

— ASCE STUDENT SYMPOSIUM —
BANGLADESH 2026

G COASTER

DESIGN COMPETITION 2026



DESIGN

Create an innovative gravity-powered roller coaster.



BUILD

Apply engineering principles with limited materials.



COMPETE

Test performance, ensure safety, earn points.



WIN

Showcase creativity, engineering excellence, and teamwork.



Hosted by the
ASCE Students Chapter, CUET



Chattogram University of
Engineering & Technology (CUET),
Bangladesh



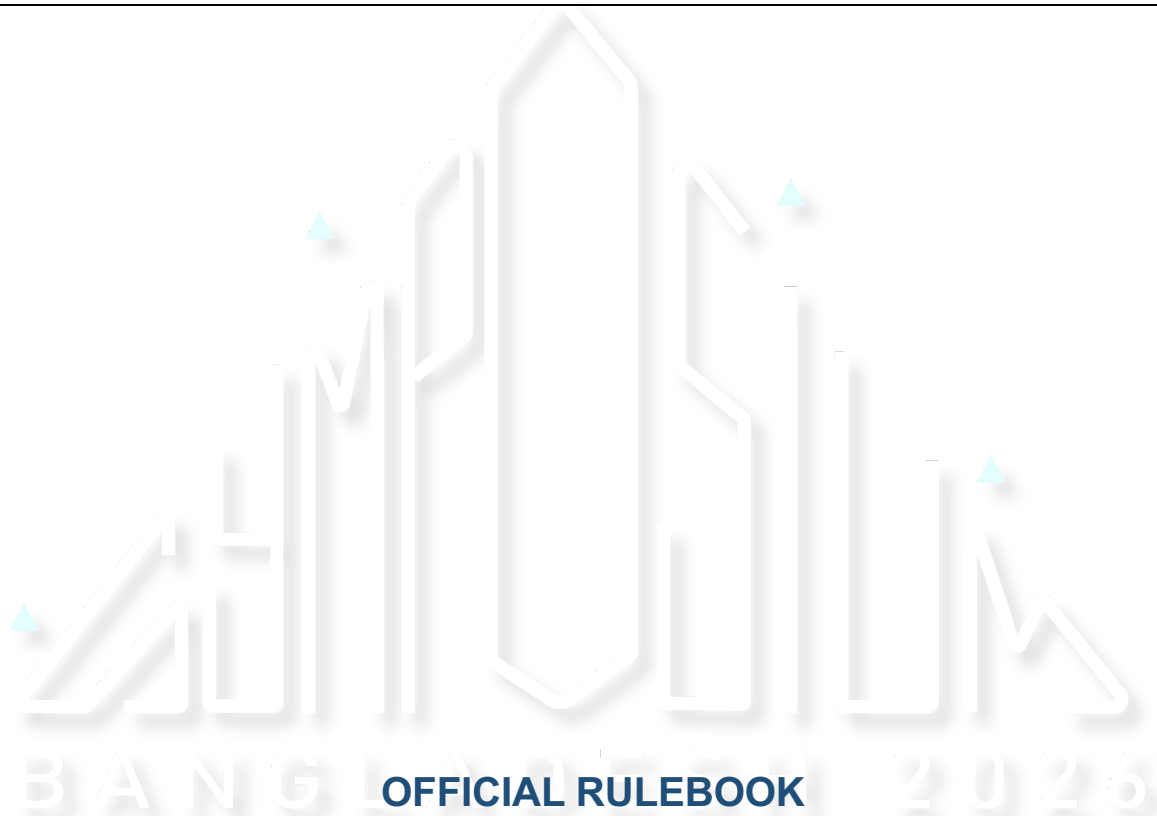
Open to all disciplines
Teams of up to three (3) members



Edition:
2026

ASCE STUDENT SYMPOSIUM BANGLADESH 2026

G COASTER COMPETITION 2026



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Chattogram University of Engineering & Technology (CUET), Bangladesh

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BANGLADESH 2026

1. Competition Overview

Roller coasters are called “gravity rides” because once released from the first hill, gravity drives them through twists, turns, and loops as energy shifts between potential and kinetic forms. In this competition, building a coaster is more than designing a thrilling ride. It showcases core engineering principles like energy conservation, stability, and safety, while fostering creativity, problem-solving, and real-world application of engineering skills.

2. Eligibility

This is an open event. The Organizing Committee reserves the right to verify the enrollment status of any team member and to withdraw a non-compliant entry.

- The competition is open to all currently enrolled undergraduate students, irrespective of discipline or institution.
- Each team shall consist of not more than three (3) members.
- No student shall be a member of more than one team.

3. Contest Rules

Each entry shall be an original model constructed by the registered team members and shall comply with the following rules without exception.

- The base of the model shall fit entirely within a 36" × 36" square footprint.
- The track shall be designed for a 5/8" marble and shall carry it, uninterrupted, from the first hill to the loading platform.
- Gravity shall be the sole source of motive power; magnets, springs, motors, and any form of electrical assistance are prohibited.
- The starting point at the first hill shall be clearly and permanently marked on the model.
- Permitted materials: paper, PVC, plastic, glue, and adhesive tapes.
- Prohibited methods: welding, and mechanical fasteners such as nuts and bolts.

4. Registration

Registration shall be completed through the official channels announced by the ASCE Student Chapter CUET. All participants shall pay a non-refundable registration fee as listed below, payable before the registration deadline.

Criteria	Fee per participant
Local student (CUET)	500 BDT
Local student (not CUET)	600 BDT
International student	20 USD

5. Deadlines

The following dates shall govern the competition. Exact dates will be published on the official channels of the ASCE Student Chapter CUET and communicated to all registered teams.

Milestone	Date
Registration opens	September 10, 2026
Registration deadline	October 15, 2026
Judging & final runs	October 30, 2026

6. Awards

Awards shall be conferred by the Organizing Committee on the basis of the final scores determined under Sections 7 and 8. Recognition shall be granted as follows.

- Champion: prize money together with a certificate of achievement.
- First Runner-Up: prize money together with a certificate of achievement.
- Second Runner-Up: prize money together with a certificate of achievement.
- All other participating teams: a certificate of participation.
- The Organizing Committee may, at its discretion, confer additional recognition for exceptional thematic design or engineering merit.

Prize amounts shall be announced through the official channels of the ASCE Student Chapter CUET prior to the day of judging. The decision of the Organizing Committee in respect of all awards shall be final.

7. Judging Criteria

Each model shall be evaluated against the three criteria set out below. The decision of the judging panel shall be final and binding in all matters.

7.1 Technical Score (50 points)

- Each model shall be permitted three (3) recorded runs.
- The longest recorded travel time from Start to Finish shall be taken as the official score (maximum 50 points).

7.2 Bonus Points (maximum 20 points)

- Vertical loops: five (5) bonus points shall be awarded for each vertical loop lying within 10° of vertical. Horizontal loops shall not be counted.
- Track openness: up to fifteen (15) points shall be awarded on the basis of the visibility and openness of the track.

7.3 Theme and Creativity (25 points)

Up to twenty-five (25) points shall be awarded for innovative engineering, coherence of thematic design, and the overall appeal of the ride to a notional rider.

8. Calculation of Points

8.1 Technical Points

Technical points shall be awarded in proportion to the longest run time recorded across all competing models. If the maximum recorded time is 15 seconds and a given coaster records 9 seconds, its technical score is:

$$(9 \div 15) \times 50 = 30 \text{ points.}$$

8.2 Bonus Points

Bonus points shall be awarded as follows.

Vertical Loops	Bonus Points
1 loop	5 pts
2 loops	10 pts
3 loops	15 pts
4 loops	20 pts
Track Openness	Points
Mostly closed	0 pts
25% open	5 pts
50% open	10 pts
>80% open	15 pts

9. Safety and Conduct

Safety is a condition of participation. Each model shall be capable of operation without risk to persons or property.

- Models shall be free of sharp projections, unstable overhangs, and any feature capable of causing injury to participants, judges, or spectators.
- Teams shall be responsible for the transport, assembly, and removal of their own model, and shall keep the venue clean and unobstructed.
- Only registered team members shall handle the model during the recorded runs.
- Any instruction issued by the Organizing Committee or the judging panel on safety grounds shall be complied with immediately.

10. Disqualification

An entry may be disqualified, at the sole discretion of the Organizing Committee, if any of the following apply.

- The eligibility requirements set out in Section 2 are not met.
- The model does not comply with the Contest Rules set out in Section 3.
- The model is found to be substantially the work of persons other than the registered team members.
- A team fails to present its model at the appointed time on the day of judging.
- A team engages in conduct that is unsafe, dishonest, or disruptive to the conduct of the competition.

11. Contact

Questions regarding eligibility, registration, model specifications, or scheduling should be directed to the ASCE Student Chapter CUET through its official channels, through which any amendment to this rulebook will also be communicated.