



Technical Board  
IIT Guwahati



# Braking-Bad

GC Points – 400

Final Date – XX/XX/XXXX

Venue – Will be informed two days before the event.

Time – Will be informed two days before the event.

## Contact Details

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**Problem:** Participant has to build a wired remote control vehicle with specifications that it has to traverse a specified track and reach the finish line and stop the vehicle within the specified zone after crossing the finish line.

**Specification of Vehicle:**

1. Vehicle should have four wheels, and its dimensions should be within 22\*17(l\*b) sq. cm.
2. Use of microprocessor and sensor is prohibited.
3. Vehicle must include a Braking mechanism for stopping.
4. Power must not be transmitted directly to the wheels, i.e. motor must not be directly attached to the driving wheels.
5. Braking action should not be achieved by reversing rotation of wheels.
6. Vehicle will have to carry a payload of 1 kg (will be a **5cm cube** provided by us in the event)during the dynamic tests.
7. Motors only with 150 RPM rating are allowed to use (Number of motors that can be used is not restricted).

**Events:**

1. Design Presentation: Participant team will be required to give a design presentation in which they have to give description about the technicalities along with the CAD model (optional) of the vehicle.
2. Acceleration Test and Brake Test (Dynamic tests): Vehicle will be required to traverse a straight track in least possible time and then has to stop in a predefined area that will be located right after the finish line.

**Team Rules:**

1. Team Strength – 6 Members.
2. Max of three members shall participate in design presentation.
3. Only one member can operate the vehicle during dynamic tests.

**Weightage:**

1. Acceleration Test – 35%
2. Brake Test – 30%
3. Design Presentation – 30%
4. CAD model – 5%

**Event Rules:**

1. Maximum number of attempts to retry are restricted to three and marks will be awarded by considering the best out of three. There is no compulsion that team has to take their remaining attempts consecutively.
2. Track Layout will be provided a week before the event.
3. If the vehicle goes out of the track then that try will not be considered for evaluation, teams can start again only if they have remaining attempts at cost of corresponding penalty.
4. Team can apply brakes only after rear wheel crosses the finish line, if there is violation, Team will be asked to try again only if they have remaining attempts and corresponding penalty will also be imposed.
5. Team slots will be informed two days prior to the event.
6. Design Presentation will be of 15 minutes (10 min for presentation and 5 min for Q&A).
7. Maximum number of points are 500.
8. Sole criteria for awarding marks will be, Time taken to traverse the distance during acceleration test, and covering excess distance after crossing the braking area will lead to negative marks.
9. Violation of rules within vehicle specification (other than rule number 1), will lead to direct disqualification.
10. Teams will be awarded GC points as per their rank in the event.

**Penalties:**

1. Penalties due to dimension: Deduction of 5% marks from final score for per 2cm increment in length or breadth.
2. Penalties due to taking attempts: Deduction of 5% marks from final score for each retry.

**People who cannot participate:**

1. Himansh Mittal (160103034)
2. Sudhanshu Verma (160103069)

“FINAL VERDICT STAYS WITH THE CLUB SECRETARY!! “



*12 Hostels, 7 Days, 1 Title!*