

 **Event Overview**

Field	Details
Event Name	BRIDGE BUILD & LOAD TEST
Cluster	MakerSpace
Event Type	Structural Design
Mode	Offline
Team Size	Team of 2 – 4 Members
Duration	1 Hour 30 Minutes

 **Event Task / Objective**

Participants must design and construct a bridge that spans between two tables and withstands load without structural failure.

The event aims to:

- **Test structural stability**
- **Evaluate load-bearing efficiency**
- **Assess real-time design thinking**
- **Encourage innovative engineering solutions**

Bridges must survive multiple testing conditions introduced by judges.

 **Design / Game format**

✓ **Bridge Construction**

- **The bridge must be built only during event time.**
- **No pre-built components allowed.**
- **Only materials provided by organizers may be used.**
- **No external reinforcement permitted.**

✓ **Span Requirement**

Bridge must:

- **Span between two tables**
- **Cover a minimum 50 cm gap**
- **Rest freely on table edges**
- **Not touch the ground**

✓ **Structural Requirements**

Bridge must:

- **Support vertical loads**
- **Maintain balance under uneven loading**
- **Withstand stability disturbances**

 **Not Allowed**

- **Fixing bridge to tables**
 - **External supports**
 - **Hanging or suspension systems**
 - **Ground contact**
 - **Pre-manufactured structural components**
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Setup Specifications

- **Table Height: ~100 cm from ground**
- **Gap Between Tables: 50 cm**

Bridge must function at this height without support.

General Guidelines

1. **Bridges must be completed within build time.**
 2. **Judges may introduce load under varying placement conditions.**
 3. **Bridges must remain structurally stable throughout testing.**
 4. **Structural failure includes:**
 - **Collapse**
 - **Excessive deformation**
 - **Loss of load support**
 - **Sliding off tables**
 5. **Judges' decisions are final.**
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Safety Rules

- **Bridges must not include sharp or hazardous components.**
 - **Participants must maintain distance during testing.**
 - **No unsafe materials allowed.**
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Event Phase / Structure

Phase	Description	Duration
Phase 1	Briefing & Setup	10 min
Phase 2	Bridge Construction	45 min
Phase 3	Preliminary Testing	15 min

Phase 4 Surprise Structural Tests 10 min

Phase 5 Final Load Testing 10 min

Structural Testing

Bridges may undergo one or more of the following:

- **Center load test**
- **Off-center load test**
- **Point load test**
- **Stability disturbance test**
- **Load duration test**
- **Dynamic load test**

Load placement will be determined by judges.

Submission Guidelines

Teams must present:

- **Completed bridge**
- **Functional structure ready for testing**

No written report required.

Judging Criteria

Criteria	Weightage
Maximum Load Capacity	40%
Structural Stability	25%

Efficiency (Strength vs Mass) 20%

Design & Innovation 15%

👛 Scoring Overview

Parameter	Max Points
Load Capacity	40
Stability	25
Efficiency	20
Design	15
Total	100

🚫 Penalties & Disqualifications

Violation	Penalty
Use of external materials	Disqualification
Fixing to tables	Disqualification
Ground contact	Disqualification
Structural modification after build time	-20 Points

Misconduct

**Immediate
Disqualification**

 **Awards & Recognition**

Category	Prize	Remarks
1st Prize	₹1,000	Winner

 **Event Team**

Role	Name	Department / Club	Contact
Faculty Coordinator	Dr.Divyarani MS	ECE	-
Event Lead	THARUN P	CSE	70224 07416

 **General Instructions**

- **Maintain decorum.**
- **Respect judges and fellow participants.**
- **Judges' decisions are final.**