



Michael Zabala, Ph.D.



Dr. Michael Zabala is the Auburn Alumni Engineering Council Endowed Associate Professor of Mechanical Engineering at Auburn University. He is also the Director of the Auburn University Biomechanical Engineering (AUBE) Lab where his research focuses on human performance and injury prevention.

Dr. Zabala graduated from Auburn University in 2007 with a Bachelor's degree in Mechanical Engineering and from Stanford University with a Master's degree and PhD in Mechanical Engineering in 2010 and 2013, respectively. His research in the AUBE Lab includes work on active lower-limb exoskeleton technology, ACL injury risk determination, lower-limb prosthetic devices, and biomechanical analysis of various artforms. Dr. Zabala is also the Founder and Executive Chairman of XO Armor, a company formed out of his lab that specializes in custom, 3D-printed casts and braces.

In 2019, Dr. Zabala created the *Engineering in the Arts* study abroad course. This is a three-hour course offered to Auburn University engineering students and is held in Florence, Italy, over the course of four weeks in the summer. The course centers on engineering principles associated with multiple forms of art such as the playing of musical instruments, painting, Renaissance architecture, and dance. Students also learn about key historical figures of the Renaissance that held major influence on the origins of biomechanics and engineering, as well as modern-day Western art and architecture. Sample lecture topics include 1) Leonardo Da Vinci, 2) Engineering of the Piano, 3) The Biomechanics of Ballet, 4) The Biomechanics of Instrument Playing, 5) Giovanni Borelli ("The Father of Biomechanics"), and 6) Architecture and the Human Body. Lectures have corresponding excursions for students to attend such as the Galileo Museum, the Accademia Gallery (home of Michelangelo's "David"), the Uffizi Gallery, an opera in Rome, a Vatican tour, and a climb to the top of the dome of the Santa Maria Del Fiore (Duomo Florence).

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