



# BILLINGSLEY ENGINEERING AND ROBOTICS (BEAR) TEAM HANDBOOK

The Billingsley Engineering and Robotics Team will be made of approximately twenty-five 7<sup>th</sup> through 12<sup>th</sup> grade students who are interested in robotics and willing to put in the time to help the team become successful. The goal of this program is to prepare our students for future careers in engineering and marketing/business and give them real-world experience in these fields. Our focus is participating and advancing in the BEST competition. If schedule and time allow, then other competitions may be entered, but for now BEST is the first priority. There are many different divisions of the BEST competition. This handbook will address each one as well as what will be expected if you are a member of the Billingsley Engineering and Robotics Team.

## A. Team Selection Process:

1. Students and parents must agree to the regulations set forth in this handbook.
2. Applications should be completed and submitted according to the instructions on the application form.
3. Students will be required to have a minimum of a "C" grade point average in all subjects.
4. Students will be selected based on a combined application and teacher recommendation form score.
5. Previous team membership does not guarantee that the student will be on the team the next year.
6. If a student has been dismissed or resigned from the team in the past, they are ineligible for team membership the following year.

## B. Events

1. Students will be required to attend all BEST related events.
  - a. If a student is unable to attend one of these events, they must be excused from the event in **advance**.
    - i. Excused absences include:
      - a. Sickness (doctor's excuse)
      - b. Death in the family
    - ii. Unexcused absences could lead to dismissal from the team and not being allowed on the team for the following year.
    - iii. If a student is not able to make the dates of competition, they should not try out.
    - iv. **This is a TEAM event. As such we will travel to and from Gameday events together.** Returning from Gameday requires many materials and supplies to be unloaded which should be the responsibility of the entire team, not just a few individuals.
  - b. **Kickoff:** Kickoff will likely be held in the month of September. The game field will be revealed at this event.
  - c. **Mall Day:** This is a practice for students to go to their local hub to get a feel for the current year's competition.
    - i. Only the engineers, programmers, notebook, photographer, and one marketing member will attend mall day. Additional team members will not be needed.
  - d. **Game Day:** Game Day is a two-day event. The presentation team will perform the first day and the exhibit team will set up. Not everyone attends competition on the first day. The second day will be a full day. Students will be participating for the chance to compete in the Southeastern Regional

Competition. Students will ride a bus with the team to and from the event. (This may change according to the regulations set by the HUB for the 2022-23 season.)

- i. While at this event, students should not be lingering in the halls. They should be in the stands supporting their team. Parents are encouraged to attend but should understand the students are there to work and compete.
  - ii. The team will return to Billingsley together to unload the bus.
  - iii. Know that even though the role of your department may have been fulfilled before competition, you are still required to support your teammates at competition by showing spirit and encouraging them.
  - iv. Students will sit as ONE group at competitions.
- e. **Regional Competition:** This is held the first weekend in December. Students must finish in a top percentage at their local competition to advance to this competition. This will be an overnight trip. Students will leave early on Saturday morning and will return late Sunday night. Students will ride a bus with the team to and from the event.
- i. **If you missed Game Day due to an unexcused absence, you will be ineligible to attend regional competition at Auburn University.**
- f. Unexcused absences to events can lead to being dismissed from BEAR and not being allowed to apply for team membership the following year.

### C. Team Structure

#### 1. Organizational Structure

- a. Engineering
  - i. Builders
  - ii. Programmers
  - iii. Game Field Construction
  - iv. Notebook
- b. Operations
  - i. Correspondence
  - ii. Media
  - iii. Fundraising/Outreach
- c. Marketing
  - i. Presentation Team
  - ii. Exhibit
  - iii. Website
  - iv. Spirit
- d. Interns

2. Officer interviews will be scheduled once the team has been selected. To be eligible to be an officer, a team member must have been a member of BEAR for at least one year.

### D. Departments and Responsibilities

#### 1. Builders

- a. The construction of the robot will require the most time out of any group. If you are going to be in this group, be prepared to stay late after school during competition season and come to weekend practices.
- b. Each day the engineers will be required to clean up the work area and return the tools neatly back to their place.
- c. Builders will be required to document in detail all ideas and all work performed to help enhance the engineering notebook. This is not optional.
- d. Builders will be required to develop a game strategy as a team.
- e. The builders should be very familiar with the game specific rules and scoring system.

#### 2. Drivers

- a. Pending timely completion of the robot, driver tryouts will be scheduled before competition. The five best drivers, based on their tryout performance, will be selected as well as an alternate. The selected drivers will be required to dedicate practice time to driving so they are prepared for competition. If the team advances to regional competition, the drivers list may be revised depending on local competition performance and capabilities of other potential drivers.
  - b. If the robot is not completed well in advance the sponsor and mentors will determine the robot drivers.
  - c. The drivers cannot be part of the marketing presentation team or the booth workers because they will need to be available to work on the robot when needed and drive when it is their turn to drive. However, they will need to be available as support for marketing or booth to help them prepare for competition.
  - d. Drivers will be responsible for making sure batteries are charged for competition.
  - e. The robot should be the first priority for drivers at all times during competition. They should not be distracted by anything else. All aspects of the robot should be inspected between every match.
  - f. One driver will be selected as the team representative to discuss any problems at competition with the judges. Only this person will be allowed to talk to judges and BEST personnel.
3. Notebook
- a. An engineering notebook will be required to submit at competition.
  - b. The notebook team will be required to submit a research paper in the notebook.
  - c. Notebook personnel are required to be at every team meeting to document the proceedings and progress of the robotics team. In order to produce a quality notebook, it must be detailed.
  - d. The notebook should follow the engineering design process in describing how the robot was constructed.
  - e. Notebook personnel must be able to do work **on their own time** in order to produce a successful notebook.
  - f. The notebook should be developed using the judging sheet to ensure everything the judges will look for is present in the notebook.
4. Programming
- a. Programming personnel are expected to spend time before kickoff researching the program we will be using so they will be prepared to program the robot as soon as possible.
  - b. Programmers may be required to be at every practice. They may not be needed at every practice, but they could be called upon at any time so they need to be there.
  - c. Programmers must be able to manage themselves responsibly because there will be many times when they will be idle. They have to be trusted and willing to work where needed if their programming skills are not being used.
5. Marketing Presenters/Support
- a. Students who are part of the marketing team should be outgoing and comfortable with public speaking.
  - b. Students in the marketing presentation will be required to wear professional attire when they present to different groups. The group will decide upon this attire.
  - c. Tryouts will be held for final positions for the marketing presentation team.
  - d. The marketing presentation should be developed using the judging sheet to ensure everything the judges will look for is present in the presentation.
6. Team Exhibit
- a. Students who are part of the booth team should be outgoing and willing to initiate conversation with the public.
  - b. Students should be pleasant and smiling while at the booth, no matter what.
  - c. Students who are responsible for the booth will be required to help set up and take down the booth at competitions.

- d. Students will be assigned certain times to be at the booth. During this time, students may not leave the booth for any reason.
- e. Students who are assigned a time at the booth will not leave the booth until there is someone at the booth to relieve them. The booth cannot be left unattended.
- f. While at the booth, students will **not horseplay, eat, or drink**.
- g. Students will interact with guests who stop at the booth and invite people to come see their booth.
- h. Students at the booth should be knowledgeable about all aspects of the robotics team including robot construction, marketing plan, game theme, fundraising and outreach efforts, etc.
- i. The team exhibit should be developed using the judging sheet to ensure everything the judges will look for is present in the exhibit.
- j. Note: While at competition, people from other departments will help contribute to setting up and staffing the booth as directed. The booth members will be the ones who are in charge of it.
- k. The booth is not a storage area for personal belongings.**
- l. Team members should not be at the booth if they do not have an assigned time. It is not a gathering area for our team.

#### 7. Website

- a. Personnel working on the website should keep it up to date and be able to document all aspects of the robotics team.
- b. The website should be developed using the judging sheet to ensure everything the judges will look for is present on the website.
- c. Personnel must be able to do work **on their own time** in order to produce a successful website.

#### 8. Spirit Coordinator(s)

- a. The spirit coordinator will be in charge of making sure that there are posters and signs for the crowd to display during competition.
- b. The spirit coordinator will be in charge of keeping everyone at a high energy level and cheering at competition.
- c. The spirit coordinator will secure the mascot uniform/mascot and a jersey for use during competition.
- d. The spirit coordinator may recruit other people who are not on the team to help make signs/posters for competition.

#### 9. Game Field Construction

- a. Game field builders will need to attend kickoff to take pictures of the playing field and become familiar with how it functions and looks.
- b. Game field builders will need to be able to read building specifications and determine what materials are needed to build the game field.
- c. Construction of the game field should be completed as soon as possible after kickoff.
- d. Game field builders will be called upon as needed to adjust the game field.
- e. Game field builders may help with the construction of the booth as well.

#### 10. Media

- a. Media personnel will be responsible for taking pictures/video that will be needed by other departments such as website, marketing and booth.
- b. Media personnel may also be responsible for submitting pictures to news outlets for publicity.
- c. Media personnel will need to be present at all events (outreach, fundraising, practice, kickoff, mall day, game day, etc.) to take pictures/video to document all activities.
- d. Media personnel may be responsible for determining a social media posting schedule.
- e. Media personnel will need to regularly save and organize pictures in the BEAR Google Drive account in specifically named folders so that the marketing, booth, and website personnel can have access to pictures.
- f. The media department may also be responsible for producing a promotional video for BEAR.

## 11. Correspondence/Paperwork

- a. The correspondence person will be in charge of keeping a list of sponsors and supporters.
- b. While keeping that list, this person will make sure that all sponsors are given what has been specified for the sponsorship level in which they gave.
- c. This person will be in charge of writing thank-you notes to everyone that helps the robotics team in any way.
- d. This person will help the sponsor in the distribution, collection, and organization of team forms (permission forms, t-shirt order forms, release forms, etc.).

## 12. Interns

- a. BEAR will have intern positions. All 7<sup>th</sup> and 8<sup>th</sup> graders will serve as interns. The purpose of this is the same as internship positions in the real world. It will be an opportunity for students to receive training and experience in robotics competition.
- b. Interns will not be required to be at every team meeting. **They will be assigned certain days to attend meetings.**

## E. Outreach/Fundraising

1. Everyone will be required to participate in outreach and fundraising events unless excused in advance by the sponsor.
2. Event dates will be publicized in advance as much as possible.
3. Many outreach opportunities may arise. Anytime an outreach opportunity presents itself, we will take advantage of it.

## F. Student Behavior

1. Students are expected to be examples to their peers. Good behavior is expected at all times. If you get in trouble at school, you will be in danger of being dismissed from the robotics team depending on the offense.
2. Any time you are in ISS or Second Chance, you will be suspended from practice and events held during the time you have to serve and possibly be dismissed from the team.
3. The sponsor will check on each team member's grades and behavior regularly. If either begin to decline, the sponsor reserves the right to put a team member on suspension.
4. There should be **no horseplay at practice or competition**. This could lead to getting dismissed. It is also a safety hazard.
5. **There will be no bullying among team members. We will respect each other. Anything that opposes this will not be tolerated and can lead to getting dismissed.**
6. We will listen to each other's ideas. This does not mean we have to agree with them, but we will listen.
7. Team members are required to obey the mentors just as if they were the sponsors.
8. Cell phones should **only** be used at practice to communicate with parents regarding transportation or researching information regarding competition.
9. **If you are caught up with all work from your department, you must be willing to help other departments and not be a distraction.**
10. You will be representing BEAR, Billingsley School, and Autauga County Schools while at any event. Keep this in mind AT ALL TIMES. Do NOT represent yourself, team, or community in a negative way. If there is ever a problem, you could be suspended or dismissed from the team.

## G. General

1. Robotics is a huge time commitment during competition season. Students should be able to make the time commitment and still be able to keep up with classwork.
2. Just like a job, when it is time to start practice, you should be prompt and ready to work.
3. There are many days, especially as game day approaches, we may be practicing until 6:00 or 7:00 pm each night. Be prepared to do so.
4. There could be Saturday practices during the fall. Be prepared to work. These are necessary in order to prepare thoroughly for competition. You must be willing to practice on the weekend.

5. Students on the robotics team must be able to work together, compromise, and work through general problems. Students who have a hard time getting along with others will not be tolerated.
6. There is a robotics team fee of \$35. This money helps pay for a competition T-shirt, gas for traveling, and bus drivers. If we make it to regional competition, an additional fee may be charged. This can be made in payments.
7. Students will be required to attend after school practice for their specific department to be allowed to go to competition. If this requirement is not met, the absence from competition will count as unexcused, making a student ineligible for the next year.
8. Students will sign in and out of practice to keep a log of hours. If a student is not performing work, they should not sign in.
9. Students will be required to participate in all fundraising and outreach events unless otherwise excused by the instructor in **advance**.
10. Any supplies used during team meetings should be returned to their proper place before the team leaves for the day. It is important to keep the room clean.
11. Students or parents must be able to be reached by group text (Remind 101)/email. This is the most efficient mode of communication to get a message to everyone.

#### H. Important Dates:

1. The following are mandatory events required of you to participate if you are part of BEAR. They are not optional. If you cannot be available to go to these events, then you do not need to try out for the team.
  - a. Kickoff – TBD (likely in the month of September)
  - b. First Practice - TBD
  - c. Game Day – TBD (likely in the month of November)
  - d. Regional Competition – TBD (likely in the month of December in Auburn)
2. If you are not willing to give up your Saturdays between the dates of Kickoff and Game Day then do not try out for the team. There may also be some Saturdays that will be required in preparation for Regional Competition if we advance.