Thank you for your recent communication with Motion Guidance, LLC regarding our continuing education class offering “Motor Learning Strategies to improve performance and movement”. This is a two-day course with established CEUs at 13 hours.

The course outline is a follows:

Joint Position Sense deficits and movement dysfunctions have been discovered and linked to various conditioning that are commonly treated in physical rehabilitation medicine. This rehabilitation continuing education course is directed toward educating healthcare professionals on how to make researched based assessments and treatments. The content utilizes current motor learning principles and gives insight into how patients can respond to various types of feedback and motivation yielding immediate improvements in movement, motor control, and improved retention to enhance both movement and performance. This interactive 2-day, lab intensive course will include lecture, patient demonstrations, and lab time to give the participants an opportunity for in-depth problem-solving and refinement of technique for using motor learning principles and motor control exercises for the assessment and treatment of conditions and dysfunctions associated with the head/neck area, shoulder, knee, and lower back pain. The attendee will leave with a good understanding of how to implement motor learning principles to any body part or condition.

The following conditions will be discussed:

- Whiplash Associated Disorder
- Concussion
- Chronic Neck pain
- Rotator Cuff related shoulder pain
- Shoulder instability
- Patello-femoral pain
- ACL deficiency
- Post-Operative Knee conditions
- Return to Participation testing and performance training for the lower chain
- Chronic Lower Back pain

…..AND MANY MORE!!!!!!

In addition, the course will provide instruction in the use of the Motion Guidance Visual Feedback system developed by G. Talmadge Blair, PT, DPT.

Learning Objectives/Objectives: ***By the end of the course the participant will be able to accurately:***

- Describe the stages of motor learning.

- Define the differences between External and Internal focus and give 2 examples of each type during a motor skill.
- Define the differences between Explicit and Implicit feedback and give two examples of each type during a motor skill.
- Define two different examples of Augmented feedback
- Define Autonomy of Support and give an example of how to incorporate this into motor skill learning.
- Define Enhanced Expectations and give an example of how to incorporate this into motor skill learning.
- Discuss the role of vision in motor learning. Specifically, the differences between ventral and dorsal stream processing.
- Give examples of utilizing dorsal stream vision processing during a novice level skill.
- Give examples of utilizing dorsal stream vision processing during an expert level skill.
- Demonstrate Lumbo-pelvic dissociation evaluation in quadruped
- Demonstrate evaluation of Cervical Spine Joint Position Sense Error in sitting
- Demonstrate evaluation of Shoulder Joint Position Sense Error in Standing
- Demonstrate evaluation of Lumbar Joint Position Sense Error in Quadruped
- Understand the role of motivation during motor learning and give two examples of enhancing motivation to improve motor skill acquisition
- Demonstrate a treatment consisting complex motions for a patient who presents with cerebellar ataxia
- List 4 risk factors associate with knee injury or pain
- Cite at minimum 2 publications that support the use of External Focus of Attention during motor learning skill acquisition
- Demonstrate two exercises that facilitate the use of visual based feedback to help a practitioner observe unwanted substitution patterns at the knee
- Demonstrate two exercises that facilitate the use of visual based feedback to help a practitioner observe unwanted substitution patterns at the Shoulder

Outline

- Two Day Course 8:00AM – 4:00PM both days (13 CEU contact hours)
- Instruction in Motor Learning Principles and Introduction to the Motion Guidance Visual Feedback system with lecture, demonstration and lab practice
- DAY 1:
- 8:00-9:00 Introduction, Course outline, Motor Learning and Motor Control definitions, and pre-test

- 9:00-10:00 Review of Cervical Joint Position Sense Error and it's prevalence in WAD, CNP, and Concussion
- 10:00-10:15 Morning Break
- 10:15-10:45 Lab Break Out Research based assessment and treatment of Cervical Spine JPSE
- 10:45-11:15 Deep Neck Flexor/ Posture/ Motor Control exercise and Literature review
- 11:15-12:00 Lab Break Out: Neck and posture exercises
- 12:00-1:00 Lunch
- 1:00-1:30 Shoulder JPSE and Exercise Performance Literature review
- 1:30-2:15 Lab Break Out: Open Kinetic chain exercise including evaluation of substitution patterns and advancements
- 2:15-2:30 Afternoon Break
- 2:30-3:15 Lab Break Out: Closed Kinetic chain exercise including evaluation of substitution patterns and advancements
- 3:15-4:00 Case Reports and Closing Comments

- Day 2
- 8:00-9:00 Review of Literature of JPSE at the knee and LE, ACL injury risk factors, PFP risk factors.
- 9:00-10:00 Lab Break Out: Evaluation of dynamic knee movement using the Motion Guidance device, creating standard deviations
- 10:00-10:15 Morning Break
- 10:15-12:00 Lab break out session for knee motor control exercises with motor learning principles. From isotonic to dynamic exercise
- 12:00-1:00 Lunch
- 1:00-1:30 Review of the literature concerning Chronic Low Back Pain, JPSE, and movement dysfunction
- 1:30-2:30 Lab Break Out: Evaluation of lumbo-pelvic dissociation and motor control exercises in quadruped using the Motion Guidance Visual Feedback system
- 2:30-2:45 Afternoon Break
- 2:45-3:30 Lab Break out: Progressions of Exercise in sitting and standing postures/ Balance applications
- 3:30-4:00 Practical Review session/ Case Studies. Post course test.

Motion Guidance visual feedback systems will be provided for the course and will be available at a discount for all participants for the course, with extra discounts available for host facility participants.

We look forward to providing your clinic and staff a wonderful Continuing Education opportunity!

The Motion Guidance Team