KnowHow WEBINARS MasterClass

Online Short Training Course for Professional Skill Development

Online MasterClass

(KnowHow Webinars) (3-Day)

Chemical Engineering Principles

Trainers: Prof. Ir. Dr. Dominic Foo; Dr. Nishanth Chemmangattuvalappil

14 Modules; ~ 15 Training Hours (3-Day)

DAY 1			
09:00-09:20	Module 1	**What is Chemical Engineering** *Professor Ir. Dr. Dominic Foo*	20 minutes
09:20-09:30	Break Time		10 minutes
09:30-10:00	Module 2	**Basic Principles of Process Operation** *Professor Ir. Dr. Dominic Foo*	30 minutes
10:00-10:30	Break Time		30 minutes
10:30-11:30	Module 3	**Basic Mass Balances** *Professor Ir. Dr. Dominic Foo*	60 minutes
11:30-12:00	Break Time		
12:00-12:55	Module 4	**Basic Energy Balances** *Professor Ir. Dr. Dominic Foo*	55 minutes
12:55-13:55	Break Time		60 minutes
13:55-14:30	Module 5	**Mass & Energy Balances using the Steam Table** *Professor Ir. Dr. Dominic Foo*	35 minutes
14:30-15:00	Break Time		
15:00-15:30	Module 6	**Mass & Energy Balances using Psychrometric Chart** *Professor Ir. Dr. Dominic Foo*	30 minutes
15:30-16:00	Break Time		30 minutes
16:00-16:40	Module 7	**Pump Selection & Hydraulic Design** *Professor Ir. Dr. Dominic Foo*	40 minutes
DAY 2			
09:00-09:50	Module 8	**Heat Exchanger Principles & Design** *Professor Ir. Dr. Dominic Foo*	50 minutes
09:50-10:20	Break Time		30 minutes
10:20-11:45	Module 9	**Chemical Reactors: An Introduction** *Dr. Nishanth Chemmangattuvalappil*	95 minutes
11:45-13:00	Break Time		75 minutes
13:00-15:10	Module 10	**Distillation Process Principles** *Dr. Nishanth Chemmangattuvalappil*	130 minutes
15:10-15:40	Break Time		
15:40-16:45	Module 11	**Evaporation & Crystallization** *Dr. Nishanth Chemmangattuvalappil*	65 minutes
DAY 3			
09:00-11:00	Module 12	**Absorption, Adsorption & Membrane Separation Principles** *Dr. Nishanth Chemmangattuvalappil*	120 min
11:00-11:30	Break Time		
11:30-13:05	Module 13	**Scale-Up Processes from Laboratory Scale to Plant Scale** *Dr. Nishanth Chemmangattuvalappil*	95 minutes
13:05-14:00	Break Time		
14:00-15:50	Module 14	**Chemical Process Safety: An Introduction** *Dr. Nishanth Chemmangattuvalappil*	110 min

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Schedules, Registration Fee & Form : Please visit www.knowhow-webinars.com

Participant Guidelines: Confirmed participants, who have paid registration fees will receive a separate link for each module two days before schedule. Participants are required to have a stable & high-speed internet to access this online program. If registered participant misses any of the modules due to other commitments and prior engagements, participants can view the recorded version of module at an additional fee of 45 US$++/Module/Person at preferred schedule. Participants who join all modules as well as knowledge test will only receive "**MasterClass Certificate**". All registered participants will receive copyrighted training document in PDF format. Registered participants are required to login 10 minutes before each module starting time on each day.

TRAINERS

Professor Ir. Dr. Dominic Foo is a Professor of Process Design and Integration at the University of Nottingham Malaysia, and is the Founding Director for the Centre of Excellence for Green Technologies. He is a Fellow of the Institution of Chemical Engineers (IChemE), a Fellow of the Academy of Sciences Malaysia (ASM), a Chartered Engineer (CEng) with the Engineering Council UK, a Professional Engineer (PEng) with the Board of Engineer Malaysia (BEM), as well as the President for the Asia Pacific Confederation of Chemical Engineering (APCChE). He is a world-renowned scholar in process integration, focusing on resource conservation and CO2 reduction. He collaborates with more than 50 research scholars and industrial practitioners over Asia, Europe, North America and Africa. Professor Foo is an active author, with eight books, more than 180 journal papers and made more than 230 conference presentations, with more than 30 keynote/plenary speeches. He served as International Scientific Committees for many important international conferences (CHISA/PRES, FOCAPD, ESCAPE, PSE, SDEWES, etc.). Professor Foo is the Editor-in-Chief for Process Integration and Optimization for Sustainability (Springer Nature), Subject Editor for Process Safety & Environmental Protection (Elsevier), and editorial board members for several other renowned journals. He is the winners of the Innovator of the Year Award 2009 of IChemE, Young Engineer Award 2010 of IEM, Outstanding Young Malaysian Award 2012 of Junior Chamber International (JCI), Outstanding Asian Researcher and Engineer 2013 (Society of Chemical Engineers, Japan), Vice-Chancellor's Achievement Award 2014 (University of Nottingham) and Top Research Scientist Malaysia 2016 (ASM). He conducted close to 100 professional workshops to academics and industrial practitioners worldwide.

Dr. Nishanth Chemmangattuvalappil is an Associated Professor of Chemical Engineering in the department of Chemical and Environmental Engineering at University of Nottingham Malaysia. He received his PhD in Chemical Engineering from Auburn University, AL, USA (2010). He worked as a Post-doctoral fellow at University of Pittsburgh, PA, USA and later at Auburn University. His main areas of expertise include product and molecular design, mixture design and integrated biorefineries. His current work focuses on the application of molecular design concepts on reactive systems, integration of molecular design techniques into the design of biorefineries and carbon capture and storage using ionic liquids. He has co-authored more than 90 peer reviewed international journal articles and five book chapters. In addition, his works have been presented in more than 70 international conferences and in five invited lectures.

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