parent training/ home management Team work PT, OT, ST content Neurophysiology Identify three compensations used by practicum children during functional tasks during a treatment session. Develop three short term goals and three long term goals based on assessment findings with a practicum child. | <p>Coordinator Instructor</p> <p>PT Instructor</p> <p>OT Instructor</p> <p>SLP Instructor</p> | <p>The ability to identify single system and multi-system factors influencing posture, movement and function is essential for the OT to assess and treat children with CNS pathophysiology.</p> <p>The integration of content area information into practicum sessions with children with CNS pathophysiology will include the areas of occupation including:</p> <ul style="list-style-type: none"> ADL IADL Education Work Play Leisure Social Participation Sleep | <ul style="list-style-type: none"> Lectures Discussion Supplemental written/visual materials Videos/slides Practicum with children Demonstrations with children Paper patient problem solving sessions | <ul style="list-style-type: none"> discussion participation NDTA exam (pre and post test) Completion and submission of assessments for assigned pediatric clients in practicum sessions Instructional observation and feedback Written and/or verbal feedback on practicum assignment |

NDTA Basic Pediatric Course Key to Course Content

Topic: Related Topics

| Learning outcome(s) that pertain to occupational therapists | Instructional Personnel | Description of occupational therapy content | Activities or Instructional Strategies | Method of Assessment |
|--|---|--|---|--|
| <p>At the conclusion of this course, participants will be able to:</p> <ol style="list-style-type: none"> 1. Demonstrate knowledge and use a task analysis model to analyze functional skills in terms of their sensory and motor components. 2. Demonstrate knowledge and use a task analysis model to develop strategies for preparation, simulation, and practice of skills for specific functional tasks. 3. Discuss the development and value of play within both typical and atypical development. 4. Determine the appropriate objects to use and select the appropriate toy to use during treatment sessions. 5. Discuss the sensory systems and their relationship to sensory motor development. 6. Discuss self-regulation and modulation of sensory input as it relates to children with neuromuscular impairments. | <p>OT Instructor (Primary Instructors)</p> <p>SLP Instructor and Coordinator Instructor (Help to relate upper body information to other functional areas)</p> | <ul style="list-style-type: none"> • Learn the principles of the task analysis model to apply to the analyses of functional task performance in areas of occupation. • Relate/integrate/apply information on play, object/ toy use and manipulation, sensory modulation/ processing, motor control, and shoulder girdle/upper extremity function | <ul style="list-style-type: none"> • Lecture • Discussion • Supplemental written/visual materials • Videos/slides • Practicum with children • Demonstrations with children • Paper patient problem solving sessions • Multi-disciplinary group discussions regarding children in demonstrations and practicums • Movement/ facilitation labs | <ul style="list-style-type: none"> • Discussion • Participation • NDTA exam (pre and post-test) • Instructional observation and feedback during labs |



NDTA Basic Pediatric Course Key to Course Content

Topic: Related Topics

| Learning outcome(s) that pertain to occupational therapists | Instructional Personnel | Description of occupational therapy content | Activities or Instructional Strategies | Method of Assessment |
|---|-------------------------|---|--|----------------------|
| <p>At the conclusion of this course, participants will be able to:</p> <ol style="list-style-type: none"> 1. Discuss praxis and its relationship to motor control. 2. Discuss the role of vision, vestibular and proprioception on postural control and movement. 3. Discuss the impact of visual perception problems on movement. 4. Identify sensory processing problems in children and how to adapt handling and the environment to impact functional outcomes. | | | | |

NDTA Basic Pediatric Course Key to Course Content

Topic: Related Topics

| Learning outcome(s) that pertain to occupational therapists | Instructional Personnel | Description of occupational therapy content | Activities or Instructional Strategies | Method of Assessment |
|--|-------------------------|--|--|----------------------|
| <p>At the conclusion of this course, participants will be able to:</p> <ol style="list-style-type: none"> 1. Identify key structures and musculature of the shoulder girdle complex and the upper extremities/hand and discuss their relationship to the head/neck, rib cage/trunk and pelvis/hips. 2. Discuss influences of pelvic mobility, the spine, and the trunk on arms and weight shifting in the upper extremities. 3. Discuss impairments that effect upper extremity function and hand function (e.g., neck hyperextension, shoulder girdle elevation, scapular adduction/abduction, humeral internal rotation and abduction, elbow flexion). 4. Identify adjuncts to therapy that may be implemented by an OT in different treatment settings including splinting, casting, taping, NMES, TES, and adaptive equipment. | | <ul style="list-style-type: none"> • Relate/integrate/apply the impact of the pelvis, spine and trunk on the use of the shoulder girdle and upper extremities during functional activities • Relate information about the upper extremity and hand function impairments often seen in infants and children with neuromuscular involvement that impact areas of occupation. | | |

NDTA Basic Pediatric Course Key to Course Content

Topic: Related Specifics (lower body)

| Learning outcome(s) that pertain to occupational therapists | Instructional Personnel | Description of occupational therapy content | Activities or Instructional Strategies | Method of Assessment |
|---|---|---|--|--|
| <p>At the conclusion of this course, participants will be able to:</p> <ol style="list-style-type: none"> 1. Identify key structures and musculature that compose the pelvic girdle, hips, lower extremities, and feet. 2. Explain the importance of the activation of the pelvis/hips/lower extremities for weight bearing, transitional movements, postural alignment, and locomotion/gait during functional activities in all positions (e.g., sitting, standing). 3. Discuss and analyze the impact of normal and abnormal components of movement and compensatory strategies on general body movement, postural alignment and control, and functional activities. 4. Gather pertinent information during the assessment process related to the musculoskeletal and neuromuscular body systems, postural control, postural alignment, and physiological strength and endurance. | <p>Coordinator Instructor and PT Instructor (Primary Instructors)</p> <p>SLP Instructor and OT Instructor (Help to relate lower body information to other functional areas)</p> | <ul style="list-style-type: none"> • Learn about the structures and musculature of the lower body and how they relate to sensory, upper body/head/neck and visual function. • Learn about the importance of facilitating active pelvic/hip/lower body activity while analyzing typical and atypical development and relate/apply information to changes in sensory, upper body, upper extremity, visual motor activity. • It is essential for OT's to understand the overall assessment process which includes recognizing all body systems identifying LE impairments in order to understand how sensory, arm, hand, and visual function relate to other parts of the body. | <ul style="list-style-type: none"> • Lecture • Discussion • Supplemental written/visual materials • Videos/slides • Practicum with children • Demonstrations with children • Paper patient problem solving sessions • Multi-disciplinary group discussions regarding children in demonstrations and practicums • Movement/facilitation labs | <ul style="list-style-type: none"> • Discussion • Participation • NDTA exam (pre and post-test) • Instructional observation and feedback during labs |

NDTA Basic Pediatric Course Key to Course Content

Topic: Related Specifics (lower body)

| Learning outcome(s) that pertain to occupational therapists | Instructional Personnel | Description of occupational therapy content | Activities or Instructional Strategies | Method of Assessment |
|---|-------------------------|---|--|----------------------|
| <p>At the conclusion of this course, participants will be able to:</p> <ol style="list-style-type: none"> 5. Analyze movement focusing on the inter relationship of the trunk, upper extremities and lower extremities; the relationship of postural behavior to function; changes dependent on a variety of surfaces (mobile or stable); and on the differences between typical and atypical movement. 6. Discuss the principles of positioning as they relate to adaptive equipment articulating the potential impact on upper extremity and visual motor function. (e.g., wheelchairs, standers, walkers). 7. Identify and discuss common types of orthopedic surgeries as they relate to children with cerebral palsy. | | <ul style="list-style-type: none"> • OT's must be able to analyze all movement as it relates to sensory processing, upper extremity, visual motor function. Understanding the principles of body alignment and how it relates to positioning and equipment selection. • Orthopedic surgeries and equipment (orthotics, braces) influence functional outcomes. OT's must understand what different surgeries/equipment may influence performance skills in OT related functional activities. | | |

NDTA Basic Pediatric Course Key to Course Content

Topic: Treatment

| Learning outcome(s) that pertain to occupational therapists | Instructional Personnel | Description of occupational therapy content | Activities or Instructional Strategies | Method of Assessment |
|---|--|---|---|---|
| <p>At the conclusion of this course, participants will be able to:</p> <ol style="list-style-type: none"> 1. Discuss the use of handling and facilitation of movement in treatment for children with CNS pathophysiology. 2. Discuss the use of positioning in treatment of children with CNS pathophysiology. 3. Demonstrate NDT handling and facilitation techniques including: <ul style="list-style-type: none"> • Key points of control • Inhibition • Co-activation • Vibration • Tapping 4. Demonstrate NDT handling and facilitation techniques as they relate to sensory processing, upper extremity, and visual motor function. | <p>Coordinator Instructor OT Instructor PT Instructor SLP Instructor</p> | <p>A significant and unique component of the Neurodevelopmental Treatment Approach (NDT) is the handling and facilitation of movement, appropriate body alignment and active postural control as the foundation for sensory processing, upper extremity, visual motor function. Specific procedures and techniques to improve sensory processing, upper extremity, and visual motor function can be implemented once the appropriate body alignment is achieved. It is essential for the OT to understand these principles and be able to integrate them into their treatment of children with CNS pathophysiology.</p> | <ul style="list-style-type: none"> • Lectures • Discussion • Supplemental written/visual materials • Video/slides • Practicum with children • Demonstrations with children • Paper patient problem solving sessions • Facilitation and treatment labs | <ul style="list-style-type: none"> • discussion • participation • NDTA exam (pre and post test) • Completion and submission of assessments for assigned pediatric clients in practicum sessions • Instructional observation and feedback during labs and during periodic performance evaluations • Written and/or verbal feedback on practicum assignment |



NDTA Basic Pediatric Course Key to Course Content

Topic: Treatment

| Learning outcome(s) that pertain to occupational therapists | Description of occupational therapy content | Activities or Instructional Strategies | Method of Assessment |
|--|---|--|----------------------|
| <p>At the conclusion of this course, participants will be able to:</p> <ol style="list-style-type: none"> 1. Demonstrate sensory-motor preparation techniques and upper extremity facilitation techniques for integration and treatment of 2. performance skills related to areas of occupation. 3. Demonstrate NDT handling and facilitation techniques focused on upper extremity and visual motor function. 4. Demonstrate an understanding of the positioning needed for upper extremity and visual motor function. 5. Explain and demonstrate the importance of ongoing assessment of a child's changes in movement, upper extremity, visual motor function as part of the treatment process. 6. Demonstrate the ability to modify treatment strategies based on changes noted during treatment. 7. Formulate carry over strategies for home and school programs related to areas of occupation. | | | |

NDTA Basic Pediatric Course Key to Course Content

Topic: Parent Training and Home Management

| Learning outcome(s) that pertain to occupational therapists | Instructional Personnel | Description of occupational therapy content | Activities or Instructional Strategies | Method of Assessment |
|---|---|---|--|--|
| <p>At the conclusion of this course, participants will be able to:</p> <ol style="list-style-type: none"> 1. Explain the importance of actively involving parents in the therapeutic program of their child. 2. Demonstrate that they can communicate clearly with parents the assessment and the treatment plan for their child. 3. With parent, develop short-term and long-term goals for their child. 4. Develop with the parents, a home management program that carries over therapy goals into the home. | <p>Coordinator Instructor</p> <p>OT Instructor PT Instructor SLP Instructor</p> | <p>Parent involvement in the treatment program ensures that the goals represent family as well as child needs. Their involvement also strengthens the effectiveness of the treatment through the carryover of activities to the child's daily life.</p> | <ul style="list-style-type: none"> • Lectures • Discussion • Supplemental written/visual materials • Videos/slides • Practicum with children • Demonstration with children | <ul style="list-style-type: none"> • Discussion • Participation • NDTA exam (pre and post-test) • Completion and submission of assignments for pediatric clients in practicum sessions • Instructional observation and feedback • Written and/or verbal feedback on practicum assignment |