

Synergy of Human Movement Course Description

How do we Move? The Biomechanics of Human Movement(L/LAB)

This lecture/workshop thoroughly provide a deeper analysis and understanding on the biomechanics of how human movement occurs, biomechanics of connective tissue, how structure affects function, functional anatomy to perform movement, as well as muscle imbalances within the shoulder complex. Review of common static and dynamic forces and physics terms will make you think differently as we move.

The Nuts and Bolts of the knee: from injury back to the gym(L)

This lecture will review the anatomy, functional anatomy, common muscle imbalances within the knee joint. Pathomechanics and biomechanics of movement examining the tibiofemoral and patellofemoral joints. Discuss of common knee dysfunction such as ACL reconstruction, menisectomies, total knee replacement(TKR) and others will be reviewed with post therapy training recommendations.

Functional training: The integrated approach(L/LAB)

This lecture/workshop will examine integrative training principles such as will examine program design, exercise prescription, neuromuscular training, spinal stabilization and stretching and their effect on one another. This section will examine exercise prescription in detail and the importance of selecting proper exercises with any client. **Sample workout programs with clinical rationale** will be reviewed to guide the personal trainer in mastering exercise prescription. Performance of functional strengthening exercises with medicine balls, physioballs and other equipment will be performed.

Understanding Posture: The Postural vs. Phasic Pull(L)

This lecture will delve into explaining the difference and effect of postural vs. phasic muscles. It will also examine assessing posture, postural dysfunctions and post therapy training principles. This lecture will make you think not only about how you train your clients, but more importantly how we think about the human body and how dysfunctions develop.

Secrets of the Shoulder: Scientific Shoulder Training(L/LAB)

This lecture/workshop will review the functional anatomy, force-couple relationships, common imbalances within the shoulder complex. Pathomechanics and biomechanics of shoulder movement will be examined thoroughly. Discussion of common shoulder dysfunctions such as impingement, rotator cuff repair, bursitis, instabilities, dislocations, adhesive capsulitis and others will be reviewed with post therapy training recommendations.

Case Studies Review(Discussion)

This interactive lecture and discussion will examine several case studies on real patients who transitioned from physical therapy to personal training and ultimately back to the gym safely with periodized programming and selective exercise prescription. Anatomy, biomechanics, program design, safety/precautions will all thoroughly be discussed providing much needed clarity.

The Road Map to tackling the complex Back Client(L)

This lecture will examine and discuss the most common back conditions such as Spinal stenosis, herniated discs, spondylosis, spondylolysis, spondylolisthesis and other while providing clarity on each while examining the anatomical, biomechanical differences of each. Program design, exercise prescription and do's and don't with all conditions as well as practical stabilization exercises that work will be extensively reviewed.

The Truth about the Core(L/LAB)

This dynamic lecture/workshop will discuss how to assess the core with functional assessments, review of the key stabilizers of the spine and core and importance will thoroughly be reviewed. You will also learn the “neural connection” on the relationship between the brain and the musculoskeletal system. Learn new static, dynamic and challenging lumbar stabilization exercises that you can add to your exercise repertoire.

Essentials of Program Design/Periodization Training(L)

Learn the foundation about program design and periodization training. This lecture will discuss essential concepts of program design that all trainers should master when working with any client. Learn how to manipulate exercise variables such as reps, sets, loads, and rest periods. Periodization concepts with sample sport training program will be thoroughly discussed in detail.

Exercises that hurt more than help(L/LAB)

This interactive lecture and demonstration will review several key exercises, stretches, and functional strengthening exercises that can create or lead to dysfunction and should be avoided. Anatomy, biomechanics and clinical rationale will all be discussed as with attendance participation. This session will make you really think about exercises that you teach and why they are utilized in training programming.

Nuts and Bolts of Neuromuscular Training(L/LAB)

This lecture/workshop will discuss the foundation of motor control and motor learning which are the foundation of learning any new exercise, retraining, improving balance, etc. This in depth lecture will examine integration of body systems reviewing the connection between the neurologic and musculoskeletal system. The physiology of balance and movement will be examined in great detail. Come prepared to really learn and understand complex information made simple. Learn new static and dynamic balance exercises to add to your exercise repertoire.

L=Lecture LAB= workshop/hands on practice