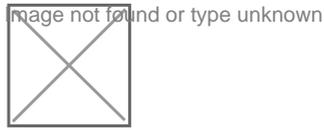# Q&A

Judging

Welcome to the official REC Foundation Question & Answer system for Judging. All registered teams can ask for official Judging interpretations and clarifications. This Q&A is the only source for official Judging clarifications, and the clarifications made here by the REC Foundation Competition Judging Committee (CJC) are considered as official and binding as the written Guide to Judging.

- Please review the Judging Q&A Usage Guidelines before posting. This Q&A is only intended for specific Judging questions for the VEX IQ Challenge, VEX Robotics Competition, and VEX U Competition.
  - Please review the current season Guide to Judging before posting.
- For event, registration, or other competition support questions, please contact your REC Foundation Regional Support Manager.
- For questions related to game rules and interpretations, please navigate to the Official Game Q&A (VRC / IQ) . Click the back button in your browser, then click the VEX Q&A Forum button.

Index

Excellence Award Minimum Criteria within VEXU and small blended Tournaments

16-Jun-2023

It is my understanding that the judging criterion this year has changed to no longer include the minimum team number requirement for percentage based criterion of the excellence award

> There is no minimum number of teams to be made eligible for the Excellence Award based on performance metrics.

This therefore means that all events must adhere to the top 30% of teams in the three performance categories as described in the excellence criteria:

> Key criteria of the Excellence Award are:
>
> - Be at or near the top of all Engineering Notebook Rubric rankings.
> - Exhibit a high-quality team interview.
> - Be ranked in the top 30% of teams at the conclusion of qualifying matches.
> - Be ranked in the top 30% of teams at the conclusion of the Robot Skills Challenges
> - Be ranked in the top 30% of Autonomous Coding Challenge rankings at the conclusion of the Robot Skills Challenges
> - Be a candidate in consideration for other Judged Awards
> - Exhibit positive team conduct, good sportsmanship, and professionalism.

In a standard event the minimum team number is 24 meaning that 8 teams would qualify under each criterion however in the event of small blended events with a minimum of 10 teams at a given age range or VEXU events with a minimum of 8 teams (from the qualifying criterion) we would see only two teams achieving each of these ranking criterion with a high likelihood of no team meeting all criteria.

This is demonstrated even more extremely in the case of national championships in non US regions such as the VEXU national championships in Australia and New Zealand where the team numbers fall below the minimum 8 and are presented with this 30% guideline only allowing one team per criteria with 5 teams or less.

In these scenarios is it expected that the excellence award is not presented despite the circumstances of these tournaments. Specifically in VEXU frequent non-awarding of the excellence award would have major repercussions on the eligibility for the excellence award at the world championships?

> **Answered by Competition Judging Committee**
>
> If a qualifying event has under 16 teams, please reach out to your regional support manager to discuss an Event Variance Request to make potential accommodations to the Excellence Award ranking eligibility requirements.

Optional Materials During Interview

20-Jun-2023

Page 26 of the Guide to Judging:

> Teams can use their Robot, Engineering Notebook (optional), and Programming laptop to show their code (optional) during the interview – other reference materials, props, or audio/visual aids should not be used to supplant these primary materials for the interview.

1. Does the Judge Advisor have final say as to whether Engineering Notebooks and/or Programming laptops are allowed?

2. If the answer to #1 is no, if a team requests for their physical Engineering Notebook to be part of their interview, are Judges expected to bring it to the interview for the team?

Answered by Competition Judging Committee

1. The use of Engineering Notebooks and Programming laptops is up to each team to optionally use to assist in answering judges questions. While it is within the scope of the Judge Advisor role to provide guidance as to whether or not this assistance goes too far and becomes a presentation, it is not up to the Judge Advisor to allow or disallow these materials.

2. Judges are not expected to provide teams their engineering notebook during their interview. Depending on the event, some teams may get their engineering notebooks back earlier or later in the course of an event and as such may or may not be available for the team to use.

Excellence Eligibility criteria

20-Jun-2023

Hi CJC, The new guide says the following over excellence criteria:

? Be ranked in the top 30% of teams at the conclusion of qualifying matches.

? Be ranked in the top 30% of teams at the conclusion of the Robot Skills Challenges

? Be ranked in the top 30% of Autonomous Coding Challenge rankings at the conclusion of the Robot Skills Challenges

1. If, at the conclusion of the Robot Skills Challenges, not every team has completed any skills runs (or no autonomous skills runs), should the "30% of teams" be 30% of teams that have undertaken a skills run or of the total number of teams at the event?
2. In a blended event that offers two excellence awards, can you confirm the "30% of teams" will be of the eligible teams for that award? For example, a blended event has 40 teams, 30 HS teams and 10 MS teams. Are the eligible teams the top 9 (30% of 30) HS teams and top 3 (30% of 10) MS teams for each award or HS and MS teams in the top 12 (30% of 40) of the overall rankings?
3. In the event of 30% not being a whole number should we round up, round down or round as normal (above and below .5)?

Answered by Competition Judging Committee

Teams that have not run skills should be considered as having a score of zero for ranking purposes.

For events with a single Excellence Award, percentages are based on the number of teams at the event. For blended grade level events with two grade specific Excellence Awards, percentages should be based on the number of teams in each the grade level for each award.

Regular rounding rules should be used: A .5 or greater value is rounded up, and below .5 is rounded down.

Guidelines when Judging Single-Student Teams

19-Jul-2023

Team Interview Rubric:

Students can explain how multiple team members contributed to the robot design and game strategy. All students answer questions independently.

[...]

Students make sure each team member contributes. Students wait to speak until others have finished.

Various Award Criteria:

Team interview demonstrates effective communication skills, teamwork, and professionalism.

Can any guidance be provided when evaluating teams, both quantitatively and qualitatively, that consist of only 1 student?

> **Answered by Competition Judging Committee**
>
> As of the September 1st, 2023 Update to the Guide to Judging, the verbiage cited in this Q&A, as well as our initial response are no longer relevant.
>
> Please refer to the latest version of the Guide to Judging for the most up to date rubrics and judging guidelines.

Engineering Notebook Changes

4-Aug-2023

The Patents and the Engineering Notebook entry in the REC library states:

- Witness signatures are no longer necessary because the notebook is not used for patent or legal reasons.
- Crossing out unused parts of a page is no longer necessary because there is no need to show that nothing was added after the page was created.
- Bound paper notebooks written in ink are no longer necessary because edits are now okay. Digital notebooks are now a valid option.

It also seems to imply that it's no longer necessary to date entries. The RECF ENB templates don't include spaces for witness signatures nor dates.

Yet the 2023-2024 Guide to Judging states:

Engineering Notebooks should contain these elements: [...]

- Errors crossed out using a single line (so errors can be seen)
- Unedited entries
- All pages intact; no pages or parts of pages removed.
- Each page/entry chronologically numbered and dated.

Can you please clarify the contradictions:

1. Are witness signatures required? (I don't see anything requiring this, but it's a change from how it's been done forever and I want to be sure.)
2. Are edits permitted?
3. Are timestamps required?

> **Answered by Competition Judging Committee**

The "Patents and the Engineering Notebook" entry in the REC library refers to the Engineering Notebook and how it relates to the patent application process, and its history as a legal document within that process. This article is not intended to provide guidance on how notebooks are evaluated and judged for REC Foundation events.

Please reference the [Engineering Notebook section](#) of the [Guide to Judging](#) for specific guidance on how notebooks are evaluated at events.

Single Team Judging and the ADA

5-Aug-2023

In [this response](#) you indicated that teams cannot receive credit for teamwork during an interview if they are a single-member team. If a participant is on a single person team and believes that being on a single-member is a reasonable accommodation under the ADA, what actions should be taken by all involved? To give an example that immediately comes to mind, I can imagine there may be students on the autism spectrum who use robotics as an opportunity to work on their interpersonal skills, but who would still find it difficult to be on a team with other students.

To summarize my concerns If single person teams are penalized, then I think it's entirely possible that that may be argued to be discrimination based on disability, especially if the student can point to alternative methods of demonstrating "teamwork," e.g. collaboration with other teams online. If there is an accommodation process, and the team still does not win the award, I would still be concerned that discrimination could be argued. If there is an accommodation process and the team does win the award, my concern is that this would create drama about a team winning that "shouldn't" have because they were a single person team, and obviously details of the ADA accommodation and details of judging in general should not be disclosed.

Guidance on how to approach this issue both as an EP/judge as well as for any teams that feel this would apply to them would be appreciated.

Answered by Competition Judging Committee

The REC Foundation supports the ADA in all areas of our programs. Mentors requiring an ADA accommodation for a team member should contact their REC Team Engagement Manager for directions on how to submit an accommodation request. Details of ADA accommodation requests received by the REC Foundation and accommodations made are confidential matters that are not open to discussion on a public forum. This is to protect the rights of the individual requesting the accommodation.

Innovate Award Criteria Clarification

7-Aug-2023

Innovate Award criteria:

> Teams identify in their notebook a specific section or specific pages covering the origin and development of a design element, strategy, or other attribute that is a key part of their team's robot design or gameplay.

How clear should this designation be? If a Team doesn't clarify in their notebook "This section/page is for the Innovate Award", should they still be in the running for the award?

Answered by Competition Judging Committee

How the Innovate Award is submitted by teams will be further clarified in the August 15th Guide to Judging update, including a standardized form.

Materials Allowed During an Interview

11-Aug-2023

Teams can use their Robot, Engineering Notebook (optional), and Programming laptop to show their code (optional) during the interview – other reference materials, props, or audio/visual aids should not be used to supplant these primary materials for the interview.

1. Can teams use a V5 controller to control their robot during an interview?
2. Can teams use Game Elements during their interview?
3. Can teams use Field Elements during their interview?
4. Can teams use a Field during their interview (eg. a practice field, or setting up half a field in a pit)?
5. Can teams take a photos of certain pages of their notebook and their codebase and use them as reference materials?

Answered by Competition Judging Committee

The upcoming Guide to Judging update will clarify what equipment is expressly permitted.

The intent of the interview is for judges to engage with students and their robot and not with audio/visual aids such as presentations or displays.

Student Centered Policy in Regards to Understanding Programming

16-Aug-2023

I understand that this question involves rules from the VRC game manual; however, unlike most other rules, judges are the most likely to spot potential G2, G4, and student-centered policy violations. If this should be posted in the over-under Q&A please let me know, and I will post it in there I understand that most of these rulings should be evaluated on a case-by-case basis but I would like to know what the correct response should be for some specific scenarios all of the scenarios listed below take place during a team's interview.

A.

```
Judge: Can you please explain to me how your team's programming works?

Student: We use the built-in Vex code commands.

Judge: Can you elaborate on how you use this to tell the robot to move around the field?

Student: We put in the dimensions of the robot base and then we can just tell the robot to move a

Judge: Can you explain any of the math or code behind how this works?

Student: No.
```

B.

```
Judge: Can you please explain to me how your team's programming works?

Student: We use the built-in PROS (a third-party software) commands.

Judge: Can you elaborate on how you use this to tell the robot to move around the field?

Student: We put in the dimensions of the robot base and then we can just tell the robot to move a

Judge: Can you explain any of the math or code behind how this works?

Student: No.
```

C.

```
Judge: Can you please explain to me how your team's programming works?

Student: We use a PID control loop to tell our robot how far to travel This allows the robot to s

Judge: Can you elaborate on the process of how you tuned your PID constants?

Student: We just changed the numbers until it worked.
```

D.

```
Judge: Can you please explain to me how your team's programming works?

Student: We use a PID control loop to tell our robot how far to travel This allows the robot to s

Judge: Can you explain what the D term is and how it affects robot movement?

Student: The D term makes the robot have smoother acceleration. Bigger D values result in smoothe
```

Additionally, I have a couple of questions Beyond these scenarios about the student-centered policy.

1. Does the team's performance affect the ruling? If a team with poor understanding of their code is winning the autonomous coding Challenge and getting AWP in every qual match then would they be more likely to receive an action such as being disqualified from the event and/or skills during the event than a team who isn't doing well in these areas with a similarly poor explanation of their code

2. The student centered policy mentions additional scrutiny at worlds qualifying events. Are there scenarios that would not result in Code of Conduct violations at a local tournament but would at an Event Regional Championship?

> **Answered by Competition Judging Committee**
>
> Code of Conduct / Student Centered investigations do not fall under the scope of this Q&A.
>
> The Event Code of Conduct Process should be followed in the case of any potential violations.

What Constitutes a Potential G2 Violation

25-Aug-2023

Based on Q and A 1617, the REC Foundation Competition Judging Committee made it clear that G2 violations are very specific and that cases should not be determined based on a precedent. However, I would like to know at what point a judge should official report a team for a potential G2 violations. There have been discussions between multiple judges and EPs on both VF and discord on what constitutes a potential G2 violation, and I believe that there should be a level on consistency regarding this between events. Since all of the scenarios listed below contain evidence of students not fulling understanding their code, should every one of these scenarios be treated as potential rule G2 violations? Should all of these scenarios result in the RECF being contacted by the EP and the team's coach being spoken to about the concern in accordance with the Event Code of Conduct Process, or would some of the scenarios not constitute a potential rule G2 violation?

A.

Judge: Can you please explain to me how your team's programming works?

Student: We use the built-in Vex code commands.

Judge: Can you elaborate on how you use this to tell the robot to move around the field?

Student: We put in the dimensions of the robot base and then we can just tell the robot to move a certain distance and turn to certain angles.

Judge: Can you explain any of the math or code behind how this works?

Student: No.

B.

Judge: Can you please explain to me how your team's programming works?

Student: We use the built-in PROS (a third-party software) commands.

Judge: Can you elaborate on how you use this to tell the robot to move around the field?

Student: We put in the dimensions of the robot base and then we can just tell the robot to move a certain distance and turn to certain angles.

Judge: Can you explain any of the math or code behind how this works?

Student: No.

C.

Judge: Can you please explain to me how your team's programming works?

Student: We use a PID control loop to tell our robot how far to travel This allows the robot to slow down as it approaches its desired value.

Judge: Can you elaborate on the process of how you tuned your PID constants?

Student: We just changed the numbers until it worked.

Alternatively, if the CoJ does not like the example scenarios I provided, could a few examples stating what conduct should and should not be reported be provided?

> ### Answered by Competition Judging Committee
>
> The interpretation of Game Manual rules does not fall under the scope of the Judging Q&A.
>
> The Event Code of Conduct Process should be followed in the case of any potential Code of Conduct violations.

Zero-Score Autonomous Skills and it's impact on excellence eligibility

31-Aug-2023

Hello!

To be eligible for the excellence award this season, teams must place in the top 30% of Autonomous Coding Challenge rankings at the conclusion of Robot Skills Challenges.

> Be ranked in the top 30% of Autonomous Coding Challenge rankings at the conclusion of the Robot Skills Challenges

My question is related to whether or not teams posting zero-score autonomous runs would rank higher than teams who have not competed in Autonomous skills.

For instance in the following scenario:

- There is a 30 team event with one excellence award offered
- Only 3 teams have participated in the Autonomous Skills component of Robot Skills
- Of these 3 teams, 2 have posted a zero-score, the other 27 robots at the event have not competed in skills.

From this, how would you interpret the following situations:

- Would the 2 teams mentioned above who have posted a zero-score and are on the skills leaderboard be placed in the Top 30% of teams as they have attempted an autonomous skills run.
- If nobody participates in autonomous skills, but skills is offered at an event, would it be omitted from excellence eligibility, or would nobody be eligible to win excellence at that event.
- If only 1 team runs auton skills at an event and they post a zero-score, would they than be the only team eligible to win the Excellence Award (provided they meet all other criteria)
- If every robot posts a zero-score run, would they still be eligible for excellence.
- If one of the 27 robots that did not post a score is in the random electronics rankings top 30%?
- If zero-score is not eligible as they have the same score as teams who do not run skills, would a zero-score run with an early stop time place a team within eligibility?

Thank you for your time

> ### Answered by Competition Judging Committee
>
> The September update to the Guide to Judging has clarified that a team must have both an overall Robot Skills and Autonomous Coding Skills score above zero to be eligible for the Excellence Award.
>
> As with any other award, if no teams at an event meet the criteria for the Excellence Award, then it should not be given out at an event.

Single Student Team Follow-Up

9-Sep-2023

Hello,
in Q&A 1592 the CJC stated that:

> Teams that consist of a single student are not able to demonstrate teamwork and communication skills within their team. As such, they would fall into the Emerging category for the Team Interview Rubric for the Teamwork, Communication, Professionalism Criteria.

However, in the September 1st 2023 update to the Guide To Judging, the Team Interview Rubric was significantly modified. The text for the Teamwork, Communication, Professionalism section now reads:

> **Expert:**
> Most or all team members contribute to explanations of the design process, game strategy, and other work done by the team.
> **Proficient:**
> Some team members contribute to explanations of the design process, game strategy, and other work done by the team.
> **Emerging:**
> Few team members contribute to explanations of the design process, game strategy, and other work done by the team.

Given that the wording of the criteria for this section and other sections has now been significantly modified from when the ruling in Q&A 1592 was made, can the CJC please provide new guidance for judging Single-Student teams based on the new criteria?

Thank you.

> ### Answered by Competition Judging Committee
>
> Thank you for bringing this to our attention - we have modified our original response for Q&A #1592, as the language in the Guide to Judging has changed and the original response is no longer relevant.

Do all Judges need to be Certified?

17-Sep-2023

Hey,

In the Guide to Judging - Judging Roles page (https://kb.roboticseducation.org/hc/en-us/articles/4972326843287-Guide-to-Judging-Judging-Roles) under the Judge role it says

> "Highly encouraged to have passed the Judge Certification Course for local qualifying events. Event Partners and Judge Advisors should encourage all Judges to be certified for Event Region Championship or Signature Events."

In the Guide to Judging Event - Prep and Execution Page (https://kb.roboticseducation.org/hc/en-us/articles/4996933618583-Guide-to-Judging-Event-Preparation-and-Execution) under the judge section it says

> "Complete the Judge Certification Course"

This seems to both say that Judges are **recommended** to be certified and that judges are **required** to be certified. Could you please clarify which is correct?

> ### Answered by Competition Judging Committee
>
> Judges are highly encouraged to complete the Judge Advisor / Judge Training & Certification Course, but it is not required.
>
> It **is** a requirement for the Judge Advisor to have completed the Judge Advisor / Judge Training & Certification Course.

Balloted Awards

27-Sep-2023

Is ballot voting by teams for the Sportsmanship Award allowed anymore?

"Balloted Awards: Based on the award criteria. Volunteer staff, such as the Head Referee, scorekeepers, and Emcees can nominate teams for these awards based on what they've seen at the event. Alternatively, the awards can be determined solely by the judges. Only the Sportsmanship and Energy Awards may each optionally be determined in this manner. The Field Note to Judge Advisor and Balloted Award Form are helpful tools for staff to submit award nominees. Event staff should be mindful to have additional candidates for the circumstance that the team at the top of their list is in consideration for another Judged Award."

Emphasis on, "Volunteer staff...can nominate teams for these awards based on what they've seen at the event. Alternatively, the awards can be determined solely by the judges."

Does this mean that ballot voting by the teams at the event is no longer an option? OR are these options in addition to teams voting by ballot?

Thanks for the clarification.

> ### Answered by Competition Judging Committee
>
> Balloted awards were removed some time ago from the Guide to Judging, thus those awards would have needed to be decided upon by Judges observing teams throughout the event.

Having teams directly vote on award winners is problematic for a few reasons. The first is that multi-team programs can skew voting by coordinating their votes, and no team's vote would be unbiased since they are competing with one another. The second is that because teams can only earn one judged award, a scenario can arise where candidates for the Energy or Sportsmanship awards are already slated to earn other judged awards.

The current Guide to Judging also allows the option of asking volunteers who are in a position to observe teams throughout the event to nominate teams for consideration for the Energy and Sportsmanship awards. These awards can also be determined directly by Judges through observation at the event.

Teamwork, Communication, and Professionalism

5-Oct-2023

The Team Interview Rubric, criteria for Teamwork, Communication, and Professionalism is update at page 39 of the link below. The item to be judged is not the quality of the "contribution to explanations of the design process, game strategy, and other work done by the team" as this is the same for all three levels. Rather, a score of Expert, Proficient, or Emerging is decided based on how many people on the team participate in the discussion.

In this case, a team with more members will have more difficulty for all members to show their contributions. However, in a single member team, the team will default to "Expert" since there is only one member to contribute. Can you please clarify if this interpretation is correct?

Thank you-

https://roboticseducation.org/documents/2023/06/guide-to-judging.pdf/

Answered by Competition Judging Committee

The objective of this criteria on the rubric is to encourage all team members to participate in the interview, rather than elect a spokesperson or spokespersons (a subset of the students involved) to speak for the entire team. We believe that all students benefit from the communication aspect of the team interview. As such, we strove to design this criteria to be as neutral as possible with regards team size, and removed any specific reference to the number of students on a team.

The Team Interview Rubric exists as a tool for initial team interview evaluations through quantitative comparison. The final determination of all award candidates and winners are done through further qualitative deliberation among judges based on award descriptions and criteria. As such, a team earning a particular or overall score on a rubric is not an automatic disqualification or threshold for any judged award.

"Engineering Design Process" vs "Robot Design Process"

5-Nov-2023

The Design Award utilizes the term "Engineering Design Process" in its Key Criteria.

> Engineering Notebook demonstrates clear, complete, and organized record of an iterative Engineering Design Process.

The Innovate Award utilizes the term "robot design process" in its Key Criteria.

> Engineering Notebook demonstrates a clear, complete, and organized record of the robot design process.

This term "Engineering Design Process" also defined in the "Key Terms, Definitions, and Links" section of the Judging Guide:

Engineering Design Process – The process of exploring the problem, generating, and testing solutions, and documenting results in an iterative process.

What does "robot design process" mean? Is it any different from the "Engineering Design Process"?

> ### Answered by Competition Judging Committee
>
> We appreciate your attention to detail - this verbiage will changed from "robot design process" to "Engineering Design Process" in the December 15th, 2023 update to the Guide to Judging.
>
> Until that time, please consider the term "robot design process" as a synonym to "Engineering Design Process".

Adults in Remote Interview sessions

27-Nov-2023

The Remote Judging Requirements for remote interviews includes:

```
    Two adults (18+ years old) who are not team members and not Judges must be present for the
&gt;    One adult must be the Event Partner or an event administrator.
&gt;    The other adult must be the team's Primary Contact as listed in RobotEvents.com, or a
```

These two adults must be "present for the duration of the session." This differs slightly from the previous requirement that the team's coach or mentor must just be visible on screen for the entire interview.

Is it acceptable for the primary contact or designee to be present on screen on two interviews at the same time (by having the two teams be on cameras facing a central spot)? It's not clear whether this fulfills the "present for the duration of the session" requirement.

> ### Answered by Competition Judging Committee
>
> The requirements for Remote Judging can be found in the Guide to Judging.
>
> The verbiage on this subject from the Guide to Judging can be found on page 34, and is as follows:
>
> **Remote Judging Protocols**
>
> ? All Judging Principles and Guidelines still apply.
>
> ? Youth Protection must be upheld – While conducting remote interviews, each participating team should have one adult representative (18+ and not a high school student) logged in, and visible on camera during the entirety of the interview. This adult representative should join the interview before any students arrive. The adult may be in the same room as the students, or logged in separately to the remote call. This adult is not to participate in, or contribute to, the content of the team interview in any way. Their presence ensures there are multiple adult parties involved in any video meeting.
>
> ? A Judge should never be alone in a remote interview with a team, but instead, should work as part of a group of two or more Judges. With the inclusion of the team's adult representative, this puts the minimum number of adults in a remote interview at three.
>
> ? Just as in-person interviews do not allow recording, remote interviews should also never be recorded by any party.
>
> Specific to the scenario of having a coach on two different cameras, this does not allow the coach to monitor both interviews, thus would not be effective at upholding the Youth Protection principle behind this requirement.

Independent Inquiry

14-Dec-2023

In the notebook rubric in the guide to judging, the category "Innovation/originality" states: "Team shows evidence of independent inquiry from the beginning stages of their design process." The team interview rubric under the category "Engineering design process" states: "Team shows evidence of independent inquiry from the beginning stages of their design process. This includes brainstorming, testing, and exploring alternative solutions"

Our team has two questions regarding this.

1. In this context what specifically would constitute independent inquiry and how are teams expected to show evidence of it? Teams will come up with very similar or even in some cases identical design solutions for the same problems while trying to play the game. How is a team expected to prove that they came up with the design on their own instead of copying it from a different source? At what point would using an outside source for inspiration no longer be considered independent and instead be dependent?

2. How is a judge intended to interpret this category? No where in the guide to judging exists a clear explanation or definition of what "independent inquiry" is.

Answered by Competition Judging Committee

"Independent inquiry" in this context relates to the process that students are following to find design solutions, not necessarily the solutions themselves. The spirit of this criteria, in both the Team Interview Rubric, and in the Engineering Notebook Rubric, is to encourage teams to document the source and process of implementing their ideas.

The Team Interview Rubric includes clarification and definition, which you cite in your question: "Team shows evidence of independent inquiry from the beginning stages of their design process. This includes brainstorming, testing, and exploring alternative solutions".

The realities of technological and intellectual innovation are that derivative ideas often exist in the world. Students can still learn from the process of exploring existing ideas and applying them to create their own solutions. This is a way to allow for teams to build on and learn from existing work while maintaining a student centered ethos.

Whether the implemented ideas have their origin with students on the team, or if those students found inspiration elsewhere, that should be documented, and students should be going through all of the steps of the design process with that idea - this helps to distinguish the line between drawing inspiration from an idea that students then understand and make their own, and rote copying.

Rankings and Their Impact on Excellence Deliberation

16-Dec-2023

From the Guide to Judging:

> EXCELLENCE AWARD The **Excellence Award** recognizes overall excellence in both the Judged Award and the Performance Award categories. The Excellence Award incorporates all the criteria of the Design Award, **plus** the added component of a team's on-field performance at the event. The Excellence Award is a required award if judging is being conducted at an event.
>
> Key criteria of the Excellence Award are: • Be at or near the top of all Engineering Notebook Rubric rankings with a Fully Developed Notebook. The absolute minimum for a notebook to be considered "Fully Developed" would be the first four criteria of the rubric, outlining the initial design process of a single iteration. • Exhibit a high-quality team interview. • At the conclusion of qualifying matches, be ranked in the

top 30% of teams* at the event in qualification match / teamwork match rankings. • At the conclusion of the Robot Skills Challenge matches, be ranked in the top 30% of teams* at the event, and have a score above zero. • At the conclusion of the Autonomous Coding Challenge matches, be ranked in the top 30% of teams* at the event with a score above zero • Be a candidate in consideration for other Judged Awards • Demonstrate a student-centered ethos. • Exhibit positive team conduct, good sportsmanship, and professionalism.

Scenario:

In the middle of the "Final Ranking and Nominations" step, Judges are discussing a Team that has been nominated for the Excellence Award, and successfully meets the three 30% thresholds to be eligible for Excellence.

1. Can the 4 items listed below be one of the factors to consider during the "Final Ranking and Nominations" step?
2. Is it required that they be one of the factors to consider during the "Final Ranking and Nominations" step?

- Team Ranking for Qualification Matches
- Highest Robot Skills score
- Highest Autonomous Coding Skills score
- Highest Driving Skills score

Answered by Competition Judging Committee

From the Guide to Judging, under the "Excellence Award Criteria":

"Excellence Award criteria, including performance metrics, are intended as a threshold for eligibility. Qualitative judgment on the part of judges is needed to discern an Excellence Award winner from among eligible candidates."

Innovate Award Question

4-Jan-2024

Can a team submit more than 1 idea for the Innovate Award at a tournament? For example, an innovative scoring mechanism and an innovative use of sensors in their program?

Thank you

Answered by Competition Judging Committee

Only one feature or attribute should be submitted for the Innovate Award. Teams that attempt to stack multiple features or attributes into a single submission should have their submissions removed from consideration.

The reasoning behind only allowing a singular feature or attribute is that by limiting the submission, teams will need to carefully consider what they are submitting. Judges will also only need to consider the merits of one feature or attribute per team, making the process more efficient.

Additionally, as the season progresses, it is anticipated that a team's choice in what to submit will change as their design (and the designs of other teams) evolves.

Innovate Award Submission Discrepancy

14-Jan-2024

Guide to Judging:

Note: For physical notebooks, submissions for the Innovate Award must be done either by using the Innovate Award Submission Information Form or through an entry in the Engineering Notebook with the equivalent information as the last entry in the notebook. For Digital Engineering Notebooks, this may be done for each team by using the RobotEvents Digital Engineering Notebook link upload feature found in the team contact's dashboard on RobotEvents.com under "My Account".

Q&A 1853:

Only one feature or attribute should be submitted for the Innovate Award. Teams that attempt to stack multiple features or attributes into a single submission should have their submissions removed from consideration.

How should each scenario be handled?

1. A team submits a valid Innovate Award submission through RobotEvents, but their Digital Notebook contains an Innovate Award Submission Information Form about a different feature of the robot.
2. A team submits a valid Innovate Award submission through RobotEvents, but their Digital Notebook contains 3 features/attributes on a separate Innovate Award Submission Information Form.
3. A team submits a valid Innovate Award submission through their Digital Notebook on a separate Innovate Award Submission Information Form, but their Innovate Award submission through RobotEvents contains 3 features/attributes.

> **Answered by Competition Judging Committee**
>
> As per Q&A 1853, only one feature or attribute should be submitted for the Innovate Award. Teams that attempt to stack multiple features or attributes into a single submission should have their submissions removed from consideration.
>
> All of your examples include multiple submissions, as such would be treated similarly.

Communication skills, teamwork, and professionalism

17-Jan-2024

One of the key criteria for the design award (and many other awards) is:

Team interview demonstrates effective communication skills, teamwork, and professionalism.

Does this mean if a team receives a low score in the "TEAMWORK, COMMUNICATION, PROFESSIONALISM" category on the interview rubric, they would be ineligible for the award? If so, is there a certain number or proficiency level that should be considered a cutoff for receiving awards with this key criteria?

> **Answered by Competition Judging Committee**
>
> From the Guide to Judging, under the section "Judging Principles"
>
> **Qualitative Judgement **
>
> Judges are expected to apply qualitative judgment to award criteria when making final decisions on all judged awards. As such, a particular or overall score on a rubric is not an automatic disqualification for any judged award.

Remote Notebook Judging and notebook collection at event

21-Jan-2024

If our event is remotely judging engineering notebooks, are we still allowed to collect physical copies of the engineering notebooks at the event for reference during deliberations? Notebooks would only be scored on the rubric prior to the event and eligibility for the Excellence, Design, and Innovate Awards would be based on those scores. Notebooks would *not* be required, but requested from all of the teams at the event whether or not they submitted a digital copy by the deadline to be scored against the Engineering Notebook Rubric.

In the past having the physical notebooks available has been helpful for qualitative comparisons for those awards and for deliberations on the other awards where the notebook is note a requirement, but can reinforce what judges discover in their interviews with teams.

> **Answered by Competition Judging Committee**
>
> In order to ensure that all teams are evaluated consistently at an event, it would not be permitted for an event to require or request a different Engineering Notebook submission format than what was communicated on RobotEvents for Engineering Notebook submissions.
>
> The primary issue is that even if the Engineering Notebook Rubrics are not scored using the physical copies, the introduction of physical notebooks into Judging evaluations and deliberations may result in teams being inconsistently evaluated, and teams who opt to not bring a physical notebook would be put at a disadvantage compared to other teams.
>
> If judges at an event prefer to evaluate physical notebooks in person, it is recommended that digital notebook submissions are not used, in favor of in-person submissions for the Engineering Notebooks.

---

robot breaking during match

27-Jan-2024

During today's competition a robot arm broke off but was still attached to the robot by its wires which made it longer than the allowed 20". The driver continued to drive until she reached the partial park zone. The ref did not allow the points because the robot did not meet the size limits. How would you have ruled?

<G6> Keep your Robot together. Robots may not intentionally detach parts or leave mechanisms on the Field during any Match. Parts that become unintentionally detached from the Robot are no longer considered to be part of the Robot and can be either left on the Field or collected by a Driver (utilizing <G10>).

> **Answered by Competition Judging Committee**
>
> This Q&As is only intended for Judging-specific questions. Because your question pertains to VIQRC rules, you will need to resubmit it in the [Official Q&A: VIQRC 2023-2024: Full Volume](#).

Cleaning robot parts

27-Jan-2024

<R6> VEX IQ product line. Robots may be built ONLY from official Robot components from the VEX IQ product line, unless otherwise specifically noted within these rules.

I have seen teams clean their wheels with baby wipes in the past. Today, I saw a team use GooGone on the plastic sheeting to make it slide better. Are the any rules pertaining to this?

Preference of Handwritten Notebooks

28-Jan-2024

Are judges at events able to arbitrarily give preference to a notebook solely on the basis that it is hand written?

According to the Engineering Notebook Rubric, there is nothing that gives any form of preference in terms of points to a hand written notebook. However, some judges have said that they will give preference to a hand written notebook in the event that they are presented with both options.

I'm asking to find out if judges will be working with this mindset going forward into future competitions, including the World Championship.

Thank you.

Answered by Competition Judging Committee

Judges should not give preference to one format of notebook over another. Engineering Notebooks are done by the team, for the team in order to document their progress and record ideas. Showing the Engineering Notebook to judges is a secondary purpose. It is not our intention to set a precedent that teams are will choose notebooking strategies that are less compatible with their team's circumstances, in order to attempt to be evaluated more highly by Judges at events.

It is our intention that teams should be comfortable using the type of Engineering Notebook that works best for them. Judges should adapt to different formats, and evaluate notebooks by **content**, rather than by format.

Individual judges who are unable to reconcile their personal bias in favor of one format or another, should at minimum recuse themselves from evaluating Engineering Notebooks and weighing in on awards such as Excellence, Design, and Innovate that directly involve the Engineering Notebook, and are encouraged to look into other volunteer roles instead.

Ties at the boundaries of Top 30% for Excellence

30-Jan-2024

The qualification threshold for Excellence includes, "At the conclusion of the Autonomous Coding Challenge matches, be ranked in the top 30% of teams."

Suppose an event with 20 MS teams has the following scores in Autonomous:

- Team A: 40
- Team B: 20
- Team C: 20
- Team D: 20
- Team E: 18
- Team F: 18
- Team G: 18
- Team H: 12

Top 30% means 20 * 0.3 = Top 6 teams. Teams B, C and D are tied and ranked <6 so they're clearly qualified for Autonomous. But since the cutoff is 6, that "straddles" teams E, F and G, which are tied with 18 points. Which team "wins"? Or do they all qualify equally? Or is there a tie-breaker?

I couldn't find how exactly ties are handled when it comes to ranking of Autonomous Coding Challenge, Teamwork, or Robot Skills, for purposes of Excellence Top 30%.

I'd personally be an advocate of having Teams E, F and G qualify equally for Autonomous Top 30% at the event, even though the # of teams would exceed 6 (in this case). It makes the candidate pool a bit broader and eliminates messy tiebreaking rules.

I know of the existence of rule RSC2 (https://www.vexrobotics.com/full-volume-manual#RSC2) from the manual. Are those the tiebreaker rules used for determining Top 30% for all three qualification types? If so, then to determine actual ranking for my example scores above, we'd potentially need to know the 2nd highest autonomous score for teams E, F and G (RSC2.3), and even potentially skills start/stop times? While EPs can look to the TM reports, it can be challenging (impossible?) for teams and mentors to independently confirm how tiebreaking happened, no?

Thank you!

> ### Answered by Competition Judging Committee
>
> In the instance that multiple teams have achieved the same score and that score would place one of the team above the qualification cutoff, all teams with that same score would be considered qualifying; the pool of eligible teams would be expanded to include all teams with the tied score.

Editing Notebooks

31-Jan-2024

As part of judging at a recent tournament, we were informed that a team had gotten a notebooker after the start of the season. The notebooker had redone the whole notebook. There was a question as to whether a team can redo or edit a notebook either when a notebooker was added to a team later or to improve upon their notebook for future tournaments.

When I look at the current guide to judging, it states that the entries should be unedited with no pages removed or omitted and each page should be chronologically dated. For an outstanding notebook, the notebook begins at the first team meeting with dated entries.

Engineering Notebooks should contain these elements: Team number on the cover/beginning of document. Errors crossed out using a single line (so errors can be seen) Unedited entries All pages/entries intact; no pages/entries or parts of pages/entries removed or omitted. Each page/entry chronologically numbered and dated. Each page/entry signed or initialed by a student author. Team meeting notes as they relate to the design process. Permanently affixed pictures, CAD drawings, documents, examples of code, or other material relevant to the design process (in the case of physical notebooks, tape is acceptable, but glue is preferred)

Outstanding Engineering Notebooks should contain these additional elements: Table of contents Entries are dated with the names of contributing students included. Notebook begins with the first team meeting. Descriptions, sketches, and pictures of design concepts and the design process Observations and thoughts of team members about their design and their design process Records of tests, test results, and evaluations of specific designs or design concepts Project management practices including their use of personnel, financial, and time resources. Notes and observations from competitions to consider in the next design iteration. Descriptions of programming concepts, programming improvements, or significant programming modifications Enough detail that a person unfamiliar with the team's work would be able to follow the logic used by the team to develop their design, and recreate the robot design using only the Engineering Notebook

I have always told my teams to take ownership of not only their robot, but their notebook. Showing that you have learned how to notebook and improve is good to show judges. If they just loose notebook format points by going out of chronological order or editing entries, that may not be enough to deter this.

Does editing past entries or redoing a notebook violate the rules for the Engineering Notebook? If so, what are the consequences? Is it considered a violation of a game rule? Is the notebook not considered for judging? Does the team

just loose the notebook format points? Some teams may choose to loose notebook format to gain points in other categories. Do they loose points for originality since they did not start at the beginning stages of their design?

> ### Answered by Competition Judging Committee
>
> It is the hope that Engineering Notebook entries are done in sequence with the design process and are a genuine representation of student work. In other words, if a notebook entry was made by a student on the team, then another student would not go in after the fact and "enhance" that entry; the notebook exists as an insight into the engineering design process and progress made by its authors. If some ideas in the notebook were going to be expanded upon or reorganized for the sake of clarity, our hope is that both the "original" and the "updated" entries would co-exist in the notebook, to show not only evidence of progress in the engineering design process, but in notebooking and documenting as well.
>
> In reality, confirming the editing or backdating of entries is next to impossible, and likely not a productive endeavor. We do not feel it is appropriate for the Judging Process to become bogged down with detective work, especially with the lack of concrete evidence to be found in most cases. As with all Judged awards, there is a level of subjectivity in the selection of the final award nominees to account for qualitative factors that may not be so easily considered in a quantitative or boolean assessment.

Digital Notebook Access

6-Feb-2024

If a judge advisor chooses to have engineering notebooks submitted digitally for an event, are the judges allowed access the digital notebooks during deliberations?

> ### Answered by Competition Judging Committee
>
> As long as all teams and notebooks are being treated equitably, and are being viewed in the same format as they were initially submitted, then this is fine.
>
> In contrast, it would not be permissible for notebooks to be initially submitted digitally, and then printed out to be reviewed in person as a physical notebook - the digital versus physical notebook judging experience are markedly different and could lead to a bias for or against certain kinds of notebooks being reflected in evaluations.

Not giving an Excellence award

8-Feb-2024

Just clarifying, If a team meets all of the performance criteria and turns in a Notebook but the notebook is not in the top notebook rankings, then an Excellence award should not be awarded.

> ### Answered by Competition Judging Committee
>
> Correct.
>
> The Design Award is the foundational award for Excellence, as as such the first criteria for the Excellence Award is: "Be at or near the top of all Engineering Notebook Rubric rankings with a Fully Developed Notebook. "
>
> Note the following guidance in the section entitled "Engineering Notebook Judging Process (page 26 of the Guide to Judging)

> "Roughly the top 30% of Fully Developed notebooks will be in consideration for the Design, Excellence and Innovate awards. They may be initially ranked according to their rubric scores, then be re-ranked according to further qualitative evaluation by Judges."

Think Award criteria clarification

11-Feb-2024

I have questions about the first two criteria for the Think Award.

The first criteria for the Think Award is: **"Participation in the Autonomous Coding Skills Challenge"**

1. Is this a hard requirement?
   IE if a team does not even attempt an Autonomous Coding Skills run, can they be eligible for this award?

The second criteria for the Think Award is: **"Autonomous programming is consistent and reliable"** 2) With Prog Skills being renamed to "Autonomous Coding Skills" this season, does **"Autonomous programming"** refer to the Autonomous Period in a match? Or to Autonomous Coding Skills? Or both? If it is the Autonomous Period of a match, are there any guidelines for using the "AP" to help distinguish comparing teams for this criteria? IE top 30% Or are Judges supposed to be watching teams Auton during multiple matches to evaluate how consistent it is?

Thank you for your time and consideration.

> **Answered by Competition Judging Committee**
>
> Participation in the Autonomous Coding Skills Challenge with a score greater than zero is a hard requirement. For VIQRC, this is the only opportunity for teams to show their Autonomous Coding.
>
> Autonomous Programming refers to both the autonomous period of VRC / VEXU events as well as the Autonomous Coding Skills Challenge. Since VIQRC does not have an autonomous period in Qualification matches, and teams in all programs only get 3 chances to run Autonomous Coding Skills, the threshold for "consistent and reliable" should not be set so high as to be insurmountable.
>
> There is no guidance with regards to using APs or scores to rank potential award candidates, as this will vary a lot from event to event.
>
> It is the intention of this verbiage in the Guide to Judging that the Think Award reward consistent and elegant programming solutions, and not a high scoring or effective run whose success was a fluke / primarily due to good luck.

Innovate Award Clarification

15-Feb-2024

The Guide to Judging states: This design element, strategy, or other attribute is unique or uncommon among Innovate Award candidates at the event.

The Guide to Judging: Awards in the REC Library Knowledge Base, https://kb.roboticseducation.org/hc/en-us/articles/4912455338391-Guide-to-Judging-Awards#innovate-award-aMwxd: This design element, strategy, or other attribute is unique or uncommon among teams at the event.

Scenario: In the event there is only one team who submits for the Innovate Award, but the innovation is not unique which from the above applies? If we follow the Guide to Judging we would have to give the award to the one team who submits, that is inconsistent from the knowledge base.

The verbiage found in the Guide to Judging and this Q&A always takes precedence over all other sources.

Thank you for alerting us to this discrepancy - it has since been corrected.

In this instance, "This design element, strategy, or other attribute is unique or uncommon among Innovate Award candidates at the event." is the correct guidance.

Sorting the Engineering Notebooks

19-Feb-2024

In the Guide to Judging, the notebook sorting process is described as a process the judges perform.
"Judges perform a quick scan of all the Engineering Notebooks and divide them into two categories: Developing and Fully Developed." (pg 26)

The Guide goes on the describe that judges who are uncertain should consult other judges. "If it is unclear whether a notebook should be categorized as Developing or Fully Developed, either another Judge can help make that determination, or the notebook should be given the benefit of the doubt and scored using the rubric." (pg 26)

If there are time constraints that make it easier for the Judge Advisor to perform the sort (let's say while the judges are conducting initial interviews), is this acceptable, or must the sorting of notebooks be performed by judges?

If the Judge Advisor is permitted to perform the sort, are there any best practices you recommend to ensure that one person is not singularly choosing which notebooks will be scored and which will not?

It is acceptable for the Judge Advisor to assist the judging process where needed.

A best practice is to set up a system of "One Yes and Two No's".

One "Yes" passes a notebook to the next level of sorting if the reviewer deems it to be "Fully Developed."

If a notebook does not pass (is given a "No") then it gets checked by another judge, who may also review it with a "No", thereby putting it in the "Developing" category, or a "Yes" putting it in the "Fully Developed" Category.

This system can save time by having some notebooks initially sorted by a single person, but removing a notebook from further consideration requires two different reviewers, lessening the chances of a notebook not getting reviewed further when it probably should have been.