



Announcing  
2 Workshops  
for 2018:



Gain  
Valuable  
CPD  
Hours

1. MSMA2 Workshop

2. ESCP Workshop

## Attention: All Civil Engineers!

### “New MSMA2 & ESCP Workshops for 2018”

Announcing 2 practical, hands-on training workshops to be held at IEM in PJ and Kuching in 2018!

#### 1. MSMA2 Workshop:

IEM (Kuching): 3-7 Sep, 2018

IEM (PJ): 30 Jul - 3 Aug, 2018

1. It is **required by law** for all engineers in Malaysia to design drainage works to comply with the requirements of **MSMA2**.
2. Find out about new **requirements** in **MSMA2**.
3. You will learn the changes in **MSMA2** compared to the earlier edition.
4. You will learn how to **optimize** your design of On-Site Detention (OSD), detention basin and sediment basins.
5. You will learn a **different approach** of computing OSD using **MSMA2** that will reduce the storage significantly compared to **MSMA2**.
6. You will get **practical tips** from an expert with 30 years of industry experience on drainage design.
7. You will receive **powerful tools** that will make your design more cost effective.
8. You will **apply** the theories you learned to solve real design problems using spreadsheets on your own laptop PC in the workshop.
9. You will get **MSMA2** spreadsheet templates worth more than **RM2,380** for free.
10. You will gain up to **30 CPD** hours (pending) by attending both Workshops A and B.
11. You will get special **discount** for MSMAware software to be announced at the workshop.

#### 2. ESCP Workshop:

IEM (Kuching): 14-16 Nov, 2018

IEM (PJ): 28-30 Nov, 2018

1. It is **required by law** in **MSMA2** for developers to submit an ESCP prior to a project's commencement.
2. Find out about the **rules and regulations** on erosion and sediment control in Malaysia.
3. Learn about the authority's **requirements** in the preparation and submission of an ESCP.
4. You will receive copies of the relevant **guidelines** for erosion and sediment control.
5. Find out the differences between an **earthwork plan** and an ESCP.
6. Understand the various **Best Management Practices** (BMPs) for common construction activities.
7. You will learn how to prepare an ESCP by working in small groups using a **real case study** of a mixed development site.
8. You will learn to apply the various soil loss equations to estimate **sediment yield** from a project site.
9. You will learn how to **design** sediment basins.
10. Get **special tips** from the expert that will make your design more cost effective.
11. You will get **spreadsheet templates** for ESCP preparation worth a total of **RM1,280** for free.
12. You get **18 CPD** hrs (pending) attending the Workshop.
13. You will get special **discount** for MSMAware software to be announced at the workshop.

Signup now for the Workshop by completing and faxing the attached registration form! The brochure and registration form can also be downloaded from <http://Workshop.msmam.com>. Call or SMS/Whatsapp me now at **012-2812590** if you have any question!

Yours Sincerely,

Ir. Dr. Quek Keng Hong

Limited to the first 100 visitors: Free **MSMA2** spreadsheet at <http://free1.msmam.com>.



# 1. MSMA2 Workshop A & B- Content

- **Workshop A Day 1 & 2- Major Changes in Key Design Parameters in *MSMA2***
- **Workshop A Day 3- On-Site Detention- Worked Example using spreadsheet**
- **Workshop B Day 1- Detention Basin- Design Storm and Time-Area Method**
- **Workshop B Day 2- Detention Basin- Reservoir Routing and Interpretation of Results**

Workshop A- Day 1 & 2	Workshop A- Day 3	Workshop B- Day 1	Workshop B- Day 2
<p><b>Introduction to MSMA2</b></p> <p>The Workshop covers an introduction to <i>MSMA2</i> emphasizing on key topics like design criteria and requirements, design storm, design discharge using Rational Method and the Time Area Method, temporal patterns and On-Site Detention (OSD).</p> <p>The values of key design parameters in <i>MSMA2</i> including: <b>storm intensities, temporal patterns, design peak discharges, SSR volumes of OSD, volumes of detention basins and sediment basins</b> will be compared to the first edition of <i>MSMA</i>. Following are some results from our case studies:</p> <ol style="list-style-type: none"> <li>1. The design storm has increased by up to 126% for 10 out of the 14 stations in Kuala Lumpur.</li> <li>2. The design discharge using the Rational Method has gone up by up to 131% for commercial and city area.</li> <li>3. The peak discharge using the Time-Area Method has increased by 127%.</li> <li>4. The Site Storage Requirement for OSD for a factory site has increased by 235%.</li> <li>5. The volume of detention basin for a site has increased by up to 130%</li> <li>6. The volume of a wet sediment basin has increased by 165%.</li> </ol> <p>The Workshop will be conducted through various case studies with plenty of worked examples.</p> <p>The participants will learn how to do the worked examples using Excel spreadsheets on their own notebook PC.</p>	<p><b>On-Site Detention- Worked Example using Spreadsheet</b></p> <p>This session covers OSD computation in details. Using actual worked examples, we show you a different approach of computing OSD using <i>MSMA2</i> that will reduce the storage significantly compared to the <i>Approximate Swinburne's Method</i> in <i>MSMA2</i>.</p> <p>The participants will do the worked examples on Excel spreadsheets on their PC.</p> <p>The worked example involves a case study involving a typical development in KL.</p> <p>First, the SSR (Site Storage Requirement) is calculated based on the <i>Swinburne's Method</i> in the first edition.</p> <p>Next, the SSR is calculated based on the <i>Approximate Swinburne's Method</i> in <i>MSMA2</i>. The SSR is found to be about 190% that from the first edition, due to the approximation involved in the method.</p> <p>Finally, we will show you a different approach of computing OSD using <i>MSMA2</i> that will reduce the storage to only 103% of that from the first edition.</p> <p>The advantage of this approach is the rainfall and discharge are based on <i>MSMA2</i>, so it is more accurate than using the first edition alone.</p>	<p><b>Detention Basin- Design Storm and Time-Area Method</b></p> <p>It is recommended that participants attend Workshop A before attending Workshop B.</p> <p>The worked example is based on a case study of a typical project site.</p> <p>Day 1 will cover two topics namely design storm and the Time-Area method for computing the discharge hydrograph.</p> <p>First, the participants will compute the design storm using a spreadsheet for the location in the case study. This will be brief as the basic theory has already been covered in Workshop A. The focus is on teaching the participants how to change the parameters in the spreadsheet for different locations.</p> <p>The computed design storm is used as input to compute the discharge hydrograph using a Time-Area Method spreadsheet. Again, the coverage on the basic theory of the Time-Area Method is brief as the subject matter has already been covered in Workshop A. The focus is on showing the participants how to modify the spreadsheet for different project sites.</p> <p>The computation will be done using the first and second editions of <i>MSMA</i>. The results will be saved and used in Day 2.</p>	<p><b>Detention Basin- Reservoir Routing and Interpretation of Results</b></p> <p>Day 2 is a continuation of Day 1. It covers the reservoir routing part of the detention basin design.</p> <p>The theory on reservoir routing is covered in detail. The participants will learn how to program a spreadsheet for solving the reservoir routing procedure. Key concepts like storage curve and rating curves are explained.</p> <p>The discharge hydrograph output from the Time-Area Method in Day 1 is routed through the level-pool routing spreadsheet to compute the outflow hydrograph from the detention basin.</p> <p>The participants will learn how to interpret the results of the spreadsheets.</p> <p>For examples: how to interpret from the result a scenario where a detention basin is overtopped due to insufficient volume or too small discharge outlet, or when a detention basin size is considered adequate to provide the temporary storage required.</p> <p>The computation will be repeated using the first and second editions of <i>MSMA</i>.</p> <p>The results will be compared in terms of the storage volume required for both editions of <i>MSMA</i></p>

# 2. ESCP Workshop- Content



**Day 1- Erosion and Sedimentation Processes & Erosion and Sediment Control Principles**

**Day 2- Design Guidelines for Erosion and Sediment Control BMPs**

**Day 3- Preparation of Erosion and Sediment Control Plan & Case Studies**

Day 1	Day 2	Day 3
<p><b>Session 1: Introduction to ESCP in <i>SUStom</i> / <i>MSMA2</i></b>                      Rules and regulations on erosion and sediment control. Federal and state regulations including: (1) statutory control and requirements contained in various acts, regulations and by-laws, (2) agency and other guidelines, and (3) operating practices.</p> <p><b>Session 2: Erosion and Sedimentation Processes</b>                      Construction activities and deforestation can cause erosion of soil and the movement of sediment into downstream water courses causing flooding and deterioration of water quality.</p> <p><b>Session 3: Erosion and Sediment Control Principles</b>                      Eight basic principles consisting of: minimizing soil erosion, preserving top soil and other assets, access route and site management, runoff control &amp; management, earthwork &amp; erosion control, sediment prevention control, slope stabilization and site maintenance.</p> <p><b>Session 4: Erosion and Sediment Control BMPs</b>                      All erosion and sediment best management practices (BMPs) can be classified into three types depending on their natural functions and their design objectives as follows: erosion control BMPs, runoff management BMPs and sediment control BMPs. Erosion control BMPs provides cover protection to soil, while runoff management BMPs minimize channel erosion, and sediment control BMPs trap sediment in runoff.</p>	<p><b>Session 1: Soil Loss Estimation &amp; Case Study</b>                      The Universal Soil Loss Equation (USLE) is a semi-empirical equation used to assess soil losses under different cropping systems and land management practices. Using a spreadsheet, the USLE is applied in a case study to estimate the soil loss from a project site.</p> <p><b>Session 2: Sediment Yield Estimation &amp; Case Study</b>                      The Modified Universal Soil Loss Equation (MUSLE) is a semi-empirical equation for sediment yield estimation of a catchment as a result of a specified storm event. The estimated sediment storage volume is used in sediment basin/trap design. Using a spreadsheet, the MUSLE is applied in a case study to estimate the soil loss from a project site.</p> <p><b>Session 3: Stormwater Management in Erosion and Sediment Control</b>                      The computation of design storm IDF data is based on the Sarawak Hydrological Yearbook. The computation of the peak discharges is based on the Rational Method in <i>SUStom/MSMA2</i>. Participants will be given spreadsheet templates to work on as case studies using their PCs.</p> <p><b>Session 4: Design of Sediment Basins &amp; Case Studies</b>                      Sediment basins are classified into wet or dry depending on the particle size. Generally wet basin for fine grained clay and dry basin for coarse grained soil. The sizing criteria for wet and dry sediment basin are covered with case studies. Participants will get the chance to do the case studies using spreadsheets.</p>	<p><b>Session 1: Preparation of Erosion and Sediment Control Plan</b>                      The ESCP must be prepared by a qualified consultant to manage the erosion and sediment processes throughout various stages of the earthworks and construction processes. It is the masterplan for construction site management in terms of erosion, runoff and sedimentation control. Requirement to submit ESCP for project site more than 1 ha or for any project site under the Street, Drainage, and Building Act (1974).</p> <p><b>Session 2: Content of Erosion and Sediment Control Plan</b>                      The ESCP which consists of 3 major components: report, site plans and engineering drawings, and an inspection and maintenance plan shall be submitted as one document for evaluation by the relevant authorities for approval. ESCP site inspection checklist.</p> <p><b>Session 3: ESCP Case Study 1</b>                      Case studies involving a Model ESCP for residential development and subdivision development for a site. They will learn to use Google Earth to visualize the terrain and to understand the drainage pattern.</p> <p><b>Session 4: ESCP Case Study 2</b>                      The case study involved a real project site for a large mixed development site bisected by a river. An ESCP was prepared for the project site and the submission was approved by the authorities.                       The participants are divided into groups of four and given the project site plans and relevant data. They will work as a group to prepare an ESCP for the case study. Finally, they will be shown the approved ESCP Plan to understand the rationale for the approved ESCP.</p>



## About the Workshop Leader

Ir. Dr. Quek Keng Hong, a consulting engineer by practice, is the principal of **Dr. Quek & Associates**. He is a corporate member of **IEM** and a professional engineer registered with the **Board of Engineers Malaysia (BEM)**. Dr. Quek was the Chairman of the **Water Resources Technical Division of IEM** for two terms since 2003.

Throughout the more than 20 years he spent in consultancy, Dr. Quek has gained a lot of experience in the field of drainage design through his direct involvement in several major infrastructure projects in the country.

Dr. Quek was the reviewer representing **IEM** in the initial review of **MSMA** organised by **D.I.D** in 2000. Since 2003 he has conducted numerous training workshops and seminars on **MSMA**. Dr. Quek has over 30 publications in various journals, seminars and conferences on urban drainage design.

## Who Should Attend?

The Workshop focuses on changes to the Second Edition of the urban drainage design procedure **MSMA**. The Workshop **is suitable for all engineers** who are involved in drainage design, including those who work in consultants, contractors or government.

You will benefit greatly from this Workshop by understanding important changes to the Second Edition of **MSMA**.

## Workshop Time Table

- Registration: 8:30 am
- 1st Session: 9:00 am- 10:30 am
- Morning Tea Break: 10:30 am to 11 am
- 2nd Session: 11:00 am-12:30 pm
- Lunch: 12:30 pm to 1:30 pm
- 3rd Session: 1:30 pm- 3:00 pm
- Afternoon Tea Break: 3:00 pm to 3:30 pm
- 4th Session: 3:30 pm- 5:00 pm
- Workshop Finish: 5:00 pm

## Details about Workshop

- **MSMA2 Workshop A & B:**
  - IEM, Kuching: 3-7 Sep, 2018
  - IEM, PJ: 30 July - 3 August, 2018
  - Time: 8:30 am- 5 pm
- **ESCP Workshop:**
  - IEM, Kuching: 14-16 November, 2018
  - IEM, PJ: 28-30 November, 2018
  - Time: 8:30 am- 5 pm

## Testimonials from Participants



Here are some testimonials we received from participants of our previous Workshop/workshops:

### Testimonial 1:

Dr Quek,

I attended your recent IEM talk and I must say that it was the most beneficial IEM talk I have ever attended so far. I hope that all the other talks could have been like yours. Thank you again.

**A. Halim Abdullah**

### Testimonial 2:

Hi Dr. Quek.

I would like to thank you for the **MSMA** course which I attended in August. It really help me a lot. I have done a layout proposal on OSD based on **MSMA** to JPS Batang Padang and Kinta. The proposal is now approved. Thanks and best regards.

**Ir. Chan Kean Chai**

### Testimonial 3:

Dear Dr Quek,

Thanks for the login ID and password. Thanks also for a well organised 4-days workshop. I have found it very interesting and gained an overview of the methods available at the disposal of the drainage engineer as well as basic hydrological concepts. I wish you all the best in your future workshops and undertakings.  
Best Regards,

**Paul Chia**

Bandar Seri Begawan, Brunei Darussalam

### Testimonial 4:

Dear Dr. Quek,

I attended your recent lecture. Far from being "dry", I found your presentation very enlightening and lively. It was worth it! On the sideline, your motivational pep talk was inspiring - a "shot in the arm" that each one of us needs every now and then. Right now I can't wait to try out your free spreadsheet programmes.

**Ramlee Hassan**

### Testimonial 5:

Dear Dr. Quek,

I was having a really great time during the workshops. Now i have confidence in my design!

**Fadzillah**

### Testimonial 6:

Dear Dr. Quek,

Greetings from IEM Sabah!!! We would like to conduct a course/workshop on MSMA. We are seeking your expertise to be the speaker for this course/workshop. Appreciate if you would confirm us soon on the above. Thank you.

**Wendy Wong (Administrator for IEM Sabah).**

## MSMA2 & ESCP WORKSHOP DATES & FEES FOR 2018



**Dr. Quek & Associates** An Accredited Training Provider for BEM CPD Program.

No. 11-1A, Jalan Bandar 10, Pusat Bandar Puchong, 47160 Puchong, Selangor D.E., Malaysia

Tel: 03-8080 1400 (Hotline: 012-2812590), Fax: 03-8080 2582, Email: [webmaster@msmam.com](mailto:webmaster@msmam.com), Website: <http://msmam.com>

### 1. VENUES AND DATES:

- The Workshop will be held at IEM, Petaling Jaya and Kuching on the dates shown.
- Workshop notes, lunch and two teas provided.
- **Final Workshop Details** containing Workshop timetable and map will be emailed and faxed to all participants 14 days before Workshop.
- Please check our website <http://msmam.com> for updated information about the Workshop.

### 2. DETAILS OF MSMA2 WORKSHOP A & B:

The **MSMA2** Workshops consists of Workshop A and B. You can choose to attend Workshop A and B, or Workshop A alone, or Workshop B alone. **But it is highly recommended for those who want to attend Workshop B to attend Workshop A first as Workshop B requires knowledge of subject matters covered in Workshop A.**

#### MSMA2 Workshop Dates:

Workshop A (3 Days)	Workshop B (2 Days)	Venue	Time:
3, 4, 5 Sep, 2018	6, 7 Sep, 2018	IEM Kuching	8:30 am - 5 pm
30 & 31 July, 1 Aug, 2018	2, 3 Aug, 2018	IEM Petaling Jaya	8:30 am - 5 pm

#### MSMA2 Workshop Fees (RM):

For Payment Made in the Month of:	Workshop A (3 Days):			Workshop B (2 Days):		
	No. of Participants:			No. of Participants:		
	1	2	3	1	2	3
June 2018	1983	3570	4760	1322	2380	3173
July 2018	2030	3653	4871	1353	2435	3247
Aug 2018	2076	3736	4982	1384	2491	3321
Sep 2018	2122	3819	5092	1415	2546	3395

**Special Discount:** We offer discount for early birds and for companies sending in more than one participant as shown above.

For example: if you sign up and paid for 1 person attending Workshop A and B in July 2018, the fee is RM2030+RM1353= RM3383.

If you sign up and paid for 3 persons attending Workshop A and B in June 2018, the fee is RM4760+RM3173= RM7933 or RM2644 per person.

### 3. DETAILS OF ESCP WORKSHOP:

#### ESCP Workshop Dates:

ESCP Workshop (3 Days)	Venue	Time:
14, 15, 16 Nov, 2018	IEM Kuching	8:30 am - 5 pm
28, 29, 30 Nov, 2018	IEM Petaling Jaya	8:30 am - 5 pm

#### ESCP Workshop Fees:

For Payment Made in the Month of:	No. of Participants:		
	1	2	3
June 2018	1864	3356	4475
July 2018	1887	3396	4528
August 2018	1909	3437	4582
September 2018	1932	3477	4636
October 2018	1954	3518	4690
November 2018	1977	3558	4744

**Special Discount:** We offer discount for early birds and for companies sending in more than one participant as shown above.

For example: if you sign up and paid for 1 person attending the Workshop in November 2018, the fee is RM1977.

If you sign up and paid for 3 persons attending the Workshop in June 2018, the fee is RM4475 or RM1492 per person.



**Dr. Quek & Associates** An Accredited Training Provider for BEM CPD Program.

No. 11-1A, Jalan Bandar 10, Pusat Bandar Puchong, 47160 Puchong, Selangor D.E., Malaysia

Tel: 03-8080 1400 (Hotline: 012-2812590), Fax: 03-8080 2582, Email: webmaster@msmam.com, Website: http://msmam.com

**1. DETAILS OF PARTICIPANTS:**

Please fill up the participant details. (\*Please tick the Workshop attending) **Please write clearly!**

Participant Name:	MSMA2 Workshop:		ESCP Workshop*:	Venue: PJ / Kuching	Email Address:	H/P No:
	A*	B*				
(1):						
(2):						
(3):						
(4):						
(5):						
(6):						

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

Company Address: \_\_\_\_\_

Telephone: \_\_\_\_\_ Fax: \_\_\_\_\_ Contact Person Email: \_\_\_\_\_ H/P: \_\_\_\_\_

Contact Person: \_\_\_\_\_ Signature: \_\_\_\_\_ Date: \_\_\_\_\_

**2. ENROLMENT:** (See Page 5 of brochure for fees)

To signup please follow the two simple steps below (Please fill this page and photocopy. Keep the original for your own record):

**Step 1- Payment:** Select one of the following three payment methods:

- **Method A- Sending Cheque:**  Yes. Enclosed herewith Cheque No..... for RM..... payable to **Dr. Quek & Associates**. Please mail/courier a photocopy of this form with payment to us within 7 days.
- **Method B- Direct Bank-In:**  Yes. Bank in cash/cheque directly to: **Maybank Account No: 512343-542887** payable to: **Dr. Quek & Associates**. Please fill up this section: We have bank in cash/Cheque No ..... for RM..... on ..... Please fax this form back with the bank-in slip after making payment.
- **Method C- Other Payment Method:**  Yes. If you wish to pay by government LO please send us an official letter stating so.

**Step 2- Reserve Your Place:** Complete this Form and fax it to 03-5882 1602 to reserve your place.

-----OFFICE USE-----

- We have received your fax booking on \_\_\_\_\_. Your place is reserved, **but will be confirmed only upon payment.**
- We have received the payment from you on \_\_\_\_\_. Your place is confirmed. Receipt will be issued at the Workshop.
- Please find attached the **Final Workshop Details**. Please fill up and fax us the **reply slip** below to confirm your attendance.
- Comment 1: \_\_\_\_\_
- Comment 2: \_\_\_\_\_

-----**REPLY SLIP (IMPORTANT: Participants must confirm their attendance by faxing/emailing/whatsapp this back to us)**-----

- Yes, we hereby confirmed we have received the **Final Workshop Details** and our participants will be attending the Workshop. We undertake to make any outstanding payment if we have not already done so.

Comment (if any): \_\_\_\_\_

Signed: \_\_\_\_\_ Stamp: \_\_\_\_\_ Date: \_\_\_\_\_

**Payment and Refund Policy:** Full payment must be received within 7 days after booking via fax. Money paid is not refundable, but substitution may be made at any time. Full refund if the Workshop is cancelled for whatever reasons. **We will SMS and email the Final Workshop Details two week before the Workshop date. Please make your flight and hotel booking only after you have received the Final Workshop Details from us.** Visit our website <http://msmam.com> for update and details of the Workshop.