PTA 4 Modalities and Procedures I

This course is designed to introduce students to physical therapy thermal modalities, including physiological principles, indications, precautions, and contraindications. The origins and management of pain are also discussed. This course also introduces the student to basic assessment techniques necessary to evaluate the efficacy of therapeutic interventions, and maintain patient safety including length and girth assessments, anthropometric measurements, as well as integument and sensation assessments.

1.0. Implement basic assessment techniques consistent with the plan of care. Effectively perform these techniques in an effort to maintain patient safety and assess the efficacy of therapeutic activities. Such assessment techniques include sensation and skin integrity tests, goniometry, muscle length, girth, and anthropometric measures.

1.1 Identify basic assessment techniques.

1.2 State the rationale for the use or selection of specific assessment and measurement techniques.

1.3 Relate the significance of various assessments to the rehabilitation process.

1.4 Perform pain assessments using analog and other visual tools, as well as pain questionnaires.

1.5 Demonstrate the ability to recognize normal and abnormal assessment values and responses.

1.6 Demonstrate the ability to measure, recognize, and appropriately document asymmetry related to muscle mass, edema, extremity length, muscle length, and sensation.

1.7 Perform and document muscle length assessments, including Ober, Thomas, 90-90, and other tests.

1.8 Correlate changes in function with muscle tightness/shortening.

1.9 Perform and document basic sensation assessments including pin prick, light touch, kinesthetic, and proprioception.

1.10 Discuss the clinical and functional significance of changes in sensation.

1.11 Discuss the benefits and limitations of circumferential measurements in assessing edema.

1.12 Perform and document extremity edema assessments using circumferential measurement techniques.

1.13 Discuss the importance of anthropometrical measurements of height and weight.

1.14 Collect, organize, and perform statistical treatments on anthropometrical data of classmates.

1.15 List normal and abnormal integumentary changes including color, hair growth, vascularity, etc.

1.16 Describe and document changes in the skin, including color, changes in hair growth, blanching, etc.
1.17 Correlate changes in the integument with the effectiveness or ill-effects of therapeutic modalities.

1.18 Identify parameters of respiratory status including respiratory rate and the presence of cyanosis.

1.19 List activities or physiological events that may produce pain, precipitate respiratory compromise, cause edema, or produce other adverse signs and symptoms.

1.20 Perform therapeutic activities that relieve edema and respiratory compromise, including positioning, extremity elevation, and postural activities.

1.21 State basic parameters of mental status, including orientation to person, place, and time.

1.22 Demonstrate ability to recognize and monitor changes in mental status.

1.23 Recognize changes in states of arousal, including confusion, stupor, and other changes.

1.24 Perform and integrate vital sign monitoring, manual muscle testing and goniometry into assessment activities and clinical practice.

1.25 Analyze the results of basic assessment techniques.

1.26 Contrast results of basic assessment techniques with modality selection, treatment outcomes and responses to treatment.

1.27 Select and implement therapeutic techniques appropriately considering results of basic assessments and measurements and the plan of care.

2.0 Demonstrate an understanding of the role of thermal modalities in rehabilitation.

2.1 State the historical perspective of thermal modalities.

2.2 Define and recognize the physiological responses to heat and cold.

2.3 State the adjunctive nature of physical agents in rehabilitation.

2.4 Discuss general indications and contraindications of thermal modalities.

2.5 Define the affective aspects of therapeutic modality administration.

2.6 Identify and describe pathologies treated with thermal modalities.

2.7 Describe the nature of acute and chronic pain conditions as they relate to the administration of thermal modalities.

2.8 Describe the therapeutic role of thermal modalities in physical therapy.

2.9 Describe inflammation and its physiological events.

2.10 Describe the physiological events associated with tissue repair.

2.11 Identify basic concepts and theories of pain, pain management, and tissue repair as they relate to the application of thermal modalities.
2.12 State the usage and application of thermal modalities and theories of pain, pain management, and tissue repair.

3.0 Implement superficial thermal treatments including: hot packs, cold packs, paraffin, infrared, and fluidotherapy.

3.1 Define superficial thermal modalities in regard to type, modes of transmission, application methods, indications and contraindications.

3.2 Define the physiological effects of heat and cold and their relationship to pathology.

3.3 Define and list the laws and properties of radiant heat and light.

3.4 State the adjunctive nature of physical agents in rehabilitation.

3.5 State the rationale for selection or various forms of thermal therapeutic modalities.

3.6 Administer superficial thermal modalities for the management of pain and range of motion.

4.0 Implement deep thermal treatments including ultrasound.

4.1 Define deep thermal modalities in regard to type, modes of transmission, application methods, indications and contraindications.

4.2 Discuss the biophysics of ultrasound.

4.3 Describe the uses, indications and contraindications, and rationales of ultrasound.

4.4 Perform ultrasound treatments considering anatomical factors, dosage, mode of delivery and pathological condition.

4.5 Describe the biophysics of shortwave diathermy.

4.6 Describe the uses and indications and contraindications of shortwave diathermy.

5.0 Implement hydrotherapy treatments for the management of pain, muscle weakness, soft tissue pathologies and open wounds.

5.1 Discuss the history, usage, indications and contraindications of hydrotherapy.

5.2 Discuss and outline the physical characteristics of water including buoyancy, temperature and resistance.

5.3 Outline the phases of wound healing and tissue repair recognizing the presence of necrotic and viable tissue.

5.4 Apply the principles of hydrotherapy and the characteristics of water to: wound healing, therapeutic exercise, soft tissue pathology and pain management.
5.5 Identify precautions for dressing removal including the use of gloves, appropriate disposal of gloves, instruments, and soiled dressings.

5.6 Perform sterile technique in wound care management, including the application and removal of dressings.

5.7 Perform hydrotherapy techniques utilizing universal precautions.

5.8 Perform aquatic therapy activities demonstrating knowledge of principles and characteristics of water.

5.9 Recognize situations that require isolation techniques.

5.10 Perform isolation techniques including donning and doffing gowns, masks, etc.

6.0 Assist in administering cold laser treatment for the management of pain associated with carpal tunnel treatment.

6.1 Define the physics of light energy

6.2 Define laser and lasing medium.

6.3 Discuss the differences and uses of low and higher level laser.

6.4 Discuss the physiological effects and indications for low level laser.

6.5 Demonstrate gridding and scanning techniques of low level laser administration.

6.6 Demonstrate knowledge of appropriate laser dosage.

6.7 Demonstrate knowledge of precautions and contraindications of low level laser.

6.8 Perform appropriate documentation of low level laser administration.

7.0 Given patient scenarios implement comprehensive physical therapy treatment.

7.1 Perform therapeutic techniques demonstrating an understanding of the role of the physical therapist assistant in rehabilitation.

7.2 Perform therapeutic techniques appropriately employing universal precautions and sound body mechanics.

7.3 Perform therapeutic techniques demonstrating an understanding of organizational structure, levels of authority, and fiscal considerations of the health care delivery system.

7.4 Teach patients, families, and other health workers, the uses, applications, and responses of modalities and procedures with emphasis on safety and rationale as directed by the physical therapist.
7.5 Demonstrate the adjunctive nature of modalities and procedures by integrating their use in complete treatment applications, utilizing knowledge and skills attained in previous and concurrent courses.

7.6 Implement therapeutic interventions within the plan of treatment considering knowledge of assessment and measurement, functional activity, thermal modality, pathology, kinesiology and therapeutic exercise.

7.7 Implement therapeutic interventions within the plan of treatment demonstrating consideration of time management, therapeutic sequence and rationale for procedure selection issues.

7.8 Demonstrate appropriate documentation of modality and procedure use, considering patient response, treatment parameters, long/short term goals, and effectiveness.

7.9 Perform physical therapy treatments and interact with patient and families considering influencing factors (psychosocial, cultural, economic, patient satisfaction, legal, ethical, etc.).

7.10 Assist in discharge planning and alternative levels of care decision making with supervising physical therapist.

7.11 Identify clinical responses and situations that require the attention of the supervising physical therapist or immediate interventions such as basic first aid or cardiopulmonary resuscitation.

7.12 Communicate patient status and response to supervising physical therapist.

7.13 Analyze the effectiveness of modalities and procedures in specific clinical situations.

7.14 Assess patient status and response to treatment and appropriately alter or progress therapeutic interventions within the plan of treatment.

7.15 Delineate beneficial and untoward effects of thermal modalities.

7.16 Analyze the relationship of thermal modalities with other therapeutic procedures (therapeutic exercise, range of motion, functional activities) as they relate to the achievement of rehabilitation goals.

7.17 Verify effectiveness of teaching behavior by analyzing patient performance.

8.0 Demonstrate appropriate professional behavior

8.1 Attend and be on time for class, lab, and scheduled appointments.

8.2 Be prepared for lab activities; attend to tasks assigned.

8.3 Accept constructive criticism and respond and/or follows through appropriately.

8.4 Express self in a clear and easily understood manner.

8.5 Maintain appropriate personal hygiene.

8.6 Treat others with positive regard, dignity and respect.
8.7 Analyze and examine professional literature considering: specific scientific methods, interpretation of results, and clinical significance in order to foster further personal investigation and clinical effectiveness.

8.8 Explain the importance of life long learning.

8.9 Describe how professional development can occur.