

Module IV

Differential Diagnosis, Biomechanical Assessment and Treatment of the Peripheral Joints.

Format: 3-day onsite lecture/lab, 6-week online learning module including discussion board, videos of technique, power point presentations of related material and anatomy, course manual, and descriptive anatomy text.

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

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Duration: 8 weeks

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

Description: This course is designed prepare the therapist in advanced differential diagnosis, biomechanical assessment and manipulation of the wrist, elbow, AC joint and ankle. Attention will be given to selected manual therapy interventions, indications and contraindications. While mobilization will be reviewed the focus will be on teaching treatment with manipulation.

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 as well as clinical skills assessment will also be performed.

Objectives and Requirements for Completion On completion of the course the therapist will be able to identify the common condition scripts for ankle, wrist, and elbow and AC joint, pass a clinical skills evaluation, and online testing covering the didactic and course manual material.

Syllabi:

Course materials

- Power point and anatomy manual review: elbow, ankle and wrist.
- Online learning material: videos, PPT presentations, and discussion board topics.
- Manual: Manipulation of Peripheral Joints:

1. <i>Manipulation: Principles</i>	4
2. <i>Clinical Biomechanics Defined and Applied</i>	6
3. Pre-Study Questions	6

4. Terminology Definitions: Clinical Biomechanics	12
5. Terminology Definitions: Assessment.....	17
6. Movement Dysfunction States.....	18
7. The Phase Transition Model of Segmental Dysfunction	20
8. Examination of the Musculoskeletal System	26
9. Differential Diagnostic Examination.....	27
10. Subjective	27
11. Objective	27
12. Neurophysiological Examination.....	30
13. Biomechanical Examination	32
14. Movement Dysfunctions	32
15. Generic Algorithm for the Biomechanical Examination.....	36
16. Examination by Joint.....	37
17. Upper Limb	37
18. Shoulder Girdle.....	37
19. Elbow	39
20. Wrist.....	40
21. Treatment Technique Selection.....	41
22. Treatment	42
23. Upper Limb Techniques.....	43
24. Shoulder.....	44
25. Glenohumeral.....	46
26. Acromioclavicular Joint.....	47
27. Elbow.....	48
28. Tennis Elbow	52
29. Inferior Radioulnar Techniques.....	55
30. Manipulation Ulna Meniscus.....	58
31. Lower Limb Techniques	60
32. Talocrural Subluxation	60
33. Talocalcaneal Subluxation	61
34. Intertarsal Subluxations.....	63
35. Plantar Cuboid	63
36. Plantar Navicular and Cuneiform and Tarsal Base.....	64
37. Dorsal Navicular	64
38. Dorsal Cuboid	66
39. Superior Tibiofibular Joint.....	67
40. The Hip	69
41. Loose Bodies.....	69
42. Anterior Subluxation.....	69
43. Overall Rehabilitation.....	70

Onsite intensive: 24 didactic/Lab hours.

Module 4 Peripheral Manipulation *in class	Topics
Anatomy , biomechanics and pathomechanics <ul style="list-style-type: none"> • Descriptive • Surface* • Applied * 	<ul style="list-style-type: none"> • Foot and ankle • Wrist and hand • Elbow • Acromioclavicular joint
Conditions (incidence/ prevalence, and presentation*)	<ul style="list-style-type: none"> • Systemic and degenerative arthropathies (AKS, RA, reactive arthritis. OA) • Traumatic and microtraumatic arthritis • Healthy, stress and pathological bone fractures • Traumatic and non-traumatic ligament tears • Neoplastic disease • Peripheral neuropathy • Articular dysfunction • Osteoporosis • Tendonopathies • Tenosynovitis and tenosynovitis
Clinical reasoning*	<ul style="list-style-type: none"> • Pattern recognition • Hypothetic-deduction • Illness scripts • SFD • Bias correction • DDx, • Diagnosis specific treatment • Prognosis
Assessment techniques Medical diagnostic * Segmental*	<ul style="list-style-type: none"> • Selective tissue tension examination • Neurophysiological (local stabilizers, quadrants) • Biomechanical (PPMs, PAIVMs, stability tests)
Treatment and management techniques*	<ul style="list-style-type: none"> • Specific exercise prescription for above conditions • Deep transverse frictions • Pain modulation treatments <ul style="list-style-type: none"> ○ Low grade mobilizations ○ Electrical stimulation ○ Exercises ○ Cryo-thermal • Rest and splints • Referral out for medical treatment and investigation • Direction specific manipulation • Traction manipulation • Mills manipulation

Module 4 Peripheral Manipulation *in class	Topics
	<ul style="list-style-type: none"> • Stabilization therapy • Movement rehabilitation therapy
Medical management and investigations for above conditions	<ul style="list-style-type: none"> • X-ray • MRI • CAT scan • Radio-uptake scans

SPECIFIC COURSE OBJECTIVES:

Module IV objectives

1. Perform and interpret results of the biomechanical assessment for Peripheral joints.
 - a. Interpreting active passive, and resistive testing
 - b. Performing and interpreting Passive physiological motion testing
 - c. Stability testing of the peripheral joints.
 - 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. Conjoint rotations
 - iii. Appropriate force for selected treatment
 - iv. Evaluation of response to treatment