

L. D. COLLEGE OF ENGINEERING
AHMEDABAD

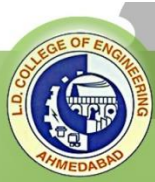
SAE LDCE
Learning by Doing



ECO GREEN VEHICLE CHALLENGE

. . . . COMBUSTION TO CONSERVATION

GUIDELINES FOR PARTICIPATING TEAM

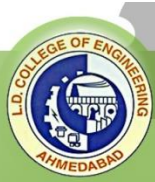


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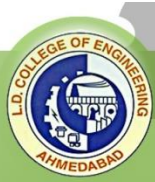
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1. COSTING PER TEAM AND COSTING PER HEAD

- Initially all the participating teams must keep in mind the total costing of event. Approx. cost distribution is given below.
 - Registration fees: Rs. 10000
 - Material for frame and all: Rs. 2000
 - Various OEM/ Readymade components: Rs. 8000
 - Vehicle fabrication: Rs. 5000
 - Miscellaneous: 5000
- Team should include various costs for manufacturing according to their respective workshop facilities.
- As per event rule, each team can accommodate maximum 10 students. So there will be approx. Rs. 3000 to 4500 per head.

2. TEAM MANAGEMENT

- First of all team must decide their captain and faculty advisor who have leadership skills, can manage team members and have knowledge about human powered vehicles.
- Next step is to divide the team in various departments like design, purchase, sponsorship, fabrication, communication, inventory management etc. As number of students per team is limited, each has to work in multiple departments.
- Department distribution should be done on interest and skill basis.
- Captain should maintain all the records.
- Transparency and smooth flow of information would help you to achieve your targets in specified time.
- Disputes between team members must be resolved immediately.



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3. RULEBOOK COMPLIANCE

- Each and every team member must read the rulebook thoroughly.
- Everyone in the team should have idea about basic rule and regulation which has to be followed for vehicle designing and fabrication.
- Team captain is required to visit the website regularly for updates and revisions.
- Team should contact concern person for any query. Contact numbers are given on website.

4. BRAINSTORMING

- Success in any competition requires motivation. Motivation comes through inside, team meetings, faculty advisor.
- Each member of team has to work for a common goal.
- Brainstorming toward unique and well-designed vehicle would lead your team to success.

5. DESIGN (CAD) & ANALYSIS

- Team should decide the configuration of their vehicle which they want to design and fabricate. Team can search down net, publications, rulebook etc. for their reference.
- Team should first design their vehicle on paper with engineering aspects.
- Team can use any modeling software for designing a vehicle.
- Next step is to analyze the CAD model with analysis software like ANSYS.
- Design must meet all the rules mentioned in the rulebook.

6. PURCHASING AND FABRICATION

- Team should make a list of the required material and components.



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- After ensuring the design is safe the procurement of materials and components needs to be carried out.
- A detailed Gantt chart should be prepared after the Design phase enlisting all the required steps in the Fabrication process.
- Means of fabrication as decided during the design phase should be executed.

7. ASSEMBLY AND FAULT RECTIFICATION

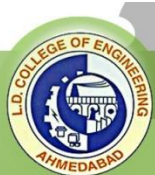
- Team should commence assembly of vehicle after receiving fabricated parts and all components.
- Sound engineering practices would help you to complete the assembly precisely and within time.
- Faults which arise during assembling should be studied and rectified. Necessary changes should be made in CAD model and must be reflected in design report.

8. TESTING

- Testing must be carried out after complete assembly. This helps driver/s to become use to with the vehicle. It also helps drive/s to understand the dynamic behavior of vehicle.

9. FAULT RECTIFICATION

- Normally, self-fabricated vehicles always show some fault after testing. Drivers' feedback also helps to find out these faults. Team should rectify these faults before coming to event.



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10. SUGGESTED TIME AND DAY DISTRIBUTION

TASK	DAYS REQUIRED (3 to 4 hours per day)
Team Formation	2
Design	6
Analysis	2
Fabrication & Purchase	20
Assembly	2
Testing and Rectification	15 to 20
TOTAL	Approx. 50 DAYS