# **Engaging Manufacturing's Next Generation**



# **National Robotics League**

#### 5 Reasons to Start an NRL Team

The benefits of starting an NRL team are the same as any extracurricular or in-school activity: social development, improving self-esteem, helping bolster a college application, giving kids a sense of belonging, etc. But, the NRL program does even more. They inspire young people to pursue manufacturing and STEM-related careers, to gain the technical and critical thinking skills needed for these careers, and to be successful in the 21st century. Here are just a few of the compelling reasons to start an NRL team:

### 1. Prepare students for the real-world manufacturing:

In the NRL students, must work as a team to design, build, test, and rebuild their own Bot. Not only are students responsible for all aspects of project planning and preparing for the competition, if a Bot is damaged or malfunctions while competing, students must think on their feet and work together to come up with a solution. This teaches students what it's like to work as a team to creatively solve problems under the pressure of a looming deadline.



### 2. Foster intense learning at all levels:

If you've been part of a NRL team, you know that they're anything but dull. The NRL immerses students in dynamic teamwork, creative challenges, technical problems, project planning, project management, time management, computational thinking, design thinking, and a whole lot of other stuff. As they work to apply the manufacturing process to real-world problems, students must figure out how to work within the technical regulations they're given, but must also figure out how to be as innovative as possible within those parameters. This adds up to a whole lot of STEM and 21<sup>st</sup> century learning as students plan, adapt, iterate, improvise, prototype, design, test and redesign their Bots.



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#### 3. Get students interested in manufacturing

Few youth have the chance to see firsthand the opportunities, career paths and successful role models in the manufacturing sector. The result? A critical shortage of skilled manufacturing workers with 2 million open positions by 2025. In the NRL program, local industry welcomes students into their facility exposing them to years of expertise and a real-world environment. These industry advisor provide students with a clear understanding of the current world of modern manufacturing that includes high-paying jobs and high-level STEM, offers clean and safe working environments, and creates opportunities for multiple diverse populations. The NRL is one of the only programs driving students to manufacturing careers.

#### 4. There's something fun for everyone

While designing and building your Bot may be the team's focus, there's a lot more involved. Just like any manufacturing company, the team also needs people who can design logos, help with fundraising, track spending, coordinate and manage the engineering documentation, and all sorts of tasks that aren't directly related to machining or wiring Bot components. This is a great way for students to see how their skills can add value in a STEM-related field.

### 5. It's a sport where everyone can turn pro

Unlike football, basketball, or even marching band, the NRL is a sport that provides each and every participant with a real chance to make it in the big leagues. Not only does being part of a team provide students with important real-world skills, the NRL is also a great place to make industry connections, and they can also be a great way for students to start on a pathway to a career in manufacturing.



