"Advancing Health Equity through Innovative Biomedical Engineering Education"

ABSTRACT: In the wake of the COVID-19 pandemic, the urgent need for an inclusive and equitable approach to biomedical education has highlighted significant health disparities across diverse axes of identity, including race and ethnicity, gender, sexual orientation, disability status, and geographic location. Traditional biomedical engineering curricula have failed to adequately address healthcare disparity topics, despite their recognized importance in cultivating culturally sensitive healthcare professionals within medical education. To bridge this gap, a new initiative introduces critical healthcare disparity topics into both undergraduate and graduate biomedical engineering courses, designed to equip future biomedical engineers with the knowledge and tools necessary to design healthcare technologies that overcome biases and cater to the diverse needs of society. The curriculum, centered around Diversifying Biotech Research, Prioritizing Under-Researched Areas, and Community-Based Design, enhances students’ awareness and understanding of healthcare inequities, urging them to develop innovative solutions. This approach not only highlights the role of bioengineering in addressing health challenges but also emphasizes the importance of equity-focused perspectives in biomedical research and education. By advocating for a comprehensive, public health-centric engineering education that actively confronts healthcare disparities, this initiative aims to cultivate technically skilled and culturally sensitive engineers committed to advancing health equity, thereby training the next generation of biomedical engineers to be dedicated to social justice in healthcare and equipped to serve an increasingly diverse world.

BIO: Mykel Green is the Provost Early Career Research Fellow in Health Care Disparities in the Department of Biomedical Engineering at The University of Texas at Austin. His research specializes in understanding the pathology of sickle cell disease and developing new technologies to cure sickle cell disease. Mykel is an alumnus of Morehouse College with a degree in Biology and earned his Ph.D. from The City College of New York in Biomedical Engineering. As an ardent advocate, he promotes participation and empowerment of marginalized communities in STEM, holding key roles on executive board of BlackinBME, National Black Postdoc Association, and the Society for Biomaterials Young Scientist Group. Outside the lab, he loves spending time with his family, traveling, and finding new places to eat.