

# Vestibular Assessment & Management Certification Workshop

**Course Director:** Richard E. Gans, Ph.D.

**Faculty:**

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Joseph Sakumura, Au.D., Steven Spinks, PT, DPT, OCS, COMT, FAAOMPT

*\*Faculty may vary based on availability and location*

<b>Day 1</b> <b>8:30 AM – 5:00 PM</b>
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## **Morning Session 8:30 AM – 12:00 PM (Break 10:00 – 10:15 AM)**

- Welcome and Introductions
  - Statement of need and demographics
  - Historical perspective
- Review of the theory of human equilibrium: Integration of vestibular, vision and somatosensory modalities and central processing
- Anatomy and physiology of peripheral and central vestibular mechanism
  - Vestibulo-Ocular Reflex (VOR)
  - Nystagmus- definition and description
  - Corrective Saccades
  - Vestibulo-Collic Reflex (VCR)
  - Vestibulo-Spinal Reflex (VSR)

## **Lunch (on your own)**

## **Afternoon Session 1:00 PM – 5:00 PM (Break 3:00 – 3:15 PM)**

- A & P (continued)
  - Cervico-Ocular Reflex (COR)
  - Cervico-Collic Reflex (CCR)
  - Cervico-Spinal Reflex (CSR)
- Central Vestibular Mechanism anatomy and physiology
- Central Vestibular Compensation
- Evaluation & Treatment – BPPV
  - Demonstration of Canalith Repositioning Maneuvers (CRM)

## Manual practice hands-on - CRMs

- Posterior/Anterior Canal
  - Modified Canalith Repositioning (CRM Epley/Herdman style)
  - Semont Liberatory Maneuver (SLM)
  - Gans Repositioning Maneuver (GRM)

<b>Day 2</b>	<b>8:30 AM - 5:00 PM</b>
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## **Morning Session 8:30 AM - 12:00 PM (Break 10:00 - 10:15 AM)**

- BPPV Treatment (continued)
  - Horizontal Canal
    - Appiani
    - Casani
    - Horizontal Hybrid Maneuver
  - CRM Treatment Considerations
    - Restrictions Post BPPV treatment
    - Complications of treatment
- Pathophysiology of common vestibular and balance disorders
  - Migraine
  - Psychiatric
  - Otologic Disorders
  - Trauma
  - Toxicity
  - Neurologic
  - Rheumatology/Autoimmune
  - Cervical
  - Other

**Lunch (on your own)**

**Afternoon Session 1:00 PM – 5:00 PM (Break 3:00 – 3:15 PM)**

- Disorders (continued)
- Concussion
  - Definition of concussion
  - Most common symptoms experienced post concussion
  - Post Concussion Symptom Scale
  - Structural and metabolic changes post concussion
  - Labyrinthine concussion
  - Chronic Traumatic Encephalopathy (CTE)
  - Defense Automated Neurobehavioral Assessment (DANA)
  - Return to Activities

<b>Day 3</b>	<b>8:30 AM – 5:00 PM</b>
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**Morning Session 8:30 AM – 12:00 PM (Break 10:00 – 10:15 AM)**

- Concussion (continued)
- Evaluation & Assessment Protocols
  - Clinical Pathways
    - Important Definitions
      - Stabilized vs. Non-stabilized
      - Compensated vs. Non-Compensated
    - Goal Examples
    - Plan of Care
    - Billing
  - Initial Evaluation: Step 1 - Interview
    - Case History
    - Medical History
    - Selecting Tests and Integrating Results
    - Outcome Measures - Clinimetrics

- Evaluation & Assessment Protocols – Postural Stability
  - Vestibular Spinal Reflex (VSR) Evaluation
    - Gans SOP
    - Computerized Dynamic Posturography

**Lunch (on your own)**

**Afternoon Session 1:00 PM – 5:00 PM (Break 3:00 – 3:15 PM)**

- Vestibulo Ocular Reflex (VOR) Bedside Evaluation: Hands on practice and interpretation
  - Gaze Evoked Nystagmus
  - Halmagyi Head Thrust
  - Evaluation & Assessment Protocols – Video Head Impulse Testing (vHIT)
    - Protocols
    - Interpretation
    - Hands on Lab
    - Dynamic Visual Acuity using Snellen chart and AIB CDVAT
  - Optokinetic Test (bedside)
  - Motion Sensitivity Index
  - Hands on practice
  
- Evaluation & Assessment Protocols – Cervical
  - Definition of Cervicogenic Dizziness
  - Incidence & Prevalence
  - Cervical Dizziness Test

<b>Day 4</b>	<b>8:30 AM – 5:00 PM</b>
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**Morning Session 8:30 AM – 12:00 PM (Break 10:00 – 10:15 AM)**

- (Cervical Continued)
- Objective Examination
  - Upper Cervical Instability (UCI)
    - Sharp-Purser Test
    - Alar Ligament Stress Test
    - Transverse Ligament Test
- Cervical Range of Motion
- Cervicogenic Dizziness Tests
- Cervical Proprioception Testing
  - Joint Position Sense
  - Treatment for Cervicogenic Dizziness

**Lunch (on your own)**

**Afternoon Session 1:00 PM – 5:00 PM (Break 3:00 – 3:15 PM)**

- Evaluation & Assessment Protocols – VideoNystagmography (VNG)
  - Protocols
  - Interpretation
  - Hands on Lab
- Evaluation & Assessment Protocols – Active and Passive Head Rotation Tests
  - Rotary Chair
  - Vestibular Autorotation Testing (VAT)
  - Hands on Lab
- Evaluation & Assessment Protocols – Cervical Vestibular Evoked Myogenic Potentials (cVEMP)
  - Protocols
  - Interpretation
  - Hands on Lab

<b>Day 5</b> <b>8:30 AM - 1:15 PM</b>
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**Morning Session 8:30 AM - 1:15 PM (Break 10:00 - 10:15 AM)**

- (Evaluation and Assessment Protocols, continued)
- Diagnosis Based Strategies: Vestibular Rehabilitation Therapy
  - Theories of Adaptation, Habituation, and Substitution
  - Identification of functional impairment
  - Evidence-based Clinical Pathways: Using VRT protocols and creating patient-centered therapy
  - Identification of functional impairment by categories
    - Oscillopsia
    - Vestibular Recruitment
    - Vestibular Visual Integration- vision/surface dependence
  - Measuring Outcomes
  - AIB Vestibular Cognitive Integration (AIB-VCI)
  - Manual Practice
  - Summary and Conclusions

*Syllabus timeline is for general purposes only. Depending on interest of the class, depth of discussions, questions, demonstrations and any hands-on, timeline may be adjusted. All content, however, will be covered.*