

## Module V

### Cervical Spine and Upper Quadrant

**Format:** 3-day onsite lecture/lab days, 8-week online learning material presented pre and post intensive, online discussion board, videos of technique, Power point Presentations of related material and anatomy, course manual, descriptive anatomy text and online testing for competency..

**Moderators:** Jim Meadows BSCPT, MCPA, FCMT, lecturer; Dave Bender PT, DPT, moderator; Gail Molloy PT, OCS, COMT, Moderator/Lecturer; Fred Stoot PT, COMT, FCMT; Scott Gallant, PT, FAAOMPT

**Contact:** Dave Bender 410-258-4721, [d1d1b@aol.com](mailto:d1d1b@aol.com)

**Grading:** Module testing will be conducted through the IMPACT's online learning and testing platform. Completion of the program online testing with a grade >80% is required for passing. Clinical skills practical will be used to evaluate performance and clinical reasoning, Passing is a grade of 70%.

**Duration:** 8 weeks

---

**Course syllabi, course description, educational objectives, requirements for successful completion, and teaching methods.**

**Description:** This course is designed to prepare the Physical Therapist in advanced biomechanical assessment and treatment with manipulation for the cervical spine and shoulder girdle. The online learning portion will build on the prior cervical spine course and upper quadrant to include advanced craniovertebral evaluation and treatment. Attention will be given to manipulation techniques for the facet joints, uncovertebral joints, C1-C2 region and the craniovertebral joints and shoulder girdle..

**Education methods** will include: 24hrs classroom didactic training and lab. 25 additional hours will be required to review power point material, course manual, videos, and descriptive anatomy material. Online testing and clinical skills assessment will also be performed.

**Objectives and requirements for completion:** On completion of the course the therapist will be able to identify indications and contraindications for manipulation. The therapist will also demonstrate correct evaluation and treatment selection for manipulation of the cervical and craniovertebral joints. Passing grades for the online testing is 80% and skills practical 70%.

#### **Course materials**

- Power point and anatomy manual review: for cervical spine and the craniovertebral region.

- Online learning platform: videos, PPT presentation on biomechanics and treatment.
- Manual: cervical spine course manual
- Discussion board

<b>Module 6 Upper Quadrant *in class</b>	<b>Topics</b>
Anatomy , biomechanics and pathomechanics <ul style="list-style-type: none"> <li>• Descriptive</li> <li>• Surface*</li> <li>• Applied *</li> </ul>	<ul style="list-style-type: none"> <li>• Cervical spine</li> <li>• Shoulder girdle</li> </ul>
Conditions (incidence/ prevalence, and presentation*	<ul style="list-style-type: none"> <li>• Labral tears</li> <li>• Systemic and degenerative arthropathies (AKS, RA, reactive arthritis, diabetic, OA)</li> <li>• Traumatic and microtraumatic arthritis</li> <li>• Healthy, stress and pathological bone fractures</li> <li>• Traumatic and non-traumatic ligament tears</li> <li>• Neoplastic disease</li> <li>• Adhesive capsulitis</li> <li>• Peripheral neuropathy</li> <li>• Articular dysfunction</li> <li>• Osteoporosis</li> <li>• Tendonopathies</li> <li>• Tenosynovitis and tenovaginitis</li> </ul>
Clinical reasoning*	<ul style="list-style-type: none"> <li>• Pattern recognition</li> <li>• Hypothetic-deduction</li> <li>• Illness scripts</li> <li>• SFD</li> <li>• Bias correction</li> <li>• DDx,</li> <li>• Diagnosis specific treatment</li> <li>• Prognosis</li> <li>• Advanced differential diagnosis</li> <li>• Intermediate complex problem solving</li> <li>• Intra-unit silent etiologies</li> </ul>
Assessment techniques Medical diagnostic* Segmental*	<ul style="list-style-type: none"> <li>• Scan examination</li> <li>• Selective tissue tension examination</li> <li>• Neurophysiological                             <ul style="list-style-type: none"> <li>○ multifidus, quadrants</li> <li>○ local stabilizers and quadrants</li> </ul> </li> <li>• Biomechanical                             <ul style="list-style-type: none"> <li>○ PPIVMs, position tests, PAIVMs</li> <li>○ PPMs and PAMs</li> <li>○ Screening tests (quadrants etc.)</li> </ul> </li> </ul>

Module 6 Upper Quadrant *in class	Topics
Treatment and management techniques*	<ul style="list-style-type: none"> <li>○ SIJ kinetic tests</li> <li>• Specific exercise prescription for above conditions</li> <li>• Pain modulation treatments                             <ul style="list-style-type: none"> <li>○ Low grade mobizations</li> <li>○ Electrical stimulation</li> <li>○ Exercises</li> <li>○ Cryo-thermal</li> </ul> </li> <li>• Rest</li> <li>• Referral out for medical treatment and investigation</li> <li>• Uncovertebral Direction manipulation (sup/inf)</li> <li>• Zygapophyseal direction specific manipulation (flex/ext)</li> <li>• Direction specific SIJ manipulation</li> <li>• Glenohumeral manipulation and mobilization</li> <li>• Sternoclavicular and acromioclavicular mobilization</li> <li>• Movement rehabilitation therapy</li> </ul>
Medical management and investigations for above conditions	<ul style="list-style-type: none"> <li>• X-ray</li> <li>• MRI</li> <li>• CAT scan</li> <li>• Radio-uptake scans</li> <li>• Blood work</li> </ul>

**Onsite intensive: 24 didactic/Lab hours. 25 hrs direct/independent study.**

**SPECIFIC COURSE OBJECTIVES:**

Module V objectives

1. Perform and interpret results of the biomechanical assessment for the cervical spine.
  - a. Interpreting active passive, and resistive testing
  - b. Performing and interpreting passive physiological motion testing
  - c. Stability testing of the thoracic spine.
  - d. Neurologic testing
  - e. Red and yellow flag recognitions and interpretation.
  - f. Selected intervention for condition scripts.
2. Condition Scripts
  - a. Identification of typical presentation of selected pathology and subluxations
  - b. Apply hypothesis testing for illness scripts as part of the differential diagnosis
  - c. Select and perform appropriate manual therapy intervention based on subjective and objective data.
  - d. Select appropriate interventions: Ther ex, NM reed modalities and HEP for illness scripts.
3. Manual therapy interventions
  - a. Apply appropriate manual therapy intervention based on clinical exams
  - b. Demonstrate proper technique with manipulation taking into account:

- i. Proper treatment selection
- ii. Integrate proper neuromuscular reeducation and therapeutic exercise prescription.
- iii. Appropriate force for selected treatment
- iv. Evaluation of response to treatment