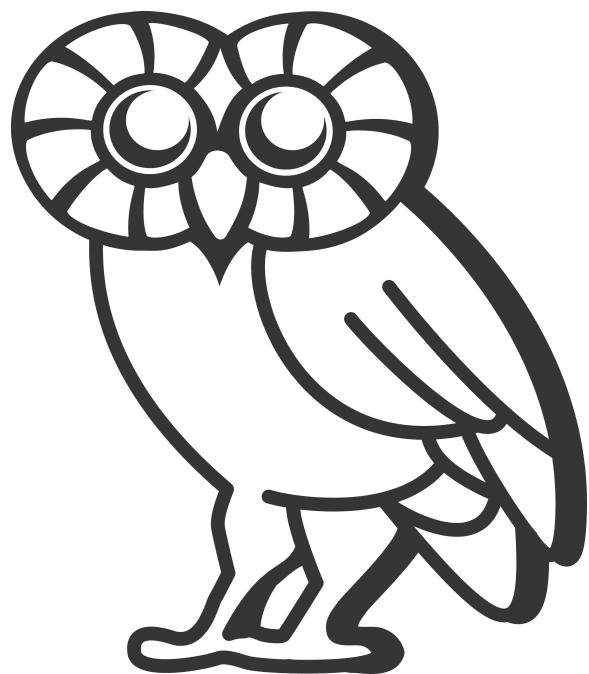


Rice Robotics Club



Sponsor Packet
2014 - 2015

robotics.rice.edu
riceroboticsclub@gmail.com

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Dear Potential Sponsor,

The Rice Robotics Club (RRC) is an interdisciplinary group of dedicated Rice University students working to design and build a variety of robots for competition. We compete in several VEX-U competitions throughout the year and are also involved in mentoring and volunteering with local robotics teams. We have put together this packet to inform potential sponsors about our activities and the impact that the club has on its members and the local community.

The club was started in 2008 with 8 students, both undergraduate and graduate, and went on to win the Design Award at the VEX-U World Championships. However, a period of inactivity followed and the club was not competitive up until last year. Through the hard work of club officers and dedicated members, the team was once again able to make it all the way to the World Championships. In April 2014 the Rice Robotics Club competed in Anaheim, California at the VEX-U World Championships and placed 19th in the world, 5th in the United States. Our success this past year could not have been possible without the generous support of our sponsors.

The VEX-U competition is an annual event where competing college student teams design and build at least two robots to compete in that year's game at regional competitions. In the spring, teams compete at World Championships where thousands of spectators watch hundreds of teams compete. The challenges are designed for the undergraduate and graduate team members, who – along with professor and mentor guidance — work to build innovative robots in an effort to attain the highest scores possible. The competition lets students have fun working in teams while building technically challenging robots. We gain valuable academic and life skills along the way: teamwork, leadership, technical design skills, and written and oral communication are all necessary for the club's success.

We have included information about the team, competitions, current challenges, K-12 and community involvement, and our sponsorship levels. We've also provided a breakdown of our proposed budget for the 2014-2015 school year. We are seeking funding for the parts and tools to build the robots and for attending competitions.

We ask for your support towards accomplishing our goals of learning, giving back to the community, and building cool robots. Your sponsorship will benefit Rice engineering students by providing them with the opportunity to gain hands-on building experience and technical design skills as well as business, management, communication, and leadership skills. Your support is an investment in the next generation of leaders and engineers.

Thank you for taking time to consider sponsoring the Rice Robotics Club. If you would like any additional information or wish to support us, please visit our website at robotics.rice.edu or contact us at riceroboticsclub@gmail.com.

Sincerely,



Prudhvi Boyapalli
President
prb2@rice.edu

Team



Rice Robotics Club Members 2013 - 2014

The Rice Robotics Club is a student-run organization that designs, builds, and programs robots to compete in local, national, and international competitions

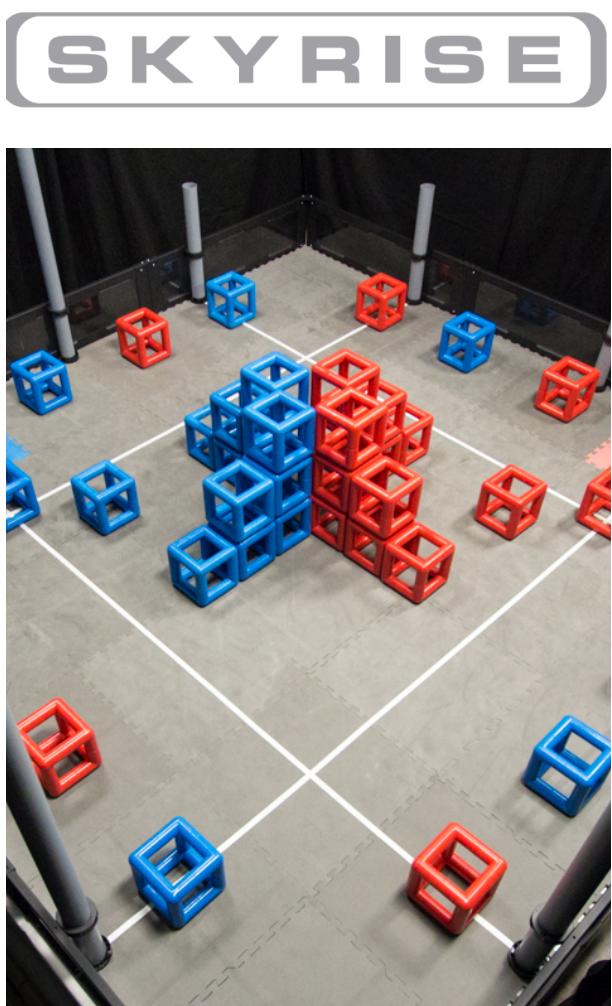
This interdisciplinary group of students represents all academic years and multiple engineering majors at Rice University. Our mission is to provide college students with an opportunity to have hands-on experience with technology and engineering. Mentors encourage students to develop innovative solutions, while learning the skills necessary to work in teams and to approach challenges. We also promote STEM education in the local elementary, middle, and high schools to help others in the larger robotics community achieve success.

The Rice Robotics Club operates on the core beliefs of a strong work ethic, teamwork, responsibility, integrity, and challenging ourselves. Team members are expected to play fair and help other teams when possible, we believe that there is more to competing than building a winning robot. Students further their interest in engineering and learn how to communicate effectively, work on a team, be a leader, and become active contributors to the community, all which help build professional skills.

The Rice Robotics Club is a growing team, including undergraduate and graduate students from Rice University as well as students from University of Houston Downtown. We have set high goals for the team and are confident that we can work to achieve them in the coming years.

Game

Each year a new game is presented for teams to play. The rules and object of the games vary significantly between years, which keeps teams on their toes to design and build creative and innovative robots to play the game. The 2014-2015 game is called **Skyrise**.



Each Cube Scored on a Floor Goal	1 point
Each Cube Scored on a Post	2 points
Each Post Owned	1 point
Each Built Skyrise Section	4 points
Each Cube Scored on a Skyrise	4 points

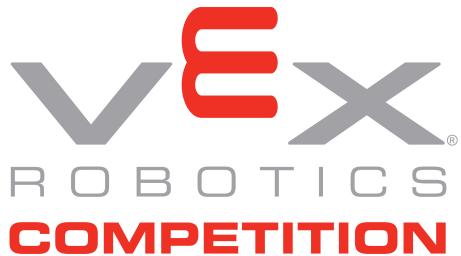
VEX *Skyrise* is played on a 12'x12' square field configured as seen to the left. Two teams – one “red” and one “blue” – compete in matches consisting of a forty-five second autonomous period followed by seventy-five seconds of driver-controlled play.

The object of the game is to attain a higher score than the opposing team by Scoring your colored Cubes in Floor Goals, on Posts or on your *Skyrise*, by Owning Posts, and by Building your *Skyrise* Sections.

There are a total of forty-four Cubes, twenty-two red and twenty-two blue, and fourteen *Skyrise* Sections available Scoring Objects in the game. Most Scoring Objects begin in designated locations on the field, while some are available to be entered into the field during the Match.

Each Robot begins a match on one of their Team Starting Tiles. There are ten Posts and four Floor Goals that Robots can Score Objects onto. The Team with the topmost Cube on a Post Owns the Post. Alliances also earn points for Building *Skyrises* on their *Skyrise* Base out of *Skyrise* Sections, and Scoring Cubes on *Skyrises*. A bonus is awarded to the Alliance that has the most total points at the end of the Autonomous Period.

Competition

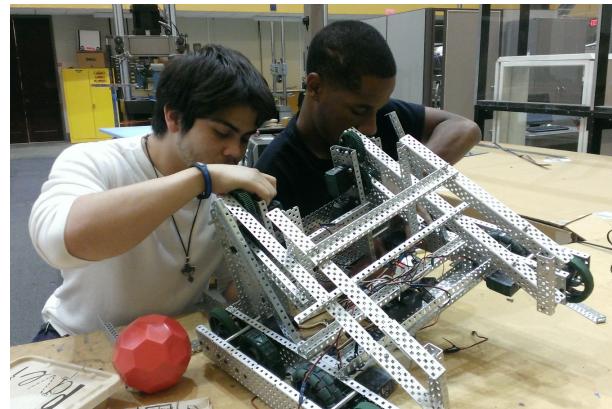
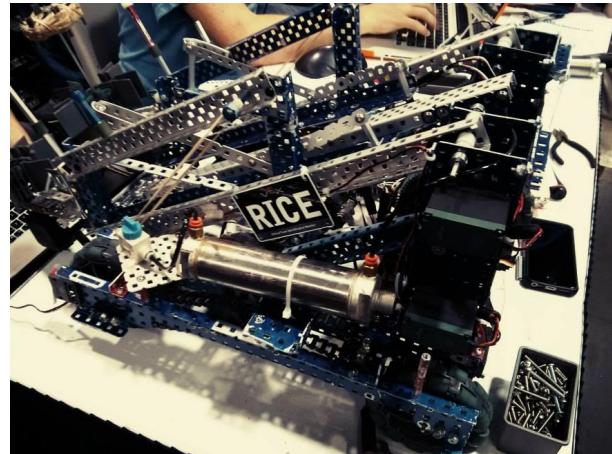


VEX-U Competition

Who: College Students (graduate and undergrads) with the help of mentors (professors or industry)

What: Design, build and program a minimum of 2 robots to compete against other university teams from around the world in a specific challenge set forth each year by VEX. During the challenge (which changes each year), 2 robots from each team are in play and have a 60 second autonomous period followed by a 60 second period where students control the robot.

When & Where: We will attend several regional competitions throughout the year as well as the World Championships in the Spring.



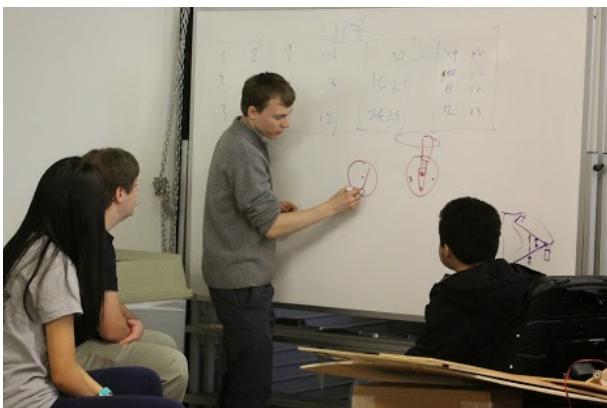
Community

K-12 **outreach** and **community** involvement is a big part of our club; a majority of our members take part in activities to support K-12 STEM **education**, including:



Sally Ride Festival

Promote science and engineering to girls in middle and elementary schools



For Inspiration and Recognition of Science and Technology (FIRST)

During the spring semester we mentor several high school robotics teams in the Houston area as they compete in the FIRST Robotics Competition



VEX

Provide a practice field and technical consulting for several high school VEX teams in the Houston area

Robotics Volunteering

Rice Robotics Club members volunteer at various local robotics competitions in order to promote robotics in our community

Sponsorship

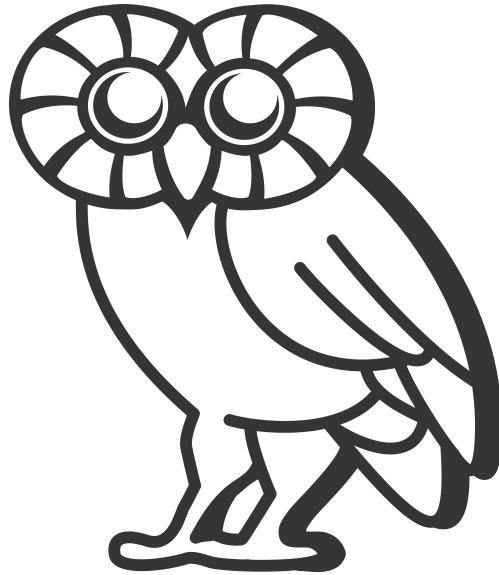
We are seeking sponsorships and donations from several entities including companies and private citizens; these entities will be recognized for their assistance in several ways as shown below. **Please feel free to contact us with any questions.**

	Basic \$250	Standard \$500	Bronze \$1000	Silver \$2500	Gold \$5000	Platinum \$5000+ for multiple years
Signed Team Picture						
Name/Logo on Website						
Name/Logo on T-shirts						
Name/Logo on Robots						
Team Dinner						
Team Naming Rights						

The success of the Rice 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 Rice University—who will become engineers and leaders in industry that will tackle some of the world's most challenging problems. **Thank you.**

Budget

Category	Sub-category	Item	Budget
TRAVEL	Regional One	Transportation (rental car + gas)	\$700.00
		Hotel (3 rooms * 4 nights * \$120 per night)	\$1,440.00
		Registration	\$100.00
		<u>Regional One Total: \$2240</u>	
		Transportation (rental car + gas)	\$700.00
	Regional Two	Hotel (3 rooms * 4 nights * \$120 per night)	\$1,440.00
		Registration	\$100.00
		<u>Regional Two Total: \$2240</u>	
		Transportation (6 travelers * \$330 per flight)	\$1,980.00
		Transportation (rental car + gas)	\$700.00
VEX	Championships	Hotel (3 rooms * 4 nights * \$120 per night)	\$1,100.00
		Registration	\$750.00
		<u>Championships Total: \$4530</u>	
		<u>Travel Total: \$9010</u>	
	Metal	Aluminum C-Channel, Plate, 5 Hole C, etc.	\$700.00
	Motors	#393 Motors w/ control	\$1400.00
	Sensors & Encoders	Encoder modules, line sensors, gyroscopes, etc.	\$500.00
	Screws & Nuts	Various sizes screws, nuts, spacers, washers, etc.	\$150.00
	Batteries	Batteries, splitters, chargers	\$250.00
	Wheels & Axles	Omni & traction wheels, axles, shaft collars	\$850.00
Ri3D	Pneumatics	Pneumatics & tubing	\$700.00
	Gears & Sprockets	Various sizes gears, sprockets, and chain	\$750.00
	Cortex & Controllers	Cortex, controllers, wiring	\$1500.00
	Tools	Allen keys, saws, files, safety goggles, etc.	\$200.00
	<u>VEX parts & tools total: \$7000</u>		
	Metal		\$1000.00
	Roborio		\$500.00
	PD Board		\$200.00
	Pneumatic Module		\$100.00
	Pneumatics		\$200.00
Total	Voltage Regulator		\$50.00
	Talons & CIMS		\$1000.00
	Wire & Connectors		\$100.00
	Chain		\$200.00
	<u>Robot in 3 Days parts & tools total: \$3350</u>		
Total			\$19,360.00



Rice Robotics Club

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President: prb2@rice.edu

Faculty Sponsor: jmclurkin@rice.edu

Rice Robotics Club
Student Activities
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