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TAKING UP THE MOTTO "SEE A NEED, FILL A NEED"

Dr. Wendi Weimar, an associate professor in the Auburn University College of Education's Department of Health and Human Performance, found a creative way to help solve the problem of funding for graduate assistants while enhancing the department's biomechanics program as a whole.

During the summer 2005 semester, Weimar added a new component to the Sport Biomechanics Laboratory. The lab now meets a variety of needs for a variety of people. First, it allows the graduate students enrolled in the Biomechanics Program a hands-on learning experience as they put the skills they learn in class into practice. Second, it provides a service to local athletes and active individuals who wish to improve their level of performance. Last, it helps alleviate some of the funding issues as a sliding fee is charged.

"The service is a video-based skill analysis. We can evaluate whatever a skill a person performs," Weimar said. "We have done analyses on swimmers, softball players, baseball players, golfers as well as marching band personnel. Our analysis often includes comparisons to professional or master performers and always includes analysis by a trained biomechanist."

Thus far, the lab has assessed more than 300 athletes. The level of analysis and the fee depends on what the person wants. There are simple analyses that start at $25. More involved analyses using more than one camera, multiple comparisons and an individualized strength/conditioning/ stretching program can cost as much as $250.

The skill analysis is beneficial by identifying flaws in the performance that can limit performance; identifying flaws that can lead to injuries; and identifying factors that maybe limiting performance such as strength and/or flexibility deficits.

"Dr. Weimar and the Biomechanics Lab have become a vital part of our team's success," said AU Swim Coach David Marsh. "The ability to have Wendy and her students breakdown the video and offer comparisons against the ideal model—and deliver it in a usable way—allows the staff and the swimmer to gain technical and strategic information in a timely way."

The service provided through the Sport Biomechanics Lab is also beneficial to the graduate students who have learned skill analysis and how to use the technology and equipment in Weimar's class, Biomechanics Sport Technique. Through students' work with the lab, they get practical experience filming the performer and analyzing the motion, allowing them to combine classroom learning experiences with the real world.

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"The opportunity to work with Dartfish software to create a skill analysis for athletes has helped prepare me for a future as a sport biomechanist in several ways. It has given me hands-on experience with state-of-the-art technology, as well as allowed me to apply my textual knowledge to the athletes looking for an advantage in their chosen sport or activity," said Jay Garner, doctoral candidate.

The work being done through Auburn's biomechanics lab is not only valuable for the athletes and the students, but for the field of biomechanics as a whole. "Biomechanics analyze motion to better understand how people perform a skill so that we can enhance how the skill is performed. Each time we analyze a person, our knowledge regarding that particular motion is enhanced," Weimar said. "This increased understanding can then be shared to enhance the performance of even more people. Further, the opportunity for understanding common mistakes that can lead to frequent injuries may lead to methods that can decrease the incidence of injuries."

Whether you are swimmer, baseball player, golfer, runner, cyclists or gymnast—whether you are a beginner or pro—if you want to improve your performance safely and correctly, the Sport Biomechanics Lab can help you in your movement endeavors.

For more information about the Sport Biomechanics Laboratory at Auburn University, please contact:

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