

## ***FIRST* Impact Award - Team 5484**

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| <b>2024 - Team 5484</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Team Number</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>5484</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Team Nickname</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Career Academy Robotics - Wolf Pack                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Team Location</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| South Bend, IN - USA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <p><b>Describe the impact of the <i>FIRST</i> program on team participants within the last 3 years. This can include but is not limited to percentages of those graduating high school, attending college, in STEM careers, and in <i>FIRST</i> programs as mentors/sponsors.</b></p>                                                                                                                                                                                                                                    |
| <p>100% of all 5484 members have graduated high school many receiving honors and earning associate's degrees during high school. 55% of these graduates attend college, 40% go straight into the workforce, and 5% go into the military. Many of our students pursue careers and degrees in STEAM, including engineering, manual and CNC machining, healthcare, and automotive work. Many of our graduate members return to our team as mentors to help coach our ever-growing team.</p>                                 |
| <p><b>Describe your community along with how your team addresses its unique opportunities and circumstances.</b></p>                                                                                                                                                                                                                                                                                                                                                                                                     |
| <p>Being a team of students from a Title I school, several of our members are faced with financial and familial instability. Because of this, our team is free to join and does not have mandated build hours. The only requirements to be sponsored for competitions are that students take part in fundraising efforts, meet 80% of offered build hours, and attend offseason meetings from August to December. This system ensures that members aren't excluded based on situations out of their control.</p>         |
| <p><b>Describe the team's methods, with emphasis on the past 3 years, for spreading the <i>FIRST</i> message in ways that are effective, scalable, sustainable, and creative. How does your team measure results?</b></p>                                                                                                                                                                                                                                                                                                |
| <p>We assisted in the development of a Mobile Makerspace through our relationship with the Boys and Girls Club of St. Joseph County (BGCSJC). Additionally, we started and continue to aid in the development of FLL, FTC, and FRC teams. Furthermore, we went to the Indiana statehouse to represent <i>FIRST</i> to state representatives in support of law HB1382. We measure our success through new partner engagements and the number of people who continue to grow from our program and show interest in it.</p> |
| <p><b>Please provide specific examples of how your team members act as role models within the <i>FIRST</i> community with emphasis on the past 3 years.</b></p>                                                                                                                                                                                                                                                                                                                                                          |
| <p>Our team is involved in the <i>FIRST</i> community through all levels of the program. Throughout the past 3 years, our network of schools has hosted and provided volunteers for various <i>FIRST</i> tournaments and events. With support and motivation from teams within our community, our team has created a Northern</p>                                                                                                                                                                                        |

Indiana Alliance that hosts a yearly scrimmage (Northern Indiana Robotics Drive-in Scrimmage-NIRDS) and works to provide teams with access to tools, a half field, 3-D printers, and knowledge.

**Describe your team's initiatives to Assist, Mentor, and/or Start other *FIRST* teams with emphasis on activities within the past 3 years.**

Our team has successfully launched two FTC, one FLL, and one FRC team this year, showcasing our commitment to expanding STEAM opportunities. Our dedicated mentors play a pivotal role, sharing valuable skills in CAD, programming, and manufacturing to students. This support ensures that each team not only learns but also excels in constructing functional robots, fostering a culture of continuous learning and achievement.

**Beyond starting teams, what initiatives have you done to help inspire young people to be science and technology leaders and innovators? What results have you seen from your efforts in the past 3 years?**

Our team has brought robotics and STEAM to various levels of our community. By assisting in the development of the Mobile Makerspace and the Future Lab, we are able to get a headstart in impacting the lives of students. Consequently, we have an increase of students who are interested in robotics. Starting out with 13 student participants, our team now includes 26.

**Describe the partnerships you've created with other organizations (teams, sponsors, educational institutions, philanthropic entities, etc.) and what you have accomplished together with emphasis on the past 3 years**

We have a longstanding partnership with the University of Notre Dame, where we operate two concession stands, which contribute to the majority of our budget. The BGCSJC set up a site at our school, and since then we've started a few projects with them. We aim to create partnerships with companies in the STEAM fields.

**Describe your team's efforts in the past 3 years to promote equity, diversity, and inclusion within your team, *FIRST*, and your communities.**

Our team is completely free to join and is open to anyone at our high school, regardless of their background. With a predominately student-led team, everyone is given the chance to express their ideas. Our team is 42% female and 46% people of color. Nearly all of our student leaders are female through a process of self-proven promotion. A motto amongst our team leadership is "They are students that are good for the team, and students the team is good for".

**Explain how you ensure your team and the initiatives you have created will continue to run effectively for the foreseeable future**

We implore team members and mentors to learn about the importance of FIRST's core values and our team's mission to, "Change Lives, Build Robots". We have several mentors who lead sub-systems. This way of mentoring ensures that every student is guided by a professional. We also offer opportunities to allow student members and mentors to mentor other teams. This ensures that members of our team learn skills to help them succeed in STEAM, but that they also have experience being leaders.

**Describe your team's innovative strategies to recruit, retain, and engage your sponsors within the past 3 years**

We have developed a marketing team that is student-led. They focus on connecting with companies that are interested in what we're doing. We look to organizations in the STEAM fields since they are a natural fit. Additionally, our team sends out newsletters to our sponsors keeping them updated on our progress.

**Highlight one area in which your team needs to improve and describe the steps actively being taken to make those improvements.**

We are working towards contributing to multiple teams allowing us the opportunity to lead more students into FIRST. Doing so we are able to get them familiar with FIRST core values eventually molding them into successful members of their communities. We also strive to continue growing our relationship with the BGCSJC, to cooperate in more designs like their Mobile Makerspace. In doing so we can reach more children in the community and reach our team objective, "Change Lives, Build Robots".

**Describe your team's goals to fulfill the mission of *FIRST* and the progress you have made towards those goals.**

The Wolf Pack's mission is to provide the benefits of STEAM and FIRST to students who would usually lack that privilege. We strive to inspire kids to work together and learn from their mistakes, through programs such as making a BGCSJC maker space, starting FLL, FTC, and FRC teams and, a future lab. Our team has made tremendous strides in the path of bringing FIRST to students.

**Briefly describe other matters of interest to the *FIRST* Judges, including items that may not fit into the above topics. The judges are interested in learning about aspects of your team that may be unique or particularly noteworthy.**

One thing that is unique to our team is our family environment. We strive to create a safe space for our team members. Our coaches & mentors make sure that we have everything we need to feel nurtured & supported. Many of our members outwardly describe our team as a second family and their home away from home.

### Judge Feedback

**Who/When**

**Feedback**

Apr 07,  
2024  
11:59:45  
AM EST

**Based on this presentation, if you were seeking out a team to mentor, why would you or would you not choose to mentor our team?**

**An area the team has an opportunity to improve.**

**Something that really impressed the judges.**

### Essay

OUR MISSION: Team 5484, The Wolf Pack is driven by our mantra "Change Lives, Build Robots." Our mission is to create a ripple effect that opens up opportunities for students of all ages and backgrounds to thrive within a FIRST program, fostering collaboration and a secure space for the next generation of problem solvers and engineers. TEAM HISTORY & CULTURE: With a mission to establish a FIRST robotics team at a Title 1 school (a school with high percentages of children from low-income families), our head coach, and FIRST alum, laid the foundation for a close-knit family environment where students felt nurtured and supported. The Wolf Pack started with 13 students and 4 dedicated coaches. Fast forward to the 2024 season, our team includes 26 students, 7 mentors, and 4 coaches. All team members, regardless of their level of experience in robotics, have equal opportunities within our team.

Whether they have little to no prior experience or extensive knowledge, each student is valued for their unique contributions. Students who have less experience receive guidance from our team's veterans & mentors. The importance of every student is highlighted by their diverse roles and responsibilities. Our team is predominantly student-led, with guidance from our dedicated coaches and mentors.

**FUNDRAISING:** As a team stemming from a Title 1 school. We recognize that many of our students are not equipped with many resources and may suffer from an array of instabilities. For this reason our team is completely free to join and participate in. However, we understand that participation in a FIRST robotics team requires significant commitment. To promote this, we require students to attend a minimum of 80% of the available build hours along with required offseason participation from August to December. If they have an interest in attending competition. Additionally, each student attending competition is given the duty of fundraising a minimum of \$500 to cover various team expenses. This commitment creates an environment of responsibility and accountability, providing valuable skills for our students' future endeavors. Recognizing that raising \$500 individually can be challenging, our team ensures that members have plenty of opportunities to meet this fundraising goal. One method we use to raise our funds is our partnership with the University of Notre Dame. Students have the opportunity to work at concession stands during Notre Dame's home football games. Students take on a variety of responsibilities, including cleaning, food preparation, operating the cash register, managing inventory, and the practice of customer service skills. These tasks simulate a real job experience, providing students with valuable life skills. Fortunately, our team generates around \$60,000 per season by operating two concession stands throughout the Notre Dame football season. For our services at the stadium, our team was recognized for running top performing stands. Although Notre Dame fundraising plays a significant role in our budget, we are always exploring different ways to meet our fundraising goals. Some of the ways we expand our fundraising efforts include, hosting events, managing parking at local fairs, and arranging dress-down days for our fellow students at school. If a contributing teammate is not able to meet their season quota by the start of competitions we understand "life happens" and they are given a chance to present to the team, explaining how they can be an asset during competition. The circumstance is left up for a vote between students only. Mentors are excluded from voting, and in most cases, considering the teammate is in good standing, they will be allowed to attend competitions. We have a dedicated marketing team that focuses exclusively on connecting with businesses and organizations to secure sponsorships. These connections are exceedingly important to us because it gives our team the opportunity to work with professionals outside of our team. Our sponsors then have a chance to learn about our team and the work we're doing. We make an effort to connect with companies in STEM fields because those partnerships are a natural fit. While monetary support is important, they can offer other resources such as materials and mentorship, while connecting with students who may find their industry intriguing. On occasion, our school will coordinate with these companies and arrange to visit their facilities for tours. We also invite them to visit our shop and let them know when our competitions are. Additionally, in the off-season we apply for as many grants as we can. This is crucial to the growth of our team, and the creation of other FIRST teams. This season we applied for three grants and so far we were awarded two of them, which allowed the creation of one FRC team, one FLL team, and 2 FTC teams.

**MENTORING:** While we acknowledge the importance of honing specific skills such as welding, CAD, engineering, and programming for FIRST students, we understand that their success hinges on a strong foundation in core subjects such as math, science, and reading. To support this, we provide study tables

during build days, allowing students to not only complete class assignments but also collaborate with peers and receive guidance from mentors. Prioritizing this aspect ensures that our team members thrive in the FIRST program while maintaining academic eligibility for competitions. Over the past three years, we've opened our doors to several FIRST robotics teams, offering access to our school's machinery and equipment. As an alternate home base for as many as seven FTC teams and one other FRC team, we've actively engaged in collaboration and mentorship, helping with growth and innovation. Our students understand the spirit of mentoring, meaning they offer guidance and assistance rather than doing the task for them. Several of our students have accredited time built into their high school schedules to go to our elementary school Success Academy of South Bend (SASB) and serve as teaching assistants. They share their knowledge and experiences with K-5 students in their makerspaces, and some of our students mentor their FLL team.

**OUTREACH:** Spreading the ideals of FIRST and STEM outside our workspace is also important to our team & school. So petitioning lawmakers at the Indiana State House in support of HB1382, several appearances on local newscasts, and hosting scrimmages, FTC and FLL events are just a few of the ways we propel the ripple effect. Each year, we host off-season seminars where we invite local teams, offering essential skills and knowledge that could assist them in the upcoming season's challenges. This year, our programming workshop was a highlight, which allowed our team to educate both our rookies and members from other teams about programming basics. This hands-on learning experience was accessible to all who attended. We host an annual kickoff event and invite local teams to participate. During this event students watch the stream of the game release together, study the game manual, and strategize, and finally put all hands in to build a full scale half field according to that year's game. In our shop, doors close at 9:00pm, visiting teams leave, and we start a sacred Wolf Pack tradition: participating in a team lock-in where we stay the night at school, play some competitive rounds of dodgeball, video games, and enjoy other team bonding activities to start our season connected and as a family.

**MOBILE MAKERSPACE:** In July of 2022 the Boys & Girls Club of St. Joseph County (BGCSJC) approached our school and coach to help them design and implement an RV. The vision of this project was to provide Club members and staff the access to a new learning environment, support all club sites with equal access to the makerspace equipment and material, and increase exposure to unique educational programs, especially in relation to STEAM. Since our team has a unique perspective of how a day in the life of a student maker would feel, and also have intimate expertise of all the equipment that was installed, we became directly involved with the design and layout of this project. Over a 15 month span (July 2022- Oct 2023) the mobile makerspace became equipped with over \$82,000 worth of equipment. Just this year, the makerspace is traveling 4 days a week and is planned to visit 26 club sites and bring STEAM to more than 3,000 kids. We are currently working with the BGCSJC to have an FLL team at BGCSJC site.

**FUTURE LAB:** Our school has also recently cut the ribbon on the new "Future Lab." This space is designed to break down the barriers between K-12 Education and the Industrial world. Including a wood shop, auxiliary shop, metal shop, and engineering makerspace, students work hand in hand with professionals to help design and fabricate industrial prototypes. Students are learning through hands-on training how to design, set up, and run this modernized equipment. We encourage those in the Northern Indiana area who are interested in learning more about this program to set up an appointment and get involved. Our robotics team members were essential during this new makerspace project to instruct and mentor in the district. Our expertise with this equipment is heavily leveraged at our two Elementary

schools (K-5) makerspaces and the BGCSJC Mobile Makerspace.

THE RIPPLE EFFECT is defined as the continuing and spreading results of an event or action. The Wolf Pack feels that this metaphor describes the way in which we plan to “Change Lives, Build Robots”. Looking back upon 10 seasons, we understand that OUR lives have changed, and with them, our priorities. So by implementing off-season seminars, developing FIRST teams, creating makerspaces, and more, we are actively attempting to contribute to the growth of our younger generation and their futures. CHANGING the lives of others to BUILD a better future.;

