

# ACES One-day course: Design of Earth-retaining Walls and Ground Anchors to Eurocode 7 [1st Run]

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|--------------------------------|------------|
| ACES Member /<br>JAC RE & RTO: | S\$200/pax |
| Non-Member:                    | S\$360/pax |

Date: ~~8-Oct-2016~~ postponed to 5 Nov 2016 (Sat)  
Duration: 9.00 am to 5.30 pm  
Venue: 18 Sin Ming Lane #06-01 Midview City  
Singapore 573960

CPD: 7 PDUs

Seats are limited: Registration is on a  
'first come first served' basis.

## Synopsis

This course is organised to prepare civil, structural and geotechnical engineering practitioners, ground investigation and testing laboratories, builders and supervisory personnel on the design of earth-retaining walls and ground anchors particularly to Eurocode 7 in Singapore.

The participants will be able to:

- appreciate and understand the design approach of earth-retaining structures and ground anchors based on Eurocodes, with particular reference to SS EN 1997 and Singapore National Annexes;
- understand the use of Eurocode 7 for the design of earth-retaining structures and ground anchors; and
- understand the execution, monitoring and testing requirements for anchors and retaining structures.

## Trainer



*Er. Yang Kin Seng is currently a Director with the Building and Construction Authority, regulating and overseeing the safety of buildings and geotechnical building works under construction in Singapore. Er. Yang has also served with the defunct Public Works Department as Assistant Chief Civil Engineer, Head (Roads, Planning and Design) and Head (Geotechnical Engineering). His involvement in civil, building and infrastructural projects ranges from roads, flyovers, bridges and expressways, including Changi Airport development, construction of schools and CTE tunnels, to parks and government buildings, as well as overseas projects in China and Brunei. He was the Chief Project Manager (Singapore) for the Singapore-Malaysia Second Crossing. Er. Yang was awarded Public Administration Medal (Silver) in 1998.*

*Er. Yang was a Colombo Plan Scholar, and graduated in BEng (First Class Hons) in Civil Engineering from University of Melbourne and a recipient of Trinity College Scholarship, CWN Sexton Scholarship, AJ Francis Prize and an Exhibition Prize. Er. Yang was also a Commonwealth Scholar, and obtained MSc (with Distinction) in Soil Mechanics and Engineering Seismology and awarded the Soil Mechanics Prize at Imperial College London. He also obtained MSc (Civil Eng) from NUS, and LLB (Hons) from the University of London. Er. Yang was a graduate and prize winner (Army) of Singapore Command and Staff Course. He was also a recipient of a NSmen of the Year Award, and his NS appointments include Commanding Officer of a Singapore Infantry Regiment.*

*Er. Yang is a Co-Chairman of SPRING Singapore's Eurocodes Review Advisory Committee, and a Co-Chairman of 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 registered with the Building and Construction Authority. Er. Yang also conducts courses for engineers and industry practitioners at the BCA Academy.*

## Workshop Outline

|                 |   |
|-----------------|---|
| <b>8.30 am</b>  | <b><i>Registration</i></b>  |
| 9.00 am         | <b>Eurocode Design Approach for Earth-Retaining Walls and Ground Anchors</b> <ul style="list-style-type: none"> <li>• Scope and design approach of Eurocode 7 for earth-retaining structures and ground anchors</li> <li>• Design duties and responsibilities</li> <li>• Geotechnical categories, risks and requirements</li> <li>• Ground Investigation and testing</li> </ul> |
| <b>10.30 am</b> | <b><i>Tea Break</i></b>   |
| 10.45 am        | <b>Eurocode Design Approach for Earth-Retaining Walls and Ground Anchors (cont'd)</b> <ul style="list-style-type: none"> <li>• Geotechnical parameters</li> <li>• Partial and model factors</li> <li>• Characteristic and design values</li> <li>• Geotechnical design and feedback report</li> </ul>   |
| <b>12.30 pm</b> | <b><i>Lunch</i></b>   |
| 1.30 pm         | <b>Earth-Retaining Structures</b> <ul style="list-style-type: none"> <li>• Design situations</li> <li>• Design and construction considerations</li> <li>• Ultimate Limit State and Serviceability Limit State</li> <li>• Actions and geometrical Data</li> <li>• Water and Earth Pressures</li> <li>• Calculation models with illustrative examples</li> </ul>                  |
| <b>3.00 pm</b>  | <b><i>Tea Break</i></b>   |
| 3.15 pm         | <b>Ground Anchors</b> <ul style="list-style-type: none"> <li>• Design situations</li> <li>• Design and construction considerations</li> <li>• Ultimate Limit State and Serviceability Limit State</li> <li>• Types of anchors</li> <li>• Execution and Testing of ground anchors</li> </ul><br><b><i>Q &amp; A session</i></b>  |
| <b>5.30pm</b>   | <b><i>End of Workshop</i></b>   |

# REGISTRATION FORM

For enquiry, please call ACES Secretariat at Tel: 6324 2682, Kindly sign and submit your completed registration to [registration@aces.org.sg](mailto:registration@aces.org.sg)

| Code | Topic   | Trainer           | Fee per pax                        | Schedule                               |
|------|---|-------------------|------------------------------------|--|
| W23  | Design of Earth-Retaining Structures and Ground Anchors to Eurocode 7 [1st Run] | Er. YANG Kin Seng | Member: \$200<br>Non-member: \$360 | 5 Nov 2016 (Sat)<br>9.00 am to 5.30 pm |

| S/N | *Name | PE No. | RE No. | RTO No. | ACES M'ship No. |
|-----|-------|--------|--------|---------|-----------------|
| 1.  |       |        |        |         |                 |
| 2.  |       |        |        |         |                 |
| 3.  |       |        |        |         |                 |

**Company:**

**Address:**

**Postal code:**

**\*Contact Person:**

**\*Mobile No.:**

**\*Email:**

**Dietary Requirements (if any) : Vegetarian \_\_\_\_\_ no. of pax**

**PAYMENT**

Enclosed is a Cheque No: \_\_\_\_\_ (Cheque should be made payable to **Association of Consulting Engineers Singapore** and mailed to ACES Secretariat, Association of Consulting Engineers Singapore, 18 Sin Ming Lane #06-01 Midview City Singapore 573960)

**Terms and Conditions**

By submitting and signing this application form, the company and individual applicant agree to the following:

- a) The company and individual applicant has read and understood the terms of the flyer (if available) and the application form.
- b) Payment for the course must be made before the course commencement date.
- c) ACES reserves the right to amend any details relating to the course, revise the course fees without prior notice, cancel or postponed the course.
- d) Request for withdrawal or replacement must be made in writing. Requests are subject to approval by ACES.
  - Written request for replacement must reach ACES before the course commencement date. There will be no additional charges for suitable replacement
  - Written request for withdrawal that reaches ACES
    - ◆ **At least At least 7 working days before course commencement: Full Refund**
    - ◆ **4 to 6 working days before course commencement: 50% of the course fee Refund**
    - ◆ **3 working days before and upon course commencement: No Refund**

To be completed by Company and Individual Applicant

**COMPANY APPLICANT**

Name: \_\_\_\_\_

Signature: \_\_\_\_\_

Date: \_\_\_\_\_



**INDIVIDUAL APPLICANT**

Name: \_\_\_\_\_

Signature: \_\_\_\_\_

Date: \_\_\_\_\_