

**CHEMICAL PROCESS SAFETY
WORKSHOP**

27 – 29 JULY 2015
A 3-DAY PROFESSIONAL
DEVELOPMENT COURSE

ORGANIZED BY

Prof. Henry Wang, University of Michigan
Prof Jingsong Zhao, Tsinghua University
Prof. Marshal Liu, HKUST

VENUE

Room 6591, Academic Building,
Hong Kong University of Science & Technology
Clear Water Bay, Kowloon, Hong Kong

PLENARY SPEAKER

- **Prof. Daniel Crowl**
Herbert H. Dow Professor for Chemical Process Safety
Michigan Technological University

LECTURERS (TENTATIVE)

- **Prof. Henry Wang**
Chemical Engineering Department, University of Michigan
- **Prof Jingsong Zhao**
Chemical Engineering, Tsinghua University
- **Mr LU Yi**
General manager, Industrial Risk Control, Beijing
- **Prof. Joseph Kwan**
Director, Health, Safety and Environment Office,
HKUST
- **Dr. Chi Moon Li**
Senior Manager, Health, Safety & Environment Office,
HKUST
- **Prof. Gordon Mckay**
Professor Emeritus, HKUST
- **Dr. Peter Clarke**
Operations Director, Exida Asia Pacific
- **Mr. Victor Kwong**
Head of Corporate HSE, Town Gas

ABOUT THIS WORKSOP

The chemical and other relevant processing industries represent a significant contribution to the global economy. Companies engaged in this business sector produce a wide variety of products, including antibiotics, health supplements, cement, gasoline, paper, explosives, plastics, fertilizer, food products, glass, soap, ceramics, and many petrochemicals. Many of facilities in these companies handle hazardous materials and manage significant amounts of fuels and energy. Despite the chemical processing industry has one of the best safety records of all manufacturing sectors, the fact remains that when something goes wrong in this industry, it can have severe and catastrophic consequences.

This chemical process safety workshop is concerned primarily with the identification of potential hazards and hazardous conditions associated with the processes and equipment involved in the chemical process industries. This includes methods of predicting the possible severity of the associated hazards and preventing, controlling or mitigating these hazards. Techniques for performing process hazard analysis, risk assessment, and accident investigations will also be covered. The lecture topics follow those in the text: A. Crowl and Joseph F. Louvar, 'Chemical Process Safety: Fundamentals with Applications', Prentice Hall (3rd edition), which will be supplemented with other pertinent materials. As this workshop is intended to prepare attendees for a real world environment, various speakers from industry as well as government agencies will present first-hand knowledge of process safety.

WHO SHOULD ATTEND

The workshop will be conducted in small-class. We welcome participants from academia, regional industries and government sectors. Participants will benefit significantly from a learning environment that includes working professionals with varied educational backgrounds and experiences.

SPONSORED BY

Exida Asia Pacific
Department of Chemical and Biomolecular Engineering,
Fok Ying Tung Graduate School, HKUST, Hong Kong

REGISTRATION FORM

Please complete and return registration form before July 20.

Professor Marshal LIU
Department of Chemical and Biomolecular Engineering
The Hong Kong University of Science and Technology,
Tel: 23588409
Fax: 23580054
Email: cps2015@ust.hk

A 3-DAY TRAINING COURSE, 27 – 29 JULY 2015

*(Please type and * delete where inappropriate)*

Title : Dr./Mr./Ms./Miss/Mrs.

Name : _____
(Surname) (Other names)

Position : _____

Company : _____
(Company Name)

Tel : _____

Fax : _____

E-Mail : _____

Please reserve a parking space for me. (Car Parks are available free of charge for course participants)

My car's license plate number is : _____

Registration Fee:

- HK\$7000 for 3 days *(includes teaching handout, welcome lunch, tea break and a course certificate of attendance)*
- HK\$2500 for 1 day *(includes teaching handout only)*
- 20% discount for members of **HKIE-SSC, HKIE-MMNC, HKARMS, HKFOSHA, IOSH, SOEHK, SRSO, HKIUS, IMechE/ ERM**

Registration fee should be made payable to :

"The Hong Kong University of Science & Technology"

Enclosed is my registration fee in *cheque/bank draft
No. _____

Note: the registration fee is non-refundable

A CERTIFICATE OF ATTENDANCE IS PROVIDED
FOR EACH CANDIDATE WHO SUCCESSFULLY
COMPLETED THE COURSE

Tentative Workshop Outline of Industrial (Chemical) Process Safety

Monday (7/27/2015)

Morning:

Registration: 8:45 outside Room 6591 (lift 27-30)

Opening remarks: Mr. Leung Yuk-keung, Chief Occupational Safety Officer, Labor Department, HKSAR

Plenary #01	Advances in Chemical Process Safety: Past, Present and Future	Crowl (MTU)
Lect #01	An Overview of Global HSE Regulations, Standards and Compliance	Victor Kwong (Towngas)
Lect #02	Industrial Hygiene and Toxicology – A Primer	Kwan (HKUST)

Afternoon

Lect #03	Fundamentals of PSM and PHA	Clarke (Exida)
Lect #04	Flammability, Fires and Explosions	Crowl (MTU)
Lect #05	Combustible Dust Hazards: Prevention and Control	Wang (UM)

Tuesday (7/28/2015)

Morning

Plenary #02	Current Status and Future Trends in Process Safety – An Industrial Perspective. Dow/DuPont?	
Lect #06	Toxic Release and Dispersion Models	McKay (HKUST)
Lect #07	Safety Devices, Relief and Sizing	McKay (HKUST)

Afternoon

Lect #08	Mechanical Integrity Systems	Lu (IRC)
Lect #09	Safety Instrumented Systems (SIS)	Clarke (Exida)
Lect #10	Human Factors in Process and Product Safety	Li (HKUST)

Wednesday (7/29/2015)

Morning

Plenary #03	Process Safety Education and Practice In Academic Environment	Crowl
Lect #11	Inherently Safer Design	Wang (UM)
Lect #12	Emergency Response and Incident Investigation	Lu (IRC)

Afternoon

Panel Discussion #01

Chemical Process Safety Education in Academic Environment (Moderator: Wang/Crowl/Zhao)
Development of a Database of Educational Materials in Chemical Process Safety