ConCastle 2026

Monsoon-Season Water Management & Mobility Planning

Online Civil Engineering Competition

Problem Description

During the monsoon season, certain locations within the IIT Indore campus experience temporary surface water accumulation due to heavy rainfall. These conditions affect drainage efficiency, pedestrian comfort, vehicular mobility, and overall campus accessibility.

This problem statement provides an opportunity to apply civil engineering principles related to stormwater management, drainage planning, and mobility optimization in a real-world campus environment.

Participant Tasks

Participants are required to:

- Identify and map locations on campus where surface water accumulation occurs
- Analyze contributing factors such as topography, drainage alignment, surface characteristics, rainfall runoff patterns, and surrounding infrastructure
- Evaluate the impact on pedestrian movement, vehicular traffic, and accessibility
- Propose practical, sustainable, and economically feasible engineering interventions to improve stormwater management and mobility during monsoon conditions

Team Composition

- Participation is allowed individually or in teams of up to 4 members
- Interdisciplinary teams are encouraged
- Basic understanding of civil engineering concepts is recommended

Eligibility

- Open to undergraduate and postgraduate students
- Non-IIT Indore participants are welcome
- For non-IIT Indore teams, a Point of Contact (PoC) from IIT Indore will be assigned for general campus-related clarification

Competition Stages and Submission Process

Stage 1: Abstract Submission

Teams must submit a 1–2 page abstract covering:

- Understanding of the problem
- Proposed approach and methodology
- Expected outcomes

Shortlisted teams will advance to Stage 2.

Stage 2: Final Submission & Presentation

- Final solution report in PDF format
- Maximum report length: 15 pages (including figures)
- 10-minute online presentation followed by Q&A

Submission Guidelines

- All submissions must be in PDF format
- Only one consolidated submission per team per stage
- Late submissions will not be accepted

Use of Data and Assumptions

Participants may use:

- Publicly available data
- Assumed campus layouts or representative maps
- Logical engineering assumptions (must be clearly stated)
- Software tools such as Excel, GIS, AutoCAD, Python (optional)

The assigned PoC may only be consulted for campus-related clarification.

Originality and Ethics

- All submissions must be original
- Plagiarism or uncustomized AI-generated content may lead to disqualification

Scoring

Stage	Marks
Abstract	20
Report	30
Presentation	50
Total	30

Detailed Evaluation Parameters

Evaluation Parameter	Weightage (%)
Problem Understanding & Contextual Analysis	15
Technical Depth & Engineering Correctness	20
Innovation & Creativity	15
Sustainability & Environmental Considerations	15
Cost-Effectiveness & Economic Feasibility	10
Practicality & Implementability	10
Clarity of Communication	10
Total	100

Rules are subject to change at the discretion of the organisers.

Further instructions will be communicated to registered participants.