



QUALITY  
OF LIFE+™

# Program Overview

February 2021



## QL+ Mission

To challenge university STEM students to create innovative technology solutions that improve the quality of life for injured veterans, first responders and others who have served our nation.

## The QL+ Program is

### **Unmatched in its Impact:**

Greater independence for injured and ill veterans and first responders 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 patriots 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 injured service personnel with students who develop cutting-edge technology to help them achieve a higher quality of life.

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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.

### 2020-21 Academic Year

**18** Schools  
**70** Projects  
**61** Challengers  
**307** Students



# QL+ Partner Universities

	<p><b>5</b> Projects <b>4</b> Challengers <b>11</b> Students</p>		<p><b>2</b> Projects <b>2</b> Challengers <b>12</b> Students</p>
	<p><b>6</b> Projects <b>5</b> Challengers <b>15</b> Students</p>		<p><b>9</b> Projects <b>4</b> Challengers <b>41</b> Students</p>
	<p><b>6</b> Projects <b>4</b> Challengers <b>17</b> Students</p>		<p><b>4</b> Projects <b>4</b> Challengers <b>11</b> Students</p>
	<p><b>3</b> Projects <b>3</b> Challengers <b>16</b> Students</p>		<p><b>1</b> Projects <b>1</b> Challengers <b>4</b> Students</p>
	<p><b>6</b> Projects <b>6</b> Challengers <b>15</b> Students</p>		<p><b>2</b> Projects <b>2</b> Challengers <b>8</b> Students</p>
	<p><b>5</b> Projects <b>5</b> Challengers <b>26</b> Students</p>		<p><b>6</b> Projects <b>4</b> Challengers <b>23</b> Students</p>
	<p><b>4</b> Projects <b>3</b> Challengers <b>15</b> Students</p>		<p><b>4</b> Projects <b>3</b> Challengers <b>16</b> Students</p>
	<p><b>2</b> Projects <b>1</b> Challengers <b>8</b> Students</p>		<p><b>8</b> Projects <b>7</b> Challengers <b>43</b> Students</p>
	<p><b>3</b> Projects <b>3</b> Challengers <b>13</b> Students</p>		<p><b>3</b> Projects <b>3</b> Challengers <b>37</b> Students</p>

## Student Teams Collaborate with Military and First Responder Heroes



It was totally refreshing to brainstorm the solution possibilities with a young group of students who had no prior experience working with amputees. They were thinking completely outside of the conventional box, and it brought great results.

**QL+ Challenger Taylor Morris**

# 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 over 1,000 American Heroes. QL+ has enjoyed extraordinary growth from 2009 to present, expanding from one university to eighteen universities in 10 states and the District of Columbia. In the 2020-21 Academic Year, nearly 300 capstone engineering students are working to find unique solutions to these heroes' needs.

Here is just a sample 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 issue 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 sustained a stroke



# IMPACT: Support for Veterans and First Responders + STEM Graduates

Through our programs, QL+ Challengers can achieve a greater level of independence. The devices our student teams design patriots with injuries or medical conditions 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 lead.

WHEN SURVEYED,  
QL+ Challengers gave the  
program an average score of

**9.1 out of 10**

## STUDENT FEEDBACK:

“ Seeing the design come to life and having our Challenger actually use it.”

“ The fact that the project was a real-world challenge that was going to directly benefit a disabled veteran.”

“ Helping our client and seeing the difference that our work made in her life.”

“ Being able to give back through a program that helps the brave men and women who sacrifice for our country.”

“ The QL+ experience as a whole ... and taking a project from start to finish.”



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## **Our Mission** is to provide innovative solutions to American heroes and their families.

### **Officers:**

**Lt. Col. Michael Phelps, USAFR (Ret.), Chair**  
Former Publisher and CEO, *The Washington Examiner*

**Michael Southworth, Treasurer**

**Lt. Col. Robert (Bob) Wolff, Ph.D., USAF (Ret.), Secretary**  
Executive Director, QL+

### **Directors:**

**Maj. Gen. Anders "Andy" Aadland, USA (Ret.)**  
Castlelink, LLC

**Sidney Collin**  
CEO, De Oro Devices

**Brig. Gen. Norvell (Van) Coats, M.D., USA (Ret.)**  
CEO, Holy Cross Health

**Dawn Halfaker\***  
Halfaker and Associates

**Col. Joe Manous, Jr., P.E., Ph.D., USA (Ret.)**  
Director, Institute for Water Resources, United States Army Corps of Engineers

**Taylor Morris\***

**James Schenck\***  
President/CEO, PenFed Credit Union, and CEO, PenFed Foundation

\*Veteran

### **Staff:**

**Lt. Col. Robert (Bob) Wolff, Ph.D., USAF (Ret.)**  
Executive Director  
bob.wolff@qlplus.org

**Col. Barbara Springer, USA (Ret.), PT, Ph.D., OCS**  
Chief Operating Officer  
barb.springer@qlplus.org

**Catherine Harkins\***  
Chief Financial Officer  
catherine.harkins@qlplus.org

**Amber Humphrey, J.D.**  
Chief Communications Officer  
amber.humphrey@qlplus.org

**Janet Papazis,\* DPT**  
Eastern and Mentor Program Manager  
janet.papazis@qlplus.org

**Edith Campbell**  
Program and IT Manager  
edith.campbell@qlplus.org

**Scott Huyvaert\***  
Rocky Mountain Program Manager  
scott.huyvaert@qlplus.org

**Kaelin Martin**  
Administrative Assistant  
kaelin.martin@qlplus.org

**Annemarie Orr, OTD**  
San Diego State University Program Manager  
annemarie.orr@qlplus.org

**Jason Whitman\***  
Midwest Program Manager  
jason.whitman@qlplus.org



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**QL+ National Office**

6841 Elm Street, Box 518

McLean, VA 22101

(202) 964-0427

info@qlplus.org

[www.qlplus.org](http://www.qlplus.org)