**Think Award**

The team’s engineering content must focus on the design and build stage of the team’s robot. This could include descriptions of the underlying science and mathematics of the robot design and game strategies, the designs, redesigns, successes, and opportunities for improvement. A team is not a candidate for this award if their portfolio does not include engineering content.

Required Criteria for the Think Award:

* Team **must show respect and Gracious Professionalism®** to everyone they meet at a FIRST Tech Challenge event.
* Team **must submit an engineering portfolio.**
* Engineering portfolio must have engineering content. The engineering content could include entries describing examples of **the underlying science, mathematics, and game strategies** in a summary fashion.
* The engineering portfolio must provide examples that show the team has a **clear understanding of the engineering design process including an example of lessons learned.**

**Strongly Suggested Criteria for the Think Award**:

* Team must be able to describe or provide additional information to the judges about their portfolio content.
* Engineering portfolio could summarize how the team acquired new mentors or acquired new knowledge and expertise from their mentors.
* Engineering portfolio could contain summary of overall team plan.
* Engineering portfolio could contain information about the plans to develop skills for team members.
* Portfolio format is less important but enables the judges to understand the team’s design maturity, organizational capabilities, and overall team structure.
* Portfolio could reference specific experiences and lessons learned but should capture the summary of the status of the team and their robot design.
* Portfolio could also summarize experiences and lessons learned from outreach with concise tables of outcomes.
* The team should refer to the Award Definitions for judging outlined in Appendix F of Game Manual Part 1 for outreach and be able to provide supporting documentation to the judges, where applicable.

**Innovation Award**

Required Criteria for the Innovate Award sponsored by RTX:

* Team must show respect and Gracious Professionalism® to everyone they meet at a FIRST Tech Challenge event.
* Team must submit an engineering portfolio.
* The engineering portfolio must include examples of the team’s engineering content that illustrate how the team arrived at their design solution.
* Robot or robot sub-assembly must be creative, elegant, and unique in its design.
* Creative component must be stable, robust, and work reliably most of the time.

Strongly Suggested Criteria for the Innovate Award sponsored by RTX:

The portfolio could inspire the judges to ask the team about the specific detailed engineering information.

**Control Award**

**Required Criteria for the Control Award:**

* Team must show respect and Gracious Professionalism® to everyone they meet at a FIRST Tech Challenge event.
* Team must apply for the Control Award by filling out the Control Award Submission Form, located in Appendix E of Game Manual Part 2.
* The Control Award Submission Form must not exceed 2 pages.
* The team must submit an engineering portfolio. The engineering portfolio must include engineering content that documents the control components.
* Control components must enhance the functionality of the Robot on the Playing Field.

**Strongly Suggested Criteria for the Control Award, sponsored by Arm:**

* Advanced software techniques and algorithms are encouraged, but not required.
* Control components should work reliably.
* Learnings from the team about what they tried and what did not work with regards to sensors, hardware, algorithms, and code could be included in the engineering portfolio.

**Motivate Award**

**Required Criteria for the Motivate Award:**

* Team must show respect and Gracious Professionalism® to everyone they meet at a FIRST Tech Challenge event.
* Team must submit an engineering portfolio.
* The engineering portfolio must include a Team Organization Plan, which could describe their future goals and the steps they will take to reach those goals. o Examples of what the plan could include are: ▪ Team identity ▪ Fund-raising goals ▪ Sustainability goals ▪ Timelines ▪ Outreach ▪ Finances ▪ Community service goals.
* The team must be an ambassador for FIRST programs.
* Team must be able to explain the individual contributions of each team member, and how these apply to the overall success of the team.

Strongly Suggested Criteria for the Motivate Award:

* Team takes part in their presentation, and actively engages with the judges.
* Team shows a creative approach to materials that market their team and FIRST.
* Team can clearly show the successful recruitment of people who were not already active within the STEM community.
* Team could also summarize experiences and lessons learned from outreach.
* The team should refer to the Award Definitions for judging outlined in Appendix F of Game Manual Part 1 for outreach and be able to provide supporting documentation to the judges, where applicable.

**Design Award**

Required Criteria for the Design Award:

* Team must show respect and Gracious Professionalism® to everyone they meet at a FIRST Tech Challenge event.
* Team must submit an engineering portfolio with engineering content. This could be CAD images or robot drawings of the team’s overall design and/or components.
* Team must document and implement strong industrial design principles, striking a balance between form, function, and aesthetics.

Strongly Suggested Criteria for the Design Award:

* Distinguishes itself from others by its aesthetic and functional design.
* Basis for the design is well considered (that is inspiration, function, etc.).
* Design is effective and consistent with team plan and strategy.
* The portfolio could inspire the judges to ask the team about specific detailed engineering information.

**Inspire Award**

Required Criteria for the Inspire Award:

* Team must show respect and Gracious Professionalism® to everyone they meet at a FIRST Tech Challenge event.
* Team must be a strong contender for several other judged awards. The Inspire Award celebrates the strongest qualities of all the judged awards. • Must be a contender for a Machine, Creativity, and Innovation Award. • Must be a contender for a Team Attributes Award. • Must be a contender for the Think Award.
* Team must be an ambassador for FIRST programs. They demonstrate and document their work in their community.
* Team must be positive and inclusive, and each team member contributes to the success of the team.
* Team must submit an engineering portfolio. The engineering portfolio must include engineering content, team information and a team plan. The entire engineering portfolio must be high quality, thoughtful, thorough, concise, and well-organized.
* Robot design must be creative and innovative, and the robot performs reliably on the field. The team communicates clearly about their robot design and strategy to the judges.
* Team interview session must be professional and engaging.

Strongly Suggested Criteria for the Inspire Award:

* The team should be able to share or provide more detailed information to support the information in the portfolio.
* The team should refer to the Award Definitions for judging outlined in Appendix F of Game Manual Part 1 for outreach and be able to provide supporting documentation to the judges, where applicable.