Engineering Design Judges

In essence the Design Judging session concentrates on assessing the design engineering of the car from concept through to manufacture, assembly and testing, and the student's knowledge of that process. Each Design judge will be assigned to a Group (of approximately 6 judges) and that Group will judge a selection of cars/entries during the day (approximately eight). The judging sessions will last approximately 55 minutes, with the judges assessing the car (where possible), looking at the design and engineering fundamentals and ascertaining why the students have made the decisions they have.

Some of the entries may be Concept Class, i.e. teams that have completed a design and some prototype parts only, not a running car. The approach to judging is intrinsically the same as we focus on the student's understanding ('why' and 'how') rather than 'what' they made.

The Design judging Groups will be led by an experienced Lead Judge who will oversee their group. The Lead Judge will be asked to manage all the appropriate comments made by the judges and the scores given. A Score Sheet with comments is completed for each entry and these comments along with the numerical scores will form the basis of their overall design score. All written feedback from the judges will be passed on to the student teams via this individual Score Sheet.

Pre-event preparation

All student entries include the pre-event submission of an 8-page Design Report and a Specification Sheet and we ask all judges to read **both** documents for each of the cars they are judging. The reason behind this is to give you an idea of what to expect in the design judging session and also indicates their style and angle of approach to the competition. This should take approximately 3-4 hours and all reports will be sent at least two weeks before the event. Where health restrictions dictate there may be virtual (online) judging and in such case there may be an additional student video pre-submission to be reviewed in advance and we estimate this may take approximately an additional 90 minutes.

Background/Experience required

- Enthusiasm, happy to work with small diverse group of others with similar aims and be able to ask questions and be questioned by students
- Basic understanding of Formula Student competition (an engineering challenge rather than a race)
- Understanding of the Design Rules to a reasonable level (read them a few times)
- Engineering knowledge: especially basic fundamental principles and practicalities, not necessarily specific to cars but a working knowledge of cars is very useful
- Previous FS experience is helpful, as is previous motorsport involvement or interest
- Wider understanding rather than detailed narrow specialism allows us to move Judges around far more easily. Specialists can be very useful for certain areas, e.g. engine mapping/traction control strategy, but wider conceptual understanding is also needed, e.g. broader powertrain (structure, cooling, lubrication, gearing) with a headline skill in engine mapping
- Specialist skills in the area of alternative powertrain technologies are especially appreciated, e.g. high voltage DC motors and control systems, hybrid and fuel cell powertrains.

To apply to be an Engineering Design Judge at Formula Student 2023 please click here: Application