



The following Rules and Regulations are for the Formula Schools Engineering Competition. The competition is open to all pupils up to the end of year 11, with a strict upper age limit. No sixth form students to participate directly but skills and knowledge gained by using older pupils as mentors is to be encouraged.

The Rules and Regulations are designed to enable the teams to compete on a reasonably level playing field, whilst encouraging technical innovation, without being too restrictive.

The organisers will be happy to give their interpretation of any aspect of the rules should the need arise, during the build phase as well as on race day, reflecting the spirit of the competition.

### **Formula:**

**No kit cars are allowed.** This would be in direct conflict with the spirit and aims of the competition. In brief, cars are to be approximately 1/8th scale, scratch built. Stock components may be used, but not complete assemblies.

Cars will be scrutinised prior to and on race day to ensure they have been scratch built and the following guidelines have been followed:

- |                            |   |
|----------------------------|---|
| <b>Engine</b>              | Supplied by the organisers <ul style="list-style-type: none"><li>- Cars may only be powered by one engine, but the engine may be modified provided it remains identifiably the same</li></ul> |
| <b>Chassis</b>             | Scratch built <ul style="list-style-type: none"><li>- There are no limits to construction, provided the whole car falls within the dimensions given in these regulations</li></ul>            |
| <b>Body</b>                | No restrictions <ul style="list-style-type: none"><li>- There are no restrictions on the body shape or construction, but the body shape must be identifiably a car</li></ul>                  |
| <b>Suspension</b>          | Formula Schools kit or scratch built <ul style="list-style-type: none"><li>- Any geometry can be used</li></ul>   |
| <b>Drive Train Gearing</b> | No restrictions <ul style="list-style-type: none"><li>- The car can be front, rear or four wheel drive</li></ul>  |
| <b>Tyres &amp; wheels.</b> | <ul style="list-style-type: none"><li>- No limits on tyre and wheel width, material and design</li></ul>  |
| <b>Radio</b>               | Radio gear will be allocated by the organisers. This is the only radio gear that can be used on race day. Prior to race day the choice is left to participants.                               |
| <b>Fuel</b>                | No restrictions   |

**Dimensions** Inclusive of all body projections and aerodynamic features, except the radio aerial. Approximately 1/8 scale construction

All in mm	Maximum	Minimum
Length	600	400
Width	300	200

**Weight** There are no weight restrictions

**Car Identification** Numbers will be allocated by the organisers and must be easily identifiable throughout the race. If a car loses its bodywork during a race it will not accrue any further laps

Scrutineers will also look for safety features (eg no sharp projections that could injure competitors) and to ensure that car construction is designed for racing rather than damaging other competitors' cars.

### Race Day

Race Day will take place at Silverstone Circuit

The overall winner will be the team gaining most points from a combination of race results (30 points max) and scrutineering (120 points max). There are a total of 150 points on offer. In the event of a tie the team with the most race points will win.

**All races are time trials; the race winner will be the team completing the most laps.**

### Qualifying Sessions

- You will have the chance to qualify for the Grand Prix in two rounds that are to be run throughout the day. When racing in your heat you will be in amongst a mix of teams, both new 'rookie' and previous competitors. In your heat you are not only racing the teams on the track with you, but the whole entry field. The top 20 teams with the highest number of laps from your best qualifying session will go forward to give you entry to the final Grand Prix. i.e. Cars are racing the whole field in their heats.
- There will be a best non qualifiers heat for cars that did not qualify for the Grand Prix in the first session, giving two further places in the Grand Prix final.
- The Grand Prix will comprise of three seven minute race sessions with two 5 minute pit stops.
- Teams may restart and work on their car during the race so long as they do not hinder the other competitors and they are not seen to gain an advantage when the car is placed back on the track. If a car has to be withdrawn from the track, it must restart from the pit lane.

All cars brought to race day must have been built as part of the engineering challenge. Only one car may be used per race (ie a damaged car cannot be swapped in mid-race) but different cars can be entered for different races.

### Sprint and Slalom rounds

These rounds will have a trophy and prize for the first placed team, with no points contributing to the overall totals.

## Point Scoring

### Racing

The team completing the most laps will win each race. Points will be awarded as follows:

Position	1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>	4 <sup>th</sup>	5 <sup>th</sup>	6 <sup>th</sup>	7 <sup>th</sup>	8 <sup>th</sup>
Points	10	8	6	5	4	3	2	1

Any team or driver who seriously obstruct or damage other competitors' cars will be disqualified from the race concerned.

### Scrutineering

Marked in increments of 0.5

The following categories will be awarded points

- Engineering 60
- Body and Aerodynamics 30
- Teamwork 30
- Total 120

### Engineering, Body and Aerodynamic design

The scrutineers will be looking for quality of design and implementation by checking the pupils' understanding of the engineering of their cars.

Wholesale use of kits will be marked down.

### Teamwork

Scrutineers will be looking for a cohesive team with clear roles, interchangeability where appropriate. They should be able to solve problems as a team and react to changing circumstances

For full details of points allocation, see the 'points criteria' section of rules and regulations.

### Trophies will be awarded for the following categories:

Group 1 Expert	Group 2 Rookies
Overall Champions Best Pit Display at Race Day	
	Rookies Winner
Engineering Body and Aerodynamics Teamwork	Engineering Body and Aerodynamics Teamwork
Winners on the track Grand Prix Heats winners Fastest lap time Sprint	