

OTAT-2330: TECHNIQUES IN PHYSICAL DISABILITIES

Cuyahoga Community College

Viewing: OTAT-2330 : Techniques in Physical Disabilities

Board of Trustees:

2018-01-25

Academic Term:

2018-01-16

Subject Code

OTAT - Occupational Therapy Assisting

Course Number:

2330

Title:

Techniques in Physical Disabilities

Catalog Description:

Overview of occupational therapy treatment strategies and techniques for physically disabled adults from late adolescence to the end of life. Emphasis on current, authentic and effective occupational therapy practice.

Credit Hour(s):

4

Lecture Hour(s):

3

Lab Hour(s):

3

Other Hour(s):

0

Requisites

Prerequisite and Corequisite

PTAT-1300 Functional Anatomy, and OTAT-1430 Techniques in Psychosocial Dysfunction.

Outcomes

Course Outcome(s):

Apply the concepts of the Occupational Therapy Practice Framework: Domain and Process to the practice of physical disabilities.

Objective(s):

1. Review the main concepts of the Occupational Therapy Practice Framework.
2. Discuss the importance of skills, habits, routines, rituals, and roles in performance of occupation.
3. Explain the effects of values, beliefs, and spirituality on occupational performance and on the rehabilitation process.
4. Illustrate ways in which different kinds of environment and context affect occupational performance.
5. Give examples in which impairment in body functions and structure impairs participation in practice.

Course Outcome(s):

Apply principles of and demonstrate strategies with assistive technology and devices (e.g. electronic aids to daily living, seating and positioning systems) used to enhance occupational performance and foster participation and well-being.

Objective(s):

1. Identify the necessary standard measurements associated with wheelchair seating and mobility evaluation.
2. Describe how to determine an appropriate mobility device for clients according to their functional activity level.
3. Describe the different conceptual framework that driver rehabilitation specialists use.

4. Recognize basic AT solutions for optimal safety and independence in activities of daily living and instrumental activities of daily living.
5. Summarize assistive technology legislation as it relates to occupational therapy practice.
6. Apply assistive technology models to occupational therapy practice to guide the use of assistive technology as a preparatory method to support occupational performance.
7. Explain the assistive technology assessment process to feature match assistive technology to client needs to support occupational performance.
8. Discuss the pros and cons of electronic aids to daily living for different population.

Course Outcome(s):

Design a plan of interaction for a physical dysfunction setting addressing the use of self, dyadic, and group interaction.

Objective(s):

1. Establish and effective rapport with patient/client/staff/caregivers.
2. Discriminate between desirable and undesirable client/patient behaviors.
3. Initiate, sustain, and end conversation with patient/client/staff/caregivers.
4. Demonstrate active listening skills.
5. Use appropriate non-verbal communication.
6. Show awareness of personal strengths/weaknesses and make efforts to improve weak areas.

Course Outcome(s):

Compare and contrast the role of the occupational therapy assistant and the occupational therapist in the evaluation of sensation, perception and cognition.

Objective(s):

1. Summarize occupational therapy assessment and interventions for the following perception deficits: inattention, apraxia, agnosia, visual spatial perception deficits, deficits of tactile perception, and body scheme disorders.
2. Define and describe various functions and deficits in the sensory, perceptual, and cognitive system.
3. Explain the test and evaluation principles related to sensory, perceptual and cognitive dysfunction.
4. Describe the interrelationships among sensory, perceptual, and cognitive functions in the performance of everyday occupations.

Course Outcome(s):

Design and adapt occupation-based interventions, purposeful intervention, therapeutic exercises and therapeutic modalities to facilitate the development of remediation, and compensation for physical, cognitive, perceptual, neuromuscular, behavioral and sensory functions.

Objective(s):

1. Differentiate purposeful activities from other modalities used in occupational therapy practice.
2. Define the terms purposeful activity, occupation, therapeutic exercises and therapeutic modalities.
3. Identify and define the types of performance skills and patterns, contexts, activity demands, and client factors that influence engagement and participation in daily occupations.
4. Identify the eight characteristics that should be present in any activity used for therapeutic purposes.
5. Describe the uses of therapeutic exercise for a variety of occupational therapy goals.
6. Discuss the appropriate use of enabling activities and adjunctive modalities.
7. Describe the indications, contraindications, procedures, and precautions for a variety of exercise protocols.
8. Discuss the appropriate uses of various physical agent modalities in occupational therapy.
9. Identify appropriate modalities in the continuum of care.

Course Outcome(s):

Create and adapt appropriate activities of daily living strategies based on various performance skills and client factors.

Objective(s):

1. Discuss the factors that affect the role of occupational therapy assistant in the practice area of activities of daily living.
2. Name, objectively describe, and contrast differing levels of independence in activities of daily living.
3. Describe the procedures for performing an evaluation of activities of daily living including instruments to be used, techniques, timing, strategies, and reporting procedures.
4. Identify recommended adaptive devices to facilitate participation in and performance of activities of daily living for individuals with specific functional losses.
5. Recommend home modifications to individuals with specific functional losses to enable maximum independence at home.
6. Select techniques and adaptive equipment for individuals with specific functional impairments to increase independence in occupational roles.

Course Outcome(s):

Explain the role of the occupational therapy practitioner in functional ambulation.

Objective(s):

1. Define functional ambulation.
2. Identify appropriate intervention to promote functional ambulation within occupational therapy intervention.
3. Identify safety issues in ambulation.
4. Recognize basic lower extremity orthotics and ambulation aids.
5. Discuss the factors that an occupational therapist considers in wheelchair evaluation, wheelchair measurement, and prescription completion.
6. Identify wheelchair safety considerations.
7. Follow guidelines for proper body mechanics.
8. Apply principles of proper body positioning.
9. Identify the steps necessary in performing various transfer techniques.
10. Identify considerations necessary to determine the appropriate transfer method based on the patient's clinical presentation.
11. List the ten elements of a driving evaluation.
12. Describe the contribution of occupational therapy to the assessment of the disabled individual/s driving.
13. Describe the contribution of occupational therapy to the assessment of the disabled individual/s driving.
14. Describe the contribution of occupational therapy to the assessment of the disabled individual/s driving.

Course Outcome(s):

Recognize the occupational therapy practitioner's role in sexuality intervention.

Objective(s):

1. Define sexuality.
2. Describe the normal human sexual response cycle.
3. Apply the PLISSIT model (permission, limited information, specific suggestions, and intervention) that are appropriate to use for occupational therapy practitioners.
4. Identify sexual impairments and how they affect function.
5. Plan intervention for impairments affecting sexual functioning.

Course Outcome(s):

Identify and understand the common pathological conditions that influence health and function in the older adult.

Objective(s):

1. Explain differences between normal aging and versus disease processes in older adults.
2. Distinguish between acute and chronic health problems.
3. Recognize the varied functional abilities of the older adults.
4. Describes the various developmental stages of aging.
5. Describe the prevalence of functional limitations among elderly populations.
6. Describe how occupational therapy intervention can be used to meet the physical, social, emotional, and cognitive needs of older adults.
7. Explain techniques to improve motivation among older adults.
8. Describe the potential effect of medication on the functioning of the older adult.

Course Outcome(s):

Apply basic features of models of practice and frame of reference that are used in occupational therapy practice.

Objective(s):

1. Describe the Model of Human Occupation and illustrate its application to a person with a physical disability.
2. Explain the principles of occupational therapy intervention that derive from the Model of Human Occupation.
3. Examine the biomechanical practice model, clarify the principles that support it, identify the conditions in which it is most effective, and establish its relationship to the model of human occupation.
4. Outline the principles of occupational therapy intervention that derive from the rehabilitation practice model.
5. Illustrate the treatment continuum model and its four stages: adjunctive methods, enabling methods, purposeful activities, and occupational performance and occupational roles.

Course Outcome(s):

Draw patterns for and fabricate three basic upper extremity splints.

Objective(s):

1. Determine what low-temperature thermoplastic handling and performance characteristics are useful when fabricating different splints.
2. Locate important landmarks in the anatomy of the hand.
3. Recognize arches and other structural elements that contribute to hand function.
4. Identify normal prehension and grasp patterns.
5. Describe the three basic positions of the hand.
6. Explain the basic purposes of splinting an extremity.
7. Discuss the biomechanical consideration involved in splint selection and fabrication.
8. Explain basic pattern-making, fabrication, and strapping principles and techniques.

Course Outcome(s):

Demonstrate sound judgement in regard to safety of self and others and adheres to safety regulations throughout the occupational therapy process as appropriate to the setting and scope of practice.

Objective(s):

1. Describe guidelines for handling various emergency situations.
2. Identify preventive positioning for patients with lower extremity amputations, rheumatoid arthritis, burns and hemiplegia.
3. Name precautions when treating patients how require special equipment.
4. Identify recommendations for safety in the clinic.
5. List the standard precautions and recognize the importance of following them with all patients.
6. Describe and practice proper techniques of hand washing.
7. Recognize the importance of following isolation procedures used in patient care.
8. Identify procedures for handling patient injuries.

Course Outcome(s):

Design and advocate programs for wellness, community integration and instrumental activities of daily living for the older adult population.

Objective(s):

1. Examine ways of promoting wellness, disease prevention and evidence based in the older adult population.
2. Discuss common functional problems that impact the ADL of the older adult and formulate a practical suggestion for each of these problems.
3. Consider architectural and societal barriers that impact rehab, safety and the participation in occupations and prepare recommendations for modifications to reduce these barriers.
4. Design intervention for reducing the effect of these changes on performance and safety.
5. Identify community resources available for the older adult including the role of the ombudsmen/patient advocate program.
6. Relate the impact of culture, ethnicity, religion, socioeconomic status and family history on the interaction and treatment of the older adult patient.
7. Assess potential barriers to the older adult population participation in health promotion/wellness activities.
8. Design an environmental assessment for fall prevention in the clinic and home that include the benefits and risks of the use of occupational therapy restraints.

Course Outcome(s):

Contrast the roles of the occupational therapist and the occupational therapy assistant in the evaluation and intervention planning stages of the occupational therapy process.

Objective(s):

1. Identify and describe the major stages of the occupational therapy process.
2. Explain how the medical record can assist the OT practitioner in preparing for evaluation of the client.
3. Discuss the importance of an occupational therapy profile client interview in the evaluation process.
4. Examine the skills and behaviors of an effective interview.
5. Explain the differences between a standardized and on standardized tests.
6. Explain and apply basic features of models of practice and frames of reference that are used in occupational therapy practice.
7. Identify treatment or intervention planning and describe the process.
8. Differentiate the roles of the occupational therapy and the occupational therapy assistant in intervention planning.
9. Write clear, measurable, relevant treatment goals and objectives.

Course Outcome(s):

Design and documents occupational therapy services to ensure accountability of service provision and to meet standards for reimbursement of services, adhering to the requirements of applicable facility, local, state, federal and reimbursement agencies.

Objective(s):

1. Describe the purpose of documentation for occupational therapy services.
2. Identify and describe the legal implications for complete and accurate documentation.
3. List fundamental elements of documentation.
4. Compare occupational therapist and occupational therapy assistant documentation requirements.
5. List the sequential steps in the clinical reasoning process for documentation.
6. Express the reporting process including initial evaluation reports, intervention plans, progress reports, and discharge summaries.
7. Recognize the value of the Occupational Therapy Practice Framework to the documentation process.
8. Describe the opportunities and challenges of using an electronic health record.

Course Outcome(s):

Given a case study, select appropriate sensation, ROM, strength, and coordination assessment measures and intervention.

Essential Learning Outcome Mapping:

Critical/Creative Thinking: Analyze, evaluate, and synthesize information in order to consider problems/ideas and transform them in innovative or imaginative ways.

Objective(s):

1. Describe common standardized and nonstandardized assessment methods for sensation, range of motion (ROM), strength and coordination.
2. Describe normal and abnormal sensation, ROM, strength, and coordination assessment findings.
3. State precautions and contraindications for the assessment and intervention of sensation, ROM, strength, and coordination.
4. Discuss how abnormal sensation, ROM, strength, and coordination findings impact areas of occupation, activity demands, performance patterns and performance skills.

Course Outcome(s):

Create and adapt low-vision intervention (i.e., including clinical observations, standardized tests, impact on activities of daily living, and interventions) for the following deficit areas: visual acuity, visual field, contrast sensitivity, oculomotor function, and visual perceptual deficits.

Essential Learning Outcome Mapping:

Critical/Creative Thinking: Analyze, evaluate, and synthesize information in order to consider problems/ideas and transform them in innovative or imaginative ways.

Objective(s):

1. Describe the key function of each structure of the eye.
2. Explain the key function of the visual pathway.
3. Describe the impact on vision when a structure of the eye or the visual pathway is injured.
4. Identify the eye diseases and injuries and their impact on vision.
5. Compare and contrast the eye diseases and injuries discussed in class.

Course Outcome(s):

Delineate between the role of the occupational therapist and the occupational therapy assistant as they pertain to assessing motor control and functional motion.

Objective(s):

1. Define motor control theory and motor learning.
2. Explain how postural control affects motor control and functional motion.
3. Distinguish between normal and abnormal muscle tone.
4. Describe the proprioceptive neuromuscular facilitation (PNF), neurodevelopmental treatment (NDT), task oriented approach (TOA), and Rood approach principles utilized in occupational therapy intervention.
5. Compare and contrast PNF, NDT, TOA, and Rood approach to OT intervention.
6. Identify and describe the evaluations and assessment used to assess motor function.
7. Appraise the evidence for the various theories, assessment, and interventions used in OT practice for motor control dysfunction.
8. Describe expected motor recovery patterns in the adult with central nervous system dysfunction.

Course Outcome(s):

Demonstrate muscle testing procedures for each of the upper extremity muscle groups including positioning, stabilization, palpation, observation, and application of resistance.

Objective(s):

1. Identify the six general purposes of muscle strengths measurement.

2. Identify the three methods of evaluating muscle strength.
 3. Discuss the relationship between joint range of motion and muscle strength measurements.
 4. Identify the four primary limitations of the manual muscle test.
 5. List and describe the two primary factors influencing muscle functions.
 6. Identify and define the muscles grades.
 7. Describe the six steps of the standard procedure for manual muscle testing.
-

Course Outcome(s):

Given a case study, identify and describe common standardized, nonstandardized assessment methods, precautions and contraindications for range of motion (ROM) intervention.

Essential Learning Outcome Mapping:

Critical/Creative Thinking: Analyze, evaluate, and synthesize information in order to consider problems/ideas and transform them in innovative or imaginative ways.

Objective(s):

1. Define goniometry in relation to range of motion.
 2. Describe functional range of motion in relation to activities of daily living.
 3. Determine range of motion measurements of the major upper extremity joints.
 4. Contrast active and passive range of motion.
 5. Describe basic goniometry testing positions of the upper extremity.
 6. Recommend a therapeutic exercise program based on goniometric measurements.
 7. Describe the three cardinal planes of movement.
-

Methods of Evaluation:

1. Demonstration of treatment techniques to classmates
2. Exams
3. Treatment plans
4. Progress notes
5. Activity analyses
6. Fabrication of adapted equipment
7. Quizzes
8. Case scenarios

Course Content Outline:

1. Frame of reference and practice models
 - a. Practice models versus frame of reference
 - b. Frame of reference
 - i. Human occupation
 - c. Practice models
 - i. Biomechanical approach
 - ii. Sensorimotor (neurophysiological) approach
 - iii. Rehabilitation approach
 - d. Treatment continuum
 - i. Adjunctive methods
 - ii. Enabling activities
 - iii. Purposeful activity
 - iv. Occupational performance and occupational roles
2. Overview of occupational therapy process
 - a. Steps or stages in the occupational therapy process
 - i. Referral
 - ii. Screening
 - iii. Evaluation
 - iv. Treatment planning
 - v. Treatment implementation
 - vi. Reevaluation
 - vii. Discharge planning
 - viii. Termination of treatment
 - b. Role of the Registered Occupational Therapist

- c. Role of the Certified Occupational Therapy Assistant
- d. Experience, expertise and service competency
- 3. Occupational therapy evaluation of physical dysfunction
 - a. Evaluation and assessment
 - i. Role of the Registered Occupational Therapist
 - ii. Role of the Certified Occupational Therapy Assistant
 - b. The Evaluation process
 - i. Clinical reasoning
 - ii. Content of the evaluation
 - iii. Methods of evaluation
 - 1. Review of medical records
 - 2. Interview
 - 3. Daily schedule interview
 - 4. Observation
 - 5. Formal evaluation procedures (i.e. standardized tests)
- 4. Occupational therapy treatment planning
 - a. The Treatment planning process
 - i. Data gathering
 - ii. Data analysis and problems identification
 - iii. Selecting a frame of reference or practice model
 - iv. Selecting and writing treatment goals and objectives
 - v. Selecting treatment methods
 - vi. Implementing the treatment plan
 - vii. Discharge planning and terminating treatment
- 5. Documentation of occupational therapy services
 - a. Purposes of documentation
 - b. Documentation and ethics
 - c. Legal aspects of documentation
 - d. Quality of documentation content
 - e. Fundamentals elements of documentation
 - f. Occupational therapy record
 - i. Permanent legal record
 - ii. Problem-oriented medical record
 - iii. Automated documentation systems
 - iv. Classification codes for billing of services
 - v. Medicare reports
- 6. Evaluation of joint range of motion
 - a. Role of the Occupational Therapy Assistant in joint measurement
 - b. General principles of joint measurement
 - c. Method of joint measurement
 - d. The Goniometer
 - i. Stationary bar
 - ii. Movable bar
 - iii. Recording measurement results
 - e. Joint limitation and disease processes
 - i. Procedure for joint measurement
 - ii. Procedures for goniometric measurement and testing selected upper extremity motions
 - f. Screening for functional range of motion
- 7. Evaluation of Muscle Strength
 - a. Role of the Occupational Therapy Assistant in evaluating muscle strength
 - b. Limitations resulting from muscle weakness
 - c. Methods of Evaluation
 - d. Manual Muscle Testing
 - i. Limitations
 - ii. Examiner's knowledge and skills
 - iii. Preparation
 - iv. Positioning
 - e. Factors influencing muscle functions
 - i. substitution

- f. Muscle grades
- g. Procedure for manual muscle testing
- 8. Evaluation of Motor Control
 - a. Postural mechanism
 - i. Normal muscle tone
 - ii. Evaluating motor tone
 - iii. Abnormal muscle tone
 - 1. Hypotonicity
 - 2. Hypertonicity
 - 3. Rigidity
 - 4. Reflexes
 - iv. Evaluating upper extremity motor recovery
 - 1. Brunnstrom's stages of motor recovery
 - v. Occupational Therapy considerations based on results of Motor Control Evaluation
 - vi. Coordination and occurrence of incoordination
- 9. Evaluation of Sensation, Perception and Cognition
 - a. Principles of sensory evaluation
 - i. Sensory supply to specific areas
 - ii. Purposes of testing
 - iii. Occluding vision during testing
 - b. Tests for sensation
 - i. General procedure
 - ii. Light touch and pressure sensation
 - iii. Superficial pain sensation
 - iv. Olfactory sensation
 - v. Gustatory sensation
 - vi. Proprioception (position, and motion sense)
- 10. Sensorimotor approaches to treatment
 - a. The Rood approach
 - b. The Brunnstrom approach to treatment of Hemiplegia
 - c. Proprioceptive Neuromuscular Facilitation (PNF)
 - d. Neurodevelopmental Treatment of Adult Hemiplegia: The Bobath approach
- 11. Treatment of disturbances in tactile sensation, perception, cognition, and vision
 - a. Treatment of sensory dysfunction
 - i. Treatment guidelines
 - 1. Central nervous system dysfunction
 - 2. Peripheral nervous system Dysfunction
 - b. Treatment of perceptual and perceptual motor deficits
 - i. Approaches to treatment
 - ii. Treatment of selected perceptual deficits
 - iii. Asternognosis
 - 1. Body scheme disorders
 - a. Ideomotor and Ideational Apraxia
 - b. Constructional Apraxia
 - c. Dressing Apraxia
 - iv. Treatment of cognitive dysfunction
 - 1. Use of technology in cognitive retraining
 - 2. Treatment of specific deficit areas
 - a. Attention
 - b. Memory
 - c. Executive functions
 - d. Reasoning and problem solving
 - e. Awareness
 - f. Behavioral problems
 - v. Treatment of visual deficits
 - 1. Role of vision in adaptation process
 - 2. Deficits in primary visual skills
 - 3. Deficits in central nervous system visual skills
 - 4. Vision loss: compensatory techniques for activities of daily living
- 12. Physical agent modalities

- a. Regulatory issues and the role of the Occupational Therapy Assistant
 - b. Physical agent modality classifications
 - c. Biophysiology of wound healing - an occupational perspective
 - d. Wound healing
 - i. Inflammatory phase
 - ii. Proliferative phase
 - iii. Remodeling phase
 - e. Superficial thermal agents
 - f. Heat agents
 - g. Physiological response to heat
 - h. Clinical applications and goals
 - i. Precautions and contraindications
 - j. Cryotherapy
 - i. Precautions and contraindications
 - k. Deep thermal agents: therapeutic ultrasound
 - i. Precautions and contraindications
 - l. Electrotherapy principles and applications
 - m. Neuromuscular electrical stimulation
 - n. Electrical stimulation for wound healing
 - o. Transcutaneous electrical nerve stimulation
13. Wheelchair seating and mobility
- a. Evaluation
 - i. History and physical examination
 - ii. Cognitive and visual status
 - iii. Sensation and skin integrity
 - b. Principles of seating for postural control
 - c. Posture control evaluation
 - i. Head and neck position
 - ii. Upper extremity function
 - iii. Trunk position
 - iv. Pelvis position
 - v. Hip and foot position and lower extremity function
 - vi. Spasticity and muscle tone.
 - d. Measuring the client
 - e. Activities and participation
 - f. Environment and current technology
 - i. Current wheelchair seating and mobility
 - ii. Home environment
 - iii. Transportation and community involvement
 - g. Equipment recommendations
 - i. Psychosocial issues - rejection of equipment
 - h. Determining items for the seating system
 - i. Manual wheelchairs
 - ii. Power wheelchairs
 - iii. Seat cushions
 - iv. Backrests
 - i. Documentation and funding Issues
 - i. Medicare considerations
 - ii. Medicaid considerations
 - iii. Other reimbursement sources
14. Health promotion and wellness
- a. Health and occupation
 - b. What is health promotion?
 - c. OT and prevention
 - d. Theories of health promotion and health behavior change
 - i. Health belief model
 - ii. Transtheoretical model
 - e. Screening and assessment

- f. Interventions
- g. Referrals and discharge consideration

Resources

Early Mary Beth. (2006) *Physical Dysfunction Practice Skills for the Occupational Therapy Assistant*, St. Louis, MO, Mosby.

Lohman, H., Byers-Connon, S., Padilla, R. (2016) *Occupational Therapy with Elders, Strategies for the Occupational Therapy Assistant*, Maryland Hts., Elsevier Mosby.

Oatis, Carol A. (2017) *Kinesiology: The Mechanics and Pathomechanics of Human Movement*, Philadelphia; Wolters Kluwer.

Cronin, A., Mandich, M.B. *Human Development and Performance Throughout the Lifespan*. 2nd. Boston: Cengage Learning, 2014.

Cole M.B., Tufano, R. (2006) *Applied Theories in Occupational Therapy A Practical Approach*, Thorofae: Slack Incorporated.

Trickey-Rokenbrod Dianne. (2016) *Occupational Therapy in Action A Library of Case Studies*, Philadelphia: Wolters Kluwer.

Resources Other

1. Videos (updated as appropriate).

Top of page

Key: 3389