I. TITLE: Somatosensory Reweighting: Forcing reorganization in the impaired or compensating nervous system

Participant Level: Intermediate to Advanced

COURSE DESCRIPTION: This program will enlighten attendees to frequently unrecognized opportunities in balance retraining for patients with impaired balance. The focus will be placed on rehabilitation of patients with sensory impairment: neuropathy, vestibulopathy, spinal cord lesion (MS, SCI), and cortical lesions (stroke, MS, tumor). This program will additionally cover recent technological advances that will allow us to better detect, classify, treat and analyze rehabilitative gains in various forms of balance impairment. Direct clinical applications will include improved testing and rehabilitation individuals with nonspecific visual dependence.

LEARNING OBJECTIVES: Upon completion of this course, you will be able to:
1. Reliably test and identify patients with abnormal or pathologic visual dependence in balance.
2. Critically appraise balance measures for their ability to determine sensory contributions to the examination.
3. Identify and be ready to apply treatment options to reduce abnormal sensory dependence in balance for multiple conditions.
4. Translate the recovery of somatosensory function into quality of life improvements for clients with neurologic impairment, as seen in the ICF and quality of life indices.
5. Identify new technologies for diagnostic and therapeutic intervention in the arena of reweighting.

KEYWORDS: Sensory reweighting, Balance, Neuroplasticity.

Session Outline:
- Introduction to compensatory neural mechanisms in balance with various pathologies and diseases.
- Testing AND training specific to sensory modalities involved in balance
- Future technological advancements relevant to somatosensory testing and training.
- Questions