

Factory Automation Competition (FAC)

VEX CTE Workcell

Presented by:

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AR, IA, IL, KS, MO, & NE



ROBOTICS EDUCATION &
COMPETITION FOUNDATION

SUMMIT

| VEX ROBOTICS PROGRAMS |



RECF

Team



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Mission & Vision



Mission

The Robotics Education & Competition Foundation's global mission is to provide every educator with competition, education, and workforce readiness programs to increase student engagement in science, technology, engineering, math, and computer science.



Vision

We see a future where every student designs and innovates as part of a team, overcomes failure, perseveres, and emerges confident in their ability to meet global challenges.

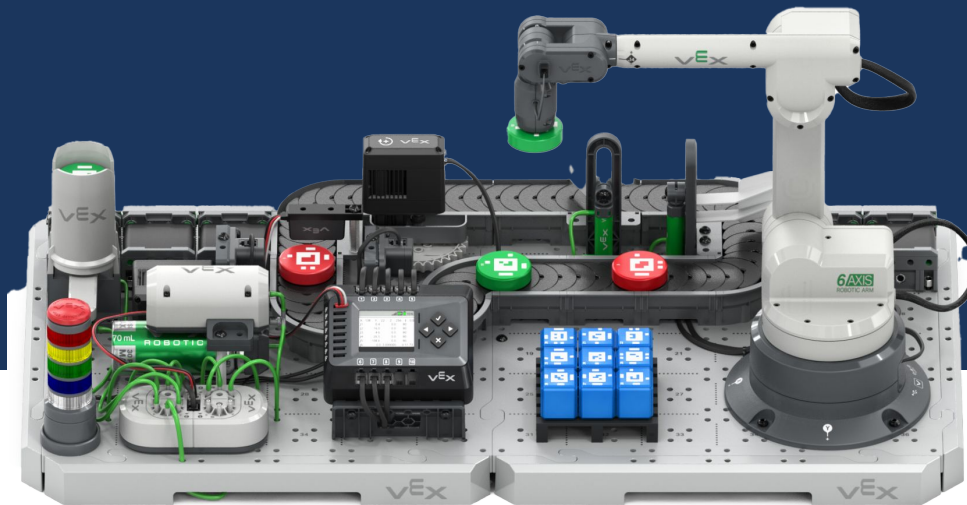


**Inspiring students,
one robot at a time.**

VEX CTE Workcell

Robotics in Industry

Students learn how to connect their love of robotics competitions with an industrial-style robotic arm, conveyor system, and sensors.



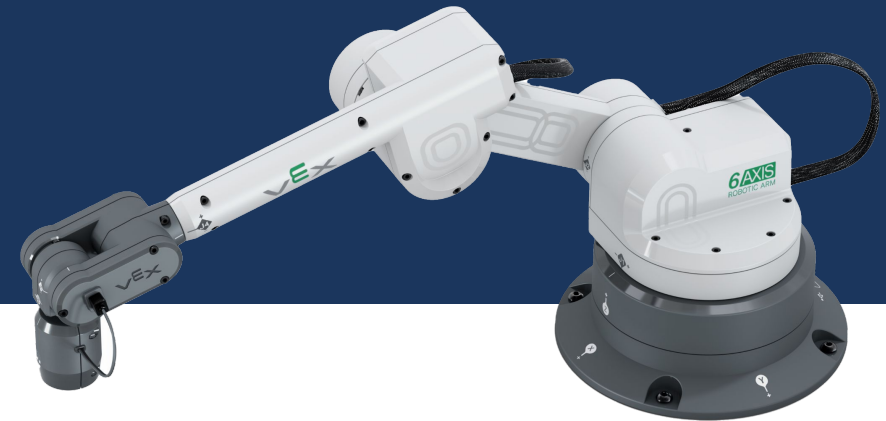
6-Axis Industrial Arm


Allows students to gain an understanding of a teach pendant



Complete System

Provides students the ability to explore how multiple systems work together



The background of the slide features a close-up, slightly blurred image of two individuals looking downwards. The person on the left has light-colored hair styled in a braid and is wearing clear safety glasses. The person on the right has dark, curly hair. A large, semi-transparent blue graphic of the numbers '01' is centered over the image. The text 'A Brief History of the Program' is written in white, bold, sans-serif font across the middle of the '01' graphic.

01

A Brief History of the Program

The Evolution of FAC



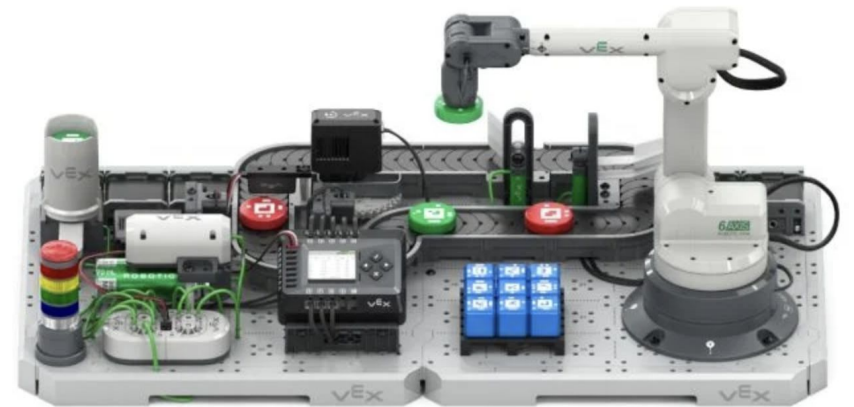
Generation 1 [VEX V5 Workcell](#)

Was originally designed through a grant from the ARM Institute in 2019. This competition was introduced in 2020.

01

Generation 2 **VEX CTE Workcell**

The 2025-26 season will be the inaugural season for this competition.



02



02

Competition
Overview

WORLD CHANGERS START HERE

FAC Competition Structure



Classroom Competition

Unlike the VIQRC and V5RC competitions, this is a classroom competition without any travel



Virtual Submissions

Teams create a video of their competition phase(s) and upload the link to the event to be scored



Engineering Notebook

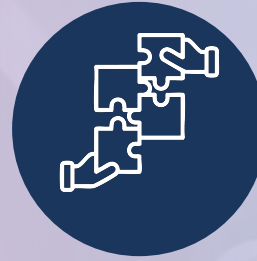
Teams still have the ability to document their engineering design process and programming skills with real world research

Format of FAC



Phase 1

Easily accessible to all students. Will not use all components of the competition kit.



Phase 2

Builds upon the tasks designed in Phase 1 and extends student's thinking. Could be the end of the MS competition.



Phase 3

Becomes more difficult and will involve all components of the competition kit. Pushes students to think outside the box.



Engineering Notebook and Interview

Students will keep up with an Engineering Notebook (Project Plan) and record a 10-minute presentation for judging.

Hardware for FAC



01

VEX CTE Workcell



02

**VEX GO Competition
Field Kit**



03

VEX AIM

A background image showing two female students in a workshop setting. They are wearing Google Guest badges and are focused on assembling a structure made of small, perforated metal blocks on a table. Other students and equipment are visible in the background, creating a collaborative learning environment.

Industry Skills



Manufacturing Skills



STEM Principles



Communication



Teamwork



Project Planning and Execution

Contact

We are here for you

Event Partners are the core of our competition program here at the REC Foundation. Please reach out to us with any questions or concerns. Thank you for all of your support.

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Resources



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