

# Engineer Better Medicine

For most of Maggie Vaccaro's life, she had no idea what kind of career to pursue. She had a love for math, science, and helping people. Maggie was encouraged to try engineering but knew she had no interest in designing cars, planes, and bridges. Her involvement in high school athletics led to two ACL reconstructions and three meniscus repairs. Each surgery required a custom-made knee brace, and after examining how the knee brace worked and its construction, she was fascinated. From that point forward, her focus was to develop medical devices to help patients heal and recover. During her time at Worcester Polytechnic Institute (WPI), she studied biomedical engineering and was an engineering intern for a start-up medical device company. One takeaway was that everyone wore multiple hats in day-to-day tasks. Maggie was able to partake in the mechanical testing to figure out what prototype worked best, and she learned about research and development; regulatory and clinical strategy; and quality plans. This opportunity inspired Maggie to obtain a minor in business in addition to her major in biomedical engineering.

With a passion for helping through improving healthcare, Maggie was intrigued by the Grand Challenges Scholars Program at WPI. Her advisers recognized her as someone who had already completed projects that specifically developed the competencies set by the National Academy of Engineering. While much of her work focused on the grand challenges related to the healthcare field, it was the program's yearning to help students view problems and solutions through many different perspectives, rather than solely a technical angle, that stuck. Moving forward, Maggie will continue working on the safety and quality of medical devices to improve healthcare. She plans to listen to patient and surgeon needs to better understand the disease state and work collaboratively with others to come up with solutions.

## Engineers Changing the World



**Maggie Vaccaro**  
*Grand Challenges  
Scholars Program*

"There will always be opportunities to embrace or even combine other passions throughout your college experience and career. With a career in STEM, I think there is always an opportunity to grow as we try to innovate to improve everyday life and discover more about the world and people."

