

Organised by : Geotechnical Engineering Technical Division (GETD), IEM

3RD IEM GEOTECHNICAL COMPETITION 2025

COMPLIMENTARY REGISTRATION

Open To: All undergraduate Civil Engineering students from public and private Institutions

IMPORTANT DATES

CLOSING DATE OF REGISTRATION: 15TH JULY 2025 REPORT SUBMISSION: 30TH SEPTEMBER 2025 ANNOUNCEMENT OF SHORTLISTED TEAM: 24TH OCTOBER 2025 DATE OF PRESENTATION (SHORTLISTED): 22ND NOVEMBER 2025 VENUE OF PRESENTATION: WISMA IEM

Note: The final presentation is a physical presentation at IEM HQ. Shortlisted teams unable to attend the physical presentation will be disqualified from the final.

PRIZES PRI 1,500 RM 1,000

RM 750

*Special prize

RM 500 7

*For the team that has the nearest prediction value compared to the site monitoring.

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CALLING ALL UNDERGRADUATE ENGINEERS!

3rd IEM GEOTECHNICAL COMPETITION 2025

Following the tremendous support and participation in the 2024 geotechnical competition, we are thrilled to announce the upcoming geotechnical competition for 2025. This year's theme is "Long-term Settlement Prediction of the Embankment".

This topic is particularly relevant for Malaysia, where developments on challenging ground conditions have been increasing over the years. These conditions often involve soft alluvial soil, which suffers from stability and long-term settlement issues.

The competition aims to:

1.Assess your ability to interpret soil investigation data for the prediction of long-term settlement of the embankment.

2.Evaluate your engineering knowledge in recommending appropriate solutions for long-term settlement mitigation.

COMPETITION STRUCTURE:

The competition consists of two stages:

- In stage 1, teams are required to prepare a comprehensive technical report. The submitted technical reports will be evaluated by a panel of judges consisting of industry experts and academics.
- The shortlisted teams will advance to Stage 2 to deliver a presentation on their findings and methodology to the judging panel.

All eligible participants will be provided with the following information:

- Details of the embankment;
- Relevant soil investigation data for settlement prediction.

The report format shall comply with the following:

- Maximum 15 pages (excluding attachments such as figures, diagrams, or calculation sheets)
- In PDF format

STAGE 1 : TECHNICAL REPORT

The technical report shall be comprehensive and specific in showing the technical capability of students:

Interpretation and extraction of soil information;
Estimation of long-term consolidation
Propose effective mitigation solutions

While acknowledging that not all technical factors can be pre-defined, the following criteria serve as the main benchmarks:

1.Introduction

•Provide a concise overview of the challenges of handling long-term settlement for embankment construction on soft and compressible subsoil.

·Highlight the relevant theoretical background or previous studies that address the long-term settlement challenges.



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COMPETITION STRUCTURE:

2.Methodology

•Conduct a literature review on the methodologies used for settlement prediction from previous studies. •Evaluate and select the appropriate prediction method to be used for the prediction of embankment settlement.

•Reference any software or computational tools utilised in this prediction (if any)

3.Analysis and Calculation - Settlement prediction

•Demonstrate in-depth knowledge in the interpretation and analysis of the given soil information. •Outline design parameters and assumptions in the long-term settlement prediction of the given embankment.

Present detailed calculations with step-by-step explanations and references to relevant equations, theories, and design principles.

4.Conclusion

•Summarise key findings, outcomes, and implications of the settlement prediction.

•Acknowledge any limitations or uncertainties associated with the process of settlement prediction. •Emphasize the practical relevance and applicability of the developed prediction methods to real-world engineering scenarios.

•Propose a practical and effective solution to mitigate long-term settlement for an embankment project, taking into account time constraints. Include necessary assumptions and support your recommendation with logical evidence and real-world examples.

STAGE 2 : PRESENTATION

A separate marking scheme will be applied for the presentation, as follows:

• **Clarity and organisation of the presentation:** The presentation slides should be wellstructured and coherent, with clear transitions between ideas.

• **Communication skills:** Deliver clear and concise answers that demonstrate knowledge and expertise on the topic.

• **Time management:** Additional points will be awarded for staying within the allocated time limit and effectively covering key points without rushing.

• **Creativity and Innovation**: additional points will be awarded for originality, innovative ideas, and engaging presentation techniques.

DISCLAIMER:

By participating in the competition, participants acknowledge and agree to comply with all rules and regulations established by the organising committee, which reserves the right to amend the rules at any time. Participants accept that all decisions regarding eligibility, judging, and awards are at the sole discretion of the organising committee and judges. Participants retain ownership of their intellectual property rights but grant the organising committee and its affiliates the right to use submitted materials for promotional purposes. The organising committee, affiliates, sponsors, and partners are not liable for any damages, losses, or injuries arising from participation in the competition, and participants indemnify them against any claims or expenses.