



APPENDIX

## College Challenge



### Introduction

This year we are proud to introduce something new, the VEX Robotics Competition College Challenge. We will be running a Pilot Tournament of this exciting new competition at the VEX Robotics

World Championships. Now VEX Robotics Competition participants who have graduated on to higher education and “can’t get enough” VEX will be able to participate at a more advanced level. This program will also open the VRC to the many colleges and universities which already use VEX in their academic programs. We now have a chance to see which school really has what it takes to be a champion.

### Event Information

The VRC College Challenge will hold a pilot competition at the VEX Robotics World Championships in Dallas, TX (4/30/2009 – 5/2/2009). For more information on this pilot competition refer to <http://robotevents.com/college> which has event details, pricing, & registration info.

### Game, Robot, & Tournament Rules

The VEX Robotics Competition College Challenge uses the *Elevation* game with very little modification. NO changes were made to the field or scoring.

All the same Game, Robot, & Tournament rules apply except for the modifications listed here. Consult the *Elevation* Game Manual for additional competition details.

Please keep in mind this is a pilot competition so rules may change in future years; if you wish to provide feedback on the current College Challenge structure refer to [www.vexforum.com](http://www.vexforum.com).

#### Game & Tournament Rule Modifications:

1. Instead of a 2-team vs. 2-team format, the VRC College Challenge will be played 1-team vs. 1-team, with a twist: each team will use TWO robots in each match. This means every team gets to build their own partner!
  - a. Teams are allowed to build as many robots as they'd like, but only TWO (2) may be used on the field during a match. They may only bring two (2) robots from the pit to the playing field for any match.
2. Qualification matches will be conducted like normal, in the 1 v 1 format described above.
3. An elimination tournament will be conducted similar to the Middle School & High School tournament. At the end of the competition ONE team will emerge as the event champion.
4. The autonomous period at the beginning of every match will be lengthened to 60-seconds.
  - a. The operator control period will remain the same (120-seconds) and will immediately follow autonomous.

## Game, Robot, & Tournament Rules cont.

### Robot Rule Modifications:

1. All teams competing in the VRC College Challenge MUST use the VEXnet wireless system.
  - a. Details on this system will be provided to teams registered on [www.robotevents.com](http://www.robotevents.com)
2. Each Robot is allowed to utilize up to two (2) VEX Microcontrollers.
3. Each Robot is allowed to utilize up to ten (10) VEX Motors and/or VEX Servos (any combination, up to ten) *per Microcontroller*. (A robot with two (2) Microcontrollers could use up to twenty (20) Motors and/or Servos.)
4. Each Robot is allowed to utilize up to two (2) VEX Power Expanders.
  - a. The rules of battery usage have not changed: Each Microcontroller and each Power Expander MUST be powered by (1) 7.2V VEX Robot Battery. This means a Robot may use four (4) 7.2V VEX Robot Batteries if it has two (2) Microcontrollers and two (2) Power Expanders.
5. Each Robot must use one (1) VEXnet module per Microcontroller.
6. Each Robot is still only allowed up to two (2) operators and one (1) coach.
  - a. Drivers MUST be post-secondary school *students*.
    - i. Students enrolled in Middle School or High School are NOT eligible to be a driver.
    - ii. Professionals not enrolled in post-secondary education are also NOT eligible to be a driver. (This is the “College Challenge”).
7. There is NO restriction on sensors and additional electronics used for sensing and processing except as follows:
  - a. Sensors & Electronics MUST be connected to the VEX Microcontroller via Analog/Digital Port or Interrupt Port. They cannot directly interface with the VEX Motors.
  - b. The additional Sensors & Electronics can only receive power from any of the following:
    - i. Directly from the VEX Microcontroller via Analog/Digital Port or Interrupt Port.
    - ii. From an additional VEX 7.2V Robot Battery or from a VEX 9.6V Transmitter Battery (only one (1) additional battery can be used for sensor power.)
  - c. Additional Motors, Servos & Actuators are NOT allowed.

## Team Restrictions

We hope to see Colleges & Universities from around the world register for the VRC College Challenge to face off in head-to-head competition. To maintain the spirit of the competition there are some restrictions on teams registering for this event.

The intent is that each team is identified with and proudly represents one (1) post-secondary institution. (i.e. “Clarkson University” vs. “UC Santa Barbara”). We expect that each registering team is recognized by some institution.

We are limiting each post-secondary institution to ONE (1) team in the VRC College Challenge.

## Rule Clarifications

For any rule clarifications or questions please use the official Q&A at [www.vexforum.com](http://www.vexforum.com)

## College Challenge Awards



The teams at the inaugural VRC College Challenge Pilot Tournament will compete for the following awards (6 awards are judged, and 2 are purely performance based):

### **Tournament Champion**

### **Tournament Finalist**

### **Amaze Award**

Overall Quality

### **Build Award**

Craftsmanship & Construction

### **Create Award**

Creative Engineering Design

### **Excellence Award**

Top All Around Team

### **Innovate Award**

Innovative Feature/Solution

### **Think Award**

Autonomous Programming & Sensor Use

For more details and descriptions of these awards refer to “Appendix E – Awards” of the *Elevation* game manual.