

Why College Is Important to Me

by Sean Tucker Cullen

At ten years of age I was awe-inspired by the growing lima bean in my garden. I would spend hours watering and weeding and examining how earth, sun, and rain acting in harmony could orchestrate new life. I was captivated by the unmistakable beauty in the complexity of it all; the intricacies of our earth are so diverse, but fit together perfectly. AP biology fascinated me. The topics we covered often led to intriguing humanitarian discussions of modern day issues. Will biofuels ever become efficient enough? Is stem cell therapy immoral? It was issues like these that led to debates with classmates at lunch and that I contemplated long after class had ended.

I began to find overlaps between our biology curriculum and my experiences as an athlete and became enthralled with the science behind the human body. As I increased the intensity of my cycling and running, my personal health took on a new level of importance. I became more in tune with my body carefully watching my nutrition and monitoring the effects of my workouts by wearing a GPS to track my runs and bike rides on Strava. It sparked my desire to learn more about health, wellness, and technology.

My study of life science has no doubt played a role in my interest in human health, but it has also spurred a desire to create a healthier environment. My internal drive to excel in the rigor of academia is balanced by the freedom I find in outdoor adventures. The natural world is a place void of distractions. Summiting a mountain or exploring a new trail not only brings me clarity, it brings my love of science to life. From the invisible microbe to the giant Sequoia, everything has a role in a complex web of interconnected ecosystems. Human behavior is threatening this ecological diversity. Developing sustainable practices will be one of the greatest challenges of my generation. We need to discover innovative new technologies to combat such issues as deforestation, ocean acidification, and climate change and remain focused on a future where renewable resources sustain our society indefinitely.

The development of these new technologies is just one part of the process. For engineering breakthroughs to make a substantial impact, they need to be brought to society in the most effective way possible. College is important to me because I hope to pioneer and bring to market bioinspired technologies to help both our society and our planet stay healthy. By majoring in biological engineering and entrepreneurship I want to play a part in the inspiring projects of our time; exosuits to help rehabilitate soldiers, biodegradable plastics to reduce landfills, and 3D bioprinting of living tissue for regenerative medicine.

Biology reveals the connections between ourselves and the world. The key to a healthier and more sustainable world will be multidisciplinary, but the life sciences are its heart. Whether it's saving lives or saving the planet, we have to first understand the science of life before we can influence it.