

Physical/Occupational Therapy I

8365 36 weeks / 280 hours

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Course Description

Suggested Grade Level: 11 or 12

The course is designed to provide an introduction to the professions of physical and occupational therapy. Students explore the principles and practices of therapists in the health care industry and participate in clinical observation under the direct supervision of a licensed physical and/or occupational therapist. Clinical skills in the areas of physical therapy and occupational therapy enable students to gain understanding of rehabilitative care, which is practiced throughout the continuum of care and across the life span of individuals. After successful completion of this course, students may seek higher education for specific degrees/licensure in a variety of fields such as physical therapy, occupational therapy, speech therapy, sports medicine, athletic training, chiropractic medicine, biology, or exercise science.

Recommended prerequisite(s): Algebra and Biology

NOTE: *This course has specific state laws and regulations from a governing medical board or agency. Please contact the Virginia Department of Education, Office of Career and Technical Education Services prior to implementing this course. All inquiries may be sent to cte@doe.virginia.gov.*

Task Essentials Table

- Tasks/competencies designated by plus icons (⊕) in the left-hand column(s) are essential
- Tasks/competencies designated by empty-circle icons (○) are optional
- Tasks/competencies designated by minus icons (⊖) are omitted
- Tasks marked with an asterisk (*) are sensitive.

8365	Tasks/Competencies
Gaining an Overview of the Rehabilitation Field	
⊕	Identify the healthcare team.
⊕	Identify therapeutic settings.
⊕	Identify the types of clients seen by occupational and physical therapy professionals.
Exploring Careers in the Rehabilitation Field	
⊕	Describe the variety of career fields related to rehabilitation.
⊕	Explain the differences among a physical therapist, physical therapist assistant, occupational therapist, and occupational therapy assistant.
⊕	Describe the requirements for licensure and credentialing in PT and OT.
⊕	Complete a clinical observation experience.
Gaining an Overview of Physical and Occupational Therapy	
⊕	Describe the basic objectives of physical therapy.
⊕	Describe the basic objectives of occupational therapy.
○	Outline the basic history of physical and occupational therapy.
⊕	Distinguish among functional mobility, activities of daily living (ADL), and instrumental activities of daily living (IADL).
○	Describe the changing roles of physical therapy and occupational therapy within the medical model.

8365	Tasks/Competencies
+	Explain the role of professional associations in the physical and occupational therapy fields.
Understanding Ethical and Legal Issues Related to Physical and Occupational Therapy Professionals	
+	Identify core values in physical therapy and occupational therapy.
+	Describe key concepts related to ethical and legal responsibilities.
+	Identify the concept and importance of the Patient Care Partnership, HIPAA, and ADA.
Using Effective Communication in the Rehabilitative Environment	
+	Explain methods of effective verbal and nonverbal communication.
+	Identify impairments and age-related changes that may affect communication.
+	Demonstrate sensitivity in communicating and interacting with persons with disabilities.
+	Describe the core elements of documentation in the medical record.
+	Use medical terminology and abbreviations common in therapeutic communication.
Maintaining a Safe Patient Environment	
+	Complete the American Heart Association course for CPR, AED, and first aid.
+	Demonstrate the use of standard precautions in the patient setting.
+	Demonstrate the cleaning of rehabilitative and related equipment.
+	Identify potential safety hazards in the rehabilitation environment and appropriate responses associated with each.
+	Explain ways to maintain client safety.
Understanding Applied Anatomy	
+	Identify the systems of the body and the functions and key structures of each system.
+	Explain the key structures and functions of the musculoskeletal system most commonly addressed by physical/occupational therapy.
Understanding Disease Processes Treated by Rehabilitation Professionals	
+	Describe common musculoskeletal disorders across the life span.
+	Describe common integumentary disorders across the life span.
+	Describe common cardiopulmonary disorders across the life span.
+	Describe common neuromuscular/neurological disorders across the life span.
+	Describe common eye disorders across the life span.
+	Describe common psychosocial disorders across the life span.
+	Describe common cognitive and perceptual impairments that occur as a result of disease processes across the life span.
+	Explain the importance of meeting the emotional needs of the rehabilitative patient.
Lifting and Transferring Patients	
+	Demonstrate good body mechanics.
+	Identify principles and precautions related to lifting clients.
+	Describe basic client positions and bed mobility with or without assistive devices.
+	Identify principles and precautions related to basic transfers of clients.
Demonstrating Therapeutic Activities	
+	Demonstrate techniques used for range of motion (ROM).
+	Demonstrate techniques used for strengthening.
+	Demonstrate techniques used for motor control, balance, and coordination.
+	Demonstrate techniques used for improving cardiovascular capacity.
+	Describe various conditions requiring therapeutic exercise.

8365	Tasks/Competencies
Determining Physical and Physiological Status	
+	Demonstrate techniques for taking and recording vital signs and observing physiological changes.
+	Describe common assessments used by rehabilitative professionals across the life span.
+	Explain techniques for assessing body composition.
Understanding Assistive Technology for Mobility	
+	Demonstrate basic wheelchair use.
+	Identify various types of assistive devices for ambulation.
+	Demonstrate gait patterns and procedures for ambulating clients using a variety of assistive devices.
+	Explain precautions when ambulating a client.
+	Describe the use of a tilt table or hospital bed to prepare a client for an upright position.
+	Describe the use of assistive devices, other than wheelchairs, to improve client mobility at home and in the community.
Understanding Techniques and Assistive Technology Used in Occupational Therapy	
+	Identify techniques used to assist clients in ADL and IADL tasks.
+	Identify various types of adaptive equipment used for ADL.
+	Identify various types of adaptive equipment used for IADL.
+	Identify techniques used to assist clients in work activities.
+	Identify various types of adaptive equipment used in the work environment.
+	Identify techniques used to assist clients in play, leisure, and social participation.
+	Identify various types of adaptive equipment used in play, leisure, and social participation.
+	Identify techniques used to assist clients in educational settings.
+	Identify various types of adaptive equipment used in educational settings.
+	Describe how adaptive equipment can be customized for individual client needs.
Understanding the Use of Orthotics and Other Supportive Devices	
+	Demonstrate applying, removing, and caring for orthotics.
+	Describe the application of elastic stockings and elastic bandages.
+	Demonstrate the application of a sling.
Understanding the Application of Therapeutic Modalities	
+	Describe the use of physical agents by rehabilitation professionals.
○	Describe wound care techniques.
+	Describe technological advances in rehabilitation.

Legend: + Essential ○ Non-essential ⊖ Omitted

Curriculum Framework

Gaining an Overview of the Rehabilitation Field

Task Number 39

Identify the healthcare team.

Definition

Identification should include

- client
- client's family
- doctors
- nurses
- nurse aides
- case manager/social workers
- dietitians
- pharmacists
- chaplains
- psychologists
- psychiatrists
- pain management team
- rehabilitation professionals
- exercise physiologists
- educational specialists.

Process/Skill Questions

- What is the importance of the healthcare team?
- What is *coordinated care*? What are its benefits?
- What are the roles of each healthcare team member?
- How do healthcare team members interact for the benefit of the client's care?
- Why is it important to include members of the client's family as part of the therapy team?

Task Number 40

Identify therapeutic settings.

Definition

Identification should include

- work settings (e.g., schools, acute care hospitals, in-patient rehabilitation hospitals, out-patient clinics, skilled nursing facilities, nursing homes, psychiatric facilities, assisted living, private practice, fitness facilities, home health care)
- regulatory requirements for each type of facility (e.g., documentation, health insurance, facility licensure).

Process/Skill Questions

- What are the roles of physical therapists and occupational therapists in each healthcare setting?
- What types of clients and disabilities are seen in each setting?
- How may the job responsibilities differ from one setting to another?
- What healthcare team members appear in each healthcare setting?
- What are requirements for licensure in each setting?

Task Number 41

Identify the types of clients seen by occupational and physical therapy professionals.

Definition

Identification should include definitions of *impairments* and *functional disabilities*, including examples of each, and the identification of broad categories of each as experienced by clients (e.g., physical, psychosocial, cognitive, developmental).

Process/Skill Questions

- What is the difference between an impairment and a functional disability? What are examples of each?
- What are the differences among prevention, habilitation, and rehabilitation?
- How might a client experience more than one type of impairment or functional disability?

Exploring Careers in the Rehabilitation Field

Task Number 42

Describe the variety of career fields related to rehabilitation.

Definition

Description should include

- occupational therapy
- physical therapy
- athletic training
- speech and language pathology
- audiology
- recreational therapy
- exercise science
- cardiac rehabilitation
- orthotics/prosthetics
- nursing, biomedical or rehabilitation engineering
- massage therapy
- social work
- respiratory therapy
- rehabilitation counseling.

Many websites offer career exploration resources, including the Virginia Department of Education's [Career Planning Guide](#) and the [Virginia Department of Health Professions](#).

Process/Skill Questions

- What high school courses prepare students for careers related to rehabilitation?
- What higher education and training is required for each career path related to rehabilitation?
- What responsibilities are involved in each career path?
- What tests/checks (e.g., drug, criminal background) may be required of employees in rehabilitation fields?
- What are *barrier crimes*? What are some examples of [barrier crimes according to the Virginia Department of Health](#)?

Task Number 43

Explain the differences among a physical therapist, physical therapist assistant, occupational therapist, and occupational therapy assistant.

Definition

Explanation should include

- roles and responsibilities of physical therapy (PT) and occupational therapy (OT) in treating clients
- terminology used to define the roles of support staff (e.g., OT aide, PT aide, rehabilitation specialist, rehabilitation technician, office assistant, rehabilitation specialist)
- terminology related to unlawful designation (i.e., [Code of Virginia 54.1-3481](#)).

Process/Skill Questions

- What are the differences in the degree requirements between therapists and assistants?
- What are the differences in the fieldwork requirements between therapists and assistants?
- What is required for licensure of therapists and assistants?
- What are the prerequisites for entering a postsecondary degree program in physical or occupational therapy?

Task Number 44

Describe the requirements for licensure and credentialing in PT and OT.

Definition

Description should include

- degree (associate for an occupational therapy assistant [OTA] and physical therapy assistant [PTA], master of occupational therapy [MOT], doctorate of occupational therapy [OTD], and doctorate of physical therapy [DPT] license) from an accredited program
- application submission for licensure
- passage of national examination (PT passing score is 600; OT passing score is 450)
- renewal licensure requirements and continuing education units (CEUs)
- criminal barriers and background requirements.

Process/Skill Questions

- What are the requirements for [National Board for Certification in Occupational Therapy, Inc. \(NBCOT\)](#) and [American Physical Therapy Association \(APTA\)](#) relative to licensure?
- What is the application process in [Virginia](#)?
- How do the criminal barriers differ in each setting?

Task Number 45

Complete a clinical observation experience.

Definition

Clinical observation experiences may include

- field trips
- volunteering
- mentorship
- other observation experiences in a clinical setting (e.g., job shadowing).

Process/Skill Questions

- What equipment is used in the clinical setting? What personal characteristics and professional behaviors are important in the clinical setting?
- What are examples of conditions that might be observed in the clinical setting?
- What are examples of therapeutic processes?
- What are the facilities' health requirements for participants (e.g., tuberculosis test, immunizations)?

Gaining an Overview of Physical and Occupational Therapy

Task Number 46

Describe the basic objectives of physical therapy.

Definition

Description should include the following purposes of physical therapy:

- To restore function
- To decrease pain and educate about pain management
- To improve functional mobility
- To prevent disability
- To promote wellness
- To promote patient education

Process/Skill Questions

- How can chronic pain potentially affect a client's life?

- What are the techniques used by physical therapists to help their clients?
- What role does the client play in his/her therapy?
- How do physical therapists promote wellness in the community?

Task Number 47

Describe the basic objectives of occupational therapy.

Definition

Description should include therapeutic use of activities for habilitation and rehabilitation to enhance

- physical health
- mental health
- cognitive functioning.

Description should also include the following objectives:

- To decrease pain and educate about pain management
- To prevent and adapt to disability
- To promote wellness
- To promote patient education

Process/Skill Questions

- How can an automobile accident potentially affect a client's participation in everyday occupations?
- What are techniques used by occupational therapists to help their clients adapt to their environment?
- How would an occupational therapist adapt the environment to help the client participate in everyday occupations?

Task Number 48

Outline the basic history of physical and occupational therapy.

Definition

Outline should consist of

- the basic history of physical therapy, including the role of 19th and 20th century polio epidemics
- the origins of occupational therapy in mental health in the 18th century
- healthcare history milestones
- the significance of 20th century wars (e.g., the training and role of post-World War I reconstruction aides, advancements during World War II) in the evolution of both types of therapy
- important figures in the history of physical therapy (e.g., Mary McMillan, Sister Elizabeth Kenny)
- important figures in the history of occupational therapy (e.g., Philippe Pinel, William Tuke).

Process/Skill Questions

- Why is it important to know the history of physical and occupational therapy?
- How have historical events shaped physical and occupational therapy?
- Who were the key figures in establishing the professions of physical and occupational therapy? What were their contributions?

Task Number 49

Distinguish among functional mobility, activities of daily living (ADL), and instrumental activities of daily living (IADL).

Definition

Distinction should include the following:

- Functional (physical) mobility (e.g., bed mobility, transfers, gait, balance, stair climbing, maneuvering over various terrains)
- Activities of daily living (ADL) or basic self-care (e.g., eating, feeding, grooming, bathing, dressing, toileting)
- Instrumental activities of daily living (IADL) or activities that allow varying degrees of independent living within the community (e.g., meal preparation, money management, home management/chores, medication management, driving and community mobility, and emergency management)

Process/Skill Questions

- What is the difference between an ADL and an IADL?
- How can an impairment of functional mobility potentially affect a person's ability to engage in community activities?

- How can an impairment of functional mobility potentially affect a person's ability to engage in activities of daily living?

Task Number 50

Describe the changing roles of physical therapy and occupational therapy within the medical model.

Definition

Description should include the following:

Physical therapy

- The movement away from required physician referrals toward direct patient access to therapy
- The emerging concept of the physical therapist as a gatekeeper within the medical field

Occupational therapy

- Increasing involvement in preventive care, as reflective of the general movement of the medical field toward prevention
- The movement toward working in the community and natural environments vs. more traditional medical settings

Process/Skill Questions

- What is meant by the term *gatekeeper* in the healthcare system? How can a physical therapist serve as a gatekeeper?
- Why is it important that physical and occupational professionals are becoming more involved in prevention?
- How do referrals and reimbursement affect the type and duration of rehabilitative treatment?

Task Number 51

Explain the role of professional associations in the physical and occupational therapy fields.

Definition

Explanation should include the

- American Physical Therapy Association (APTA)
- Virginia Physical Therapy Association (VPTA)
- American Occupational Therapy Association (AOTA)
- Virginia Occupational Therapy Association (VOTA).

Process/Skill Questions

- What do professional associations do for their members? For the profession as a whole?
- Why is it important to support one's professional association?
- How does one become a member of a professional association?

Understanding Ethical and Legal Issues Related to Physical and Occupational Therapy Professionals

Task Number 52

Identify core values in physical therapy and occupational therapy.

Definition

Identification should include

- altruism
- equality
- freedom
- justice
- dignity
- truth
- prudence
- accountability
- compassion/caring
- excellence
- integrity
- professional duty
- advocacy
- social responsibility.

Process/Skill Questions

- In what ways might a therapist demonstrate concern for others?
- What is prudence? In what ways can a therapist act in a prudent manner?
- Why is the demonstration of social responsibility important for a therapy professional?
- How are these values related to documentation, patient care, recordkeeping, and billing?

Task Number 53

Describe key concepts related to ethical and legal responsibilities.

Definition

Description should include

- beneficence (i.e., the therapist is there for the good of the client)
- non-maleficence (i.e., the concept of "Do no harm")
- autonomy
- confidentiality
- duty
- procedural justice
- veracity
- fidelity

as emphasized in the AOTA and APTA codes of ethics and standards for professional practice/conduct.

Process/Skill Questions

- What are the implications if a therapist fails to comply with the professional codes of ethics?
- What is beneficence? Non-maleficence? What actions would illustrate these principles?
- What are the implications in Virginia for failure to comply with laws and regulations?

HOSA Competitive Events (High School)

Health Science Events

- Knowledge Test: Medical Law and Ethics

Task Number 54

Identify the concept and importance of the Patient Care Partnership, HIPAA, and ADA.

Definition

Identification should include the concept and importance of

- the Patient Care Partnership—Incorporates and replaces the American Hospital Association's Patient Bill of Rights and includes the patient's right to
 - high-quality hospital care
 - a clean and safe environment
 - involvement in his/her care
 - protection of his/her privacy
 - help when leaving the hospital
 - help with billing claims
- the Health Insurance Portability and Accountability Act (HIPAA)—Ensures confidentiality and safety for patients through standards for
 - privacy of patient information
 - patient healthcare information security
 - administrative simplification
- the Americans with Disabilities Act (ADA)—Protects the civil rights of individuals with disabilities, focusing primarily on
 - protection of those with impairments that “substantially limit major life activities” as defined by the ADA
 - guarantee of equal opportunity for individuals with disabilities in public accommodations, employment, transportation, state and local government services, and telecommunications.

Process/Skill Questions

- What is an advance directive? How does it influence patient rehabilitative care?
- What is the process of getting informed consent from a client? Why is informed consent required prior to medical intervention?
- Who benefits from the ADA? Why is it important for physical and occupational therapists to be knowledgeable about the ADA?
- What happens if patient confidentiality is breached?

HOSA Competitive Events (High School)

Health Science Events

- Knowledge Test: Medical Law and Ethics

Using Effective Communication in the Rehabilitative Environment

Task Number 55

Explain methods of effective verbal and nonverbal communication.

Definition

Explanation should include methods of effective verbal communication (e.g., word choice, volume, tone, pace, pausing for feedback) and nonverbal communications (e.g., eye contact, respecting personal space, body language, gestures, active listening, facial expressions). It should also incorporate considerations regarding

- clients with cultural differences that may affect communication
- clients using augmentative communication devices or sign language.

Process/Skill Questions

- What are the procedures for meeting and greeting clients?
- How does body language affect the verbal message?
- What adaptations and services can be used to enhance communication with clients for whom English is not their primary language?

Task Number 56

Identify impairments and age-related changes that may affect communication.

Definition

Identification should include the following impairments:

- Physical
- Cognitive
- Psychosocial
- Developmental

It should also include age-related changes across the life span, such as the following:

- Hearing loss
- Visual changes
- Memory function
- Dentation

Process/Skill Questions

- What alternative communication skills are in place for patients with sensory impairments? Cognitive impairments?
- How can psychosocial impairments affect communication?
- How does the therapist's approach to communication change to accommodate clients in various stages of the life span?

Task Number 57

Demonstrate sensitivity in communicating and interacting with persons with disabilities.

Definition

Demonstration should consist of

- using person-first language—using person-focused nouns (e.g., child with autism; person with diabetes) rather than disability-focused nouns (e.g., autistic child; diabetic)
- practicing disability etiquette—exhibiting courtesy and sensitivity in interactions with persons with disabilities (e.g., avoid leaning on a wheelchair; avoid touching therapy dogs)
- explaining the distinction between the terms *disability* (a physical limitation that keeps a person from performing an activity) and *handicap* (an environmental restriction or a mind-set that limits or blocks another person's possibilities of performing a task or taking part in an activity) and the role of that distinction in communicating with persons with disabilities.

Process/Skill Questions

- Why is it important to demonstrate sensitivity?
- What are three examples of disability etiquette? How does disability etiquette relate to communication?
- What is the proper way to greet someone who is using a wheelchair and has a hearing impairment?

Task Number 58

Describe the core elements of documentation in the medical record.

Definition

Description should include

- the medical record (electronic and/or print), such as precautions, medical history, and goal of treatment
- examples of documentation, such as SOAP notes (i.e., subjective, objective, assessment, and plan).

Process/Skill Questions

- What is the distinction between subjective and objective information? How is each important in documentation?
- What are common precautions a therapy professional would look for before transferring a client?
- What is the importance of knowing a client's medical history?
- How does documentation support services provided (e.g., billing, plan of care)?

Task Number 59

Use medical terminology and abbreviations common in therapeutic communication.

Definition

Use of medical terminology should be reflected in both written and oral communication and should include using

- terms such as *prone, supine, inflammation, hypertonic vs. hypotonic*
- abbreviations according to state or facility requirements, (e.g., PRN, LE, UE, bid).

Use of medical terminology should also include

- describing how word parts are combined to form medical terms
- identifying common medical prefixes, roots, and suffixes and their meanings
- dividing words into prefix, root, and suffix to determine meaning.

Process/Skill Questions

- Why is it important to explain medical terms to the lay person?

- When is it be appropriate to use medical terminology?
- Why are abbreviations, symbols, and acronyms used in healthcare?

HOSA Competitive Events (High School)

Health Science Events

- Medical Terminology

Teamwork Events

- HOSA Bowl

Maintaining a Safe Patient Environment

Task Number 60

Complete the American Heart Association course for CPR, AED, and first aid.

Definition

Completion should consist of a demonstration that one has fulfilled the requirements of the following courses from the American Heart Association:

- Basic Life Support CPR (cardiopulmonary resuscitation) and AED (automated external defibrillator)
- Heartsaver First Aid.

Process/Skill Questions

- How does the "Good Samaritan" law affect a responder?
 - Why is recertification required for the basic first aid credential? How often is it required?
 - How does infant CPR differ from adult CPR?
 - How and why have CPR techniques evolved over recent years?
 - What are the essential components of performing CPR? Of using an AED?
-

Task Number 61

Demonstrate the use of standard precautions in the patient setting.

Definition

Demonstration should include an explanation of asepsis and standard precautions in accordance with Centers for Disease Control and Prevention (CDC) guidelines related to

- hand hygiene
- personal protective equipment (PPE), including gloves, gowns, eye protection, and face shields
- exposure and safe injection
- contact, droplet, and airborne particles.

Process/Skill Questions

- What are the essential features of hand washing?
- What are the most common types PPE? When is each necessary?
- What client situations may require the use of higher-level precautions?

HOSA Competitive Events (High School)

Teamwork Events

- HOSA Bowl
-

Task Number 62

Demonstrate the cleaning of rehabilitative and related equipment.

Definition

Demonstration should include the use of disinfectants to clean

- mats
- toys
- parallel bars
- walkers

- canes
- assistive technology
- exercise equipment
- activities of daily living (ADL) equipment.

Process/Skill Questions

- What disinfectants are appropriate for use in cleaning therapy-related equipment?
 - What cleaning precautions must be taken when working with clients who have multi-drug resistant infections?
 - What factors determine how often equipment should be cleaned?
-

Task Number 63

Identify potential safety hazards in the rehabilitation environment and appropriate responses associated with each.

Definition

Identification should include the following:

- Fire hazard—Responses to fire should include
 - fire situation (RACE = rescue, alert, confine, extinguish/evacuate)
 - use of a fire extinguisher (PASS = pull, aim, squeeze, spray).
- Fall hazard—Responses for preventing falls should include environmental modifications such as installing grab bars, removing loose mats or carpets, and clearing walkways and stairways.
- Other hazards—Responses to other emergencies should include use of facility emergency codes (e.g., for weather, utility failure, natural disaster, HAZMAT).

Process/Skill Questions

- What regulatory agency monitors safety in rehabilitation environments? What are the penalties when standards are not maintained?
- What can therapists do to prevent falls among their clients?
- What safety procedures are specific to each clinical facility?
- What are basic evacuation procedures for people with disabilities?

Task Number 64

Explain ways to maintain client safety.

Definition

Explanation should follow the National Health Safety guidelines and include equipment and practices such as

- call bells
- bed rails
- emergency pull chains
- emergency response systems
- proximity and positioning of the therapist during client treatment
- therapist's recognition of his/her own physical limitations and the judgment to summon assistance as needed (e.g., during transfer)
- therapist's use of mechanical conveyance equipment for transferring clients (i.e., safe-lift environment).

Process/Skill Questions

- How does the therapeutic setting influence the options for maintaining client safety?
- What factors may require that a therapy professional seek assistance or use lifting equipment when transferring a client?
- What are the proper uses of commonly used patient restraints?

Understanding Applied Anatomy

Task Number 65

Identify the systems of the body and the functions and key structures of each system.

Definition

Identification should include the name, key structures, and basic functions of the following systems:

- Integumentary
- Cardiovascular
- Nervous
- Sensory
- Lymphatic/immune

- Respiratory
- Gastrointestinal
- Endocrine
- Reproductive
- Urinary
- Musculoskeletal

Process/Skill Questions

- What are the body systems? What is the general function of each body system?
- What are the major organs of each body system and the function of each?
- How do the body systems interact with one another?

Task Number 66

Explain the key structures and functions of the musculoskeletal system most commonly addressed by physical/occupational therapy.

Definition

Explanation should include

- locating the major joints (i.e., ankle, knee, hip, shoulder, wrist, and elbow)
- describing joint movements (i.e., normal joint range of motion for ankle, knee, hip, shoulder, wrist, and elbow)
- explaining the structures and functions of the axial and appendicular skeleton
- identifying prime movers of the major joints of the body (i.e., the ankle, knee, hip, shoulder, wrist, and elbow)
- identifying planes of movement of the body (i.e., sagittal, frontal, and transverse).

Process/Skill Questions

- How are bones attached to other bones? How are muscles attached to bones?
- What types of changes occur in the musculoskeletal system during the aging process?
- How can one differentiate between the antagonistic and synergistic muscles?

HOSA Competitive Events (High School)

Health Professions Events

- Physical Therapy

Understanding Disease Processes Treated by Rehabilitation Professionals

Task Number 67

Describe common musculoskeletal disorders across the life span.

Definition

Description should include musculoskeletal disorders such as

- amputations
- fractures
- sprains
- strains
- dislocations
- arthritis
- back injuries
- repetitive stress injuries.

Process/Skill Questions

- How do disorders of the musculoskeletal system affect the client's mobility and occupations?
- What types of medical interventions have occurred for patients with each common disorder?
- What are the roles of rehabilitative professionals in treating common musculoskeletal disorders?
- What special therapeutic approaches might people with these disorders need?

HOSA Competitive Events (High School)

Health Science Events

- Knowledge Test: Human Growth and Development

Health Professions Events

- Physical Therapy

Task Number 68

Describe common integumentary disorders across the life span.

Definition

Description should include

- burns
- wounds
- pressure ulcers
- allergic reactions.

Process/Skill Questions

- How do disorders of the integumentary system affect the client's mobility and occupations?
- What types of medical interventions have occurred for patients with this disorder?
- What are the roles of rehabilitative professionals in treating common integumentary disorders?
- What special therapeutic approaches might people with these disorders need?

HOSA Competitive Events (High School)

Health Science Events

- Knowledge Test: Human Growth and Development

Health Professions Events

- Physical Therapy

Task Number 69

Describe common cardiopulmonary disorders across the life span.

Definition

Description should include

- myocardial infarction
- congestive heart failure
- valvular disease
- chronic obstructive pulmonary disease
- angina pectoris
- arrhythmia
- cystic fibrosis
- asthma
- coronary artery disease
- hypertension.

Process/Skill Questions

- How do disorders of the cardiopulmonary system affect the client's mobility and occupations?
- What types of medical interventions have occurred for patients with these disorders?
- What are the roles of rehabilitative professionals in treating common cardiopulmonary disorders?
- What special therapeutic approaches might people with these disorders need?

HOSA Competitive Events (High School)

Health Science Events

- Knowledge Test: Human Growth and Development

Health Professions Events

- Physical Therapy

Task Number 70

Describe common neuromuscular/neurological disorders across the life span.

Definition

Description should include

- developmental disorders

- birth defects
- stroke
- cerebral palsy
- muscular dystrophy
- traumatic brain injury
- multiple sclerosis
- Parkinson's disease
- Guillain-Barré syndrome
- neuropathy.

Process/Skill Questions

- How do disorders of the neuromuscular/neurological system affect the client's mobility and occupations?
- What types of medical interventions have occurred for patients with these disorders?
- What are the roles of rehabilitative professionals in treating common neuromuscular/neurological disorders?
- What special therapeutic approaches might people with these disorders need?

HOSA Competitive Events (High School)

Health Science Events

- Knowledge Test: Human Growth and Development

Health Professions Events

- Physical Therapy

Task Number 71

Describe common eye disorders across the life span.

Definition

Description should include

- glaucoma
- myasthenia gravis.

Process/Skill Questions

- How do eye disorders affect the client's mobility and occupations?

- What types of medical interventions have occurred for patients with these disorders?
- What are the roles of rehabilitative professionals in treating common neuromuscular/neurological disorders?
- What special therapeutic approaches might people with these disorders need?

HOSA Competitive Events (High School)

Health Science Events

- Knowledge Test: Human Growth and Development

Health Professions Events

- Physical Therapy

Task Number 72

Describe common psychosocial disorders across the life span.

Definition

Description should include

- pervasive developmental disabilities (e.g., autism, Asperger's)
- anxiety
- affective disabilities (e.g., depression, bipolarism, schizophrenia)
- conduct disorders
- panic, social, or school phobia
- post-traumatic stress; adjustment
- obsessive-compulsive disorders
- alcoholism
- substance abuse
- eating disorders (e.g., anorexia nervosa, bulimia).

Process/Skill Questions

- How do psychosocial disorders affect the client's mobility and occupations?
- What types of mental health or educational interventions have occurred for patients with these disorders?
- What are the roles of rehabilitative professionals in treating common psychosocial disorders?

- What special therapeutic approaches might people with these disorders need?

HOSA Competitive Events (High School)

Health Science Events

- Knowledge Test: Human Growth and Development

Health Professions Events

- Physical Therapy
-

Task Number 73

Describe common cognitive and perceptual impairments that occur as a result of disease processes across the life span.

Definition

Description should include

- dementia
- amnesia
- delirium
- attention-deficit/hyperactivity disorder (ADHD)
- learning disabilities
- intellectual impairments (e.g., disorientation, memory loss, inattention to task, reduced problem-solving and sequencing, disorganization)
- agnosia
- auditory processing disorders, secondary visual disorders (e.g., field of vision cuts).

Process/Skill Questions

- How do cognitive and perceptual impairments affect the client's mobility and occupations?
- What are the roles of rehabilitative professionals in treating cognitive and perceptual impairments that occur as a result of disease processes?
- What types of adaptations can be used with a client experiencing these impairments?

HOSA Competitive Events (High School)

Health Science Events

- Knowledge Test: Human Growth and Development

Health Professions Events

- Physical Therapy
-

Task Number 74

Explain the importance of meeting the emotional needs of the rehabilitative patient.

Definition

Explanation should include the effects of change on the routines, roles, and lifestyle of the client and the family in the face of challenging situations such as facing loss of limb, adjusting to other physical limitation or loss, or handling terminal illness. It should also address the role of coping mechanisms and their effects on clients and/or family members in such situations.

Process/Skill Questions

- What coping mechanisms might a client use in response to his/her illness or condition?
- How can a therapist help a client adjust emotionally to his/her limitations?
- What other team members might one engage to help the client and his/her family adjust emotionally to a new disability?

HOSA Competitive Events (High School)

Health Science Events

- Knowledge Test: Behavioral Health
-

Lifting and Transferring Patients

Task Number 75

Demonstrate good body mechanics.

Definition

Demonstration should include elements of good body mechanics, such as

- base of support
- proximity to load
- minimal twisting
- avoidance of repetitive motions
- use of large muscles
- proper alignment.

Process/Skill Questions

- Why is proper alignment important?
 - What are the potential consequences of not using good body mechanics?
 - How should one position one's self to pick up a heavy object?
-

Task Number 76

Identify principles and precautions related to lifting clients.

Definition

Identification should reflect the following process:

- Plan the lift.
- Assess the environment.
- Gather equipment and assistance.
- Use good body mechanics.
- Know one's own limitations.

Process/Skill Questions

- Why is it important to assess the environment prior to lifting a client?
- How might equipment be useful in lifting clients?

HOSA Competitive Events (High School)

Health Professions Events

- Clinical Nursing
 - Home Health Aide
 - Nursing Assisting
 - Physical Therapy
-

Task Number 77

Describe basic client positions and bed mobility with or without assistive devices.

Definition

Description should include the following client positions:

- Supine
- Prone
- Side-lying
- Trendelenburg
- Sitting
- Semi-sitting
- Kneel
- Half-kneel

Adaptive equipment should include

- pillows
- wedges
- overhead trapeze
- loop ladder
- reflux slings
- bed rails
- hospital bed.

Process/Skill Questions

- When would a therapist use an overhead trapeze to help a client move in bed?
- Why is bed mobility important for the client?
- What would be the proper bed position for a client recovering from a total hip replacement?

HOSA Competitive Events (High School)

Health Professions Events

- Clinical Nursing
 - Home Health Aide
 - Nursing Assisting
 - Physical Therapy
-

Task Number 78

Identify principles and precautions related to basic transfers of clients.

Definition

Identification should include the importance of base of support, pivot vs. step-to, placement of wheelchair, use of gait belt, and precautions such as the following:

- Planning the transfer
- Assessing the environment
- Gathering equipment and assistance
- Using good body mechanics
- Knowing one's own limitations
- OSHA regulations regarding mechanical lift

Process/Skill Questions

- What are the implications of not adhering to proper precautions when transferring a client?
- How might equipment be useful in transferring clients?
- What OSHA restrictions are related to the transfer of clients?
- During a transfer, why is regular reassessment of a client's status important?

HOSA Competitive Events (High School)

Health Professions Events

- Clinical Nursing
 - Home Health Aide
 - Nursing Assisting
 - Physical Therapy
-

Demonstrating Therapeutic Activities

Task Number 79

Demonstrate techniques used for range of motion (ROM).

Definition

Demonstration should include

- describing how ROM is assessed (e.g. goniometer, inclinometer, sit-and-reach box)
- explaining precautions needed when performing ROM exercises
- displaying both active and passive techniques
- employing stretching techniques
- describing adaptive exercise or activity options for people with disabilities.

Process/Skill Questions

- What is a progressive routine to increase joint ROM?
- What are the benefits of stretching in a therapeutic setting?
- How can clients with limited mobility improve their ROM?
- What is the distinction between passive, active, and active-assist ROM?

HOSA Competitive Events (High School)

Health Professions Events

- Physical Therapy
 - Sports Medicine
-

Task Number 80

Demonstrate techniques used for strengthening.

Definition

Demonstration should include strength-assessment options (e.g., one-rep max, muscle grading, dynamometer, pinch meter), as well as the following techniques used for strengthening:

- Free weights
- Stationary weights
- Resistance bands
- Repetitive movement
- Functional exercise
- Resistive putty
- Aquatics
- Group exercise
- Isometrics

Description should also address adaptive strengthening options for people with disabilities.

Process/Skill Questions

- How do concentric, eccentric, and isometric contractions differ?
- What is a progressive resistance exercise routine?
- What are the benefits of strength training in a therapeutic setting?

HOSA Competitive Events (High School)

Health Professions Events

- Physical Therapy
- Sports Medicine

Task Number 81

Demonstrate techniques used for motor control, balance, and coordination.

Definition

Demonstration should include techniques such as

- proprioceptive neuromuscular facilitation (PNF)
- neurodevelopmental treatment (NDT)
- manual facilitation and inhibition
- balance boards
- exercise balls
- pivot board
- trampoline
- manipulation boards

- mind-body techniques.

Demonstration should also include a description of adaptive motor control, balance, and coordination options for people with disabilities.

Process/Skill Questions

- What is a progressive routine to increase balance?
- What are the benefits of motor control, balance, and coordination training in a therapeutic setting?
- How can someone with limited mobility improve his or her balance?
- What specialized training is needed for PNF? For NDT?

HOSA Competitive Events (High School)

Health Professions Events

- Physical Therapy
 - Sports Medicine
-

Task Number 82

Demonstrate techniques used for improving cardiovascular capacity.

Definition

Demonstration should include techniques used for improving cardiovascular capacity, such as

- cycle ergometer
- upper body ergometer (UBE)
- treadmill
- elliptical
- stepper
- aquatics
- group exercise.

Demonstration should also include a description of adaptive options for people with disabilities.

Process/Skill Questions

- What is a progressive aerobic exercise routine?

- What are the benefits of cardiovascular conditioning in a therapeutic setting?
- How can clients with limited mobility improve their cardiovascular capacity?

HOSA Competitive Events (High School)

Health Professions Events

- Physical Therapy
 - Sports Medicine
-

Task Number 83

Describe various conditions requiring therapeutic exercise.

Definition

Description should include

- total hip replacement (THR)
- total knee replacement (TKR)
- back injuries
- hand injuries
- balance disorders.

Process/Skill Questions

- What exercises are used with a client who has had a total knee replacement?
- How do positions play a role in exercise progression?
- What exercises are used for a client with weak flexors in the hand?

Determining Physical and Physiological Status

Task Number 84

Demonstrate techniques for taking and recording vital signs and observing physiological changes.

Definition

Demonstration should include use of a variety of equipment to measure vital signs such as blood pressure, pulse, pulse oximetry respiration, and temperature.

Observation should include noting and documenting physiological changes such as excessive pain, increased or decreased blood pressure, fainting, changes in skin color/texture, respiratory change, and increased or decreased heart rate.

Process/Skill Questions

- What is the impact of age on vital signs?
- What is the importance of vital signs in physical and occupational therapy?
- How will vital signs change with exercise?
- What other physiological changes may be associated with activity?
- How do therapists calculate target heart rate?

HOSA Competitive Events (High School)

Health Professions Events

- Clinical Nursing
 - Home Health Aide
 - Physical Therapy
 - Sports Medicine
-

Task Number 85

Describe common assessments used by rehabilitative professionals across the life span.

Definition

Description should include assessments for range of motion, strength, volumetric measuring, and circumferential measuring for edema.

Process/Skill Questions

- How can functional range of motion be assessed?
- How would one assess the impact of limited shoulder range of motion on a client's activities of daily living?

- When a client has an impairment of one extremity, why is it important to assess the uninvolved extremity as well?

HOSA Competitive Events (High School)

Health Professions Events

- Physical Therapy
-

Task Number 86

Explain techniques for assessing body composition.

Definition

Explanation should include

- underwater weighing
- body mass index (BMI) based on height and weight
- skin folds
- bioelectrical impedance analysis (BIA).

Explanation should also incorporate a description of standards used to determine obesity and body fat distribution (e.g., BMI, percent of body fat, waist circumference).

Process/Skill Questions

- What is the relationship between waist circumference and cardiovascular disease risk?
- How does body type (e.g., apple vs. pear shape) influence cardiovascular disease risk?
- How do lifestyle factors affect body composition?

Understanding Assistive Technology for Mobility

Task Number 87

Demonstrate basic wheelchair use.

Definition

Demonstration should include

- identifying wheelchair parts
- adjusting wheelchair parts
- maneuvering different types of wheelchairs
- propelling a wheelchair on different types of surfaces.

Process/Skill Questions

- If the client's knees are higher than his/her hips, which parts of the wheelchair need adjusting?
- What environmental adaptations are available in the community to accommodate wheelchair users?
- How would a person in a wheelchair safely get in and out of a car? Go up a curb? Enter a public bathroom?

HOSA Competitive Events (High School)

Health Professions Events

- Nursing Assisting
-

Task Number 88

Identify various types of assistive devices for ambulation.

Definition

Identification should include various types of crutches, canes, and walkers, and accessories for each.

Process/Skill Questions

- What considerations should be made when selecting an assistive device to use for client ambulation?
- Which assistive device would be best if a client needs to climb stairs?
- What type of walker should a client with arthritis use?

HOSA Competitive Events (High School)

Health Professions Events

- Nursing Assisting
 - Physical Therapy
-

Task Number 89

Demonstrate gait patterns and procedures for ambulating clients using a variety of assistive devices.

Definition

Demonstration should include

- adjustment of ambulatory devices
- ambulatory technique with a walker
- ambulatory technique with a cane
- ambulatory technique with a quad cane
- three-point gait crutch walking
- four-point gait crutch walking
- the procedure for gait training in parallel bars.

Process/Skill Questions

- Which gait pattern is most appropriate for an individual with a bilateral bunionectomy? Why?
- If a client's left leg is injured, in which hand should he/she use the cane? Why?
- How high should the parallel bars be positioned when the client is ambulating in them? Why?

HOSA Competitive Events (High School)

Health Professions Events

- Physical Therapy
-

Task Number 90

Explain precautions when ambulating a client.

Definition

Explanation should include

- various weight-bearing options
- level of assistance needed by client
- client's mental status
- safety awareness
- effects of medications on ambulation
- need for cardiac monitoring of client
- percent oxygenation required by client
- ancillary equipment needed.

Process/Skill Questions

- What is the consequence of exceeding the prescribed weight-bearing limitation?
- What factors may affect a client's ability to ambulate?
- How does a decrease in safety awareness place the client and the therapist at risk?

HOSA Competitive Events (High School)

Health Professions Events

- Nursing Assisting
 - Physical Therapy
-

Task Number 91

Describe the use of a tilt table or hospital bed to prepare a client for an upright position.

Definition

Description should include the primary situations in which a tilt table or hospital bed would be used to prepare a client for an upright position. A tilt table or hospital bed would be needed for a client who

- has syncope when standing
- has been immobile for an extended period and requires progressive adjustment to the upright position.

Process/Skill Questions

- What vital sign is essential to monitor when assessing syncope? Why?
- What other physiological changes are indicative of syncope? What is their significance in client care?
- What precautions must be observed when using a tilt table?

HOSA Competitive Events (High School)

Health Professions Events

- Physical Therapy
-

Task Number 92

Describe the use of assistive devices, other than wheelchairs, to improve client mobility at home and in the community.

Definition

Description should include the following:

- Electric personal assistive mobility devices (EPAMDs), such as seated or standing electric scooters
- In-home modifications, such as track systems, stair glides, wheelchair lifts, elevators, and riser or lift chairs

Process/Skill Questions

- When would a scooter be a better choice than a wheelchair for a client?
- When would it be appropriate for a client to have a track system installed in his/her home?
- What are the indications that a stair glide should be installed in a client's home?

HOSA Competitive Events (High School)

Health Professions Events

- Home Health Aide
 - Nursing Assisting
 - Physical Therapy
-

Understanding Techniques and Assistive Technology Used in Occupational Therapy

Task Number 93

Identify techniques used to assist clients in ADL and IADL tasks.

Definition

Identification should include

- task analysis and adaption of task requirements or methods
- material choice
- prompting/cuing
- one-handed dressing
- positioning
- environmental modifications
- work simplification
- energy conservation.

Process/Skill Questions

- What is an adaptation to help a client with the use of only one arm dress himself/herself?
- What adaptive techniques would assist a child with ADHD to complete his/her chores?
- How could one modify the environment to assist a client with a cast to take a bath?

HOSA Competitive Events (High School)

Health Professions Events

- Home Health Aide
- Nursing Assisting
- Physical Therapy

Task Number 94

Identify various types of adaptive equipment used for ADL.

Definition

Identification should include various types of adaptive equipment used for ADL, such as the following:

- Dressing equipment, such as a hip kit (including sock aid, elastic shoe laces, reacher, dressing stick, and long-handled shoehorn) button hook, and leg lifter
- Built-up handles for feeding, grooming, or oral hygiene, such as plate guards, scoop plates, or universal cuff
- Bathing devices, including bathtub benches, hand-held shower heads, and grab bars

Process/Skill Questions

- Why would a therapist suggest a button hook to a client?
- Which equipment would be used to assist a client with a total hip replacement? Why?
- What environmental and personal factors may affect a client's acceptance of ADL adaptive equipment? Why is this knowledge important in client care?

HOSA Competitive Events (High School)

Health Professions Events

- Home Health Aide
 - Nursing Assisting
 - Physical Therapy
-

Task Number 95

Identify various types of adaptive equipment used for IADL.

Definition

Identification should include various types of adaptive equipment used for IADL such as the following:

- Key aids
- Built-up writing utensils
- Mobile devices, computers
- Electronic aids for daily living to control the environment (EADLs)
- Medication reminders

- Enlarged checks
- Adaptive cooking devices
- Digital wristwatch with an alarm/schedule
- Adaptive driving equipment

Process/Skill Questions

- Why would a therapist suggest a mobile device for a client?
- Which equipment would be used to assist a client with a visual impairment? How does this equipment aid the client?
- What environmental and personal factors may affect a client's acceptance of IADL adaptive equipment? Why is this knowledge important in client care?

HOSA Competitive Events (High School)

Health Professions Events

- Home Health Aide
- Nursing Assisting
- Physical Therapy

Task Number 96

Identify techniques used to assist clients in work activities.

Definition

Identification should include the following:

- Material choice
- Prompting/cuing
- One-handed techniques
- Environmental modifications
- Task analysis
- Work task modifications
- Work simplification
- Energy conservation
- Body mechanics
- Ergonomics for seating and workstation

Process/Skill Questions

- What is an adaptation to help a person with a traumatic brain injury organize his/her work area?
- What adaptive techniques would assist an assembly line worker in completing his/her job duties?
- How could the work environment be modified to assist a preschool teacher with a back injury with changing a diaper?

HOSA Competitive Events (High School)

Health Professions Events

- Home Health Aide
- Physical Therapy

Task Number 97

Identify various types of adaptive equipment used in the work environment.

Definition

Identification should include the following:

- Ergonomic desks and chairs
- Computers
- Switches
- Augmentative communication devices
- Electronic aids for daily living/environmental controls (EADL)
- Positioning devices for equipment (e.g., jigs, lifts, stabilizers)
- Adaptations to bathrooms, elevators, lunchrooms, and copy rooms
- Adaptive equipment used during ADL tasks at work

Process/Skill Questions

- What ergonomic adaptations could assist a person suffering from carpal tunnel syndrome?
- When would a client need to use an electronic aid of daily living in the work environment? What type(s) of EADL would be appropriate?
- In what ways can a switch be used as an adaptation for a client in the work environment?

HOSA Competitive Events (High School)

Health Professions Events

- Physical Therapy
-

Task Number 98

Identify techniques used to assist clients in play, leisure, and social participation.

Definition

Identification should include

- identifying interests
- prompting/cuing
- networking with others in the community
- modifying environment or task
- using structured task groups
- role-playing
- exploring relationships with community, family, peers, and friends
- providing social supports.

Process/Skill Questions

- What is an adaptation to help a child with cerebral palsy play a board game? How does it assist the child?
- What adaptive techniques would assist a client with a spinal cord injury to play tennis?
- How could one modify the environment to assist a client with an amputation to take a bath?
- How could one promote social interaction of a nonverbal child at a birthday party?

HOSA Competitive Events (High School)

Health Professions Events

- Physical Therapy
-

Task Number 99

Identify various types of adaptive equipment used in play, leisure, and social participation.

Definition

Identification should include the following:

- Universal design toys
- Switches
- Adaptive games
- Modifications to leisure equipment (e.g., lifts in pools, adaptive golf clubs, switch-controlled motorized cars)
- Augmentative communication devices or visual prompts

Process/Skill Questions

- Why would a therapist suggest that a client use an interactive video game?
- Which equipment would be used to assist a client with a paraplegia to swim?
- What environmental and personal factors may affect a client's acceptance of adaptive equipment for play, leisure, and/or social participation? How can this knowledge be useful in providing quality client care?

HOSA Competitive Events (High School)

Health Professions Events

- Physical Therapy
-

Task Number 100

Identify techniques used to assist clients in educational settings.

Definition

Identification should include

- material choice
- prompting or cuing
- environmental modifications
- task analysis

- supports or consultations for teachers, families, and students
- assistance with ergonomics
- adaptations to assist with handwriting
- task groups for social participation
- sensory diets
- vocational preparation, including ADL and IADL tasks.

Process/Skill Questions

- What is an adaptation the teacher can use to promote better handwriting?
- What adaptive techniques would assist a student with autism in completing a school project?

HOSA Competitive Events (High School)

Health Professions Events

- Physical Therapy

Task Number 101

Identify various types of adaptive equipment used in educational settings.

Definition

Identification may include the following:

- Adaptive writing utensils or art materials
- Slant boards
- Switches
- Computers with adaptive input (e.g., Braille keyboards), software, or output (e.g., Braille)
- Adaptive positioning devices (e.g., seating, floor cushion)
- Organizational aids (e.g., visual schedules, mobile devices)

Process/Skill Questions

- Why would a therapist suggest a slant board to a student?
- Which equipment would be used to assist a student with organizational problems?
- What environmental and personal factors may affect a student's acceptance of adaptive equipment?

Task Number 102

Describe how adaptive equipment can be customized for individual client needs.

Definition

Description should include modification of existing materials and devices by enlarging, elongating, shortening, or amplifying characteristics of the materials (e.g., long-handled razor; enlarged knob on door; amplification of the sound, visual contrast, or tactile characteristics of an object).

Process/Skill Questions

- How can a hairbrush be customized for a person with limited shoulder range?
- What computer options are readily available to assist a client with a visual impairment?

HOSA Competitive Events (High School)

Health Professions Events

- Physical Therapy
-

Understanding the Use of Orthotics and Other Supportive Devices

Task Number 103

Demonstrate applying, removing, and caring for orthotics.

Definition

Demonstration should include applying, removing, and caring for a splint and an orthosis, according to manufacturer's guidelines and other applicable safety precautions, as appropriate for client's age and physical/mental status.

Process/Skill Questions

- Why is it important to have a wearing schedule for a hand splint?
- What is the proper way to care for an orthosis? A splint?
- How would one teach a client to apply and remove a foot orthosis?

HOSA Competitive Events (High School)

Health Professions Events

- Physical Therapy
-

Task Number 104

Describe the application of elastic stockings and elastic bandages.

Definition

Description should include the types of elastic stockings and elastic bandages, and the indications, contraindications, types, and techniques for applying each.

Process/Skill Questions

- What common orthopedic surgeries require the use of elastic stockings postoperatively? Why?
- What may be the consequences of not using elastic stockings?
- What is the consequence of applying an elastic bandage too tightly? How might this practice be harmful to the client?

HOSA Competitive Events (High School)

Health Professions Events

- Physical Therapy
 - Sports Medicine
-

Task Number 105

Demonstrate the application of a sling.

Definition

Demonstration should include the types of slings and the indications, contraindications, and techniques for applying a sling.

Process/Skill Questions

- In what circumstances might a sling be appropriate? Why?
- How would one instruct a client to apply his/her own sling?
- Why does a patient who has had a rotator cuff repair need to use a sling?

HOSA Competitive Events (High School)

Health Professions Events

- Physical Therapy
 - Sports Medicine
-

Understanding the Application of Therapeutic Modalities

Task Number 106

Describe the use of physical agents by rehabilitation professionals.

Definition

Description should include the use of physical agents such as ultrasound, superficial heat, cryotherapy, electrical stimulation, paraffin, transcutaneous electric nerve stimulation (TENS), traction, and fluidotherapy, as well as indications and contraindications for each agent.

Process/Skill Questions

- What are the reasons for use of cold treatment? Heat treatment?
- For what disease processes would paraffin be applied? Why?
- What is a contraindication for ultrasound? Why?

HOSA Competitive Events (High School)

Health Professions Events

- Physical Therapy
-

Task Number 107

Describe wound care techniques.

Definition

Description should include

- the set-up of a sterile field
- the application of a clean dressing
- the removal and disposal of a dressing
- identification of conditions in which whirlpool treatment or pulsed lavage is useful
- a description of the standard set-up, temperature, and cleaning of the whirlpool.

Process/Skill Questions

- What is a sterile field? How is it achieved? Why is a sterile field important in wound care?
- When should a soiled dressing be placed in red bag trash? Why must it be done?
- In what circumstances is pulsed lavage a better choice than whirlpool treatment? When is whirlpool treatment called for? Why?

HOSA Competitive Events (High School)

Health Professions Events

- Clinical Nursing
 - Home Health Aide
 - Physical Therapy
-

Task Number 108

Describe technological advances in rehabilitation.

Definition

Description should include technologies such as

- laser
- 3D printing
- exoskeletons
- neuromodulation
- dynamic orthotics for upper and lower extremities
- robotic arms
- weight-supported ambulatory devices
- dynamic balancing machines.

Process/Skill Questions

- How can therapy professionals stay current with technological advances in rehabilitation?
- What factors affect availability of new technologies in a rehabilitation facility?
- What factors might limit a client’s access to new technologies?
- What new technologies could be used with a client who had a stroke?

SOL Correlation by Task

Identify the healthcare team.	English: 11.5, 12.5
Identify therapeutic settings.	English: 11.5, 12.5
Identify the types of clients seen by occupational and physical therapy professionals.	English: 11.3, 11.5, 12.3, 12.5 History and Social Science: VUS.13
Describe the variety of career fields related to rehabilitation.	English: 11.5, 12.5
Explain the differences among a physical therapist, physical therapist assistant, occupational therapist, and occupational therapy assistant.	English: 11.5, 12.5 History and Social Science: WHI.5, WHII.4
Describe the requirements for licensure and credentialing in PT and OT.	English: 11.5, 12.5
Complete a clinical observation experience.	
Describe the basic objectives of physical therapy.	English: 11.5, 12.5
Describe the basic objectives of occupational therapy.	English: 11.5, 12.5 History and Social Science: WHI.5, WHII.4
Outline the basic history of physical and occupational therapy.	English: 11.5, 11.6, 11.7, 12.5, 12.6, 12.7

	History and Social Science: VUS.8, VUS.9, VUS.10, VUS.11
Distinguish among functional mobility, activities of daily living (ADL), and instrumental activities of daily living (IADL).	English: 11.5, 12.5
Describe the changing roles of physical therapy and occupational therapy within the medical model.	English: 11.5, 12.5
Explain the role of professional associations in the physical and occupational therapy fields.	English: 11.5, 11.8, 12.5, 12.8
Identify core values in physical therapy and occupational therapy.	English: 11.5, 12.5 History and Social Science: GOVT.3, GOVT.11, GOVT.16, WHI.5
Describe key concepts related to ethical and legal responsibilities.	English: 11.5, 12.5 History and Social Science: GOVT.3, GOVT.11, GOVT.16, WHI.5
Identify the concept and importance of the Patient Care Partnership, HIPAA, and ADA.	English: 11.5, 11.8, 12.5, 12.8 History and Social Science: GOVT.3, GOVT.9, GOVT.11, GOVT.16, VUS.13, WHI.5
Explain methods of effective verbal and nonverbal communication.	English: 11.5, 12.5 History and Social Science: GOVT.3, GOVT.16
Identify impairments and age-related changes that may affect communication.	English: 11.5, 12.5
Demonstrate sensitivity in communicating and interacting with persons with disabilities.	History and Social Science: GOVT.3, GOVT.9, GOVT.11, GOVT.16, VUS.13
Describe the core elements of documentation in the medical record.	English: 11.5, 11.8, 12.5, 12.8
Use medical terminology and abbreviations common in therapeutic communication.	English: 11.3, 11.8, 12.3, 12.8
Complete the American Heart Association course for CPR, AED, and first aid.	
Demonstrate the use of standard precautions in the patient setting.	
Demonstrate the cleaning of rehabilitative and related equipment.	

Identify potential safety hazards in the rehabilitation environment and appropriate responses associated with each.	English: 11.5, 12.5
Explain ways to maintain client safety.	English: 11.5, 12.5
Identify the systems of the body and the functions and key structures of each system.	English: 11.5, 12.5 History and Social Science: WHI.5, WHI.13, WHII.2, WHII.4 Science: BIO.4
Explain the key structures and functions of the musculoskeletal system most commonly addressed by physical/occupational therapy.	English: 11.5, 12.5 History and Social Science: WHI.5, WHI.13, WHII.2, WHII.4 Science: BIO.4
Describe common musculoskeletal disorders across the life span.	English: 11.5, 12.5 History and Social Science: WHI.5, WHI.13, WHII.2, WHII.4
Describe common integumentary disorders across the life span.	English: 11.5, 12.5
Describe common cardiopulmonary disorders across the life span.	English: 11.5, 12.5 History and Social Science: WHII.4
Describe common neuromuscular/neurological disorders across the life span.	English: 11.5, 12.5 History and Social Science: VUS.14, WG.17, WHII.14
Describe common eye disorders across the life span.	English: 11.5, 12.5
Describe common psychosocial disorders across the life span.	English: 11.5, 12.5 History and Social Science: WG.17, WHII.14
Describe common cognitive and perceptual impairments that occur as a result of disease processes across the life span.	English: 11.5, 12.5 History and Social Science: VUS.14, WG.17, WHII.14
Explain the importance of meeting the emotional needs of the rehabilitative patient.	English: 11.5, 12.5
Demonstrate good body mechanics.	
Identify principles and precautions related to lifting clients.	English: 11.5, 12.5

Describe basic client positions and bed mobility with or without assistive devices.	English: 11.5, 12.5
Identify principles and precautions related to basic transfers of clients.	English: 11.5, 12.5
Demonstrate techniques used for range of motion (ROM).	
Demonstrate techniques used for strengthening.	
Demonstrate techniques used for motor control, balance, and coordination.	
Demonstrate techniques used for improving cardiovascular capacity.	
Describe various conditions requiring therapeutic exercise.	English: 11.5, 12.5
Demonstrate techniques for taking and recording vital signs and observing physiological changes.	
Describe common assessments used by rehabilitative professionals across the life span.	English: 11.5, 12.5
Explain techniques for assessing body composition.	English: 11.5, 12.5
Demonstrate basic wheelchair use.	
Identify various types of assistive devices for ambulation.	English: 11.5, 12.5
Demonstrate gait patterns and procedures for ambulating clients using a variety of assistive devices.	
Explain precautions when ambulating a client.	English: 11.5, 12.5
Describe the use of a tilt table or hospital bed to prepare a client for an upright position.	English: 11.5, 12.5
Describe the use of assistive devices, other than wheelchairs, to improve client mobility at home and in the community.	English: 11.5, 12.5
Identify techniques used to assist clients in ADL and IADL tasks.	English: 11.5, 12.5
Identify various types of adaptive equipment used for ADL.	English: 11.5, 12.5
Identify various types of adaptive equipment used for IADL.	English: 11.5, 12.5
Identify techniques used to assist clients in work activities.	English: 11.5, 12.5
Identify various types of adaptive equipment used in the work environment.	English: 11.5, 12.5
Identify techniques used to assist clients in play, leisure, and social participation.	English: 11.5, 12.5
Identify various types of adaptive equipment used in play, leisure, and social participation.	English: 11.5, 12.5
Identify techniques used to assist clients in educational settings.	English: 11.5, 12.5
Identify various types of adaptive equipment used in educational settings.	English: 11.5, 12.5
Describe how adaptive equipment can be customized for individual client needs.	English: 11.5, 12.5
Demonstrate applying, removing, and caring for orthotics.	

Describe the application of elastic stockings and elastic bandages.	English: 11.5, 12.5
Demonstrate the application of a sling.	
Describe the use of physical agents by rehabilitation professionals.	English: 11.5, 12.5
Describe wound care techniques.	English: 11.5, 12.5
Describe technological advances in rehabilitation.	English: 11.5, 12.5 History and Social Science: VUS.14, WG.17, WHII.14

Appendix: Credentials, Course Sequences, and Career Cluster Information

Industry Credentials: Only apply to 36-week courses

- Certified Physical Therapy Aide (CPTA) Examination
- College and Work Readiness Assessment (CWRA+)
- National Career Readiness Certificate Assessment
- Physical Therapy Aide Certification (PTAC) Examination
- Workplace Readiness Skills for the Commonwealth Examination

Concentration sequences: *A combination of this course and those below, equivalent to two 36-week courses, is a concentration sequence. Students wishing to complete a specialization may take additional courses based on their career pathways. A program completer is a student who has met the requirements for a CTE concentration sequence and all other requirements for high school graduation or an approved alternative education program.*

- Health Assisting Careers (8331/36 weeks)
- Introduction to Health and Medical Sciences (8302/36 weeks)
- Introduction to Health and Medical Sciences (8301/18 weeks)
- Physical/Occupational Therapy II (8366/36 weeks)

Career Cluster: Health Science	
Pathway	Occupations
Therapeutic Services	Exercise Physiologist Occupational Therapist Physical Therapist Assistant Recreation Therapist