OFFICIAL PARTICIPANT HANDBOOK

ForgeLab Handbook

Category Code: HSQ-3D01

ELIGIBILITY
Classes VI - XII

TEAM COMPOSITION
1 - 2 Students

EVENT LOCATION
DAV Public School, New Shimla (HP)

1. Competition Scope

Competition Overview

ForgeLab is an on-site CAD structural modeling challenge. Teams are presented with a real-time engineering scenario and must design a digital CAD model to solve the problem within a fixed timeframe.

Problem Statement

Emergency infrastructure must be reinforced against strategic forces. Designers are given raw material constraints and load requirements, and must construct a stable, parametrical structural assembly model on-site.

Objective

Understand engineering requirements, perform load and force calculations, build a high-quality parametric CAD assembly model, and defend the design during judges' Q&A.

2. Guidelines & Expectations

Participant Expectations

Teams must bring a pre-printed model from home for showcase and be ready to design a completely new structural component from scratch on the event day using local CAD software.

Suggested Preparation

Familiarize yourself with mechanical design principles, structural load analysis, and standard CAD assembly tools (Fusion 360, SolidWorks, Onshape).

Design Compliance Note

All physical hardware or software models brought to the arena must be verified during the morning check-in and technical compliance runs. Organizers reserve the right to alter environmental configurations inside the arena to ensure testing integrity.

3. Event Rules & Safety

General Competition Rules

- All referee calls and judge panel evaluations are final and absolute.
- Only registered student members are allowed inside active lanes and pit crew blocks.
- No wireless configuration inputs may be sent to rovers or computing models during run intervals.
- School coordinators must remain present in the campus boundaries during the entire quest.

Code of Conduct

HSQ is a collaborative ecosystem. Respect for coordinates, school properties, and competitors is mandatory. Sharing spare gear or troubleshooting help is highly encouraged inside the pit area.

Critical Safety Regulations

- Physical emergency stop controls must isolate battery supplies instantly.
- Protective glasses must be worn in active testing grid lines.
- Battery handling is restricted to safe, fire-insulated pads in the pit block.

Support Contact
coordinator@himalayanstemquest.org