IES/ACES PROFESSIONAL COURSE ON EROSION CONTROL (17TH INTAKE)

Jointly organized by: Supported by:

Starting Date : 24 August 2018 to 19 October 2018 (Tentative schedule)
Time : 6.30pm - 9.30pm (Various weekday nights)
Duration : 16 Sessions
Venue : IES Academy@Jurong East
Devan Nair Institute for Employment and Employability,
80 Jurong East Street 21, #04-10
Singapore 609607

Course Fees (IES / ACES / PUB Members) : $2033
Nett Course fees Payable after Non-SME SSG Grant : $1448
Nett Course fees Payable after SME SSG Grant : $ 863

Course Fees (Non-Members) : $2461
Nett Course fees Payable after Non-SME SSG Grant : $1876
Nett Course fees Payable after SME SSG Grant : $1291

**All SSG grant subject to SSG grant application assessment and approval.
**All course fees are included 7 %GST

CPD Programme : 24 PDUs (To be confirmed)
Organising Committee : Erosion Control Sub-Committee

**SkillsFuture SG (SSG) Fund
1. The Trainee has attained a minimum of 75% attendance for the Funded Course.
2. Must attempt and pass the Quizzes and Project Work.
3. For participants under self-sponsor please approach course coordinator for more information on Skillsfuture SG (SSG) Grant and skillsFuture Credit (SFC) grant.

The professional course on erosion control will lead to accreditation of professional engineers as Qualified Erosion Control Professionals (QECPs).

The duties and responsibilities of a QECP include designing erosion and sedimentation control measures in construction sites and preparing plans. Submission plans to PUB shall be submitted by a registered QECP.

* Certificate of successful completion will be issued to participants who achieved 100% attendance and having achieved the required grades for Quizzes and Project Work.
COURSE OUTLINE

Section 1: Introduction to Erosion and Sedimentation Control (3 hour)
- Overview of course, objectives, expectations and accreditation process
- Regulations and legislation
- Course details and structures
- Roles of Qualified Erosion Control Professional (QECP) and other stakeholders in erosion and sedimentation control at construction sites
- Typical types of construction and areas of concern

Section 2: Basic Methods of Erosion Control (3 hours)
- Fundamentals of earth control
- Erosion on construction sites
- Mechanics of erosion and erosion controls
- Protecting surface: vegetation stabilization and Mulches
- Protecting surface by others means
- Watershed management and surface run-off control
- Costing for earth control measures - erosion control measures

Section 3: Calculations of Soil Loss and Sediment Delivery (3 Hours)
- Background to soil loss calculations
- Formulations for soil loss calculations (USLE, RUSLE, MUSLE etc)
- Calculating Total Suspended Solids in runoffs
- Basic design (accounting for effect of erosion and sedimentation control measures)
- Complete example for typical construction site

Section 4: Basic Methods of Sedimentation Control (6 Hours)
- Concept of sediment yield and delivery ratios
- Classification of sediment control practices
- Surface drainage system
- Subsoil drainage
- Sedimentation trap : Design and details
- Sedimentation basin : Design and details
- Treatment plants (chemical/membrane type): Basic introduction
- Costing for Earth Control Measures - sedimentation control measures

QUIZ 1: Assessment of understanding of Section 1 to 4
Open book assessment to be conducted at IES Academy

Section 5: BMPs and Erosion and Sedimentation Control Plan (3 Hours)
- What is BMPs and BAT
- Principles of Erosion and Sedimentation Control Plan (ESCP)
- Planning process of ESCP
- Development of an effective ESCP
- Case study of typical ESCP
- Costing for ECM elements

Section 6: Inspection and maintenance of BMPs (6 Hours)
- Inspection of BMPs
- Inspection requirements and frequency
- Maintenance of BMPs

QUIZ 2: Assessment of understanding of Section 5 to 6
Open book assessment to be conducted at IES Academy

Project Preparation and Presentation
CVs of LECTURERS / FACILITATORS

Mr Quah Hock Lai, BEng (Hons)

Mr. Quah Hock Lai is the Senior Assistance Director in the Catchment & Waterways Department, PUB, taking charge of enforcement and regulatory matters. His other key duties include taking charge of the drainage geographic information system (GIS). He is also concurrently the Quality Service Manager for the Department. Hock Lai has 20 over years of experience working in PUB and the former ENV, covering operation, construction and planning of pollution control, sewerage, drainage and IT matters.

Er. Leong Sow Hon, BSc (Hons), MSc, PEng (Singapore & Malaysia), CEng, QECP, CPESC, MICE, MIES, FIEM

Er. Leong Sow Hon is the Managing Director in Calibre Consulting (Singapore) Pte Ltd, who has 27 years of professional engineering practice experience in this region. He is the ex-Chairman of the Soil Erosion Working Group, and has been involved in this work since the inception of the Group. He is also the current Chairman of the QECP Registration Panel. Er. Leong is a registered PE, as well as a Chartered CE. He is a Qualified Erosion Control Professional in Singapore and a Certified Professional Erosion and Sediment Control from USA. In addition to his all round technical expertise, both as Consultant and as Contractor; he is also well versed in governmental authority permitting in building & engineering construction/ development. He has been involved as the QP/ PE in some of the projects, e.g. Seletar Water Reclamation Plant and Exxon-Mobil Singapore Chemical Complex in Jurong Island.

Er. Dr. Chew Soon Hoe, SrMIES, MASCE, MIGS, PEng (Singapore)

Dr Chew Soon Hoe received his PhD from University of California at Berkeley. He is currently an Assistant Professor in the Department of CE, NUS, and also holds the position of Deputy Director of the Centre for Protective Technology, NUS.

His research interests include geosynthetics, slope engineering, land reclamation, soil improvement, numerical modeling in geotechnical engineering and geo-environmental engineering. In the past 15 years, he has conducted extensive research on geosynthetics, especially on the reinforcement, filtration and drainage applications of geosynthetics material. His particular interest is in the evaluation of the suitability as well as the proper design philosophy of the geosynthetics material in local soil conditions and construction practices. His other research interests include survivability of geotextiles, geosynthetics for erosion control, vertical drains testing and applications.

He has been very actively promoting the use of geosynthetics in civil engineering construction, and has been engaged as consultant to government agencies and private consultants and contractors on geosynthetics related projects and construction in this region. He is also actively consulted in general area of geotechnical engineering including slope stability, pile foundation and excavation related problem. He is currently the President of the Southeast Asia Chapter of the International Geosynthetics Society. He has published very widely and was invited to deliver a number of keynote and special lectures, including in the GaoAsia 2000 conference in KL and the 7TH International Geosynthetics Conference in Nice, France, 2002, 4th Asia Regional Geosynthetics Conference in Shanghai, 2008, and 4th Europe Regional Geosynthetics Conference in Edinburgh, 2008.

Er. Teo Ee Huat, BE (Hons), M.Ed, MSc (Civil), Msc (International Construction Management), PGD (Construction Management), P.E (Singapore), MIES

Er. Teo Ee Huat has extensive working experience in the industry and spent 6 years working in design and supervision of wastewater/water treatment plant related projects, as well as hospitality, commercial and transportation projects in Singapore. He also worked in wastewater/water treatment plants in Malaysia, Brunei, Bintan Island and the neighbouring islands. He is a Singapore registered Professional Engineer and Qualified Erosion Control Professional.
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<thead>
<tr>
<th>Date</th>
<th>Module</th>
<th>Lecturers / Facilitators</th>
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<tr>
<td>24 August 2018 (Fri)</td>
<td>Introduction by course coordinator</td>
<td>Er. Teo Ee Huat</td>
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<tr>
<td></td>
<td>Preventing Silty Water at Our Waterways</td>
<td>Mr. Quah Hock Lai</td>
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<tr>
<td>27 August 2018 (Mon)</td>
<td>Section 1: Introduction to Erosion and Sedimentation Control</td>
<td>Dr. Chew Soon Hoe / Er. Teo Ee Huat</td>
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<td>29 August 2018 (Wed)</td>
<td>Section 2: Basics of Erosion Control</td>
<td>Dr. Chew Soon Hoe / Er. Teo Ee Huat</td>
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<td>31 August 2018 (Fri)</td>
<td>Section 3: Calculation of Soil Loss and Sediment Delivery</td>
<td>Dr. Chew Soon Hoe / Er. Teo Ee Huat</td>
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<tr>
<td>3 September 2018 (Mon)</td>
<td>Section 4: Basics of Sedimentation Control</td>
<td>Dr. Chew Soon Hoe</td>
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<td>5 September 2018 (Wed)</td>
<td>Quiz 1: Open Book Test on Section 1 to Section 4</td>
<td>Dr. Chew Soon Hoe / Er. Teo Ee Huat</td>
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<td>7 September 2018 (Fri)</td>
<td>Section 5: BMPs and Erosion and Sediment Control Plan</td>
<td>Er. Teo Ee Huat</td>
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<td>10 September 2018 (Mon)</td>
<td>Section 6: Inspection and Maintenance of BMPs</td>
<td>Er. Teo Ee Huat</td>
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<tr>
<td>17 September 2018 (Mon)</td>
<td>Section 6: Inspection and Maintenance of BMPs</td>
<td>Er. Teo Ee Huat</td>
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<td>19 September 2018 (Wed)</td>
<td>Quiz 2: Open Book Test on Section 5 to Section 6</td>
<td>Er. Teo Ee Huat</td>
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<tr>
<td>26 September 2018 (Wed)</td>
<td>Project group working session</td>
<td>Er. Leong Sow Hon / Er. Teo Ee Huat / Dr. Chew Soon Hoe</td>
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<td>3 October 2018 (Wed)</td>
<td>Project group working session</td>
<td>Er. Leong Sow Hon / Er. Teo Ee Huat / Dr. Chew Soon Hoe</td>
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<td>10 October 2018 (Wed)</td>
<td>Project group working session</td>
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<td>15 October 2018 (Wed)</td>
<td>Project presentation</td>
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<td>17 October 2018 (Wed)</td>
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<td>19 October 2018 (Fri)</td>
<td>Project presentation</td>
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* Company and self-sponsor participants will be eligible for any SSG funding and subjected to terms and conditions. Application must be via the SkillsConnect (to be eligible for Nett Course Fee payment and for absentee payroll claims if attending course within working hour). Participants who did not apply this course through SkillsConnect prior to registration with us will not be eligible for the Nett Course Fee payment. Full course fee will be applicable.

** Course Title in Skillsconnect is “IES/ACES Qualified Erosion Control Professional (QECP)”

QECP RF 1.0
Registration Form

IES/ACES PROFESSIONAL COURSE ON EROSION CONTROL (17TH INTAKE)

Date : 24 August 2018 to 19 October 2018 (Tentative schedule)
Time : 6.30 pm – 9.30 pm (Various weekday nights)
Venue : IES Academy@Jurong East
Devan Nair Institute for Employment and Employability,
80 Jurong East Street 21, #04-10
Singapore 609607

Fees *:
- Course Fees (IES / ACES / PUB Members) : $2033
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- Nett Course fees payable after SME SSG Grant : $863
- Course Fees (Non-Members) : $2461
- Nett Course fees payable after Non-SME SSG Grant : $1876
- Nett Course fees payable after SME SSG Grant : $1291

** All SSG grant subject to SSG grant application assessment and approval.

All course fees are included 7% GST

For participants under self-sponsor please approach course co-ordinator for more information on Skillsfuture SG (SSG) Grant and skillsFuture Credit (SFC) grant.

1. The Trainee has attained a minimum of 75% attendance for the Funded Course.
2. Attempt Assessment 1 and Assessment 2.

Please register e-mail/fax the completed form by 6 August 2018 before 3pm to:

Att: Christine Lau
IES Academy @ Jurong East
80 Jurong East Street 21, #04-10
Devan Nair Institute for Employment and Employability
Singapore 609607
Tel: 6463 9211 Fax: 6560 6030
Email: christine.lau@iesnet.org.sg

Participant Details

Name : ___________________________ NRIC : ___________________________
Company : ___________________________ Designation : ___________________________
Address : ____________________________________________________________
(For mailing of invoice and receipt)
Postal Code : ___________________________ Sex : __ Male / Female ___________________________
Mobile No. : ___________________________ Fax : ___________________________
Email : __________________________________________________________
(For sending of confirmation email)

Please indicate:
- IES members IES M’ship No.: ___________________________ P.E. No.: __________________________ (if applicable)
- ACES Member ACES M’ship No.: __________________________
- Non-members
- Sponsored by company
- Vegetarian

Contact Person Details (if different from participant)

Name : ___________________________ Designation : ___________________________
Mobile No. : ___________________________ Fax : ___________________________
Email : __________________________________________________________

Payment Details

Bank / Cheque No.: ___________________________ Amount ($) : ___________________________

* All Fees are inclusive of 7% GST. Cheque should be made payable to “IES”.

Acceptance of Terms and Conditions for Registrations of IES Academy’s Events

I agree to abide by the Terms and Conditions for Registration of IES Academy’s Events.

Name: ___________________________ Signature: ___________________________
**TERMS & CONDITIONS COURSE REGISTRATION**

**Registration**

Any registration, whether on-line or fax will be on a **first-come-first-served basis** and will only be confirmed upon receipt of full payment by Engineers Singapore Pte Ltd unless otherwise invoice to company.

All registrations must be submitted with duly completed registration form.

**Closing Date & Payment**

The closing date of the event will be 1 week prior to event commencement date or earlier. Cheques should be crossed ‘A/C payee only’ and made payable to ‘Engineers Singapore Pte Ltd’, with the **Title of The Event indicated clearly written on the back of the cheques**, and submitted with the duly completed registration forms to:

IES Academy@Jurong East
Devan Nair Institute for Employment and Employability,
80 Jurong East Street 21, #04-10
Singapore 609607

**Confirmation of Registration**

Confirmation of registration will be given at least 1 week before the commencement date via email. **If you do not receive the said confirmation email, you are required to contact IESA at 6463 9211 during office hours.**

IESA reserves the right to allow only confirmed registrants to attend the Event.

**Withdrawals/Refunds of Fees**

Written notice **at least 1 week in advance** before the commencement of the event

Full course fee shall be refunded subjected to 4.5% transaction charge.

➢ **NO** refund otherwise.

No show of participant would not be accepted as a valid reason for withdrawal/refund.

One time replacement is allowed only if written notice is received by us at least 1 week before the commencement of the event. However, when an IES member is replaced by a non-member, the participant has to pay the difference in the relevant fees.

**Cancellation/Postponement**

Changes in Venue, Dates, Time and Speakers for the Events can occur due to unforeseen circumstances. IES reserves the full rights to cancel or postpone the Event under such circumstances without prior reasons. Every effort, however, will be made to inform the participants or contact person of any cancellation or postponement.

Fees will be refunded in FULL if any Event is cancelled by IESA.

**SkillsFuture Credit (SFC)** “All Singaporeans aged 25 and above can use their $500 SkillsFuture Credit from the government to pay for a wide range of approved skills-related courses. Visit the SkillsFuture Credit website (www.skillsfuture.sg/credit) to choose from the courses available on the SkillsFuture Credit course directory.”

Please visit [HERE](#) for more information on SFC claim.

**PERSONAL DATA PROTECTION ACT**

I consent to the processing by Institution of Engineers, Singapore of personal data, including sensitive personal data as defined in the Data Protection Act 2014, about me for the proper purposes of Institution of Engineers, Singapore (IES). I undertake to observe the provisions of the Data Protection Act 2014 in relation to any personal data I may myself hold and process as a Members of Institution of Engineers, Singapore, and I agree to indemnify Institution of Engineers, Singapore from liability for any claims or damages that may arise from the processing of this data. For more information kindly refer to [here](#).

**Enquiries**

For further enquiries, please contact IESA general office at Tel: 6463 9211.

**Others**

* Reprint of Certificate of Completion is subjected to $50 administrative charges
* For further enquiries, please contact IESA general office at Tel: 6463 9211.

QEC RF 1.0