



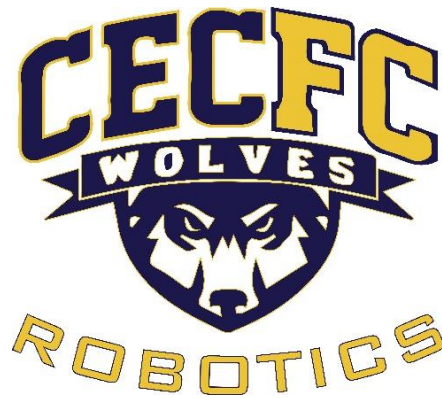
COLORADO  
Early Colleges  
Fort Collins



# CEC Fort Collins Robotics Team



Sponsorship Packet  
2023-2024



Dear Potential Sponsor,

The Colorado Early Colleges Fort Collins (CECFC) Robotics Team is an interdisciplinary group of dedicated CECFC students working to design and build a variety of robots for competition. Through solid construction and programming of the VEX-EDR material medium, we will compete in several VEX Robotics Competitions (VRC) throughout the year. The goal is to keep this program at a competitive level while also giving students an optimal environment for learning,

Our program started seven years ago with six students as an after-school club with only one competition robot. Through the hard work of the team's mentors, dedicated members, and benevolent sponsors, the club has grown to multiple classes at the Middle School and High School. We have over 50 students in our program and currently have nine competition robot teams.

The VEX-EDR competition is a seasonal event series where high schools and middle schools across the country design, build, and program robots to compete in the current year's game. The teams will compete through regular season events in their region with goals set on qualifying for the State Robotics Competition (High School and Middle School levels are separate). Teams have a chance to qualify for Invitationals, State, and World Championships.

Since the start of our program, both Middle and High School teams have qualified to compete in both state, national, and worlds competitions. The number of students interested in joining the team has grown tremendously. To continue the success of our program, and meet the growing needs of our teams, we need to seek out more sponsorships.

The challenges are designed for the robotics students that work to build innovative robots best engineered to compete at a high skill level in the VEX-EDR competition. This competition opportunity lets students compete on teams while building technically challenging robots. Students gain valuable academic and life skills along the way such as: teamwork, leadership, project management techniques (like SCRUM), strategy development, technical design skills as well as written and oral communication. These skills largely benefit our students by preparing them for professional workplace expectations.

In this packet we have included information about this year's competitions and our sponsorship levels. We've also provided a breakdown of our proposed budget for the 2022-2023 school year. Your funding will provide parts and tools to build the robots, equipment for this season's new challenge, and will help us pay for travel, registration and competition fees for our teams. We ask for your support towards accomplishing our goals of learning, competing, growing and giving back to the community by building innovative robots. Your support is an investment in the next generation of technicians, programmers, creators, engineers, and leaders. Thank you!

Best,

**Charlie Englar** CECFC MS Robotics Coach/STEM Instructor



Colorado Early Colleges Fort Collins Middle School

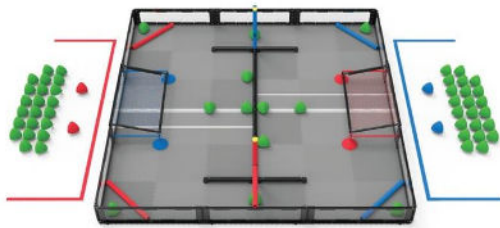
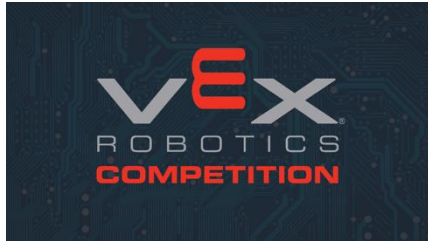
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<https://fortcollinsms.coloradoearlycolleges.org/>

## The 2023-2024 Game



*Over Under Field Set-Up*

Each year, Vex Robotics, [www.vexrobotics.com](http://www.vexrobotics.com), introduces a new game for teams to play. The rules and object of the games vary significantly between years, which provides teams with new challenges to design and build creative and innovative robots to play the game. The 2023-2024 game is *Over Under*.

VEX Robotics Competition Over Under is played on a 12' x 12' square field. Two (2) Alliances – one (1) "red" and one (1) "blue" – composed of two (2) Teams each, compete in matches consisting of a fifteen (15) second Autonomous Period, followed by a one minute and forty-five second (1:45) Driver Controlled Period.

The object of the game is to attain a higher score than the opposing Alliance by Scoring **Triballs** in **Goals**, and by **Elevating** at the end of the Match. There are sixty (60) **Triballs** on a VRC Over Under Field. There are two netted **Goals** on opposite sides of the field. A 2" PVC **Barrier** divides the field into a Red **Offensive Zone** and a Blue Offensive Zone.

Each Triball scored in a Goal is worth five (5) points, and each Triball which makes it into an Offensive Zone is worth two (2) points.

The VRC Over Under Field also includes two sets of Alliance-specific pipes on either side of the Barrier. These are called **Elevation Bars**, and are used at the end of the Match for **Elevating** Robots.

At the end of the Match, each Robot's height off the ground will be measured to determine their **Elevation Tier**. Elevation Points will then be awarded based on each Robot's Tier *relative* to all other Robots. For example, getting to Tier E could be worth as many as twenty (20) points OR as few as five (5). Elevation Tiers begin at the floor, and they end above the Elevation Bar!

The Alliance that scores more points in the Autonomous period is awarded with eight (8) bonus points, added to the final score at the end of the match. Each Alliance also has the opportunity to earn an **Autonomous Win Point** by completing three assigned tasks. This Bonus can be earned by both Alliances, regardless of who wins the Autonomous Bonus.











# Budget

The table below provides an itemized list of expected costs for the 2023-2024 season. The total cost provided is an estimate based upon last season and may vary depending on robot design and performance and unexpected increases in prices for various elements.

Item	Description	Budget
<b>Competitions</b>		
Team Registrations	Team registration \$200 for first team and \$150 per team after	\$200
Local Events	Event registration cost ~\$70 per team with ~4 - 6 events per team (Varies per event)	\$280
State*	Team registration \$150 per team	\$150*
Nationals*	Team registration \$500 per team	\$500*
World Championships*	Team registration \$1200 per team	\$1,200*
<b>Travel*</b>		
Nationals and World Championships*	Flights for 4 students and 2 mentors at ~\$300 per flight	~\$4750
	4 hotel rooms for 4 nights at ~\$120 per night	
	Rental cars and gas	
<b>Parts (for one team)</b>		
Metal and Hardware	Aluminum Kits (\$90) and Hardware Kits (\$90)	~\$1380
Motors	8 V5 Smart Motors at \$45 each	
Sensors	Vision Sensors (\$80), Inertial Sensor (\$50), Sensor Kit (\$110)	
Microcontrollers	V5 Robot Brains (\$350) and 2 Controllers (\$125/each)	
<b>Facilities</b>		
Game Elements	Game and Field Element Kit for the new Over Under Game	\$575
Tools	Drivers, wrenches, pliers, wire strippers, hacksaw, drill and bits	\$250

# Sponsorship

We are seeking sponsorships and donations from several entities including companies and private donors; these entities will be recognized for their assistance in several ways as shown below. Please feel free to contact us with any questions.

	<i>Bronze</i> \$100	<i>Silver</i> \$200	<i>Gold</i> \$500	<i>Platinum</i> \$500+
<i>Thank You Card</i>				
<i>Sponsor Plaque</i>				
<i>Company Banner in Robotics Room at CECFC and logo on a CECFC robotics banner</i>				
<i>Company Presentation</i>				

The success of the CECFC Robotics Team is dependent upon the contributions from generous donors and sponsors. We would like to reiterate that your help is an investment in not only the future of the team, but also in the future of the students at CECFC – who will become engineers, technicians, programmers, and leaders in industry that will tackle some of the world’s most challenging problems.

If you are interested in helping out and making a donation to our program, please talk with your student contact about the next steps.

Thank you!

# Contact



## CEC Fort Collins Robotics Team

### Donation Website:

<https://coloradoearlycolleges.org/cecfc-robotics-fund/>



### Faculty Sponsors:

[Kathleen.Kingdom@coloradoearlycolleges.org](mailto:Kathleen.Kingdom@coloradoearlycolleges.org) - STEM Coordinator for CEC

[Evan.Mesh@coloradoearlycolleges.org](mailto:Evan.Mesh@coloradoearlycolleges.org) - high school head coach

[Charles.Englar@coloradoearlycolleges.org](mailto:Charles.Englar@coloradoearlycolleges.org) - middle school head coach

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