



Celebrating 30 years of BEST Robotics

2022 Team Handbook



2022 Championship Schedule

Saturday, December 3rd

| | |
|-------------------|---|
| 8:30am – 12:00pm | Registration Check-in , Beard Eaves Memorial Coliseum <i>Teams must check-in prior to Compliance check-in</i> |
| 8:30am – 12:00pm | Compliance Check-In , Pit |
| 9:00am – 5:00pm | Pit Open , Coliseum Main Floor |
| 9:00am – 5:00pm | Team Exhibit Set-Up , Coliseum 3 rd Floor Concourse |
| 9:00am – 11:20pm | Marketing Presentations , ACLC Building |
| 9:30am – 1:00pm | Driving Practice , Coliseum Main Floor |
| 11:30am – 12:45pm | Women in STEM Luncheon , ACLC Building, Room 002 |
| 1:30pm – 2:00pm | Driver's Meeting , Coliseum Stands <i>Required of ALL who will be in the Pit during the competition</i> |
| 2:30pm – 2:45pm | Parade of Teams |
| 3:00pm – 5:30pm | Seeding Matches , Coliseum Main Floor Team Video Competition |
| 3:30pm | Coaches Meeting , Scholarship Room, Coliseum 1 st Floor |
| 5:45pm | Pit Closes |
| 6:00pm | Beard-Eaves-Memorial Coliseum Closes |

Sunday, December 4th

| | |
|-------------------|--|
| 8:30am | Coliseum Open |
| 8:30am – 4:00pm | Registration Open , Main Entrance |
| 8:30am | Pit Open , Coliseum Main Floor |
| 9:00am – 2:00pm | Special Awards Judging , Everywhere |
| 9:15am – 9:30am | 2022 South's BEST Opening and Official Welcome |
| 9:30am – 11:45am | Seeding Matches (cont.) |
| 9:30am – 2:00pm | Team Exhibit & Interview Judging , Coliseum 3 rd Floor Concourse |
| 11:45am – 12:45pm | Lunch Break <i>Pit and Coliseum Main Floor closed during lunch</i> |
| 12:45pm – 1:00pm | BEST Teachers and Judges Recognition , Coliseum Floor <i>All teachers assemble at the playing field "A" area</i> <i>All judges assemble at playing field "B" area</i> |
| 1:00pm – 1:30pm | Halftime Report <i>Recognitions and announcements</i> |
| 1:30pm – 1:45pm | Wildcard Match (8 teams) Video Competition Award Announcement |
| 2:00pm – 2:30pm | Semi-final Round (16 teams) |
| 2:30pm | Team Exhibits may be dismantled |
| 2:45pm – 3:00pm | Championship Round (4 teams) |
| 3:00pm – 3:45pm | Awards Ceremony & Championship Team Photos |
| 4:00pm | 2022 South's BEST Concludes |

*We're mindful that many teams need to get on the road as soon as possible.
We'll do everything possible to stick to this schedule, but sometimes "stuff" happens.*



Teacher's To-Do List

We recommend you follow this guide of tasks that need to be completed before and at South's BEST. Note that all times listed in this handbook are in the **Central Time Zone**. In addition, South's BEST staff will send out regular updates to the e-mail address provided on the team information form. These updates will contain critical information including scheduling changes and other event logistics. The team is responsible for maintaining a record of these updates and adhering to any changes that occur.

STEP #1 – Team Information Form



Submit your 2022 Team Information Form by 5:00pm (Central Time) on the Monday immediately following your hub competition using the following link or the provided QR code: https://auburn.qualtrics.com/jfe/form/SV_5mrcMTO2TuHVU1M.

- We will use the Remind app to share information to teams. Please register at <https://www.remind.com/join/southsb>

STEP #2 – Hotel Arrangements

To reserve hotel rooms, visit the Hotel reservation sheet in the South's BEST Championship Handbook. As much as possible, **please book hotels on this list so we can the impact of South's BEST in our area**. Cindy Pugh from the Auburn Opelika Tourism Bureau will be available to answer any questions you may have regarding the Auburn/Opelika area. Cindy works closely with our local hotels and understands the variety of amenities and price ranges available, thus making her a valuable resource for locating lodging that works for you and your group. For booking assistance, please contact Cindy directly at 334-704-0114 or by e-mail at cindy@aotourism.com.

STEP #3 – Engineering Notebook

All teams **must** submit an Engineering Notebook to compete at South's BEST. The **Engineering Notebook should be received five days following your local hub competition**. Team notebooks must be submitted electronically via BEST Registry (<https://registry.bestrobotics.org/>). Files must be in PDF format (saved as one single document – not multiple) with a file name of "Team# - Team Name.pdf" or "555 - South High School.pdf."

Please upload your team's engineering notebook submission by using the registry file upload feature. When uploading the file, select "Engineering Notebook" for the "What is the file for?" field. Be sure to check the appropriate box in the "Uploaded Files" table so that the file is visible to South's BEST.

Step #4 – Team Demographics/Minors on Campus Parental Waiver Submission

All teams must submit a copy of the Team Demographics Form and an Auburn University Minors on Campus Consent Form* for all team members planning to attend South's BEST. Forms must be submitted by Friday, November 18th.



Demographic form can be found here:

https://auburn.qualtrics.com/jfe/form/SV_6EbcYrMWPEZlOG

Minors on Campus forms can be found here:

https://auburn.qualtrics.com/jfe/form/SV_byC0Fd0LIHrjS8S



Forms must be signed (by a parent/guardian) and received by the deadlines stated above. The Auburn University Minors on Campus Consent Form is required for participation in South's BEST! This form is required to adhere to Auburn University's Minors on Campus policy.

If you have any questions or issues, please contact Dr. Jessica Gilpin (jaq0038@auburn.edu).

STEP #5 – Women in STEM Luncheon



Complete the South's BEST Women in STEM Luncheon Registration found at the QR code to the left or https://aub.ie/Women_In_STEM_Luncheon_BEST2022. Submit by Friday, November 18th. Seating is limited and available on a first-come, first-served basis. Each team may submit names for 10 participants (including adult chaperones) until all spaces fill. Once we have confirmed your school's seats at the luncheon, teams may substitute students into those slots without notifying the South's BEST staff. The 2022 South's BEST Women in STEM Luncheon will be held in Room 002 in the Academic Classroom and Laboratory Complex (ACLC Building) on Saturday, December 3rd from 11:30am to 12:45pm.

STEP #6 – Pre-order South's BEST Championship T-shirts

Collect t-shirt pre-orders from your students. Complete the South's BEST Championship T-shirt Pre-Order form in this Handbook and submit form and payment by Friday, November 11th using payment information provided on the form.

STEP #7 – Video Competition Submission

To compete in the Video Competition, follow the instructions on the Video Competition Requirements document in the Championship handbook. Submit a link to your video at the following link no later than 5:00pm on Friday, November 11th: https://auburn.qualtrics.com/jfe/form/SV_9MpkfVut57PHJ3g

STEP #8 – Marketing Presentation Time Selection (BEST Award Teams Only)

Marketing Presentations will be held on Saturday, December 3 (9:00am – 11:30am). You will be able to schedule your marketing presentation time slot via the BEST Registry (<https://registry.bestrobotics.org/>). Presentation time slots should be reserved no later than November 11th at 11:59 p.m. CST.

STEP #9 – Accommodations for Students with Disabilities

If a hearing interpreter is traveling with your party and needs access to areas of the competition site not open to the public, we need to know prior to your arrival to ensure all South's BEST staff members are informed. If you have a student who requires any other accommodations that you believe we need to be aware of, let Jessica know (jag0038@auburn.edu).

STEP #10 – Student Survey



Every participating member of your team **must** complete the Student Survey available at the following link: https://auburn.qualtrics.com/jfe/form/SV_6hhRv4ggUb6uS5o.

We will not distribute your registration packet or pit packet until each of your attending students have completed the survey.

STEP #11 – Information for Adults

Make copies of key sections of this handbook for other adults in the group. Pay particular attention to the information in the following documents:

- Compliance Checklist
- General Information
- Pit Protocol
- Parking Maps

STEP #12 – Registration Check-In

There will be one registration/check-in time available to teams.

- Saturday, December 3rd, 8:30am – 12:00pm (Beard-Eaves-Memorial Coliseum, 3rd floor concourse).

The primary/lead teacher should check-in at the above registration session to receive the competition information packet. Your team must check in before participating in any scheduled events.

Great deals!
SPECIAL RATES

SOUTH'S BEST ROBOTICS | DECEMBER 2-4, 2022



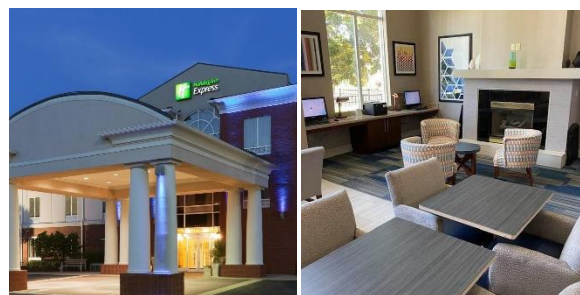
HAMPTON INN & SUITES - OPELIKA

RATE: \$109/night

DEADLINE: Book by **November 18, 2022** to receive rate

DETAILS: [Click to Book](#)

PHONE: (334) 745-4311



HOLIDAY INN EXPRESS & SUITES AUBURN

RATE: \$189/night

DEADLINE: Book by **November 18, 2022** to receive rate

DETAILS: [Click to Book](#)

PHONE: (334) 502-1090



CANDLEWOOD SUITES

RATE: \$179/night

DEADLINE: Book by **November 18, 2022** to receive rate

DETAILS: [Click to Book](#)

PHONE: (334) 521-7494



HAMPTON INN - AUBURN

RATE: \$139/night

DEADLINE: Book by **November 18, 2022** to receive rate

DETAILS: [Click to Book](#)

PHONE: (334) 821-4111

THIS INFORMATION PROUDLY PROVIDED BY AUBURN-OPELIKA TOURISM.
FOR A FULL SELECTION OF AREA HOTELS OR MORE INFORMATION, PLEASE
VISIT AOTOURISM.COM OR CONTACT BROOKE@AOTOURISM.COM.
334.501.3283

**AUBURN
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[HILTON GARDEN INN](#)

RATE: \$119/night

DEADLINE: Book by **November 20, 2022** to receive rate

DETAILS: [Click to Book](#)

PHONE: (334) 502-3500



[FAIRFIELD INN & SUITES AUBURN/OPELIKA](#)

RATE: \$109/night

DEADLINE: Book by **November 18, 2022** to receive rate

DETAILS: [Click to Book](#)

PHONE: (334) 742-2590



[STAYBRIDGE SUITES AUBURN](#)

RATE: \$119/night

DEADLINE: Book by **November 18, 2022** to receive rate

DETAILS: [Click to Book](#)

PHONE: (334) 591-8300



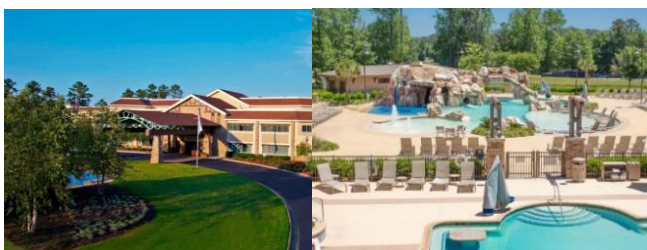
[MICROTEL INN & SUITES AT TIGER TOWN](#)

RATE: \$94/night

DEADLINE: Book by **November 18, 2022** to receive rate

DETAILS: [Click to Book](#)

PHONE: (334) 745-0415



[AUBURN MARRIOTT OPELIKA RESORT & SPA AT GRAND NATIONAL](#)

RATE: \$127/night

DEADLINE: Book by **November 4, 2022** to receive rate

DETAILS: [Click to Book](#)

PHONE: (334) 741-9292



[LA QUINTA INN & SUITES OPELIKA/AUBURN](#)

RATE: \$119/night

DEADLINE: Book by **November 18, 2022** to receive rate

DETAILS: [Click to Book](#)

PHONE: (334) 748-9000

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334.501.3283

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STAYBRIDGE SUITES AUBURN

RATE: \$119/night

DEADLINE: Book by **November 18, 2022** to receive rate

DETAILS: [Click to Book](#)

PHONE: (334) 591-8300

SHOW YOUR BADGE

While you're here, enjoy some of our favorite local restaurants, shops, and attractions - and here's a little discount to sweeten your stay! Simply *Show Your Badge (the digital coupon)* to participating businesses and receive the discount.

[Click here for discounts!](#)

OTHER AREA INFORMATION

- [Group/Team Friendly Dining Options](#)
- [Explore other events going on in the area!](#)
- [Fun activities for the whole team!](#)
- [Guides & Maps](#)

Show Your Badge



Welcome to Auburn-Opelika! While you're here, enjoy some of our favorite local restaurants, shops, and attractions. Simply **Show Your Badge** to participating businesses and receive the discount.

For a full list of discounts, scan the QR code with your smartphone camera or visit aotourism.com/show-your-badge.



THINGS TO DO IN AUBURN-OPELIKA



Rock 'N Roll Pinball

815 S Railroad Avenue, Opelika

Modern, classic, and vintage pins, two multicade FREE PLAY video arcades with over 500 games, snacks, beer, wine, TV lounge, and live music on Fridays at 8pm.



Jule Collins Smith Museum of Fine Art

901 South College Street, Auburn

The Jule Collins Smith Museum of Fine Art at Auburn University consists of changing exhibition galleries and Dale Chihuly's Amber Luster Chandelier, in a striking modernist building set within extensive grounds. A pillar of the Southern gateway cultural arts district, the museum offers impactful opportunities to engage with a wide-ranging visual and decorative art collection spanning centuries, genres, and materials.



Surge Trampoline Park

2506 Pepperell Pkwy, Opelika

Surge Trampoline Park in Opelika is a cutting-edge entertainment, fitness, and sports facility unlike anything you have ever experienced. With over 45,000 square feet of high-flying fun, we have created a venue for active social outings, intense workouts, and awesome birthday parties. All ages are welcome.



CyberZone

107 N 9th Street, Opelika

Battle it out in our pulse-pounding, custom themed laser tag, immerse yourself in a whole new virtual reality, and challenge yourself or a friend in our state-of-the-art arcades. With such a wide variety of experiences to explore, we're bound to have something to keep you entertained for hours!



The World's Best Lemonade

Toomer's Drugs | 100 N College Street, Auburn

When Toomer's lemonade ranked number one in Esquire magazine's "162 Reasons It's Good To Be An American," it was only about 105 years after the rest of us already knew. Handmade to order, this tart and tangy concoction is the hallmark of Toomer's Drugstore, a beloved Auburn icon and the only business that has occupied this historic corner since 1896.

Family-friendly Axe Throwing

Blade & Barrel Axe Co. | 1188 Opelika Road, Auburn

Blade & Barrel is an axe-throwing entertainment venue located in the Midtown entertainment district. It has 9 interactive Axe throwing lanes. Family-friendly fun, children age 8 and above can participate.





Chewacla State Park

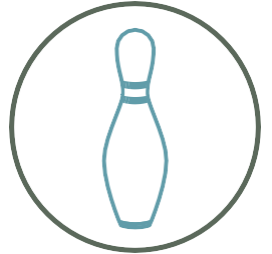
124 Shell Toomer Parkway, Auburn

Chewacla State Park's 696 scenic acres offer plenty of rest, relaxation, and recreation, just a short drive from Auburn University. Facilities include a 26-acre lake, swimming area, playground, a modern campground, picnic areas with tables, grills, and shelters, cabins, hiking, and mountain biking trails.

Eat + Play + Roll

750 E Glenn Avenue, Auburn

How do we roll at GoodTimes? Watching our favorite bands on video walls. Chillin' out on plush loungers. Feasting on over-sized eats with one hand and throwing strikes with the other. Bowling at GoodTimes isn't the same old game: it's an immersive lane-side experience, full arcade, and escape room extravaganza that transforms America's favorite recreational pastime into something worthy of the 21st century!



Kreher Preserve & Nature Center

3100 AL Hwy 147 N, Auburn

One hundred twenty acres of birds, walking trails, plants, and wildlife! Weekly programs for kids and families include hands-on activities with nature, exploration, and exercise. Enjoy the natural playground or a self-guided walk along the marked trails through natural habitats of over 80 species of birds and critters.

O Town Ice Cream

700 2nd Avenue, Opelika

The Opelika story being told through Ice Cream! O Town offers 30+ flavors of decadent ice cream. Try the Chunky Monkey Park, Spring Villa Vanilla, Summer Swing Strawberry, Railroad Tracks and more. Described as "A sweet treat destination for the authentic Opelikan" by the Opelika-Auburn News. O Town also serves lunch. Enjoy homemade soup and sandwiches.



Find more *cool* things to
do at AOTourism.com
or [@auburnopelika](https://www.instagram.com/auburnopelika).



Scan the QR code with your smartphone to see our Show Your Badge program which gets you great discounts at area restaurants, retailers, and attractions! You can also visit aotourism.com/show-your-badge.

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2022 Championship T-Shirt Pre-Order Form

T-shirts are \$17.00 pre-order (sizes S-XL), or \$20 on-site. T-shirts will be a **tultex** in indigo blue. Payment for pre-order shirts must be by credit card, check, or purchase order no later than Friday, November 11th. T-shirts can be picked up at the Registration table. **DO NOT SEND THIS FORM HOME WITH STUDENTS!** Only ONE pre-order form from each participating school is allowed.

Team #: _____ School: _____

Primary teacher name: _____

Primary teacher email: _____ Primary teacher phone: _____

Please fill out form and scan and email form to Kristen Jackson at kristenjackson@auburn.edu.

| Size | Quantity | Cost | Total Cost |
|-------|----------|---------|------------|
| S | | \$17.00 | |
| M | | \$17.00 | |
| L | | \$17.00 | |
| XL | | \$17.00 | |
| 2XL | | \$17.00 | |
| 3XL | | \$17.00 | |
| Total | | | |

Select Payment Method:

_____ **Credit Card**

Please visit aub.ie/STEMstore

_____ **Check**

Auburn University
Attn: Kristen Jackson, COSAM Outreach
131 Sciences Center Classrooms Building
Auburn University, AL 36849



Questions can be directed to Kristen Jackson at kristenjackson@auburn.edu



2022 Awards and Judging Logistics



Awards

In addition to the Standard Required Hub Level Awards outlined in the BEST Competition Rules document (Section 4 – *Awards & Judging*, pages 57-62; Section 5 – *BEST Award Components*, pages 63-71; Section 7 – *Standard Awards*, pages 74-76), the awards below will be given at the South's BEST competition. Unless otherwise noted, all teams are eligible for the award(s) with 1st – 3rd place plaques for each.

Engineering Notebook Award

Awarded to the team that scores the highest in the Engineering Notebook category.

Neptune Technology Group Most Elegant Robot

Awarded to the team whose machine demonstrates the best design and execution of the game...the machine that makes you say "Wow!"

Most Photogenic Robot

Awarded to the team whose machine is the most eye pleasing.

igus TOP GUN Award (First Place Only)

Awarded to the team who scores the most points in a single match.

T-Wear Design Award

Awarded for the most original game-specific team t-shirt or team-wear design. Team-wear entries should be items worn by all team members and supporters (button down shirts, golf shirt, t-shirts, etc.), not a one-of-a-kind item designed specifically for judging consideration. In addition, teams should submit a brief explanation of their design (no longer than one page) with their shirt. The explanation sheet should clearly identify the team # and school name and be attached to the shirt by pin, clothespin, paperclip, or some similar device. Entries should be submitted to the Registration/Information Desk on the 3rd floor concourse by noon on Saturday, December 3rd to be considered for judging. Items may be picked up at the Registration Desk on Sunday after 1:00pm.

Video Competition Award

To compete in the Video Competition, follow the instructions on the Video Competition Requirements document in the Championship handbook. Submit a url link to your video at the following link no later than 5:00pm on Friday, November 11th:

https://auburn.qualtrics.com/jfe/form/SV_9MpkfVut57PHJ3g

Hyundai Motor Manufacturing Alabama Team Exhibit Design & Construction Award (BEST Award teams only)

Awarded to teams with the most creative and innovative Exhibit design.

Spirit and Sportsmanship (BEST Award teams only)

Awarded to the team that scores the highest on the Spirit and Sportsmanship category.

Team Exhibit and Interview Award (BEST Award teams only)

Awarded to the team that scores the highest on the Team Exhibit and Interview category.

Marketing Presentation Award (BEST Award teams only)

Awarded to the team that scores the highest on the Marketing Presentation category.

***Note that we will not be hosting a Mascot dance-off competition this year and will not be recognizing the Best Mascot with an award as we have done in the past. However, teams are welcome to have mascots in attendance.**

***Note that we will not be judging team websites this year.**

Team Demographics/Minors on Campus Parental Waiver Submission

All teams must submit a copy of the Team Demographics Form and an Auburn University Minors on Campus Consent Form* for all team members planning to attend South's BEST. Forms must be submitted by Friday, November 18th. All teams must submit a copy of the Team Demographics Form and an Auburn University Minors on Campus Consent Form* for all team members planning to attend South's BEST. Forms must be submitted by Friday, November 18th.



Demographic form can be found here:

https://auburn.qualtrics.com/jfe/form/SV_6EbcYrMWPEZlOG

Minors on Campus forms can be found here:

https://auburn.qualtrics.com/jfe/form/SV_byC0Fd0LIHrjS8S



Forms must be signed (by a parent/guardian) and received by the deadlines stated above. The Auburn University Minors on Campus Consent Form is required for participation in South's BEST! This form is required to adhere to Auburn University's Minors on Campus policy.

If you have any questions or issues, please contact Dr. Jessica Gilpin (jag0038@auburn.edu).

** The Auburn University Minors on Campus Consent Form is required for participation in South's BEST. This form is required to adhere to Auburn University's Minors on Campus policy.*

BEST Award Requirements and Logistics

Hub vs. Championship Judging

Teams chosen to participate in the BEST Award recognize that inclusiveness, diversity of participation, exposure to and use of the engineering process, sportsmanship, teamwork, creativity, positive attitude and enthusiasm, and school and community involvement play significant roles in a team's competitive experience and contribute to student success in the competition beyond winning an award.

In accordance with the BEST philosophy, materials submitted by teams must be the work of students. The involvement of student peers in auxiliary roles to support a school's official BEST team with the documentation – i.e., journalists, photographers, and/or artists– is encouraged.

Due to space limitations, we will enforce a limit on the number of BEST Award teams that are eligible to compete at South's BEST. Teams that advance due to their BEST Award placing will be expected to compete in the BEST Award at South's.

All teams competing for the BEST Award must participate in all categories and will be judged using the following point system:

| Judged Components | Point Value |
|-----------------------------|-------------|
| Engineering Notebook | 30 points |
| Marketing Presentation | 25 points |
| Team Exhibit and Interviews | 20 points |
| Spirit and Sportsmanship | 10 points |
| Robot Performance | 15 points |
| | |

Total: 100 points

Engineering Notebook (30 points)

ALL participating teams (both BEST Award and non-BEST Award) are required to submit an Engineering Notebook within 5 days after their hub competition in order to compete at South's BEST. The Engineering Notebook should be received by 5PM on the date below.

Team notebooks must be submitted electronically via the BEST National Registry (<https://registry.bestrobotics.org/>). The engineering notebook is listed under "Tasks & Deliverables" on your team workflow. Files must be in PDF format (saved as one single document – not multiple) with a file name of "Team# - Team Name.pdf" or "555 - South High School.pdf."

Please upload your team's engineering notebook submission by using the registry file upload feature. When uploading the file, select "Engineering Notebook" for the "What is the file for?" field. Be sure to check the appropriate box in the "Uploaded Files" table so that the file is visible to South's BEST.

For additional information regarding Engineering Notebook requirements, please reference Section 5.1 – *Judged Components*, pages 73-74 of the 2022 BEST Robotics Competition Rules.

Marketing Presentation (25 points)

Marketing Presentations will be held on Saturday, December 3 (9:00am – 11:30am). You will be able to schedule your marketing presentation time slot via the BEST Registry

(<https://registry.bestrobotics.org/>). Presentation time slots should be reserved no later than November 11th at 11:59 p.m. CST.

Teams at South's BEST will have a total of 15 minutes to complete their presentation, with up to 5 minutes of additional time for Q and A with the judges.

For additional information regarding Marketing Presentations, please reference Section 5.2 – *BEST Award Components*, pages 66 - 68 of the 2022 BEST Robotics Competition Rules.



2022_BEST_Competiti
on_Rules_v1.0.pdf

Team Exhibit and Interviews (20 points)

Team Exhibits will be located on the 3rd floor concourse of the Beard-Eaves-Memorial Coliseum. Exhibits are restricted to a size of 8 feet wide X 8 feet tall X 8 feet deep. The South's BEST staff will assign team locations for Exhibit placement. Teams will be directed to their assigned location upon registration.

Team Exhibit set-up can begin after team check-in at the Registration desk in the Beard-Eaves-Memorial Coliseum. Exhibits should be completely set up by 5:00pm on Saturday, December 3. Judging will begin at 9:30am on Sunday, December 4. Teams will be visited by 3 to 5 judges. Please wait until the official announcement on Sunday afternoon before any breakdown begins. During breakdown, students should remove ALL portions of the Exhibits. A large dumpster will be available outside the south entrance of the building to discard unwanted items.

Tables will not be provided at South's BEST. Teams wishing to have a table in their booth should supply their own. Each team should bring one extension cord and one power strip IF the display requires electricity.

Teams should not leave valuable equipment in the Exhibit booth overnight.

Fog machines and strobe lighting are NOT allowed in booths. Heat generating devices are NOT allowed in booths (e.g., blow dryers, soldering irons, utility lamps, 3D printers, etc.). Standard string/Christmas lights are fine. Candy and other food or drink items are NOT permitted at Team Exhibits as complimentary handouts.

Live animals should not be part of the exhibit and may NOT be distributed as part of a team giveaways. Stickers will NOT be allowed to be distributed as part of team giveaways.

For additional information regarding your Team Exhibit and Judges Interview, please reference Section 5.3 – *BEST Award Components*, pages 68-71 of the 2022 BEST Robotics Competition Rules.

Spirit and Sportsmanship (10 points)

Judges will evaluate this category on Game Weekend.

Judges will observe the spirit promoted by the team during the head-to-head competition matches as well as the team's conduct throughout the day in the seating area, team exhibit area, game floor, and pit area.

Judges may also consider the teams' conduct at the entire competition (Saturday, Saturday evening, hotel locations, etc.).

No tape of any kind can be used on any Beard-Eaves-Memorial Coliseum surface to secure posters, banners, spirit signage, etc. Teams should plan to use rope, cable ties, string, etc. when securing spirit stick items to Coliseum surfaces. Tape may be used inside Team Exhibits on surfaces provided by the team.

The following noise-makers are banned at the event: air-horns, whistles (and similar high frequency items), bass drums (and similar low frequency items), amplified sound or amplified instruments. The Head Judge has the right to ban any noise-makers that are deemed to potentially cause hearing damage by those in attendance at South's BEST.

Instruments, including bass drums, will only be allowed during specified spirit breaks and should not be played unless invited by the emcee.

Spirit Stick: To facilitate judging, each competing team may bring a "spirit stick" for identification in the seating area. Specifications include:

- School name and/or team number prominently displayed and visible by judges from a distance
- Pole constructed of PVC pipe or similar material (should not be pointed or sharp on either end)
- Maximum height of 8 feet
- Maximum of 5 spirit sticks per team

Spirit sticks are meant solely as a means of team identification by the judges during the competition. Please do not attach spirit sticks to the seating area.

Note that the Coliseum may not be well-lighted during the competition, so teams may wish to take this into account when designing their spirit stick. Making a team easier to identify makes for happy judges!

For additional information regarding Spirit and Sportsmanship, please reference Section 5.4 – *BEST Award Components*, pages 71-72 of the 2022 BEST Robotics Competition Rules.

Robot Performance (15 Points)

The fifth category, Robot Performance, will determine the final 15 points of teams' BEST Award score. These 15 points will be based on the total game points earned throughout the seeding

phase of the competition (prior to the semi-final and championship rounds) according to the following scale:

| | |
|---|-----------|
| Team finishes in top 20% of all teams competing | 15 Points |
| Team finishes in top 40% of all teams competing | 12 Points |
| Team finishes in top 60% of all teams competing | 9 Points |
| Team finishes in top 80% of all teams competing | 6 Points |
| Team finishes in top 100% of all teams competing | 3 Points |
| Team is unable to score any points during the competition | 0 Points |

Up to 15 Robot Performance points will be included in BEST Award points.

Applying for the Simulink Design Award

The “BEST Simulink Design Award” sponsored by MathWorks is an award open to all teams participating in the competition. The award will be presented to one team in each of the 3 BEST championship regions (South’s, Texas, Denver) that best applies Simulink in the programming of their robot based on the judging criteria and their robot’s performance in the competition. Any team using MathWorks MATLAB/Simulink to design their software (i.e. robot program) is eligible. The entries must be submitted by November 18, 2022 for all regions.

For detailed information regarding this award, please see the following: Section 4.3 – *Simulink Design Award Guidelines* on pages 59-61 in the 2022 BEST Robotics Competition Rules.

Additional Information

Seating at South’s BEST

Teams will be assigned a seating location upon check-in on Saturday morning. The amount of seating provided will be based on the attendance number provided on the Team Information Form. If that number changes significantly, please contact Jessica Gilpin (jag0038@auburn.edu) with updated numbers. Teams may NOT rope off seating areas due to fire code restrictions.

Judging Procedure and Results

A distinguished team of judges from both private and public sectors with technical and non-technical expertise will evaluate teams with all judges serving on a rotation schedule.

Category scores will be the average of each judges’ individual scores. Teams should know in advance that scores among many teams frequently differ by only fractions of a point.

Each team will be emailed a copy of its score sheets following the competition. Top rankings will be posted on the South’s BEST website at www.southsbest.org.



Video Competition Specifications

Teams competing in the Video Design Competition should prepare a 90 second video on this year's game theme. The purpose of the video contest is to enhance students' researching and fact-finding skills, and to educate them about the game theme. Students are encouraged to be creative in their entries, yet informative. The video can be staged as a short play, commercial, news broadcast, talk show, music video, documentary, etc.

Guidelines

- One submission per team
- Between 60 seconds – 90 seconds in length
- Based on your current BEST team
- Incorporate this year's game theme
- Include school name, location, and name of participating hub
- Can include music, but no objectionable lyrics
- Content should not be objectionable and should be representative of the team and school
- Resolution should be at minimum 1280 X 720 (720p)

Judging Criteria

- Captivating
- Creativity and innovation
- Clarity of audio
- Technical quality of video
- Editing (organization, flow)
- Best use of game theme
- Best combination of narration and video
- Best incorporation of team members

Judging Process

A team of judges will preview videos and choose the top videos to be shown during South's BEST. South's BEST teams will vote on the top three videos. The winners will be announced on Sunday.

Video Submission Process

Videos should be uploaded via the following link: [2022 Video Submission](#) by **Friday, November 11th**.

Judges' 2022 Engineering Notebook Score Sheet

Purpose: To document the process used to design, build, and test the robot. (30 pts.)

| Research Paper (4 pts.) | | | | Possible Points | Points Awarded |
|---|--|------|---|-----------------|----------------|
| Correlation between the game and how the science/technology is being used at a company/industry/research lab in the team's state or region | | | | | |
| 8-10 | In-depth discussion of how this year's game theme relates to industry in this region. | | | | |
| 4-7 | General discussion of how this year's game theme relates to industry in this region. | | | | |
| 1-3 | General discussion of this year's game theme, but no ties to the region | 0 | No discussion of game theme. | | |
| <i>Comments:</i> | | | | 10 | |
| Any related information of the game theme such as history, famous inventor(s), major milestones, etc. | | | | | |
| 4-5 | In-depth discussion of history and people related to this year's game theme. | | | | |
| 2-3 | General discussion of history and people related to this year's game theme. | | | | |
| 1 | Some mention of history or people. | 0 | No discussion of related info | | |
| <i>Comments:</i> | | | | 5 | |
| Analysis of the game theme/problem & related technology's impact on the human experience, our needs, adaptations, and progress with solutions. | | | | | |
| 4-5 | In-depth historical account of the effects to human experience, needs, adaptation and progress toward solutions. | | | | |
| 2-3 | Some discussion about the effects of the theme/problem/technology on human experiences, needs, adaptations or progress. | | | | |
| 1 | Mentioned the effects to human experience, needs, adaptation or progress. | 0 | No mention of history/effects to humanity. | | |
| <i>Comments:</i> | | | | 5 | |
| Creativity in linking the game to appropriately related science content | | | | | |
| 8-10 | Very creative in linking this year's game theme to other science/technology. | | | | |
| 4-7 | Attempted to link this year's game theme to other science/technology. | | | | |
| 1-3 | Mentioned other science/technology. | 0 | No discussion of other science/technology. | | |
| <i>Comments:</i> | | | | 10 | |
| Proper formal writing - Proper use of grammar & composition throughout ; source citations used to gather information; within 2-5 page limit | | | | | |
| 8-10 | Very few grammar mistakes/misspellings, included citations, 2-5 pages. | | | | |
| 4-7 | Noticeable grammar mistakes/misspellings or did not include citations, 2-5 pages. | | | | |
| 1-3 | Many grammar mistakes/misspellings, no citations, or not within 2-5 pages. | 0 | Incomprehensible or missing. | | |
| <i>Comments:</i> | | | | 10 | |
| Design Process (17 pts.) | | | | | |
| Implementation of the Engineering Design Process (Evidence that the engineering design process was effectively used) | | | | | |
| 21-25 | Process is explicitly identified; steps are obvious and explanation is thorough. | | | | |
| 16-20 | Process is identified; steps are discernible and there is some explanation. | | | | |
| 11-15 | Process is not identified; there is some discussion of a design process. | 6-10 | Discussion of process is minimal. | | |
| 1-5 | You can tell there was a design process of some sort. | 0 | No discernible design process. | | |
| <i>Comments:</i> | | | | 25 | |
| Brainstorming Approaches - How well organized and productive was the brainstorming approach? How well was it documented? | | | | | |
| 21-25 | Approach is explicitly identified, organization & productivity are obvious, explanation is thorough, discussion of how decisions made. | | | | |
| 16-20 | Approach is identified, organization and productivity are discernible, there is some explanation. | | | | |
| 11-15 | Approach is not identified, there is some discussion of brainstorming. | 6-10 | Discussion of approach is minimal. | | |
| 1-5 | You can tell there were ideas generated. | 0 | No discernible brainstorming. | | |
| <i>Comments:</i> | | | | 25 | |
| Analytical evaluation of design alternatives - Use of analytical and mathematical skills in deciding upon and implementing design alternatives | | | | | |
| 21-25 | Evaluation is explicitly identified, analytic/mathematical approach is obvious, alternative designs are explained. | | | | |
| 16-20 | Evaluation is identified, analytic/mathematical approach is discernible, alternative designs are identified. | | | | |
| 11-15 | Evaluation is not identifiable, alternative designs are identified. | 6-10 | Discussion of alternative designs is minimal. | | |
| 1-5 | You can tell there were alternatives. | 0 | No discernible evaluation. | | |
| <i>Comments:</i> | | | | 25 | |

Judges' 2022 Engineering Notebook Score Sheet

| | | | | |
|--|--|--------------------|--|---------------|
| Offensive and defensive evaluation - Analysis of gaming strategies and design elements used to achieve team goals | | | | |
| 21-25 | Evaluation of offensive/defensive strategies is explicitly identified, goals of this team are clearly identified, discussion shows a deep knowledge of the game. | | | |
| 16-20 | Evaluation is identified, goals are discernible, discussion shows a knowledge of the game. | | | |
| 11-15 | Evaluation is not identified, there is some notion of goals and game knowledge. | | | |
| 6-10 | Discussion of goals and game knowledge are minimal. | | | |
| 1-5 | There is some slight mention of strategy. | 0 | No discernible evaluation. | |
| Comments: | | | 25 | |
| Software Development Process (Evidence that a software development process was effectively used) | | | | |
| 21-25 | Process is explicitly identified; steps are obvious and explanation is thorough. Design methods utilized are identified and explained. | | | |
| 16-20 | Process is identified; steps are discernible and there is some explanation. Some design methods are discussed. | | | |
| 11-15 | There is some discussion of a development process or design methods. | 6-10 | Process is mentioned but minimal detail. | |
| 1-5 | You can tell there were some software design methods used. | 0 | No discernible software development process | |
| Comments: | | | 25 | |
| Safety - Evidence that safety training occurred and safe practices were followed to prevent students' misuse of tools and other devices/equipment that may result in personal injury or damage to property | | | | |
| 17-20 | Clear evidence that safety training occurred, clear evidence that the team verified safety procedures were followed. | | | |
| 13-16 | Clear evidence of safety training, some evidence procedures were verified. | | | |
| 9-12 | Some evidence of safety training, some procedures were verified. | 5-8 | Some evidence safety training, no verifying proc | |
| 1-4 | Safety was mentioned; unsafe methods might be visible in photos. | 0 | No mention of safety. | |
| Comments: | | | 20 | |
| Support Documentation - Team organization, meeting minutes/notes, CAD/other drawings, photos, derived requirements, test results, code/algorithms, etc. that support the main document (max 40 pages) | | | | |
| 21-25 | Clearly identifies at least 5 categories mentioned above; references made from primary document. | | | |
| 16-20 | Items from at least 4 categories mentioned are included. | | | |
| 11-15 | Items from at least 3 categories above are included. | 6-10 | Items from at least 2 categories above are included. | |
| 1-5 | Includes items from at least 1 category; but not identified. | 0 | No items from listed categories are included. | |
| Comments: | | | 25 | |
| Overall Quality and completeness of Notebook (9 pts.) | | | | |
| Organization and appearance - Table of contents, summary, page numbers, discussion of evaluation points, linkage to appendices | | | | |
| 21-30 | Well organized, looks good, includes Table of Contents, summary, page numbers, discussion of evaluation points (e.g. Items on the score sheet), linkage to appendices. | | | |
| 11-20 | Reasonably organized, looks good, missing one or two items from list above. | | | |
| 1-10 | Poorly organized, no attention to looks, missing multiple items from list above. | 0 | Disorganized, missing most items. | |
| Comments: | | | 30 | |
| Adherence to specifications Cover sheet and/or title page that identifies the school team name, teacher contact information, and team number 1" margins; Business font no smaller than 12 pt., double-spaced (single spaced ok in tables and outlines) ; PDF Format Only, 35 pages max for main section, 40 pages max for appendices | | | | |
| 21-30 | Adheres to the specifications listed above. | | | |
| 11-20 | Violates one of the specifications listed above. | | | |
| 1-10 | Violates two or three of the specifications listed above. | 0 | Violates four or more specs. | |
| Comments: | | | 30 | |
| Quality of content - Well written, clear photo labels, lack of extraneous material such as community or promotional efforts, spirit development, team building | | | | |
| 21-30 | Everything is well written/clear/logical, everything is clearly labeled, no excess material. | | | |
| 11-20 | You can follow everything with some effort, one or two things that are unnecessary. | | | |
| 1-10 | Hard to understand in places, labels missing in places, unnecessary material. | 0 | Very difficult to follow, unnecessary material. | |
| Comments: | | | 30 | |
| SCORE CALCULATION and Additional Comments: | | Total | | 300 |
| | | | | ÷10 |
| | | Final Score | | 30 max |

Judge name/number (print): _____

Team Number: _____ **School:** _____

2022 Marketing Presentation Score Sheet

Objective: Address the needs of a potential client, share product and brand information and navigate the business environment (25pts)

| | Scoring Sections | Possible Points | Points Awarded |
|------------------------------------|--|-----------------|----------------|
| Section 1: Company Overview | | 75 | |
| Organization | Presented structure/org chart, employee roles, experience levels (grades/years), inclusiveness – team is multidisciplinary and includes roles in engineering, business, presentation skills, etc. | 10 | |
| Mission Statement | Defined the team's mission statement – one or two sentences, using simple and concise terms, stating the team's purpose for being, encapsulating culture, values, and ethics. | 10 | |
| Brand Promise | Defined the team's brand promise – the value or experience customers can expect to receive every time they interact with the company. | 10 | |
| Visual Identity | Created a strong visual identity (logos, color scheme, style book, etc.) based on brand and mission. | 10 | |
| Public Image | Presented the team's publicity, social responsibility, community visibility (brochures, press release, outreach to other Schools and Businesses). It included BEST and sponsor logos. | 15 | |
| Budget | Presented funding sources (sponsors, in-kind, fundraisers) and engineering development expenses. | 10 | |
| Company Sustainability | Presented and explained the 1-year company outlook, including employee development, recruitment, and training. Explained how they will leave the team in better hands for next year. | 10 | |
| Comments: | | | |
| Section 2: Product Features | | 70 | |
| Task Knowledge | Defined the problem and customer priorities (as derived from the game rules). Has specific requirements and specifications listed. Referenced the Client's needs" as listed in the Request For Proposal ("the Game Story") and defined their focused solution. | 20 | |
| Meeting Requirements | Described how the specific game details influenced their detailed design. Described how the real physical features of the robot address actions on the physical field. Explained how the product's features solve the client's problem. | 20 | |
| Differentiation | Explained how the product features are unique and better than the competition. | 20 | |
| Visual Aids | Used visual aids to effectively enhance the presentation (eg. CAD drawing, computer simulation, photos, videos, mockups, infographics, etc.) | 10 | |
| Comments: | | | |

Judge Name/number (print): _____

Team Number: _____ School: _____

2022 Marketing Presentation Score Sheet

| Scoring Sections | | Possible Points | Points Awarded |
|--|--|---------------------|----------------|
| Section 3: Business Offer | | 50 | |
| Sales Price | Showed the product's acquisition cost. May include individual and multiple units, delivery, warranty, repairs, training, etc. Showed manufacturing cost – (MLO); part of acquisition cost based on the cost of the Materials, Labor, Overhead. Included an itemized cost breakdown and explained final Price. (Clarification: Based on real costs of the prototype robot, not a hypothetical for the company). | 25 | |
| Aftermarket Support | Addressed details of warranty and training for the client's workforce to operate and/or maintain the product. | 20 | |
| Formal Offer | Formal offer was made in the meeting. | 5 | |
| Comments: | | | |
| Section 4: Business Professionalism | | 55 | |
| Mechanics | All 4-8 presenters participated; dressed professionally or theme-based. Students performed all set up/breakdown; stayed within time limits. | 10 | |
| Endorsements | Included testimonials to support research or success stories. | 10 | |
| Professional | Presentation was understandable, well organized, prepared, conversational, and engaged in discussion. Fully responsive to questions. | 15 | |
| Creativity | Presentation was creative and interesting. (Wow Factor) | 20 | |
| Comments: | | | |
| Additional Comments: | | Total: | 250 |
| | | | ÷10 |
| | | Final Score: | 25 |

Judge Name/number (print): _____

Team Number: _____ School: _____

2022 Team Exhibit and Interviews Score Sheet

Total: 20pts

| Student Interviews | | Possible Points | Points Awarded |
|---|--|-----------------|----------------|
| Objective: Communicate Company Brand, Learning, and Outreach Scores will reflect interviews with students at team exhibits, in the pit area and in the stands | | | |
| Section 1: Elevator Speech and Branding | | | |
| Elevator Speech | Clearly defines what benefits the product (robot) delivers. Explains outreach and social responsibility. Conveys the company's brand through tone and language. | 20 | |
| Branding | Brand promise (what service/reputation your company offers the customer) is evident in the Exhibit. Explains how the product illustrates the company brand. | 15 | |
| Comments: | | | |
| Section 2: Knowledge and Experience with BEST | | | |
| Knowledge | Students easily and thoroughly answer technical questions about the robot, team exhibit, and related materials. They show a deep understanding of the design and construction of robot and exhibit; adult contributions are mentioned purely in an advisory capacity. | 15 | |
| Learning | Evidence of students' learning experience and understanding of the game. They can clearly articulate lessons learned through experience, and it is evident they understand the game theme. | 15 | |
| Enthusiasm (Enjoyed it) | Students describe with obvious enthusiasm and positivity their experience in BEST and show a clear understanding of the organization's mission. Students communicate the impact of the BEST Robotics program on his/her path toward STEM or career choice (testimonial). | 10 | |
| Comments: | | | |
| Section 3: Outreach | | | |
| Sharing | Sharing information and/or technology resources, and mentoring other schools, including other BEST teams. Clear evidence of support (including testimonials or storytelling) to other schools with information, technology, or encouragement. | 20 | |
| Publicity/ Demos | Students effectively communicate their publicity methods (print materials, media/press), media platforms used, and specific presentations/demonstrations to other schools & community groups about BEST to generate excitement. | 20 | |
| Inclusion | Evidence that recruitment efforts include multiple grade levels and students from a cross-section of the school population. Clearly identify specific efforts to promote inclusiveness. | 15 | |
| Advocacy | Fundraising and/or sponsorship efforts. Describe strategies to recruit sponsors, team fundraisers, and how any funds raised were allocated to support team (team budget available for review). Presents and demonstrates strong evidence of effectively executing these efforts. | 10 | |
| Comments: | | | |
| Interviews Subtotal | | 140 | |

Judge Name/number (print): _____

Team Number: _____ School: _____

2022 Team Exhibit and Interviews Score Sheet

Total: 20pts

| | Exhibit Objective: Display a Visual Story of the Product and Company | Possible Points | Points Awarded |
|---------------------------|--|-----------------|----------------|
| Section 4: Exhibit | | | |
| Creativity | Creativity in incorporating game theme into design and presentation of this exhibit. Display is unique. Game theme is very prominent. | 25 | |
| Technology | Effective balance of print, multi-media and technology in exhibit. • Physical Exhibit (e.g., display boards, physical models, multi-media equipment, etc.) • Virtual Exhibit (e.g., graphics vs. text, virtual models, rich multi-media, creative layout, etc.) | 15 | |
| Aesthetics | The exhibit is cohesive, engaging, and interactive. Information is logically arranged. | 10 | |
| Compliance | Team, Hub, and national BEST logos / branding are visible. All sponsors are clearly displayed. Compliance with specifications (did not exceed space allocation of 8'X8'X8' cube). Area is neat, clean, well-organized. Evidence that the students were the primary designers and builders of robot, team exhibit, and all materials. | 10 | |
| | Interview Subtotal | 140 | |
| | Exhibit Subtotal | 60 | |
| | Interview & Exhibit Raw Total | 200 | |
| | | ÷ 10 | ÷ 10 |
| | Exhibit & Interviews Total | 20 | |
| Comments: | | | |
| Overall Comments | | | |

Judge Name/number (print): _____

Team Number: _____ School: _____

Judges' 2022 Spirit and Sportsmanship Score Sheet

Purpose: To display team spirit & sportsmanship at the competition. (10pts)

SPIRIT! (4 points)

| Exhibit vigor and enthusiasm throughout competition event. | | | |
|--|---|--|----|
| 12-10 | Clear evidence of continued support over an extended time period, group is loud and enthusiastic and consistent encouragement for own team and opponents. | | |
| 9-7 | Evidence of support most of time, group is often loud and enthusiastic, but inconsistent for opponent teams. | | |
| 6-4 | Group is loud and enthusiastic once or twice, and there is not visible encouragement for opponent teams. | | |
| 3-1 | You can tell some people are rooting for the team once in a while. | | |
| Comments: | | | 12 |
| Use of signs, posters, props, costumes, t-shirts, etc. | | | |
| 12-10 | Group uses multiple avenues of support - signs, posters, props, costumes, t-shirts, these are creative and noticeable. | | |
| 9-7 | Group uses three or more methods of support, but they are not particularly creative or noticeable. | | |
| 6-4 | Group shows support through one or two methods in a creative way. | | |
| 3-1 | Group shows support through one or two methods, but they are not creative or noticeable. | | |
| Comments: | | | 12 |
| Cheerleaders, mascots, bands, organized noise-makers, etc. | | | |
| 8-6 | Group has several of these things (cheerleaders, mascots, bands, noise-makers), they are quite noticeable, and appropriately used. | | |
| 5-3 | Group has several things, but they are not prominent and are noticeable or appropriately used. | | |
| 2-1 | Group has one of these things, but many not noticeable or appropriately used. | | |
| Comments: | | | 8 |
| Number of supporters with school (other than students) | | | |
| 8-6 | It is clear there are many non-student supporters, and they are actively engaged. | | |
| 5-3 | There are clearly a few supporters other than students, but appear to be somewhat disengaged. | | |
| 2-1 | You think they have non-students supporters but you aren't sure. | | |
| Comments: | | | 8 |

SPORTSMANSHIP (6 points)

| Outward display of sportsmanship (e.g. helping other teams in need). | | | |
|--|---|-------------|--|
| 20-19 | You clearly see and hear of two or more instances of helping another team that are genuine. | | |
| 18-15 | You clearly see and hear of at least one instance of helping another team that are genuine. | | |
| 14-10 | You clearly see and hear of instances of helping another team but not authentic. | | |
| 9-5 | Group appears helpful, but you have no direct evidence. | 4-0 | Minimal engagement with other teams, or teammates on their own team. |
| Comments: | | | 20 |
| Conduct an attitude considered befitting participation in sports (e.g., grace in winning or losing). | | | |
| 20-19 | Team actively cheers for other teams no matter what the circumstances, they always show respect for others. | | |
| 18-15 | Team generally cheers for and supports other teams most of the time. | | |
| 14-10 | Team sometimes cheers for others. | | |
| 9-5 | Team shows respect for others most of the time. | 4-0 | Team shows minimal respect for others. |
| Comments: | | | 20 |
| Evidence that students are the primary "pit crew" (robot repairs and adjustments during competition) | | | |
| 20-16 | Students clearly do all the work with minimal guidance from adults. | | |
| 15-10 | Students do most of the work with some help from adults. | | |
| 9-5 | Adults are in charge in the pit and students are doing some work. | 4-0 | Adults are in charge in the pit and students are doing minimal work |
| Comments: | | | 20 |
| SCORE CALCULATION and Additional Comments: | | Total | 100 |
| | | | ÷10 |
| | | Final Score | 10 max |

Judge name/number (print): _____

Team Number: _____ School: _____



General Information

Access to Power for Team Exhibits

Teams will be required to provide their own supplies, including surge protectors/power strips, a 25-foot (recommended) extension cord, and gaffer's tape. Teams are responsible for securing their extension cords to the ground using gaffer's tape. South's BEST staff will facilitate the set-up of exhibits to ensure that all walking paths are clear and cords are securely taped down.

Teams should not use heat-generating devices in their Team Exhibits. This will overload the circuit in the Coliseum and cause problems. Examples of heat-generating devices that should not be used include soldering irons, utility lights (unless it is LED), 3-D printers, etc. If you are uncertain about using a particular device, please contact the Awards and Judging coordinator, Mary Lou Ewald (ewaldml@auburn.edu).

Bus Driver Restrictions

If you're booking a bus, be sure to check with the company about how long the driver can be on duty without having to take a break. Many states have laws regarding driving-time limitations for bus drivers.

Clean-Up and Maintenance of the Coliseum facility

Auburn University Facilities Management is kind enough to allow us use of this space, but any future use is contingent upon our maintenance of the facility. Encourage students to be good stewards of this facility as we wish to continue using facilities on campus for South's BEST in future years.

- Spray paints and spray adhesives should not be used inside the facility.
- Glitter should not be applied to an object while inside the facility.
- **Signage may not be adhered with tape to ANY SURFACE of the facility. This includes to the back wall of the Coliseum for team signs.**
- No confetti!

Help us keep the Beard-Eaves-Memorial Coliseum clean and free of trash. In your registration packet you will find a large trash bag for your convenience. Trash bags may be left near any Coliseum garbage can at the end of the event on Sunday. Upon conclusion of Sunday's events please have your students do the following:

- Dispose of all food and drink trash in your team's seating area.
- Remove and dispose (or take with you) any signage used in your team's seating area.

- Remove all trash, items, and portions of your Team Exhibit. Do not leave any part of your team's exhibit behind in the Coliseum. We cannot be responsible for disposing of wood, PVC, etc.
- For all the above, **please utilize the dumpster that will be located at the South Entrance of the Coliseum.**

Concessions

Details on concessions and mealtime options will be shared on the website in mid-November.

Driver's Meeting (Saturday, 1:30 – 2:00pm)

ALL team members that expect to be in the Pit during the competition must attend this meeting in the Coliseum seating. Teachers and mentors are welcome to attend the meeting to assist students as needed.

Emergency Number

Determine one adult who will be responsible for receiving any emergency phone calls from home while your team is here. Provide that person's cell number to parents, school officials, and others.

First Aid

An EMT is on-duty both days Saturday and Sunday during the event. Medical emergencies should be reported to Registration. The nearest emergency facility is the East Alabama Medical Center Freestanding Emergency Department located approximately 1.5 miles from the Coliseum:

<https://www.eamc.org/location/east-alabama-medical-center-freestanding-emergency-department>

900 Camp Auburn Road
Auburn, AL 36832
Phone: 334-364-3000

East Alabama Medical Center offers a full-service hospital in Opelika at the following address:

East Alabama Medical Center
2000 Pepperell Parkway
Opelika, AL 36801
334-749-3411

Lost and Found

Lost and Found is located at Registration on the 3rd floor.

Noise-Makers and Band Instruments

The following are not allowed in or around the Coliseum and will be confiscated:

- Air horns
- Electric instruments
- High intensity/high frequency noise makers

The Head Judge has the right to ban noisemakers that are deemed hearing hazards.

Spirit and Sportsmanship is being judged this year so bands/pep bands will be allowed at South's BEST. Bands will be allowed to play in the stands when instructed to do so by the emcees, but not outside of that time. Bands can play on the 3rd Floor Concourse at anytime

Parking and Unloading

Auburn University does not ticket during weekends. However, vehicles parked in areas not specifically designated for vehicle parking (sidewalk, grass, etc.) may be ticketed and towed at the owner's expense. Parking is sometimes a slow process. Please be mindful of this when setting your departure times. In this packet you will find parking maps for cars, trailers and buses. Please print these maps and bring them with you to the event.

- Suggested Parking Areas:
 - Cars are encouraged to park in the following lots: Beard-Eaves-Memorial Coliseum Parking Lot, and the Stadium Parking Deck
 - Note that there is a women's basketball game at the Arena on Saturday afternoon and a swim competition on Sunday of South's BEST so parking near the Coliseum may get crowded. Showing up early to park can never hurt your chances!
 - Buses must park at the Intramural Fields.
 - Trailers may park at both the Beard-Eaves-Memorial Coliseum Parking Lot and the Intramural Fields
- Designated Unloading Areas:
 - Materials Unloading: Cars and small trailers carrying exhibit materials should unload at the 5 Minute Unloading Zone (see map in this handbook) located on the South Entrance of the Beard-Eaves-Memorial Coliseum.
 - Each team should have a group of students, parents, mentors (other than the driver of the vehicle) prepared to remove the exhibit from the vehicle in a timely manner.
 - **The driver of the vehicle should NOT leave the vehicle at any time during the unloading process.**
 - A South's BEST staff member will be available on site during the unloading times to assist and ensure a smooth process.
 - Students: Students arriving in buses should be dropped off at the EAST entrance of the Beard-Eaves-Memorial Coliseum. Please see the 2021 Map for procedures for dropping off students from buses.

Photos & Video – Blanket Release Permission

South's BEST assumes blanket permission to photograph and video team members, teachers, parents, chaperones, mentors, and others in attendance. These are used for promotional purposes in printed materials, videos, and on BEST websites.

Souvenirs

South's BEST souvenirs and a limited number of championship t-shirts will be on sale at registration. We recommend that teams pre-order their souvenir t-shirts.

Team Banners

Teams may post spirit banners on the railing in the Coliseum from 9:00 a.m. to 1:00 p.m. on Saturday and before the start of the competition on Sunday. Banner restrictions:

- Banners must contain grommets at the top and be attached with string or cable ties.
- **No tape is allowed. Teams should bring their own string/ties and scissors.**
- Banners may not have any design or language of a crude nature.
- Banners and other team signage are not to be posted at other sites in the Coliseum or elsewhere on campus.
- All banners (including rope and cable ties) **MUST** be taken down and **REMOVED** from the Coliseum at the conclusion of the event.

Note that teams will not be allowed to tape signage to any surface of the Beard Eaves Memorial Coliseum.

Team Seating in Stands

Teams will be assigned a seating location upon check-in on Saturday morning. Teams may NOT rope off seating areas due to fire code restrictions.

QUESTIONS:

Event Logistics should be directed to Jessica Gilpin at jag0038@auburn.edu

Awards and Judging should be directed to Mary Lou Ewald at ewaldml@auburn.edu

Technical/Game/Pit should be directed to Garon Griffiths at griffgj@auburn.edu



Student Code of Conduct

South's BEST expects teams and supporters accompanying them to conduct themselves in an appropriate manner while participating in the Championship. This includes all activities associated with their participation in the event.

- Appropriate conduct of teams and supporters is the sole responsibility of school officials and other adult chaperones that have legal responsibility as supervisors.
- Students should be under the supervision of school officials or chaperones during all excursions and competition activities, including while in hotels and restaurants.
- Students who violate the conduct code at any point during South's BEST are subject to suspension from remaining competition activities.
- South's BEST reserves the right to refuse participation in future competitions, to any team whose behavior has been disruptive.

Inappropriate conduct includes, but is not limited to, the following:

- **At no time should any South's BEST participant (student or adult) be found in "No Access" zones in the Coliseum. No Access zones include those marked with signage, and the entire 2nd, 4th and 5th floors of the Coliseum, except for permitted stairwells. Violation of this rule will result in disqualification of the team with which the violator is associated.**
- Property damage, vandalism, or theft.
- Appropriation of Auburn University or South's BEST memorabilia.
- Use of alcohol or illegal drugs.
- Use of water pistols, water balloons, or other creative missiles.
- Fighting, loud/foul language, or other disruptive/rude behavior.
- Disruptive and excessive noise during activities other than the actual competition.
- Inappropriate dress. Students are expected to wear shirts/t-shirts and shoes.
- Distractive apparel that displays design or language of a crude nature.

Financial liability for all damages or losses incurred by actions of team members and supporters shall be the sole responsibility of the team/school.



Driver's Meeting (Saturday, 1:30pm to 2:00pm)

This is a **mandatory meeting** for ALL team members that expect to be in the Pit during the competition. Teachers/mentors are welcome to attend the Driver's Meeting to assist students as needed. The meeting covers information provided in this document as well as other logistics.

I. General Information

Access to Power

There is no power access at teams' pit tables. Power is only available at the Battery Charging Station and Pit Repair Stations located at the rear of the Pit (see *Pit Stations* below).

Access to the Pit

Saturday

- Teams will be allowed to access the Pit once their team has registered at the Registration Desk (3rd Floor – Beard-Eaves-Memorial Coliseum) from 8:30am – 12 noon on Saturday.
- Pit access is limited to one specific stairwell, which will be identified with signage.
- During check-in, teams will receive Pit Packets at the Registration Table on the 3rd floor of the Coliseum. Pit Packets will contain: 8 Driver's bracelets, a Team Rep button, 5 student Pit Passes, 1 student/adult Pit Pass and a Drivers List (to be completed and submitted to Pit Boss).
- Loading in/out machines and equipment can only be accessed through the South Entrance of the Coliseum (see event map). Security will be posted there to help guide teams to the Pit.
- Due to the number of teams and the limited size of the Pit, we must control the number of people on the floor. We will not enforce a strict number of students and adults per team that can be on the floor prior to the seeding matches. However, this area will be continually monitored for safety.
- When seeding matches begin (approximately 3:00 pm on Saturday), only those with a Pit Pass will be allowed in the Pit and on the floor. Each team will receive five student Pit Passes in their Pit Packet for use on Saturday and Sunday during matches. Each team will also receive one student/adult Pit Pass to be used by adults on a very limited basis in cases of urgency or emergency. When the student/adult Pit Pass is not being used by an adult, it may be used by a student. **No pass, no access.**

Sunday

- The Pit opens at 8:30am on Sunday. Teams should continue to use the designated Pit entrance and access will still be limited to those wearing a Pit Pass.
- Pit Passes must be worn at all times by team members while in the Pit. It is up to each team to determine who needs to be in the Pit and how passes will be swapped.

Driving

Drivers List

- Each team must turn in a driver's list, due by the start of the Driver's Meeting Saturday at 1:30pm. Team members that are not on the list and who attempt to drive will not be allowed to do so. Drivers will drive in the order provided on the list.

Driving Practice Matches (Saturday)

- Driving practice matches are simulated game matches: three minutes each; two sets of four teams each will practice at a time; and one driver and spotter per team.
- Driving practice runs from 9:30am – 1:00 pm and is optional for teams.
- Teams may sign up for practice matches after they successfully pass Compliance Check-in, which occurs on Saturday from 8:30am – 12:00pm.

Driver Rotation

- Drivers must rotate equally throughout the competition; teams are responsible for rotating in the order provided on their driver's list.

Safety Glasses

- **Due to Health & Safety concerns, teams MUST provide their own safety glasses. Safety glasses are required for your team to compete.**
- Teams are encouraged to bring extra safety glasses and wear them while working in the Pit.

Vests

- At check-in, each team will receive two safety vests with the team's number attached. These vests are the team's responsibility throughout the competition and are required to be worn by drivers and spotters during matches.

Wristbands

- At check-in, each driver will be issued a wristband with his/her team number. The wristbands will be checked at Staging to ensure that drivers are rotating as required. Wristbands should be worn on both Saturday and Sunday. You will only receive one set of wristbands. Do not let students lose them on Saturday night.

Pit Stations

Battery Charging Station

- All battery charging is done at this station; teams must use their own BEST-provided charger at the Battery Charging Station.
- Teams should designate one member to monitor the battery and charger.
- Illegal (non BEST-issued) chargers or batteries will not be allowed.
- No other types of equipment or cell phones may be charged at this station.
- South's BEST is not responsible for lost or stolen batteries and has no replacements.

Power Tool Repair Station

- All repairs requiring power tools must be done at this station; teams must provide their own tools.

Soldering Station

- All soldering must be done at this station; teams must provide their own iron and solder.

Team Equipment & Materials

- Teams should label/tag any personal equipment, tools, or materials that will be used at any of the repair stations. Teams that choose to leave equipment or materials at their Pit table overnight do so at their own risk.

Replacement Parts

- South's BEST will NOT supply additional parts for robots at South's BEST. It is up to the hub from which you advanced to provide you with additional parts should yours become damaged (or defective). Most hubs will have a representative available at South's BEST who will bring additional parts with them. Otherwise, they should send your team to South's BEST with additional parts. If you have questions about this, please contact your local hub director.

Team Numbers & School Names

Each team's robot is required to have the team number and school name in an easily visible location. The number must be a minimum 2" in size.

II. Resolving Problems Teams May Encounter

Team Rep Button

- Each team will have one button in their Pit Packet that is to be worn by a Student voicing a concern to the Team Advocate. **No button, no response.**

Pit Problems – Team Advocate

- If a team has problems regarding equipment, event personnel, or other teams, they should address them to the Team Advocate, who is THE ONLY person designated to handle them. The Team Advocate(s) will be introduced at the Driver's Meeting so that teams will be able to recognize him/her during the competition.
- Only ONE team member (not a mentor) can approach the Team Advocate concerning a problem and they must be wearing their Team Rep Button.
- The Team Advocate will work with the team to resolve the problem. If it cannot be resolved, the Team Advocate will consult with the Pit Boss, Floor Boss, Head Referee, and/or Head Scorekeeper for a final ruling.

Game-Specific Challenges

- Teams that have a conflict or problem with scoring, field electronics, etc. should approach the Team Advocate initially. If the issue cannot be resolved immediately, the Team Advocate will consult with the Head Referee, Floor Boss, and/or Head Scorekeeper.

Floor Boss

- The Floor Boss oversees the entire competition area: Pit, Staging, Playing Field, and Scorekeeping areas.
- The Floor Boss is consulted when the Pit Boss, Team Advocate, Head Referee, and Head Scorekeeper cannot resolve problems and issues that are brought to them by teams.

III. Compliance Check-In

Regardless of how Compliance check-in was performed by your local hub, at South's BEST teams will follow our established policies and procedures. Failure to abide by South's BEST Compliance check-in policies and procedures could result in disqualification.

Teams will not be allowed to practice drive on Saturday or compete on Sunday until or unless their machines are in full compliance.

Included in this handbook is a document entitled *Compliance Checklist*. We strongly suggest you go through this list BEFORE you come to South's to ensure your team is eligible to compete.

Saturday

- South's BEST will NOT conduct a Critical Design Review but will conduct Compliance check-in.
- Compliance check-in takes place in the Pit from 8:30am – 12:00 noon on Saturday.
- Teams whose machines are non-compliant when Compliance check-in concludes at 12:00 noon will not be allowed to compete.
- At the end of matches on Saturday, robots will be impounded and will be kept in the Coliseum, which will be secured overnight.



Driver and Spotter Protocol

Prior to Match Play

Each team must submit a Drivers List (in the pit packet) during the Driver's Meeting.

The minimum number of student team members on the driver list is shown in the following table:

| Robotics Team members present at competition | Minimum number of students on Drivers List |
|--|--|
| 2-4 | 2 |
| 5-6 | 3 |
| 7-8 | 4 |
| 9 or more | 5 |

BEST encourages participation by as many team members as possible.

The first person on the Drivers List is the driver for the first match; the second person on the list is the driver for the second match, etc.

This rotation continues for successive matches.

Rotation during wild card, semi-final, and final matches will begin where the seeding round rotation left off.

If a match is eliminated for any reason, the driver rotation will continue in accordance with the driver list, with the driver scheduled for the eliminated match (or matches) being the first driver for the following match.

The spotter(s) may be any students from the team.

NOTE: This may change due to game-specific rules. Be sure to check the game-specific rules for details.

During Match Play

Only one team member is allowed in each of the Driver's & Spotter's "squares," respectively.

Adults are not allowed in the Staging or Playing Field areas.

Drivers & Spotters may not stand on platforms of their own construction in the squares.

Drivers & Spotters may not communicate with anyone (including each other) through the use of any electronic devices or other signaling aids.

Machine Compliance Check 2022

Team Name

Team Number

General

Comments:

- ☐ weight less than 24 lb (with battery and detachable parts)
- ☐ size less than 24" cube (unconstrained, can be powered)
- ☐ team number (visible?)
- ☐ multiple configurations? (check each one)

Control System

Joystick

- ☐ no labels
- ☐ no rubber bands
- ☐ no tape of any kind

Cortex

- ☐ mounted (use mounting holes)
- ☐ no solder (use RK cables)
- ☐ on/off switch (must be accessible)
- ☐ motor ports 1 and 10 not used
- ☐ 7.2v battery secured (holder/mount)

General Parts Check

- ☐ no paint, adhesives or tape on returnable parts (except as noted¹)
- ☐ no modified returnable parts (except for servo horns and 3' belt)
- ☐ only allowable parts/materials/quantities - see Kit Lists
- ☐ detachable parts? (must be weighed and measured with robot) - incl. team-built arms
- ☐ team-built Squeaky arms (size, materials) (measured separately 8" x 8" x 24")
- ☐ team-built Squeaky arms (weighed with robot)

Team Custom Parts (two parts are allowed)

- ☐ each part could fit within 2" x 4" x 4" cuboid
- ☐ each part is made from a uniform material
- ☐ raw stock shape is rectangular or cylindrical (if applicable)

Comments:

Notes: 1) Painters tape allowed on all items except the Joystick.



SOUTH'S BEST

2022 Event Map

Beard Eaves Memorial Coliseum
650 Biggio Dr.
Auburn University, AL 36849

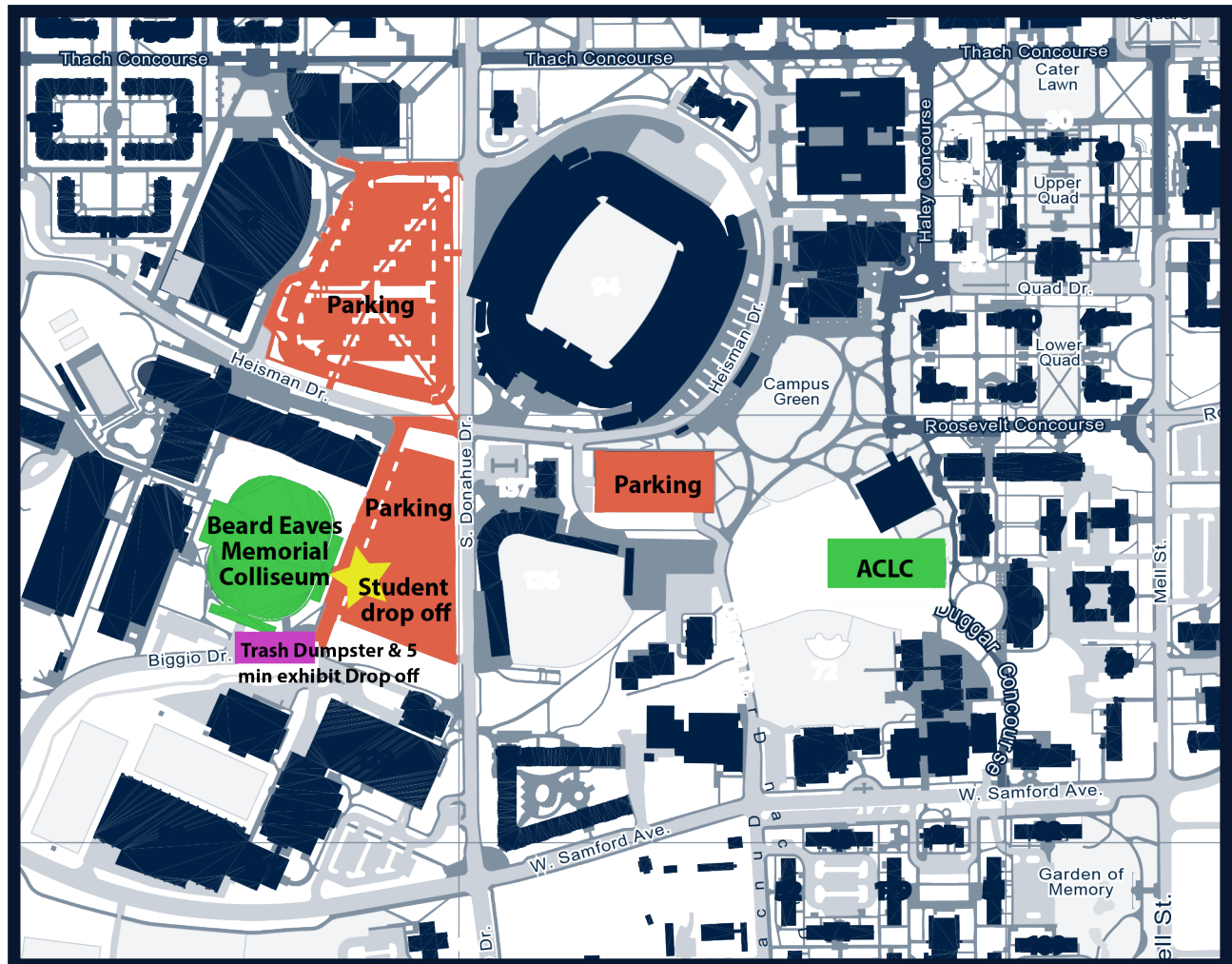
ALCLC
347 Duncan Dr.
Auburn University, AL 36849

Green = Event spaces

Orange = Car parking spaces

Yellow Star = Student drop off

Purple = Trash dumpster and five-minute exhibit drop off





Parking Logistics (all parking is marked in orange)

1. Cars may park in any legal parking spot
2. Buses should park in the hayfield lot
3. Parking on Friday must on the fourth floor of the stadium parking deck

Bus Directions (follow the blue dotted line from BEMC)

1. The bus parking lot is located across the street from the Nursing school (710 S. Duncan Dr.)
2. From Donohue Dr., turn east onto Woodfield Dr.
3. Turn left into parking lot

