

6. Apply knowledge of the various pain modulation theories and how these may be utilized in manual physical therapy of the thoracic cage
7. Apply active and passive mobilization procedures and combined movements to the thoracic spinal and costal joints in any position using the correct grade, direction and duration and explain the mechanical and physiological effects
8. Analyze the indications and contraindication of mobilization
9. Assess static and dynamic postures and implement appropriate correction
10. Evaluate treatment effectiveness in order to progress or modify treatment;
11. Plan an effective home program including spinal care and joint mobilization and instruct the patient in the same
12. Record examination data, problems, plans and procedures in a standardized format
13. Further develop self reliant learning strategies
14. Discuss the strengths and weakness' of manual physical therapy assessment and interventions as demonstrated by the current literature and evidence

### MAJOR TOPICS:

*The descriptions of the minimum course components may vary according to the instructor's assessment of the needs or expertise of the class. Some areas may be covered in guided independent study.*

- 1) Applied anatomy & physiology with relevance to examination and intervention of the thoracic spine
- 2) Biomechanics: apply biomechanical principles to the clinical presentation, assessment and intervention of thoracic and costal joints
- 3) Clinical Theory: evaluation and assessment of the upper quadrant
  - a) review the selective tissue tension examination of the thorax
  - b) passive intervertebral mobility testing (PIVM) thoracic spine and ribs
  - c) articular and segmental stability testing
  - d) indications and contraindications to mobilizations
  - e) optimal and dysfunctional posture and the potential local and effects of postural insufficiency
  - f) the rationale for selecting an exercise program and comparisons to rest and joint protection
  - g) the neurophysiological and mechanical effects of mobilization and manipulation
  - h) rationale for segmental and specific traction and its detailed application
  - i) postural and ergonomic re-education
  - j) clinical studies and current evidence to support manual physical therapy to the upper quadrant
- 4) Clinical Practical Skills
  - a) review of the thoracic scanning examinations and detailed palpation of the thoracic spine
  - b) specific uniplanar (symmetrical) segmental physiological and accessory passive mobility examination and manual techniques procedures for the thoracic spine and ribs
- 5) Conditions (dysfunctions or pathologies): the signs and symptoms clusters, pathology and intervention/treatment or management of the following conditions will be discussed:
  - a) segmental facilitation
  - b) thoracic disc herniation
  - c) spinal and costal articular hypomobility & hypermobility
  - d) costochondritis and dysfunctions of anterior ribs joints
  - e) cervical and thoracic discal, zygapophyseal joint degenerative disease, osteoporosis and injury
  - f) thoracic spine and rib biomechanical dysfunctions including articular/capsular and extra-articular restrictions of the zygapophyseal joints including arthrosis, arthritis and arthrofibrosis
  - g) General presentation of serious diseases including: osteoporosis, metastatic invasion, spinal cord compression and tumors, fractures, cardiac and pulmonary pathology, upper abdominal pathology

**NAIOMT 640\***  
**LEVEL II THORACIC SPINE**

*\* As of July 2005, the syllabus of this class is taught within the NAIOMT core classes level I, II and III, especially 600 and 700; and is not an independent course. See also 740 Thoracic plus thrust*

**HIGHLIGHTS**

- **Focus on thoracic spine applied anatomy, biomechanics, assessment and analysis**
- **Medical screening and efficient scanning examination**
- **Segmental mobilization to thoracic spine and ribs**

**CLOCK HOURS:** 14 contact hours, typically 50% lab, 50% theory & demonstration. Two-day course

**COURSE DESCRIPTION:**

This two-day course will focus on the thoracic region, spinal and costal joints. It will include the performance and analysis of the selective tissue tension and biomechanical examinations and the manual physical therapy treatment of the thoracic and costal articulations with mid and end range mobilization. Currently available literature and evidence for examination and intervention will be discussed.

**AUDIENCE:**

Physical Therapists

**PRE-REQUISITES:**

- ❖ Licensed Physical Therapist (copy of current PT license required)
- ❖ It is highly recommended that the course participant has completed NAIOMT 500 (level I: Differential Diagnosis) and 600 or 610 level II upper or lower quadrant or equivalents

**COURSE GENERAL OBJECTIVES**

This course will teach course participants subjective and objective examination techniques (history and detailed tests and measures) as they pertain to the thoracic spine and their integration and analysis to generate a provisional and initial differential and biomechanical diagnosis. It will also teach mid and end range mobilizations for the spinal and costal joints of the thoracic region. The course will apply biomechanical and pathological theories and knowledge to the recognition and analysis of joint conditions and movement dysfunctions that benefit from OMPT techniques, focusing on the joint.

**SPECIFIC COURSE OBJECTIVES:**

At the completion of this course, the course participants will be able to:

1. Efficiently perform a detailed subjective examination (history and systems review) of the thoracic region
2. Efficiently perform a detailed objective examination (tests and measures) of the thoracic region, including palpation of articular and soft tissue structures, passive intervertebral movement and stability tests
3. Apply biomechanical knowledge of the thoracic and costal joints to the examination and diagnosis/hypothesis of the movement dysfunction of the thoracic and costal joints
4. Analyze and evaluate the history and examination data to prioritize the patient's problem list, especially identifying the potential stage and irritability of the dysfunctions
5. Identify the indications and contraindications for the application of mobilization procedures to the segmental thoracic spinal and costal joints