The Commandant of the United States Marine Corps posed a simple question: What will it take to integrate female Marines into previously restricted combat arms Military Occupational Specialties (MOS) so they can safely and effectively serve in ground combat units? The answer is not so simple. But a team from the Department of Sports Medicine and Nutrition (SMN) is working on it.

Dr. Katelyn Allison, assistant professor, and Dr. Scott M. Lephart, distinguished professor and department chair, are leading the charge to mitigate injury and optimize performance for female Marines, using the same model they use to train elite athletes.

Their research, funded through a grant from the Office of Naval Research, is designed to help female Marines hit the ground running, literally, when the decision regarding integration of women into combat arms following the rescission of the Direct Ground Combat Assignment Rule takes effect in January 2016.

Working in collaboration with the Marine Corps’ Ground Combat Element Integrated Task Force, they’re following more than 160 women from Camp Lejeune, N.C., and the Naval Amphibious Base in Coronado, Calif., through MOS training and simulated combat exercises.

And the training is brutal. “These women may serve as riflemen, machine gunners, or members of an amphibious crew,” Allison notes. “They could be in mountainous terrain, deserts, or oceans.

“If males are required to carry 100-pound packs, then they must do the same,” she continues. “But females who are small in stature will be at a huge disadvantage compared to men who are perhaps 180 or 200 pounds.”

To help equalize the odds for the women, SMN researchers installed on-site replicas of the University of Pittsburgh’s Warrior Human Performance Research Center, a part of its Neuromuscular Research Lab.

They use a scientific approach to test and analyze tactical requirements and musculoskeletal and physiological profiles of the Marines, and conduct physical training to help narrow the strength gap between men and women.

In a July report on National Public Radio (NPR), Marine Lt. Col. Michael Samarov, a member of the integrated task force planning committee, insisted, “Male and female, the task has got to be the same. Combat readiness will not be compromised. If we get this right, combat readiness will improve. And we’re not going to lower standards.”

Allison is confident that the Pitt team is up to the challenge. She says, “Our work will not only enhance the performance of female Marines, but help to prevent certain injuries, such as shin splints and sprained ankles that are more common in women.
Lephart points out that his researchers have been doing similar work for a decade, with seven studies currently underway as part of the Department of Defense-sponsored Warrior Human Performance Research Center.

“We’ve been studying these issues as they relate to men in the Navy SEALs and other branches’ special operations groups.

“The Marines are taking a very proactive approach,” he continues, “studying how well women likely will perform in what are very physically taxing new roles and jobs.”

In his NPR interview, Samarov stated, “All the physiological, physical, and performance data collected by the University of Pittsburgh and the Marines will help determine who can perform in combat—which is the only measure that counts.”

“This is an important moment in American history,” points out Allison. “It is a true honor to be contributing to this landmark initiative.”