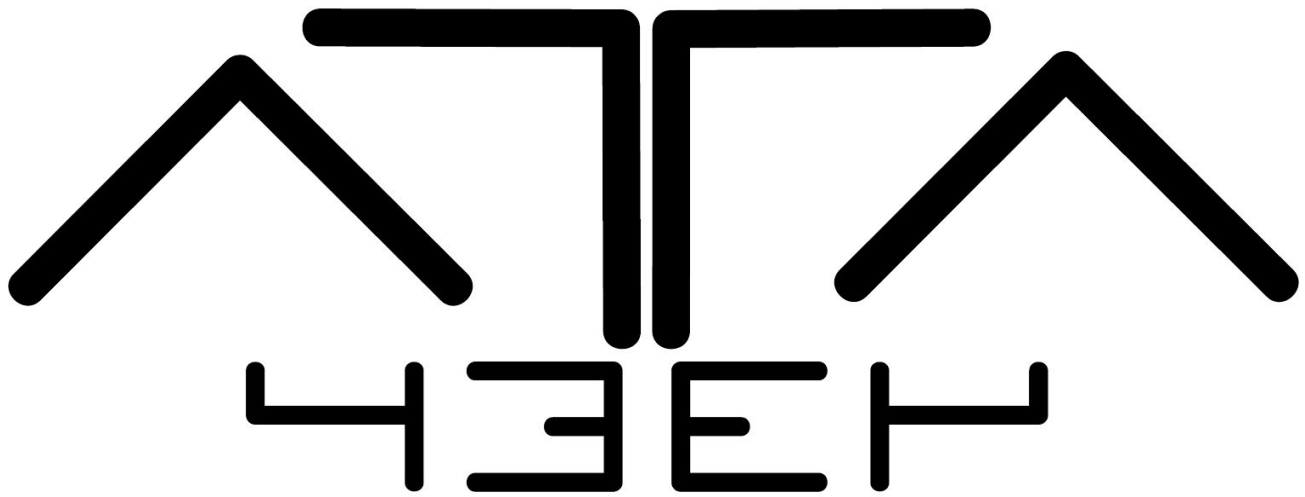
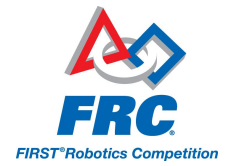


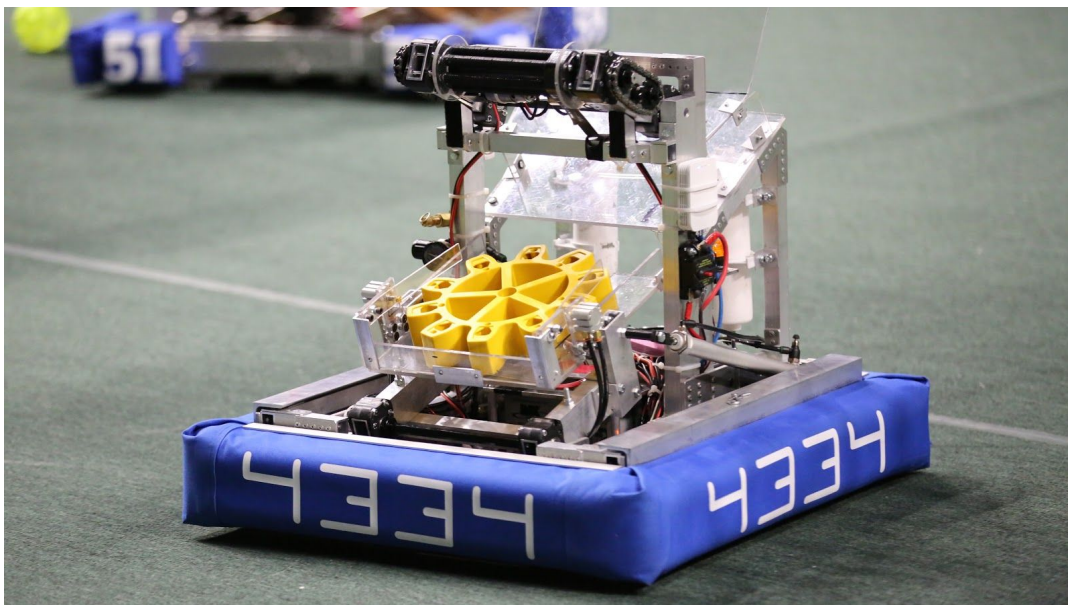


Team 4334  
Alberta Tech Alliance



# Team 4334 Alberta Tech Alliance

## 2018-2019 Sponsorship Package





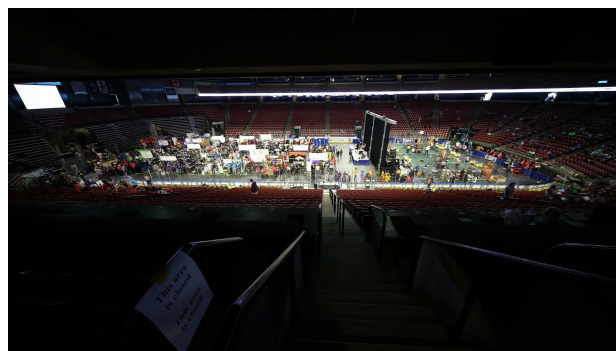
## Who are we?

Team 4334 Alberta Tech Alliance is a high school community robotics team in Calgary, Alberta.

We are participating in our seventh yearly *FIRST* Robotics Competition in which students build 120 pound robots to compete against teams from all around the world. “The varsity sport for the mind,” FRC combines the excitement of sport with the rigors of science and technology. Under strict rules, limited resources, and limited time, our team of approximately 25 is challenged to raise funds, design a team brand, hone teamwork skills in addition to designing, fabricating, building and programming a robot to perform predetermined set of competitive tasks against a field of similar robots.

Every year, the team is given a 6 week period starting in January to build a robot for competition against other robotics high school teams at regional tournaments. If we are successful at the regional level, as we have been multiple times since the founding of our team, we qualify for the FIRST World Championships FRC World Championships, which take place April in Houston Texas, where we compete against some of the best teams in the world.

All of this is done through the time investments of mentors and students and the financial contributions of corporate sponsors like you.



## Why Should You Sponsor Us?

- Use the team as training for new employees by having them mentor on the team and put their management skill to the test
- Invest in future employees for your company
- Get exposure to thousands of students, teachers, and industry professionals
- Promote the growth of Science, Technology, Engineering and Math (STEM) in Calgary
- Get access to VIP areas at the Calgary regional

*FOR INSPIRATION AND RECOGNITION OF SCIENCE AND TECHNOLOGY*

## What is *FIRST*?

*FIRST* (For Inspiration and Recognition of Science and Technology) was founded in 1989 to inspire young people's interest and participation in science and technology. Based in Manchester, NH, the not-for-profit public charity engages youth in exciting mentor-based programs that build science, engineering and technology skills, that inspire innovation, and that foster well-rounded life capabilities including self-confidence, communication, and leadership.



## Our Mission - “*We build people*”

Team 4334 is dedicated to:

1. Inspiring youth, mentors, parents and community to become active and engaged in STEM fields.
2. Spreading understanding and appreciation for science, technology, engineering, and mathematics (STEM) in our community.
3. Developing our students into the skilled workers and leaders of tomorrow.

## Our Achievements

Chairman's Award = 1  
Champs Div. Win = 1  
Regional Wins = 6  
Team Awards = 13  
Invitational Wins = 2



### Canadian Pacific FRC Region 2018

- Award for Industrial Design

### FRC Championships 2017 (Houston, Tx) - Carver Division Ranked 4th

### Western Canada FRC Regional 2017 - Regional Winners

- Award for Quality

### China Robotics Challenge 2016 - Event Winners

- Award for Inspiration

### FRC Championships 2016 (St. Louis, MO) - Hopper Division Ranked 5th

### Western Canada FRC Regional 2016 - Regional Winners

- Award for Creativity

### Utah FRC Regional 2016 - Regional Winners

- Award for Excellence in Engineering

### FRC Championships 2015 (St. Louis, MO) - Archimedes Division Ranked 19th

### Western Canada FRC Regional 2015

- Innovation in Control Award sponsored by Rockwell Automation

### Utah FRC Regional 2015 - Regional Winners

### FRC Championships 2014 (St. Louis, MO) - Curie Division Ranked 44th

### Western Canada FRC Regional 2014 - Regional Winners

- Chairman's Award - Award for most community impact

### Utah FRC Regional 2014

- Judges Award - Award for notable community achievements



## Our Achievements Cont.

FRC Championships 2013 (St. Louis, MO) - Galileo Division Ranked 18th

Western Canada FRC Regional 2013 - Regional Winners

- Woodie Flowers Finalist Award (Craig Maynard) - Award for best mentor
- FIRST Dean's List Finalist (Alexander Rodrigues) - Award for best student
- Innovation in Control Award sponsored by Rockwell Automation

Seattle FRC Regional 2013

Indiana Robotics Invitational 2012 - Event Winners

FRC Championships 2012 (St. Louis, MO) - Archimedes Division Champions

- Einstein Field - Semi Finals Loss
- Top 0.8% of teams in the world

Greater Toronto East Regional 2012

- Rookie All Star Award - Best Rookie Team at Event
- Coopertition Award
- Highest Rookie Seed - Highest Ranked Rookie at Event



# Team Organization

## Public Relations

Team 4334 participates in many local events around Calgary, to promote our mission of science and technology. The public relations team is in charge of this effort, organizing events, publishing promotional material, contacting sponsors and reaching out to the community.



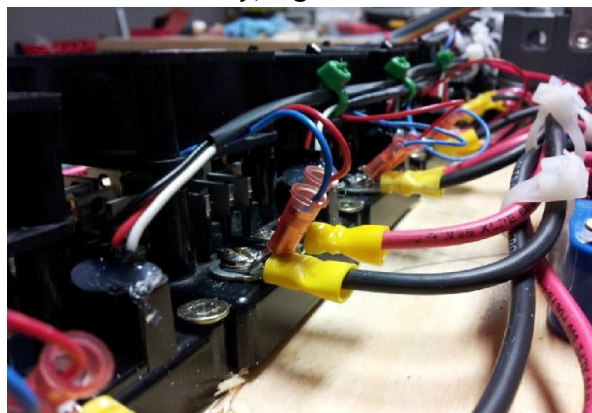
## Programming

The programming team writes code for the robot that will run on its roboRIO controller. This code gives the robot instructions, and enables it to perform given tasks. The team explores concepts in computer science, math, and artificial intelligence to create the functionality of the robot.

```
1  /*
2  * This software has been created by Alberta Tech Alliance, Team 4334, in
3  * Calgary, Alberta. All credit goes to them and any use of this code should be
4  * accredited to them.
5  */
6
7  package edu.first.main;
8
9  import edu.first.robot.IterativeRobotAdapter;
10 import edu.first.robot.RobotNode;
11 import edu.first.robot.RobotNodeSelector;
12 import edu.first.robot.NatRobotNode;
13 import edu.wpi.first.wpilibj.IterativeRobot;
14
15 /**
16  * This class is called by the VM automatically for every game mode. It is meant
17  * to start all necessary functions, and is the gateway from the Java VM into
18  * your code. (@code GamePeriods) is final because the functionality it provides
19  * is through (@link RobotNode Robot Nodes). Although the implementation and
20  * specifics about how (@link RobotNode) is used is up to the programmer, the
21  * usage of (@link RobotNode) is necessary. This does not detract from
22  * (@code GamePeriods)'s usefulness because it contains all of the methods of
23  * (@code GamePeriods) and more.
24  *
25  * (@link GamePeriods) works by using a (@link RobotNodeSelector) to select from
26  * (@link GamePeriods#modes). This allows the programmer to use one mode or
27  * multiple modes. The mode is selectable on the SmartDashboard under the key
28  * "Robot Mode". To change this functionality, edit this class so that
29  * (@link GamePeriods#updateMode()) returns the mode you want to run.
30  *
31  * NOTE: If you change the name of this class or the package after creating this
32  * project, you must also update the manifest file in the resource directory.
33  * (c:\programcs\JDK1.7\bin\manifest.mf) under "Manifest"
34  *
35  * This class is not thread safe and should (never/it) be manually
36  * constructed, but by module (VM) it's constructor needs to be public.
37  *
38  * @since May 07 13
39  * @author Joel Ballant
40  */
41 public final class GamePeriods extends IterativeRobot {
42
43     // Stored to "end" the game mode after it is finished
44     private static GamePeriods previousGameMode = null;
```

## Electrical

The electrical team wires, solders and tests all electrical components of the robot. These systems provide the power for motors and sensors on the robot. The team expands on their skills with circuitry, signals and sensors.



## Mechanical

The mechanical team designs mechanisms in CAD software. These mechanisms are prototyped, tested and machined into working elements of the robot. Then, parts are assembled together into a fully functioning robot. The team uses CAD, 3D printing, precision machining, hand tools and their imaginations to bring a robot to life.



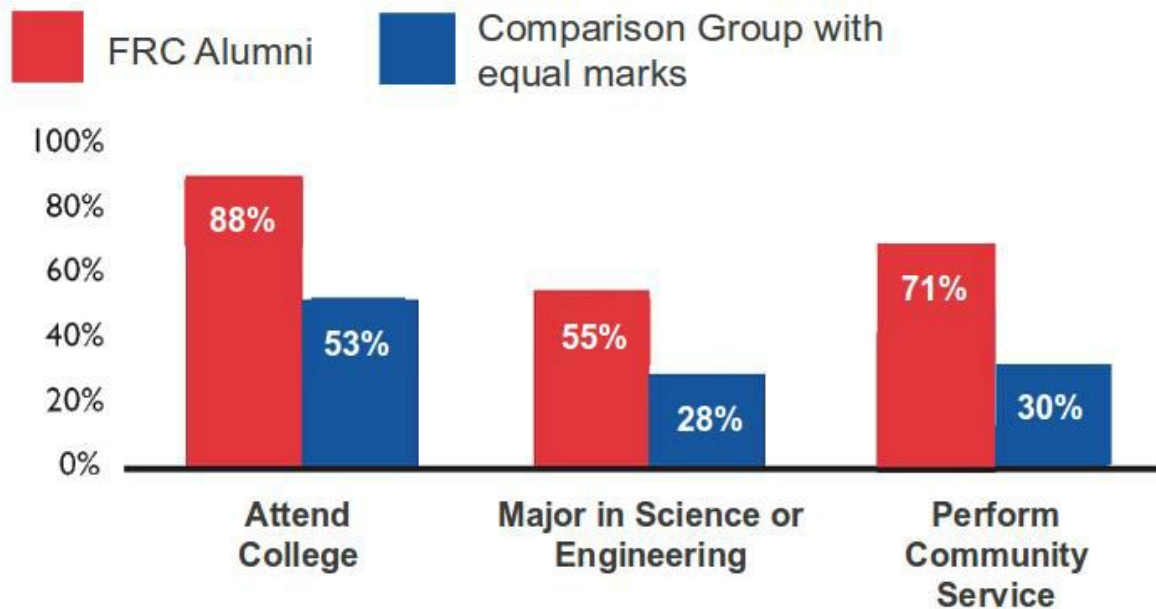


# The 2018 Robotics Season

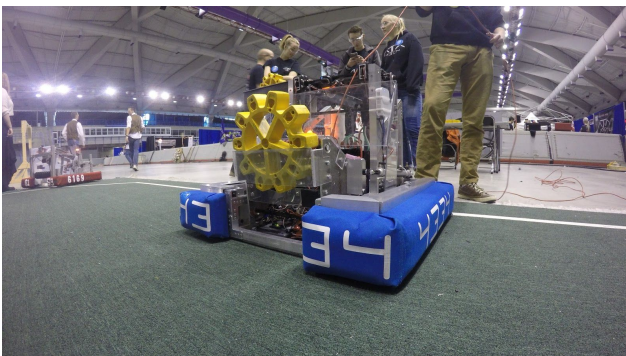
<b><u>Kickoff</u></b> January 5th, 2019	Teams from all over Calgary gather for the unveiling of the 2019 game. After the game is released, teams each begin designing and prototyping robots.
<b><u>Build Season</u></b> January 5, 2019 - February 19, 2019	The 6 week and 3 day period which teams have to design, build, and refine their robots. Team 4334 works 7 days a week during this period.
<b><u>Stop Build Day</u></b> February 19, 2019	This is the final deadline for teams to finish working on their competition robots. Robots are placed in a sealed bag and sent to their first competition.
<b><u>Competition Season</u></b> February 27, 2019 - April 13, 2019	This is the part of the season in which teams' hard work is put to the test as they compete in up to 3 regionals. Alberta Tech Alliance is scheduled to compete in 2 regionals with the prospects of attending the World Championships.
<b><u>World Championships</u></b> April 17, 2019 - April 20, 2019	Eligible competition winners are invited to compete in Houston, TX (for Western teams) or St. Louis, MO (for Eastern teams). During the World Championships the <i>FIRST</i> community comes together to compete for the world title and recognize various achievements.
<b><u>Off-Season</u></b> May - September	During this period our team attends outreach events and other non-official competitions.



## Student Benefits



All students can participate and benefit from the *FIRST* Robotics Competition, even those that are not partial to Science, Technology, Engineering and Mathematics. The roles students can fill include everything from fabrication to design, fundraising, programming, and public relations. Throughout their membership students build self-confidence and maturity, learn teamwork, and gain an understanding of professionalism. These skills help them obtain exciting careers in order to become entrepreneurs of their own. *FIRST* students are much more likely to attend college and major in science and engineering than their matched comparison groups. This program motivates today's youth to be innovative and strive for success.





## Team Member Perspectives

**Kieran Bererton (ATA Alumni: Rookie team lead, 2016):** “Being on Team 4334 has allowed me to make friends, learn how to work with others on my team, and with other teams, despite our differences, and has served to increase my interest in STEM careers.”

**Clayton McNeil (ATA Alumni: AutoCAD and Electronics):** “Team 4334 Alberta Tech Alliance exposed me to the world of engineering in high school. Now that I’m studying Engineering Design and Drafting Technology at SAIT, the benefits from the time spent on the team have showed up in the classroom. Both the practical knowledge gained and the life lessons of time management and organization have come in handy during future endeavors. My time spent with the team as a student and now as a mentor have prepared me for what life has to throw at me.”



**David Hernandez (Recent ATA Graduate: AutoCAD and Fabrications):** “Robotics has benefitted me by helping me learn practical skills that I could use in the future, such as design software, but also things like communication. It was taught to me how to problem solve as a team and how to work around dilemmas. Lastly, it has helped me make friends.”

**Jeremy Zantua (ATA Alumni: AutoCAD and Design):** “Robotics greatly improved my practical problem solving and analytical skills.”

**Ayla Chase (ATA Alumni: Public Relations and Electronics):** “Through my time on Team 4334 I have developed skills not only in all of the aspects of robot design and fabrication, but also in my ability to communicate with others. My experience in public relations has greatly increased my networking skills, and my work with electronics will likely benefit me as I pursue a career in engineering.”

## Sponsorship Benefits

FIRST competitions are attended by thousands of students, teachers, and industry professionals - the World Championships will be attended by even more - ensuring exposure for your company's name! Competitions are free and open to the public, as well as broadcast live to thousands of viewers, and your brand will be associated with young bright people. We will also be exhibiting our team at various community events. For example, Maker Faire, as well as Beakerhead. You can also further incorporate our team into your brand by using us in your promotional materials.

Some other sponsorship benefits include:

- Employee training and volunteering opportunities
- Strengthen company reputation in the community
- Inspiration for company engineers and employees

## The Cost of a Competitive Robot

Canadian Rockies	\$6,500
Second Regional	\$5,000
Championships	\$6,500
Robot Chassis	\$1,500
Parts	\$4,000
Machining	\$3,000
Extras	\$500
Tools	\$2,000
Build Space	\$10,000
Field	\$2,000
Promotional	\$1,000
Travel Expenses	\$15,000
<b>Total</b>	<b>\$57,000</b>

### Costs



## What Your Sponsorship Gets Us

\$1000	\$2000	\$3000	\$5000	\$10,000
Half of our tools	Half of our robot parts	Robot machining costs	Second competition fee	A place to build our robot



## Sponsorship Levels

Sponsorship Level	Bronze \$500+	Silver \$1000+	Gold \$1750+	Platinum \$2500+	Title \$10000+
Website (your logo with a link to your website)	✓	✓	✓	✓	✓
T-Shirts (your logo on every team member t-shirt)		✓	✓	✓	✓
Pits (your promotional material in our pits)			✓	✓	✓
Robot (your logo on a sticker on our robot)				✓	✓
Title (your name will be incorporated into ours)					✓

We understand that sponsoring a team is a big decision. If you have any questions, please contact us! FRC Team 4334 would be happy to meet with you or your representative and present more information on our team. We can also arrange a live robot demonstration.

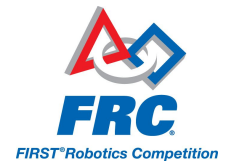
### Contact Information

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Team 4334  
Alberta Tech Alliance



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