Impact Robotics League Tournament and Match Procedures

Version 1.0, Effective Date August 22, 2025

1. General Tournament Flow

1.1 Check-In and Robot Weigh-In

1.2 Safety Inspections

1.3 Tournament Bracket Finalization

1.4 Match Schedule Release

1.5 Competition Rounds

1.6 Final Matches and Awards Ceremony

2. Team and Robot Eligibility

2.1 Competitor Eligibility

Competitors must be students in grades 7-12, or ages 12 and up. All student competitors must be accompanied by an adult supervisor who is present onsite at all times. A student may compete on only one bot team per event.

2.2 Robot Similarity

Teams may not enter more than one functionally identical robot into a single event. However, exceptions may be made for new builders using reference or kit-based designs in beginner classes.

2.3 Part Sharing

Lending of common parts such as motors, electronics, and batteries between teams is permitted and encouraged. However, sharing or swapping of custom-fabricated parts between teams during an event is prohibited.

3. Division Structure

3.1 Skill Divisions

The league currently supports three experience-based skill divisions. These divisions may be used to guide matchups, judging, or awards at the discretion of event staff.

- **Beginner Division:** For new builders with little or no experience. Use of kits, reference bots, or open-source designs is allowed. Rookies are welcome to take this path, though original designs are also welcome.
- **Intermediate Division:** For builders with some experience. Custom designs are strongly encouraged, though partial inspiration or remixing is acceptable.
- **Advanced Division:** For experienced builders. Robots must include original design elements and reflect student-led engineering.

3.2 Student Builder Requirements

All robots must be student-built and student-operated. Students are responsible for design, construction, repairs, and driving. Adults may provide guidance and safety oversight but cannot perform work on robots.

3.3 Middle School Exceptions

Middle school students (grades 7–8) may receive limited adult assistance for:

- Soldering (student must be actively involved)
- Battery installation/removal (under direct adult supervision)
  All other construction, repair, and modification work must be performed by the student.

3.4 Adult Role

Adults serve as mentors and safety supervisors only. Any behavior where adults perform construction work undermines student ownership and is inconsistent with league values.

4. Match Format

4.1 Match Duration

Normal match duration is 3 minutes. For larger events, this may be shortened to 2 minutes at the Event Organizer's discretion to ensure the event stays on schedule.

4.2 Winning a Match

A match is won by a Knockout (KO), Tap Out, or a Judges' Decision.

4.3 Knockout (KO)

A robot that has ceased all controlled movement will be counted out by the referee. If the robot cannot demonstrate controlled translational movement within a 10-second countdown, it will be declared the loser by knockout. Controlled translational movement is defined as any net linear movement across the arena floor. Moving forward, backward, or side-to-side counts; merely spinning in place or twitching does not count as controlled translational movement.

4.4 Tap Out

At any point during the match, a driver may elect to tap out by raising their hand and clearly announcing their surrender. The referee will confirm and halt the match. The opponent will be awarded the win by knockout.

4.5 Post-KO Attacks

Once a robot has been declared knocked out by the referee, any further contact or attack on the disabled robot may result in penalties or disqualification depending on severity and intent.

4.6 Pinning and Immobilization

Any robot performing a pin or corral is limited to 10 seconds. After the designated time has elapsed, the robot in control must release the opponent. The two robots must be physically separated for a minimum of 5 seconds before a new pin can be attempted.

4.7 Un-sticks

If a robot becomes immovably stuck on the arena itself or on a piece of debris, the referee may call for an un-stick. Each robot is granted one un-stick per match. The robot will be safely moved to a new location and the match will resume. Note that getting propped sideways against an arena wall is not considered an "un-stick" and is part of normal combat.

4.8 Arena Hazards

The arena has no pits, push-out zones, or other permanent hazards. Standard arenas are 4x4x2 feet with wood floors, though arena specifications may vary by event.

4.9 Multi-Bot Entries

Teams may enter a multi-bot system so long as the total weight does not exceed 1 pound combined. These bots may be controlled using separate transmitters or as a single system. The multi-bot entry must be identified and registered as a single robot during check-in.

4.10 Judges' Decision

If a match goes the full duration without a KO or tap out, the winner will be decided by the judges based on the judging criteria.

5. Pre-Match Procedures

5.1 Calling to the Arena

Teams must report to the arena when their match is scheduled or called. Failure to appear within the allotted time may result in a forfeit.

5.2 Battery Installation

The battery must be installed securely inside the robot in the queuing area before the robot is placed in the arena.

5.3 Arena Load-In

Teams will place their robot into the arena following the load-in procedure. See the Event Safety Rules.

5.4 Radio Check & Twitch Test

After the robot has been loaded into the arena, a final check to confirm that the robot and transmitter are powered, bound, and responsive will occur. If the bot is not ready, the team may call their one allowed timeout. Event staff will provide basic assistance with radio binding issues.

5.5 Driver Communication

Drivers must listen to the referee and follow all arena commands.

6. Match Procedures

6.1 Match Start Signal

The match will begin when the referee gives a clear verbal or visual start signal.

6.2 Match Stoppage Signals

Drivers must immediately stop their bots upon hearing or seeing a stop signal.

7. Post-Match Procedures

7.1 Robot Deactivation

All functional robots should be driven to the arena door and removed following the load-out procedure. See the Event Safety Rules.

7.2 Battery Removal

The battery must be removed from the robot after it has been taken out of the arena, but before it is returned to the pits.

7.3 Arena Load-Out

Teams must remove robots from the arena promptly and safely.

7.4 Post-Match Inspections

Referees or safety officials may inspect robots for safety violations or damage.

7.5 Judges' Scoring

If applicable, judges will review the match and announce the winner based on the judging criteria.

8. Tournament-Specific Rules

8.1 Match Frequency and Forfeits

Teams are guaranteed a minimum 20-minute repair period between matches. Robot weight will be verified using the official event scale during check-in. A forfeit will be declared if a team is not ready when called after their guaranteed repair time has elapsed.

8.2 Time Outs

Each robot is allowed one 20-minute postponement for the entire event to allow for repairs. This postponement can be requested at any time before a match begins.

9. Judges and Judging Criteria

9.1 Judging Panel

Judging panels are a combination of judges and the Head Referee. While the panel typically consists of at least two officials, this may vary based on event staffing.

9.2 Judging Criteria

Matches are judged based on:

- Damage: Which robot caused more significant damage.
- Control: Which robot had superior driving and positioning.
- Aggression: Which robot took the fight to the opponent and pushed the action.

10. Disputes and Rulings

10.1 Process for Disputes

If a team wishes to contest a ruling, they must calmly notify the referee or event director immediately after the match.

10.2 Final Rulings

All decisions made by the event director and judging panel are final.

11. XP System and Future Tier Mapping

11.1 XP System Summary

The IRL XP system provides progression through participation and performance. Each robot and builder earns XP at events. This XP will eventually determine eligibility for advanced parts and competitive tiers.

11.2 Builder XP Tiers

XP accrues across all robots a student has worked on. Current XP tier names:

- **Rookie:** Entry-level, learning the basics
- **Veteran:** Gaining consistency and independence
- **Elite:** Strong builders with advanced skills
- **Pro:** High-performing and innovative
- **Master:** Experienced leaders in the league
- **Legendary:** Top-tier competitors with proven skill
- **Prestige:** Hall of Fame-level accomplishment

11.3 XP Role in Bracketing and Progression

XP tiers may be used to:

- Seed brackets
- Determine awards
- Guide access to advanced motors or batteries in future events
  XP does not currently gate entry into divisions but may in the future. More details will be released as the system is rolled out.

10. Division Structure

10.1 **Skill Divisions** The league currently supports three experience-based skill divisions. These divisions may be used to guide matchups, judging, or awards at the discretion of event staff.

- **Beginner Division:** For new builders with little or no experience. Use of kits, reference bots, or open-source designs is allowed. Rookies are welcome to take this path, though original designs are also welcome.
- **Intermediate Division:** For builders with some experience. Custom designs are strongly encouraged, though partial inspiration or remixing is acceptable.
- **Advanced Division:** For experienced builders. Robots must include original design elements and reflect student-led engineering.

10.2 **Student Leadership Expectations** All teams must be student-led. Robots should be built, maintained, and operated by the students themselves, with adults serving only in a support and safety role.

- Students must perform the design, construction, repairs, and driving.
- Adults may provide guidance and ensure safety but should never perform work on a robot without the student present and actively involved.
- At the high school level, adults should not directly work on robots under any circumstance.

10.3 **Middle School Exceptions** Middle school students (grades 7–8) may receive limited adult assistance for the following:

- Soldering (student must be actively involved)
- Battery installation/removal (only under direct adult supervision)

10.4 **Mentor Conduct Standard** Mentor and parent involvement should always prioritize student growth, learning, and safety. This league does not support a win-at-all-costs mentality. Any behavior that undermines student ownership of the process is inconsistent with league values.

11. XP System and Future Tier Mapping

11.1 **XP System Summary** The IRL XP system provides progression through participation and performance. Each robot and builder earns XP at events. This XP will eventually determine eligibility for advanced parts and competitive tiers.

11.2 **Builder XP Tiers**
XP accrues across all robots a student has worked on. Current XP tier names:

- **Rookie** (0–99 XP): Entry-level, learning the basics
- **Veteran** (100–299 XP): Gaining consistency and independence
- **Elite** (300–599 XP): Strong builders with advanced skills
- **Pro** (600–999 XP): High-performing and innovative
- **Master** (1000–1499 XP): Experienced leaders in the league
- **Legendary** (1500–2099 XP): Top-tier competitors with proven skill
- **Prestige** (2100+ XP): Hall of Fame-level accomplishment

11.3 **XP Role in Bracketing and Progression** XP tiers may be used to:

- Seed brackets
- Determine awards
- Guide access to advanced motors or batteries in future events

XP does not currently gate entry into divisions but may in the future. More details will be released as the system is rolled out.