

UTeM FORMULA VARSITY 2012 EVENT REGULATIONS

1.1 POINT EVALUATION

UTeM Formula Varsity 2012 consists of 2 sections which is divided to section A and section B. Both sections consist of 50 % marks. Prize will be awarded for both sections and for overall. The details are:

SECTION A : TECHNICAL JUDGEMENT (50 %)

- 1) STATIC EVENT (30 %)
 - Specification (15 %)
 - Poster Presentation (15 %)

- 2) DYNAMIC EVENT (20 %)
 - Acceleration Test and Braking Test (10 %)
 - Qualifying Race (10 %)

Point Evaluation:

POSITION	POINTS (%)	POSITION	POINTS (%)
1	10	19	4.6
2	9.7	20	4.3
3	9.4	21	4.0
4	9.1	22	3.7
5	8.8	23	3.4
6	8.5	24	3.1
7	8.2	25	2.8
8	7.9	26	2.5
9	7.6	27	2.2
10	7.3	28	1.9
11	7.0	29	1.6
12	6.7	30	1.3
13	6.4	31	1.0
14	6.1	32	0.8
15	5.8	33	0.6
16	5.5	34	0.4
17	5.2	35	0.2
18	4.9		

UTeM FORMULA VARSITY 2012 EVENT REGULATIONS

SECTION B : RACE (50 %)

- 1) Please refer to Race Procedure in Section 1.4 in this document for details.
- 2) Point evaluation only will be given to the car that completes 25 laps from 1st to 20th places because the race ends after 20th place driver that has completed their 25th lap.
- 3) Position of the next 15 cars will be taken based on their current position. Only one point will be given to them if their car is still on track or not exit from the race because of accident or technical problem which expects they can finish the race.
- 4) Point Evaluation

POSITION	POINTS (%)	POSITION	POINTS (%)
1	50	11	16
2	45	12	14
3	40	13	12
4	36	14	10
5	32	15	8
6	28	16	7
7	25	17	6
8	22	18	5
9	20	19	4
10	18	20	3

*Total point for both sections will be added to obtain the overall position in order to determine the Grand Prize winner. **The Most Outstanding FV Team.**

UTeM FORMULA VARSITY 2012**EVENT REGULATIONS****1.2 ACCELERATION AND BRAKING TEST**Objective

The purpose of acceleration and braking test is to evaluate the car acceleration and braking performance in a straight line on flat pavement.

Accelerate and Brake test procedure

- 1) The accelerate and brake test will begin from a standing start over a distance of 50 m on a flat surface.
- 2) The foremost part of the car will be staged at 0.30 m behind the starting line.
- 3) A yellow flag will be used to indicate the approval to begin, time starts only after the vehicle crosses the start line.
- 4) The total distance to accelerate is 35 m from the start line. When the foremost part of the car reaches the 35 m line, the driver must apply the brake to stop. Total distance between the rearmost of the car and the 35 m line will be measured.
- 5) Another yellow flag will be used at 35 m line to indicate that the drivers can start to brake.
- 6) A green flag will be used to indicate that the brake and accelerate test is success.
- 7) A red flag will be used to indicate that the brake and acceleration tests have failed if the car stops beyond 50 m from the starting line during braking, as shown in Figure 1.
- 8) All cars are only allowed to perform ONE test. The test can be repeated only ONCE for the car that has failed the braking test.
- 9) Marks will be given according to the total distance and the total time needed for a vehicle to completely stop. Higher marks will be given to the team with shorter distance during braking test and fastest time during acceleration test.
- 10) The following equation is used to determine the scores for the event:

* Point for acceleration test is **5**.

$$\text{POINT} = \left(\frac{\text{Acceleration Time}}{\text{Best Acceleration Time}} - 6 \right) \times (-1) ,$$

* Point for braking test is **5**.

$$\text{POINT} = \left(\frac{\text{Braking Distance}}{\text{Best Bracking Distance}} - 6 \right) \times (-1)$$

* The total point for acceleration and braking tests is **10**.

UTeM FORMULA VARSITY 2012 EVENT REGULATIONS

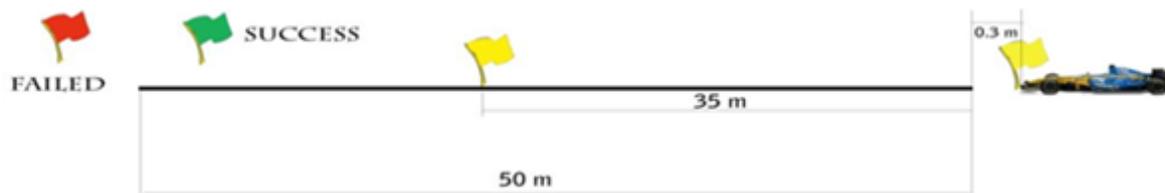


Figure 1. Acceleration and braking tests.

1.3 PRACTICE & QUALIFYING

- 1) All teams can have their free practice for 3 laps in each free practice session.
- 2) Free practice is given for drivers to have the feel of the track condition. Apart from that, drivers can take the opportunity to enhance their driving skills and optimize their vehicle performance.
- 3) All cars will start the practice according to their pit stop order.
- 4) In the qualifying event, all cars are given maximum of 3 laps.
- 5) All cars will start their qualifying based on car registration number.
- 6) In the qualifying event, the first lap will not be counted. The time will be recorded when the vehicle is on the second and third lap.
- 7) The best lap time will be taken and will be used to determine the grid position in the race event.
- 8) If a vehicle is deemed by the marshals to have stopped unnecessarily on the circuit or impeded another driver during qualifying event, his recorded times may be cancelled and the team will be placed at the last grid position.

UTeM FORMULA VARSITY 2012 EVENT REGULATIONS

1.4 RACE PROCEDURES

- 1) 15 minutes before the race start, drivers should be at the grid position and the engines must be turned off.
- 2) 10 minutes before the race start, the grid must be cleared from crowds except for team technical staff, race officials and drivers.
- 3) 3 minutes before the race start, first horn will be sounded and all drivers must turn on the engine.
- 4) 1 minute before the race start, second horn will be sounded and all personnel must then leave the grid.
- 5) Third horn will be sounded to indicate that the formation lap will be started within 30 seconds before the green light appears.
- 6) Any driver who has problems with his vehicle must immediately raise his arm to indicate his predicament. When all cars have already leaved the grid, marshals will push the car into the side lane.
- 7) During the formation lap, no practice starts are allowed. Overtaking is also forbidden.
- 8) One representative from each team must be at the side lane of the grid to ensure that the car is in correct position grid after the formation lap.
- 9) Once all cars have safely taken up their grid positions at the end of the formation lap, five red lights will appear in sequence at one-second intervals. These red lights are then turned off to signal the start of the race.
- 10) Drivers must try to complete all 25 laps. However, the race will be stopped after the 20th place driver has completed the 25th lap.
- 11) Top 5 position cars must be parked at grid side lane after the race has completed and all the cars will be inspected.

UTeM FORMULA VARSITY 2012 EVENT REGULATIONS

1.5 WHEN ACCIDENT

- 1) If an accident occurs on the race line, then red flags will be shown around the circuit. All cars on track must proceed slowly to the grid line without overtaking and then stop at the grid in staggered formation with the leading car at the front (following a safety car).
- 2) The safety car will then be driven to the front of the queue. While the race is suspended, refuelling is not allowed.
- 3) The race will be re-start according to Section 1.4 after the race line has been cleared.
- 4) All laps completed when safety car is on the track are counted as race laps.
- 5) If for whatever reason it is impossible to resume the race, the rules state that *“the results will be taken at the end of the penultimate lap before the lap during which the signal to suspend the race will be given”*.

**UTeM FORMULA VARSITY 2012
EVENT REGULATIONS**

1.6 PENALTIES AND DISQUALIFICATION

1) Penalty will be given if the car does not follow the UTeM Formula Varsity 2012 Vehicle Technical Specification. There are few specifications that are considered to have a penalty. These specifications are known as critical specification. Below are the list of all the critical specifications and its penalties.

(Please refer UTeM Formula Varsity 2012 Vehicle Technical Specification for detail).

ARTICLE	CRITICAL SPECIFICATIONS	PENALTIES
<p>6.0</p> <p>6.1</p>	<p>WEIGHT</p> <p>Minimum Weight</p> <ul style="list-style-type: none"> • The half dry weight of the car plus driver without fuel is between 190 kg to 200 kg. • The half dry weight of the car plus driver without fuel is less than 190 kg. 	<ul style="list-style-type: none"> • Disqualify for all parts in section A (Technical Judgement). • Start the section B (Race) after the last car on the track has completed 10 laps. Starting line is at the paddock. • Disqualify for all part in section A (Technical Judgement). • Start the section B (Race) after the last car on the track has completed 15 laps. Starting line is at the paddock.

**UTeM FORMULA VARSITY 2012
EVENT REGULATIONS**

ARTICLE	CRITICAL SPECIFICATIONS	PENALTIES
<p>7.0</p> <p>7.1</p> <p>7.2</p>	<p>ENGINE</p> <p>Permitted Engine</p> <ul style="list-style-type: none"> • Engine is not four-strokes. <p>Maximum Capacity</p> <ul style="list-style-type: none"> • Based-engine exceeds 135 cc. 	<ul style="list-style-type: none"> • Disqualify for all events in section A (Technical Judgement). • Start the section B (Race) after the last car on the track has completed 10 laps. Starting line is at the paddock. • Disqualify for all event in section A (Technical Judgement) and section B (Race).

UTeM FORMULA VARSITY 2012 EVENT REGULATIONS

- 8) Any driver that has been identified to be 'unsporting behaviour' for the first time will be penalized to drive through penalty and will be black flagged/disqualified from the race for the second fault.
- 9) Registered team members must at all time wear and show their Formula Varsity identification tag and those who comply with this are allowed to present in the paddock throughout the event.
- 10) All the judgement decisions are conclusive. Any protest must be made to the organizer within 10 minutes after the official result has been displayed with RM500 protest fee.

1.7 SAFETY CAR

- 1) The Formula Varsity safety car will be driven by an experienced circuit driver and will carry an observer capable of recognizing all the competing cars. The observer is in permanent radio contact with the race control.
- 2) The safety car may be brought into operation to maintain safety in a race event upon order of the steward. It will be used only if competitors or officials are in immediate physical danger but the circumstances are not such as to necessitate suspending the race.
- 3) When the order is given to deploy the safety car, all marshals' posts will display waved yellow flags for duration of the intervention. Marshals will also display board with SC DEPLOYED at all posts.
- 4) From this time, any car being driven unnecessarily slowly, erratically or which is deemed potentially dangerous to other drivers at any time whilst the safety car is deployed will be reported to the steward. This will apply whether any such car is being driven on the circuit, the pit entry or pit lane.
- 5) The safety car will join the track with its orange lights illuminated and will do so regardless of where the race leader is.
- 6) The observer will use a green light to signal to any cars between it and the race leader that they should pass. These cars will continue with reduced speed and without overtaking until they reach the line of cars behind the safety car. The safety car shall be used at least until the leader is behind it and all remaining cars are lined up behind him.

UTeM FORMULA VARSITY 2012 EVENT REGULATIONS

- 7) Whilst the safety car is in operation, competing cars may enter the pit lane, but may only rejoin the track when the pit exit is opened by the marshals. A car rejoining the track must proceed at an appropriate speed until it reaches the end of the line of cars behind the safety car.

- 8) When the steward of the course decides that it is safe to call in the safety car, the marshals in all posts will display a board written SC IN THIS LAP. The safety car orange light will be extinguished. This will be the signal to the teams and drivers that it will be entering the pit lane at the end of the lap. As the safety car is approaching the pit entry, the yellow flags will be withdrawn replaced with green flags. These will be displayed until the last car crosses the line.

- 9) Each lap completed while the safety car is deployed will be counted as a race lap.