### Injury Mechanisms, Prevention and Rehabilitation

**William Buckley**  
Professor  
Kinesiology  
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Research Interests  
Health aspects of sport and athletic training with a focus in sport injury risk assessment and epidemiology; development of sport injury risk assessment models to apply to various subset athletic populations (women, disabled, senior participants), drug use in athletics, quality assessment for athletic training, and curriculum design.

**Philip Martin**  
Professor and Department Head  
Kinesiology  
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Research Interests  
Biomechanics and energetics of locomotion; factors affecting preferred rates of movement in cyclic activities, with particular emphasis on the biomechanics and economy of walking, running, and cycling; kinematic and kinetic determinants of walking and running patterns in below knee amputees.

**Nicole McBrier**  
Assistant Professor  
Kinesiology  
Email Address: nmm13@psu.edu  

Research Interests  
Skeletal muscle regeneration following injury and the influence of therapeutic modalities and rehabilitation on the regenerative processes. Currently, Dr. McBrier is investigating the influence of therapeutic ultrasound on skeletal muscle regeneration following contusion injury.

**Stephen Piazza**  
Associate Professor  
Kinesiology  
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Research Interests  
Kinematic and dynamic computer simulation applied to the study of normal and pathological human gait; effects of design and surgical variation on the mechanics of total knee replacements; modeling of articular contact.

**Neil Sharkey**  
Professor  
Kinesiology  
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Research Interests  
Functional aspects of the musculoskeletal system viewed from an orthopaedic perspective; normal, pathologic, and reconstructed function of bones and joints; mechanisms of injury to bone, ligament, and tendon and associated healing responses; laboratory modeling of skeletal and diarthroidal joint loading; internal biomechanical behavior of the foot and ankle, knee, hip and