The QL+ Mission

To challenge university STEM students to create innovative technology solutions that improve the quality of life for injured veterans and first responders.

The QL+ Program is Unmatched in its Impact

Greater independence for veterans and first responders who live with a life-altering disability to overcome daily challenges and get back to the activities they love.

Real-world impact and experience for science, technology, engineering, and math (STEM) students.

A deeper respect for those who serve and protect America, and a chance to give back to those who gave so much for us.

The QL+ Challenger

For American heroes with life-altering injuries and medical conditions, their struggle doesn’t end with their service. Many live with disabilities that drastically alter their way of life. For some, the active lifestyle they once enjoyed is now out of reach. For others, even simple tasks become a daily challenge. These men and women sacrificed much for their country—we want to give back to them.

These men and women are the QL+ Challengers

QL+ works to give these heroes the support they deserve. We connect disabled service personnel with students who develop cutting-edge technology to help them improve their quality of life.

Since 2009, QL+ has expanded to universities across the country. Students build solutions that impact real lives, and injured or ill heroes get the support they need to overcome their lifestyle challenges. We are not market-driven; we are people-driven. We want to see lives changed. Come join us.
**Student Teams Collaborate with Military and First Responder Heroes**

1. **Recruit Challengers**
   - with life-altering injuries or medical conditions

2. **Understand their lifestyle limitations**

3. **Assign Students**
   - Universities assign student teams to design and build solutions

4. **Present Completed Product**

5. **Feedback**
   - QL+ receives feedback from the Challengers and the students to measure the success of the process.
QL+ Partner Universities

- The Catholic University of America
- Colorado School of Mines
- Duquesne University
- George Mason University
- The George Washington University
- Grace College
- Ohio University
- Old Dominion University
- Norwich University
- Rose-Hulman Institute of Technology
- Rowan University
- San Diego State University
- Trine University
- University of Cincinnati
- University of Colorado Boulder
- University of Dayton
- University of South Florida
- University of Texas at Austin Biomedical Engineering Cockrell School of Engineering
- UTSA
- VCU
- Virginia Military Institute
- Virginia Tech
- Virginia Western
“QL+ challenged my team and I to create a device to help volunteers transport para-athletes and their bobsleds from a transfer truck to the bobsled track. Meeting the athletes and volunteers who will be using our device and seeing how engineering can be applied to improve para-bobsledding gave me a glimpse of how I can use my mechanical engineering skills to positively impact people’s lives.”

—Kate Carrington, Virginia Tech

“I want to highlight how professional the Team Lead and the Team was. I was very impressed with that aspect and I am not easily impressed. Additionally, I want to thank them personally and the organization’s mission to help those like me that want to still lead an active lifestyle and just needed some help to accomplish that goal. I hope that God continues to Bless your endeavors. From the bottom of my heart, thank you!”

From a Challenger
Here are some samples of our life-transforming projects:

- Fog Control Box to prevent “freezing of gait” for Korean War veteran with Parkinson’s
- Treadmill Centering device for blind veteran
- Wheelchair Wheel Change device for Army veteran
- Pushup/Plank device for Army veteran whose arm was amputated
- Yeager Knife for veterans with diminished hand strength
- Wobble Chair for Walter Reed National Military Medical Center
- Blind Paddler Slalom Kayak Course for Team River Runner
- Voice-activated Bicycle Shifting device for a triple-amputee Marine veteran
- Swimmer Lift for swimmers with mobility issues for Travis Mills Foundation
- Transfer device to lift a paralyzed Navy veteran from wheelchair to a recumbent bike
- Transfer device from Wheelchair to Hockey Sled for a double amputee Marine veteran
- Spasticity Brace for Air Force veteran who experienced a stroke

“QL+ gave me the opportunity to show off my skills by giving back to the people who need it. I pursued engineering to be able to do such, and this year-long project encapsulated everything I had hoped for, between building great teamwork skills and challenging myself in creating something from nothing.”

—Ben Knouse (Virginia Tech, Tractor Transfer project)

Innovative and Life-changing Solutions

We are proud of the work QL+ teams have done across the nation. Since the creation of QL+ in 2009, our work has benefited 1,100 American Heroes. QL+ has enjoyed extraordinary growth from 2009 to present, expanding from one university to 24 universities in 11 states and the District of Columbia. In the 2023-24 Academic Year, 360 capstone engineering students are working to find unique solutions to these heroes’ needs.
Support for Veterans and First Responders + STEM Graduates

Because of our programs, QL+ Challengers can achieve a greater level of independence. The devices our student teams design for our heroes who live with life-altering disabilities help them to overcome many of their challenges and get back to doing the things they love. This support can change their lives.

Beyond the benefit to American heroes, QL+ helps develop the next generation of engineers and scientists. Students gain valuable experience and skills, preparing them for their careers.

Our program has real impact. Students get opportunities found in few other programs. Challengers, those men and women who gave so much to serve and protect, receive the tools they need to pursue the lives they want to live.

“It was extra rewarding working on a QL+ project because we were able to work one on one with a Challenger and build a very custom design. In the end, we got to witness the Challenger’s newfound joy as a result of our device. In this end, this made it all worth it for me.”

—Caroline Miko (Virginia Tech Motorized Garden Chair Team)
Our Mission is to provide innovative solutions to American heroes and their families.

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