



Robotics Handbook '23 - '24

Introduction

Hello Janksters!

For the new students and families joining our team, welcome! For those who have been with us for the ride before, welcome back! We are so excited to start off a new year with you all.

Robotics is one of the largest programs at Notre Dame, and we're proud of the dedication and commitment our students show throughout the year. We enjoy being able to create positive student experiences, and one of the ways we do that is through setting clear expectations about team participation at the beginning of the year. Please take the time to read through the handbooks - one for Students, one for Parents - and understand what to look for in the coming year.

There is a lot of information to digest in this document - what we recommend is to look over the key sections and then refer back to this document throughout the year to become more familiar with the team's overall processes. Here's some of the key things to review:

- Meeting Schedule
- Guidelines for Students
- Attendance

As always, we see everybody as partners in this program's success, and are open to answering any questions or concerns you may have.

Go Janksters!

Robotics Co-Directors

Marta Carrillo
mcarrillo@ndsj.org

Aidan Ferrer
aferrer@ndsj.org



Robotics Handbook '23 - '24 (Students)

To-Do (Pre-Season):

- **Program Fee of \$150:** This fee (to be paid online) covers a T-shirt, workshop fees, and other team activities for each student. We want to ensure that all students can participate in robotics - if your family needs financial support, please contact the Co-Directors.
- **Communication:** The team uses Slack as a platform to communicate with each other, committees, subgroups and the mentors. All students are asked to use this app on their personal device.
- **FIRST STIMS:** Students must fill out registration information on the FIRST website to indicate that they have officially signed up for the team. This registration must be completed by September 22nd.

Meeting Schedule:

Fall Semester

Tuesdays and Thursdays, 3:30 – 6:00 PM.

All attempts are made to keep to this schedule except when we need to work around Notre Dame events. Additionally, the team will meet at least one additional Friday and/or Saturday meetings per month for training workshops, competitions and outreach activities.

Build Season (January 6 - February 24):

Tuesdays 3:30 - 6:00 PM

Thursdays 5:00 - 8:00 PM

Fridays 3:30 - 6:00 PM

Saturdays (and School Holidays) 9:00 AM - 5:00 PM

Sundays (twice per Build Season, dates TBD) 10:00 AM - 4:00 PM

Students are given seven weeks to design and build a competition ready robot. With 49 days to complete a working machine, maximizing the time to work on the robot is crucial. The participation of each team member is vital during this time. Additional Sundays may be added as deemed necessary.

Attendance:

Robotics is a year round activity that requires commitment and dedication. The team depends on the regular attendance of members to make decisions, complete projects and plan activities. Attendance is one factor used to determine a student's opportunities for leadership, Pit crew and Drive team roles.

- **Absences:** Students are responsible to inform the Program Co-Directors and student leaders of absences or changes in schedule. We request that you try to give us 48 hours notice of pre-scheduled conflicts, or as soon as possible otherwise.
- Students are responsible for signing in and out of each meeting. Documentation of attendance is handled by the Logistics Coordinator. The student sign in sheet will be used to determine which students are eligible for class credit, competitions, Drive Team, leadership and other opportunities.
- Students must have a **minimum attendance rate** of 60% for meetings and 9 hours of training during the **Fall Semester** to be considered a team member in good standing. Additionally, every student must attend a Communication Training workshop (offered during training hours) and the Chezy Champs offseason. Inability to meet this requirement must be discussed with the Robotics Program Directors.
- Students must have a **minimum attendance rate** of 60% for meetings; attend the FIRST Kick-off event, the Robot Showcase event, and Silicon Valley Regional; and complete their 4 SORT hours and 4 outreach hours during the **Spring semester** to be qualified as a team member. Inability to meet this requirement must be discussed with the Robotics Program Directors.

Robotics Class Credit:

2.5 units of credit is given for each Semester. Each Semester is independent of the other.

To receive transcript credit on the **Fall Semester** students must attend:

- 75% of meetings
- 9 hours of training
- Chezy Champs

To receive transcript credit on the **Spring Semester** students must participate in/attend:

- 75% of meetings
- Kick off event
- Robot Showcase
- Silicon Valley Regional
- 4 SORT hours
- 4 outreach hours

Guidelines for Students:

Communication: Email and Slack are the primary methods used to notify students of team activities and announcements.

- The Team Captain will send out an email with details for the week and other announcements on Mondays.
- Students should check their school email on a regular basis. Students are expected to respond to emails within 24-48 hours.
- Students should check their Slack on a regular basis. Students are expected to respond to Slack messages within 24 hours when requested.
- Students must include at least one Robotics Co-Director in their communication with individual mentors.

Behavior Expectations: Students are expected to follow the Notre Dame Student Handbook regarding conduct at all times during meetings and outside activities.

- Students must sign in and out at all meetings. Students are responsible for submitting their attendance.
- Students are expected to be focused and active participants during meetings and SORT Hours. Students who are distractions or seen engaged in non-robotics activities during the meeting will be asked to speak to the Robotics Program Directors.

Safety: Students must use safety protocols at all times. These will be explained by Program Directors and Safety Captain. FIRST holds safety as a high priority not only to prevent injury and damage but to encourage good work habits.

Competitions:

Students participating in Regional competitions (March/April) will miss 1 or 2 days of class, occasionally 3. It is the student's responsibility to notify teachers about their absence as well as be up to date on class work, tests, quizzes and homework. Teachers will allow students time to make up school work and tests in a reasonable time frame.

- All students will be required to attend **Chezy Champs** at Bellarmine College Preparatory (Sept 30th - Oct 1st) and the **Silicon Valley Regional** at San Jose State (March/April) and All students are expected to be active participants at the competitions.
- There are many tasks that students do during competitions. Tasks are assigned based on need, experience and learning opportunity. Assignments of tasks will be determined by the Program Directors, mentors and student leaders.
- Students participating in any overnight competition are required to cover their own travel costs.

Student Positions:

Pit Crew and Drive Team Members: During the competitions there is a limit to the number of people allowed in the Team's pit area. A set number of students will be selected to be part of this Pit Crew. A Drive Team is selected for operating the robot on the competition field. This is usually made up of five students: Student Coach, Driver, Operator, Human Player and Technician.

- Selection to the Drive team and Pit crew is determined by several factors in the best effort to ensure the Team can handle the various situations that arise during the competition. Among the factors used to determine selection are attitude, attendance, teamwork, and specialized skills.
- The Program Directors will make the final determination of the members of the Drive Team and the Pit Crew.
- Students not on the Pit Crew or Drive Team will be assigned roles related to scouting, team representation or competition support. All students are engaged in tasks during competitions.

Student Leaders: Student leaders work closely with the Program Directors and mentors to determine committee or team objectives and agenda. Student leaders will be asked to maintain 85% meeting attendance, attend extra meetings and do work outside of regular meeting times. Student leaders will make sure the classrooms and workrooms are left in a clean and organized condition at the end of the meetings.

- Part of being a student leader is being an example to others. Student leaders are expected to demonstrate positive attitude, reliability, and adhere to safety practices. Student leaders set the tone for the team.
- Student leaders train and guide students in their committee or area of competency.
- Student leaders will be expected to represent the team and school at events such as Open House, Information Meetings and other FIRST events.



Robotics Handbook '23 - '24 (Parents)

To-Do (Pre-Season):

- **Program Fee of \$150:** This fee (to be paid online) covers a T-shirt, workshop fees, and other team activities for each student. We want to ensure that all students can participate in robotics - if your family needs financial support, please contact the Co-Directors.
- **Forms and Paperwork:** Parents need to fill out general permission forms that allow students to participate in a variety of robotics activities for the year. Specific permission slips and release forms will be needed for each competition or travel activity outside our local area. These forms are to be filled out using your PowerSchool account by September 22nd.
- **FIRST STIMS:** Parents need to do an electronic waiver for their student on the FIRST Website. This registration must be completed by September 22nd.

Meeting Schedule:

Fall Semester

Tuesdays and Thursdays, 3:30 – 6:00 PM.

All attempts are made to keep to this schedule, except when working around Notre Dame events. Additionally, the team will meet at least one additional Friday and/or Saturday meetings per month for training workshops, competitions and outreach activities.

Build Season (January 6 - February 24):

Tuesdays 3:30 - 6:00 PM

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Fridays 3:30 - 6:00 PM

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Sundays (twice per Build Season, dates TBD) 10:00 AM - 4:00 PM

Students are given seven weeks to design and build a competition ready robot. With 49 days to complete a working machine, maximizing the time to work on the robot is crucial. The participation of each team member is vital during this time. Additional Sundays may be added as deemed necessary.

Competition Season (March and April)

The team competes twice during the six weeks following the Build Season. During this time the team will modify the Build Schedule based on the tasks that need to be completed in preparation for Regional Tournaments. The team aims to compete in two events every season:

- **Away Regional:** The team will travel to a competition outside of the San Jose Area sometime in March. This optional competition allows our team a second opportunity to compete, work through problems and challenges, and make improvements to the robot.
 - The away regional involves many logistics: transportation, lodging, and food. We ask parents to help with driving, chaperoning, food organization and other aspects of the trip and event. The costs associated with this second regional will cover food, lodging, and transportation for the students as well as the costs for the Program Directors and mentors to accompany the team.
- **Silicon Valley Regional:** We consider this our “home” competition since it is typically held at the San Jose State Event Center. All students are required to attend. This is a celebration of all the hard work students put in during the build season. We encourage parents, family and friends to come and cheer for the team. This event is generally the first weekend in April.
- **World Championships:** Qualification to the FIRST World Championships is achieved by the teams winning a regional or receiving either the Impact or Engineering Inspiration Award. The Championships are held in Houston, Texas at the end of April.

Important Dates

- **Chezy Champs Off-Season Competition (Sept 30th - Oct 1st):** This event is a Bay Area competition in the off season. It is an opportunity to train new members, make modifications to last season’s robot and try new strategies. All students are required to attend.
- **Capital City Classic Off-Season Competition (October 27 - October 29):** This event is a competition in the off season in Elk Grove, CA. This event will include training workshops. Attendance is optional but we will be extending invitations for a select number of students for transportation and lodging.
- **Kick-Off (January 6, 2024):** Students will attend a Kick-Off event at Notre Dame, where the team learns the new season’s challenge. All students are required to attend.
- **Robotics Showcase (February 24, 2024):** On the final Build weekend, the team hosts an evening for family and friends. The team shares the process of building our robot and reveals the robot for all to see. All students are required to attend.
- **Silicon Valley Regional (March/April 2024):** This event is a Northern California Regional event typically hosted at San Jose State University. This is an opportunity to compete with local teams with all team members. All students are required to attend.

Expectations of your Student:

Attendance: Part of the robotics program is building up discipline and accountability to the team. Having regular attendance is in everyone's best interest to keep students engaged and on the same track as the rest of the team. Each student is required to attend at least 60% of team meetings each Semester to be in good standing. If your student cannot attend a meeting, we request that they try to give us 48 hours notice of pre-scheduled conflicts, or as soon as possible otherwise.

Workshops and Training: We prepare students for Build Season with skills and experiences over the Fall Semester. General training happens during regular meetings. Each student is required to attend 9 training hours outside of regular team meetings by December 11th, 2023. Opportunities to meet these hours will be scheduled on Fridays and weekends at Notre Dame. Additionally, workshops offered at other schools and locations will be available to the team.

SORT: In addition to regular meetings, where students' number one priority is robotics-related projects, we have scheduled SORT (Sort, Organize, Rearrange, Tidy) hours throughout the year dedicated to shop cleanups, organization, and general housekeeping to streamline the year. Each student is required to attend 4 SORT hours outside of regular team meetings by May 1st, 2024. Opportunities to complete these hours will be scheduled on Fridays and weekends at Notre Dame.

Outreach: Throughout the year, the team is invited to demonstrate our Robot at various venues, assist with local youth robotics tournaments, or help educate the community about the importance of supporting STEM education projects in schools. Students will be encouraged to participate in these events when the opportunity arises. Each student is required to contribute 4 volunteer hours outside of school-related service projects by May 1st, 2024.

Travel guidelines: Students invited to travel to an away tournament must be in good academic standing. Students are responsible for covering the cost of travel, food and lodging for the event. The amount will vary depending upon the distance to the event (\$300 to \$600 for a Regional event, World Championships \$1000 to \$1200). Students are required to meet the deadline for informing the Program Co-Directors of their attendance and making a deposit for the trip.

Robotics Class Credit:

2.5 units of credit is given for each Semester. Each Semester is independent of the other.

- To receive transcript credit on the **Fall Semester** students must attend 75% of meetings, 9 hours of training by December 15th.
- To receive transcript credit on the **Spring Semester** students must attend 75% of meetings, Kick off event, Robotics Showcase, complete their 4 SORT hours and 4 outreach hours by May 1st.

Ways you can support the team

Food: Nutritious food is vital to keeping brains and bodies functioning at their best. Janksters always have healthy appetites and need healthy food and snacks on long work days during pre-season, build season and competition season. We rely on parents to help provide meals for students and mentors. Requests for food items during the 2023-2024 school year will be dependent on COVID restrictions.

- **Nut-Free Policy:** In order to keep students with nut allergies safe we have created a nut free environment in Robotics. We ask students and parents not to bring snacks or food items that contain peanuts, tree nuts (almond, brazil, cashew, chestnut, hazelnut, macadamia, pecan, pine, pistachio, and walnut), or sesame seeds. Foods containing peanuts, tree nuts, or sesame seeds as ingredients, (e.g. baked goods, pesto sauce, hummus, tahini, crackers, sauces, and dressings) are also forbidden.
- **Meals & Snacks:** During the pre-season, build season and competition season we provide community meals for the students and mentors. The responsibility for meals is shared by 4-6 people. A list of suggestions and ideas for meals will be made available through the **Notre Dame's VolunteerMatters portal**. Parents will use VolunteerMatters for meal sign ups. We try to be conscious of dietary restrictions and we will let you know of any.
- We ask each family to sign up for:
 - At least 1 meal slot during the year, which includes pre-season, build season and competition season. *If you are unable to provide a meal we ask for a monetary contribution so we can purchase food.*
 - In addition each family will be asked to contribute **2** snack items during the year. These snacks are for long competition or work days to help students keep up their energy. Snack requests will be sent out via email by Parent Coordinators.

Donations and Connections: The team is always in need of supplies, tools and resources. As parents you may have resources available via employers, business associates, family or friends. We can use direct donations, donations in kind, or use of space and materials. To donate directly you can talk with Co-Directors about sponsorship, use the Amazon Wish List or support Robotics through the Booster program.

Event Support: Students will need to make arrangements to attend events away from Notre Dame. We do our best to arrange carpools and share driving duties for team events when necessary. There may also be requests for support with setting up large team gatherings both at Notre Dame and competition. Requests will be made by email or Volunteer Matters portal.

Open Communication: Build and competition season can be demanding on a student's time. As a parent you can help your student with time management, rest and stress. We understand that there may be challenges or conflicts with some of the dates and other Robotics requirements. We encourage students and parents to contact the Robotics Program Co-Directors to discuss these conflicts in advance.

You know your students best, but if you have any question or concerns, please be sure to contact the Program Co-Directors or Mr. Bracco. Clear communication in a timely manner will help the Robotics Co-directors and mentors work most effectively with students.

We understand that there may be challenges or conflicts with some of the dates and other Robotics Team requirements. We encourage students and parents to contact the Robotics Program Directors to discuss these conflicts in advance.

At the time of this Handbook's publication dates and requirements for FIRST events were not available. We reserve the right to make changes as deemed necessary for the program.

Marta Carrillo
Robotics Program Co-Director
mcarrillo@ndsj.org

Aidan Ferrer
Robotics Program Co-Director
aferrer@ndsj.org