Education is too important to be responsibility of only one committee

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Education concerns all

• Education = learning + teaching:
  • we are all learners
  • we are all teachers

• Technical Committee (TC) 306 on Geoeducation concerns all ISSMGE members

• Today’s presentation is informational, menu-like, inviting you to:
  • visit TC306’s website
  • contact TC306
  • explore further something from this presentation

• We need many people to do small things
Objectives of the presentation & contents

• For ongoing TC306 activities:
  • involve all instructors
  • involve other TCs
  let’s work together

• For future TC306 activities, we learn from you:
  • what you would like to be offered
  • what you would like to offer

TC306 website (posts, news)
TC103, TC106, TC215
peer reviewed educational materials

results from a questionnaire
conference GEE 2025,
Nancy, France, July 2-4
Published posts

- Contrast memorably soils and rocks, by M. Pantazidou (21/02/2022)
- Short geo-engineering video quizzes on-demand, by M. Calvello (30/06/2022)

New posts will appear in this section soon. Stay tuned for news.
3. Contribution by Polyxeni (Tzeni) Kalliglou *(quiz in video 30)*

My favorite geo-engineering quiz question is No 30, which asks about the identification of the residual strength based on results (shear stress – displacement curves) of three geosynthetic interface direct shear tests at various normal stress levels. Since the maximum displacement recorded at the end of each test is not enough to achieve the residual shear strength—which is activated at significantly larger displacements—the suggestion is to either perform ring shear tests or extrapolate direct shear test results out to the residual strength conditions.

Fabricated Geomembranes Institute (2024): Stark, T., *Geo-engineering Pop Quizzes*
• Scrolling down you find:
  • **A compilation of videos** used in a Soil Mechanics class including *a voyage through sand!* 20-12-2020
  • Prof. Carlo Viggiani delivered the first TC306 **case-study webinar**, 6-11-2018
  • **Bare Essentials of Soil Mechanics** by John Burland – **a brief review**, 30-4-2018
Take Prof. Burland’s ideas…

Expedition Watershed (2024): Burland J.,
The Bare Essentials of Soil Mechanics

… or use selected visuals in your course.

… or modify them in your lab…

1st-year Laboratory on Materials, Soils Lab, Vasiliki N. Georgiannou, Eleni Pavlopoulou, National Technical University of Athens, Greece
Unsaturated soils (TC106) and Geoeducation (TC306)

- UNSAT 2023, panel on education: guiding the non-specialist instructor
- The three panelists were given questions and provided written answers (Houston et al., 2023) distributed to attendees
- Paper based on the answers to be presented in ECSMGE 24 in Lisbon (Pantazidou et al., 2024)

https://www.erasmus.gr/microsites/1259/panel-discussion-on-education
The TC215-TC306 collection of peer-reviewed teaching samples

A “preview” for each sample

Metadata: the “identity card” of the sample

https://iceg2023.org/special-session-environmental-geotechnics-education-teaching-material-samples/
A possible future: Peer reviewed educational materials

• ISSMGE agreed to give us a home

• Start with the TC215 (Geoenvironmental) collection of teaching samples and then add materials on soil fundamentals
For the future
Are you satisfied with the **educational material** you currently use in your teaching?

Were you satisfied with any **material** found after searching?

Results from questionnaire: satisfaction with educational materials

Pantazidou & Calvello (2023)
Why are we unhappy when there is so much material on the internet?

- Changing the culture concerning the educational materials of others:
  - Review critically
  - Share meaningfully, e.g. contrast:
    - Ralph Peck’s Legacy site
    - Ralph Peck’s Legacy site (Geoengineer.org), video “Learning from the Ground”
    - Ralph Peck’s Legacy site, video “Learning from the Ground” (69’), City of Chicago subway newsreel (1930s), 9:38-10:40, excavation with a hand-held clay knife

- We need to overcome the yellow pages problem!
The Conference Geotechnical Engineering Education 2025 (GEE2025) is organized by the Technical Committee TC306 for Geo-Engineering Education of the International Society for Soil Mechanics and Geotechnical Engineering (ISSMGE), under the auspices of the Ecole Nationale Supérieure de Géologie ENSG of the Université de Lorraine – France.

The International Conferences on Geotechnical Engineering Education are now well established since TC306 took over their organization under the auspices of ISSMGE. The conference in Nancy will be the sixth, after Sinaia, Romania (2000), Constantza, Romania (2008), Galway, Ireland (2012) and Belo Horizonte, Brazil (2016), Athens, Greece (2020). The proceedings of the 2008, 2012, 2016 and 2020 conferences are available through the Online Library of ISSMGE.

The Conference GEE2020 has two priority themes:

- Theme 1 – Teaching of Unsaturated soils
- Theme 2 – Use of numerical modelling to support teaching

2 priority themes: TC106, TC103

https://gee2025.sciencesconf.org/
Main points

• We need many people doing small things
• Instructors: Visit the TC306 website
• ISSMGE TCs: Consider a collaboration with TC306-Geoeducation for teaching in introductory courses topics related to your TC
• All: Contribute to a culture of peer exchanges in education: peer selection, peer recommendation, peer review
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• **NTUA** (National Technical University of Athens): Vasiliki Georgiannou, Achilleas Papadimitriou, Eleni Pavlopoulou, Charis Saroglou
References


• Expedition Watershed (2024): Burland J., The Effect of Gravity on Soil Strength and The Effect of Particle Size and Shape on Soil Strength (videos).

• Fabricated Geomembranes Institute (2024): Stark, T., Geo-Engineering Pop Quizzes (videos).

• Geoengineer.org (2024), Professor’s Peck Legacy Site: Peck, R., Learning from the Ground (video).


Image credits

• Yellow Pages (Slide 13), Wikipedia