



ASSOCIATION OF
CONSULTING ENGINEERS
SINGAPORE

ACES Courses Series on Eurocode 7 Geotechnical Design

Date: 27, 28 & 29 August 2024 (Tue/Wed/Thu)

Time: 9.00 am to 12.30 pm

Mode of Delivery: In-person

Venue: ACES Office at 18 Sin Ming Lane

#06-01 Midview City S573960

CPD: 9 PDU

Fee: \$300 nett per person for ACES Members

\$450 nett per person for Non-ACES Members

Registration Link

<https://forms.gle/S5eeonKdFP9zbrwz8>



Course A: Understanding Eurocode 7 Geotechnical Design from First to Next Generation	27 August 2024 (Tue) 9.00 am to 12.30 pm.
Course B: Next Generation Eurocode 7 Geotechnical Design on Piled Foundations	28 August 2024 (Wed) 9.00 am to 12.30 pm.
Course C: Next Generation Eurocode 7 on Numerical Methods	29 August 2024 (Thu) 9.00 am to 12.30 pm.

Course Objective

Eurocode 1997 has been implemented for structural plans submission in compliance of Building Regulations since 2013. With the BSI publication in 2023 of the new head Eurocode 1990, now titled 'Basis of Structural and Geotechnical Design', the publication of the three parts of the next generation Eurocode 7 on Geotechnical Design is imminent, likely to be completed by early 2025.

This course will provide participants an understanding and what to expect in the next generation of Eurocode 7 on Geotechnical Design, covering enhanced concept of safety, major changes and features in dealing with current geotechnical design and geotechnical structures.

Trainer: Er. Yang Kin Seng

Er. Yang Kin Seng was a former Director with the Building and Construction Authority, regulating and overseeing the safety of buildings and geotechnical building works under construction in Singapore, and headed the Singapore Geological Office. Er. Yang has also served with the now defunct Public Works Department as Assistant Chief Civil Engineer, Head (Roads, Planning and Design) and Head of Geotechnical Engineering, Site Investigation, Instrumentation and Laboratories. He was the Chief Project Manager (Singapore) for the Singapore-Malaysia Second Crossing. He has published more than 40 papers in International conferences and seminars, and peer-reviewed journals. He co-chaired the SPRING (Singapore) Eurocodes Review Advisory Committee, and the Technical Committee on Civil and Geotechnical Works. He is a Professional Engineer and a Specialist Professional Engineer registered with the Professional Engineers' Board, and a Specialist Accredited Checker whilst in Building and Construction Authority.

Course A: Understanding Eurocode 7 Geotechnical Design from First to Next Generation

Duration: 3 hours

Course Outline

- 1) Overview of Next Generation Eurocodes
- 2) Basis of Geotechnical Design in EN 1990
- 3) Safety concept and Geotechnical Category
- 4) Organisation changes to EN 1997 Geotechnical Design
- 5) Specific overview and new features in EN 1997 Geotechnical Design
 - a. Part 1 – General Rules
 - b. Part 2 – Ground Properties
 - c. Part 3 – Geotechnical Structures
- 6) Groundwater issues

This course will provide participants an understanding and what to expect in the next generation of Eurocode 7 on Geotechnical Design, covering enhanced concept of safety, major changes and features in dealing with current geotechnical design and geotechnical structures.

The course is useful and relevant to developers, builders, site supervisors, Resident Engineers, Resident Technical Officers, and those practitioners who are involved in the design, supervision and construction of building, civil and geotechnical engineering projects.

Course B: Next Generation Eurocode 7 Geotechnical Design on Piled Foundations

Duration: 3 hours

Course Outline

- 1) Overview of next generation Eurocode 1997 on Piled Foundations
- 2) Basis of pile design and Eurocode 1997 Part 3 on Piled Foundations
- 3) Axially loaded pile behaviour
- 4) Pile design by various methods including by calculation, by load testing, by
- 5) ground test results etc.
- 6) Pile group and pile-raft behaviour
- 7) Traverse loading on piled foundation
- 8) Implementation of design

This course will provide participants with an understanding on the changes to pile design and the revised section of Eurocode 7 on piled foundation. The course covers design methods and considerations for axially-loaded pile, pile groups and pile-rafts, and behaviour of axially and transversely loaded piles.

The course is useful and relevant to developers, builders, site supervisors, Resident Engineers, Resident Technical Officers, and those practitioners who are involved in the design and construction of piled foundations and supervision of piling works.

Course C: Next Generation Eurocode 7 on Numerical Methods

Duration: 3 hours

Course Outline

- 1) Overview of next generation Eurocode 1997 on Numerical Methods
- 2) Procedures for numerical models
- 3) Ultimate Limit State factoring approaches
- 4) Serviceability Limit State factoring approaches
- 5) Application requirements for Geotechnical Structures

If published, Eurocode 7 will be the first geotechnical design code to cater to the growing use of numerical methods in geotechnical engineering. The course will provide participants an understanding of verification approaches of ultimate and serviceability limit states using numerical methods as provided in the next generation Eurocode 7 on geotechnical design.

The course is useful and relevant to developers, builders, practising engineers and practitioners who are involved in the design and geotechnical analyses for building and geotechnical structures.