INTRODUCTION
Before commencement of construction and earthworks, the site occupier/owner shall engage a Qualified Erosion Control Professional Engineer (QECP) to plan, design, supervise and review a system of earth control measures (ECM) to meet the requirements cited in the Code of Practice on Surface Water Drainage and to comply with the Sewerage and Drainage Act of total suspended solids (TSS) limit of 50 mg/l before discharging into public drains. The site occupier/owner shall submit the detailed ECM proposal, endorsed by his QECP, to the Public Utilities Board (PUB), prior to the commencement of works.

The above system has been in place since 1 July 2007 and has increased the effectiveness of ECM in construction sites. It is noted that QECPs will not be on site full time to implement, operate and maintain the ECM and the contractor’s representative will have to ensure the system of ECM has been implemented properly, operate them correctly and maintain them regularly.

This 1-day course is designed to train the contractor’s representative to understand the principles of ECM and to allow them to properly implement ECM as designed by the QECP, operate ECM in accordance to the ECM plan and maintain the ECM properly.

COURSE OBJECTIVE
Upon completion of the course, participants will be able to understand and appreciate the system of ECM in place and be competent in assisting the QECPs in monitoring and/or carrying out daily operational activities at the site.

SCOPE
- Introduction to Erosion Control Measures (ECM) and Regulatory Requirements
- Erosion and Sedimentation Control
- ECM Technologies
- ECM Plans and BMPs
- Inspection and maintenance of ECMs
- Case Studies
TARGET AUDIENCE
Environmental Control Officers, Site Supervisors, Site Occupier/Owner of construction sites, Site Managers/Executive, Maintenance Personnel, Contractors, Clerk of works and anyone who wishes to learn more about ECM at construction sites.

COURSE METHODOLOGY & DURATION
1 full-day, classroom-based, English, class size of 28 (max).

COURSE ASSESSMENT
Participants will be required to take 1 hour written paper (open book) on the same day. The paper consists of multiple choice questions, fill-in-the-blanks, true/false, short questions.

There will be ½ hour of revision and preparation given to participants on the same day.

Participants will be considered to have successfully completed the course if they achieve more than 75% for the written paper. Participants will be allowed to retake the written paper in the subsequent run if they do not successfully complete the course and will be considered to have successfully completed the course if they can achieve more than 75% for the reseat paper. Participants will have to pay an administrative fee of $50 to retake the written paper and if they are still unable to obtain more than 75%, they have the option of retaking the whole course at full fees.

COURSE FEES
IES Members: $180.00 Non IES Members: $230.00

COURSE LOCATION
PUB WaterHub 80 Toh Guan Road East (608575)

COURSE SCHEDULE
Course will be repeated on a monthly basis with dates subject to change. Current dates are:

1. 05 Jan 2012
2. 09 Feb 2012
3. 01 Mar 2012
4. 19 Apr 2012
5. 03 Jul 2012
CV OF LECTURERS

Er. Teo Ee Huat
B. Eng (Civil); Postgrad (Construction Management); MSc (International Construction Management); MSc (Civil Eng); Professional Engineering (Singapore); Qualified Erosion Control Professional; MIES

Er. Teo Ee Huat graduated from Nanyang Technological University with a 2nd Upper in Civil Engineering and currently is a lecturer in Ngee Ann Polytechnic teaching subjects related to Civil and Environmental Engineering. Prior to joining the Polytechnic 6 years ago, he has spent 7 years working in the construction industry involving the design and supervision of wastewater/water treatment plant related building projects, as well as hospitality, commercial and transportation projects in Singapore. He also worked on constructing and supervision of small wastewater/water treatment plants in Malaysia, Brunei, Bintan island and the neighbouring countries. He has obtained both MSc in International Construction Management (from Nanyang Technological University) and Civil Engineering (National University of Singapore) and is a Singapore registered Professional Engineer and Qualified Erosion Control Professional.

He has been actively involved in educating the industry professionals on earth control measures and has organized Professional Course on Erosion and Sedimentation Control for Engineers as well as giving seminars on Earth Control Measures for site supervisions for the past years. He also actively consulted in the general areas of earth control measures for construction sites and currently is the chairman of the Erosion Control Group under the Industry Group (Institution of Engineers, Singapore)

Er. Sim Mui Leng has over the past 17 years gained good experiences in both civil and structural design and construction work. She was part of the design team undertaking vehicular bridges, underground Mass Rapid Transit stations and tall buildings. She is the design engineer and Qualified Person (Supervision) for the construction of 2.6 km road including 2 vehicular bridges for Singapore Air-show and Events infrastructure works. Mui Leng is the Qualified Person (ST) for the Proposed 9 storey Data Centre at Kim Chuan Road and Proposed 13 storey Pathology Building at Singapore General Hospital. Mui Leng is also the Qualified Person (ST) for the reconstruction of Jetty Structures and Berthing dolphins at Sultan Shoal Lighthouse. Mui Leng’s overseas experiences in Vietnam include design and construction of the 200 beds Hanh Phuc International Women and Children Hospital in Binh Duong, Proposed 35 storey textile centre and 17 storey office building in Ho Chi Minh City and a mixed development project at Danang City. Mui Leng is also the QECP (Qualified Erosion Control Professional) for many major projects

Mr Goh Hearn
Dip Building & Property Management, 2nd lower Hons B.App.Sc (Const Mgt), Cert WSHOC

Mr Goh Hearn has over 20 years of working experience in drainage design, supervision of drainage construction and drainage operation & maintenance. Currently he leads a team of technical officers to inspect constructions sites for compliance with silt control requirements and take prosecution actions against the offenders. His work also involves troubleshooting and auditing of the drainage system to check for non compliance, particularly obstruction of public drains by construction sites which could lead to flooding of public roads and property. Mr Goh also works closely with the Qualified Erosion Control Professionals (QECP), site project managers and ECOs to assess the effectiveness of the earth control measures (ECM) put forth by the QECP and the implementation of ECM on site.
PROGRAMME STRUCTURE:

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<tr>
<th>S/No</th>
<th>Time</th>
<th>Duration</th>
<th>Topics (to be reviewed)</th>
<th>Lecturer</th>
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<td>Introducing / Legislation</td>
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<td>9.00am to 10.00am</td>
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<td>1 Background / Legislations</td>
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<td>2 Code of Practice</td>
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<td>3 Duties / Responsibilities of stakeholders</td>
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<td>10.00am to 11.00am</td>
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<td>Erosion &amp; Sediment Control</td>
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<td>1 Introduction to concepts of Erosion Control</td>
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<td>2 Treatment Units (Chemical / Membrane)</td>
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<td>3 Turbidity Curtains</td>
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<td>4 TSS Monitoring Systems / CCTVs</td>
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<td>12.15am to 1.15pm</td>
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<td>ECM Plan and BMPs</td>
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<td>1 Principles of Erosion Sediment Control Plan</td>
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<td>2 Planning Process</td>
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<td>3 Development of an effective ECM plan</td>
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<td>4 What are BMPs</td>
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<td>2.15pm to 3.15pm</td>
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<td>Inspection and Maintenance of ECMs</td>
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<td>2 Building Works</td>
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<td>Revision / Preparation for Assessment</td>
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<td>8</td>
<td>5.30pm to 6.30pm</td>
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<td>Examination</td>
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Registration Form

Certificate of Competency (CoC) In Earth Control Measures (ECM) for Construction Site Personnel (38th Run)

Date : 03 July 2012
Duration : 1 Full day
Time : 9.00am – 6.30pm
CPD Programme : 7 PDUs (To Be Confirmed) /6 STUs (To Be Confirmed)
Venue : PUB WaterHub (To Be Confirmed)
80 Toh Guan Road East
Singapore 608575
Fees : $180.00 nett (IES Member)
$230.00 nett (Non Member)

Please mail/fax the completed form to
Rasheedah Goh
IES Academy
70 Bukit Tinggi Road,
IES Building,
Singapore 289758.
(Tel) 6463.9211 (Fax) 6463.9468

Participant Details

Name : ___________________________ NRIC : ___________________________
Company : ______________________ Designation : _______________________
Address : ______________________ Postal Code : _______________________
Tel : ___________________________ Fax : ___________________________
Email : ______________________

Please indicate :

☐ IES members IES M’ship No. : __________________________
☐ Non-members
☐ Sponsored by company
P.E. No. : __________________________ (if applicable)

Date : ___________________________ Signature : ______________________

Contact Person Details (if different from participant)

Name : ______________________ Designation : _______________________
Tel : __________________________ Fax : ___________________________
Email : ______________________

Payment Details
Bank/Cheque No. : __________________________ Amount ($) : __________________________

* All Fees are inclusive of 7 % GST.
Cheque should be made payable to: “Institution of Engineers, Singapore” or “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

Registration can be done either online or by faxing in the registration form.

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 The Institution of Engineers, Singapore (IES).

Email and phone registrations will not be accepted.

Closing Date & Payment

The closing date of the event will be 7 days prior to event commencement date. Cheques should be crossed ‘A/C payee only’ and made payable to ‘IES’, with the Date of event, Title of The Event and participants’ name indicated clearly on the back of the cheque, and post to:

IES Academy
70 Bukit Tinggi Road
Singapore 289758

Confirmation of Registration

Confirmation of registration will be given 7 days prior to the commencement date of event via email. If you do not receive the said confirmation email, you are required to contact IESA general admin immediately at 6463 9211 (office).

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

Withdrawals/Refunds of Fees

Notice of withdrawal must be given in writing to IESA. Policy on refund of course fee is as follows:

- FULL refund if we receive your written notice of withdrawal at least 7 days before the commencement of the Event.
- NO refund otherwise.

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

Replacement is allowed but restricted to once only. Replacement will be allowed only if written notice is received by us at least 3 working days 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. IESA 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.

Enquiries

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