

Davidson RobotEx Application 2019

This application is for Davidson RobotEx's 2019 fall robotics season. Students from all grades are welcome to apply, but all applicants must be in good academic standing and have a clear discipline record. Our team, RobotEx, prepares from now until September to participate in the BEST Robotics tournament (www.bestinc.org). BEST requires that participating teams create a robot from limited materials to complete specified tasks in a simulation of real-world issues. However, while a lot of focus is centered on the robot, teams must also sell their robot to potential buyers (tournament judges), submit an engineering notebook, and display high-spirited and sportsmanlike behavior throughout the competition. The Teaser Video that sets the theme for next season can be found at <https://www.youtube.com/watch?v=kcaoyXWEDCU>. Davidson has an extensive history of success in this competition. Team members that develop specific skill sets have found internships and employment using what they have learned in robotics. All the skills in this competition transfer directly to the engineering world.

Davidson's team is divided into construction and marketing divisions. These two cooperate to complete the tasks that need to be finished during the season. Many members operate in both divisions. The construction division is responsible for designing, building, and operating the robot, while also writing the engineering design notebook and contributing to the marketing aspect of the robot. The marketing division is responsible for constructing the exhibit booth, creating both the marketing presentation and website, managing spirit and sportsmanship activities, and handling publicity and fundraising efforts for the team. Both divisions allow for a thorough understanding of how the robot operates.

The robotics program at Davidson requires a major time commitment from its members. Both divisions meet a minimum of once a week (one day after school and Saturday), and as the competition approaches, members will be expected to meet three to five days a week (multiple afternoons and Saturday). Applicants must be able to not only attend these meetings, but also attend the competition, and other related events. These specific events and meeting details will be emailed once the team is established. Prior to Kick-Off Day, there will be scheduled meetings, so it is vital to provide a current email address and check it frequently. Members will be notified through both email and Remind, and it is the responsibility of the member to check and respond to these notifications.

A **\$25 fee** is required from each team member **upon acceptance**; this fee assist helps to offset initial costs associated with the competition. As part of the competition, team members will be expected to assist in raising extra funding for the team. This may include finding possible sponsors for donations and participating in team fundraisers.

Application Options: (choose one)

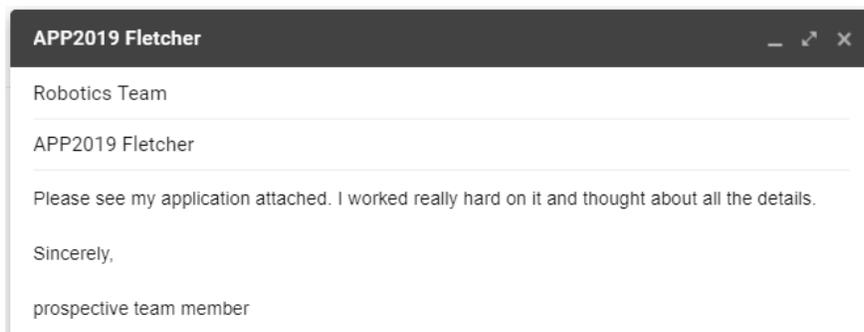
Option 1: Research transmission line inspection/repair robots. During the robotics season you will be expected to design/create mechanical components that complete a specific task. Study these transmission line robots and prepare to give a detailed explanation of their structure and function from what you can see on YouTube videos and websites. We are looking for people who can notice details and explain how things work. These are critical skills when designing a robot. The better applications will include details on the how and why something works as opposed to what it does. At the minimum, your presentation should come from a list of parts or features that you can discuss with like-minded designers. The document you present should be in a detailed outline form with references.

Option 2: This is the option for people who are more inclined towards marketing. Create a presentation with your choice of some type of correlating visual, for example, a PowerPoint, brochure, infographic, video, or some other type of media that you will present with your oral presentation. There is a time constraint of 5-7 minutes, along with 2-3 minutes of general questioning concerning your presentation. This presentation should be a case study of an area (country, state, city etc.) of the world that uses, or plans to use, an alternative form of energy. Study and explain why this alternative form of energy is better than what is traditionally used. For example, is your form of energy more beneficial to the environment? Is it more easily accessible? Is it cost-effective?

You will turn in your presentation outline (option 1) or presentation material (option 2) on Tuesday April, 9. The files must be emailed to dhsrobotics@gmail.com by 7 AM. Include the word **APP2109** and your last name in the subject line. A leadership team and teacher sponsors will evaluate the quality of your research and preparation materials. Those that show the proper amount of care and attention to detail will be asked to come present their materials after Spring Break. From those presentations, we will make a final cut.

You will be notified of the first cut no later than Wednesday, April 10. Students will be identified of their status after all of the presentations have been completed.

If your materials are incomplete or late, you will not be considered. This includes leaving the word **APP2019** out of the subject line. See example below.



Turn this page into Mr. Fletcher's box, room 125, by Tuesday, April 9th. Do not turn in the other pages. Keep them for reference.

Applicant Information

Name: _____

Grade (2019-2020 school year): _____

Email (most frequently used): _____

If you were chosen to be on the RobotEx team, would you want to be on the marketing or construction/design side? _____

What skills or experience do you think you would bring to the team?

List of your teachers for this school year:

Circle the option that you are doing for you application: Option 1 Option 2

Dear Parent:

This activity requires a significant investment of time from the beginning of school to the first week of December. We will meet every Saturday from the week before Labor Day until October 12. If your child has a conflict on Saturdays, this may not be the activity for them. Team members will also be expected to travel with the team for the Regional tournament in Auburn in December.

Parent Signature: _____