

IDA Academy-SgWA Desalination Masterclass

July 12-14, 2018



For more information and to register, please visit: <http://idadesal.org/academy/academy-events/>

Program

The Desalination Masterclass is intended for water utility engineers, managers and planners, operators of desalination plants; consulting engineers and designers; as well as researchers and desalination technology developers and scientists. This Masterclass provides an overview of the state-of-the-art in the engineering and operation of seawater reverse osmosis desalination plants and presents case studies with valuable lessons learned from practical experience.

Day 1 – July 12

Instructor: Nikolay Voutchkov, PE, BCEE, Water Globe Consultants, LLC, USA

Design and Process of RO Desalination Plants (morning)

- 💧 Intakes and Pretreatment for SWRO Desalination Plants to Optimum Design
- 💧 Application, Design to Optimum Membrane SWRO Configuration
- 💧 Concentrate Management to Optimum Discharge System
- 💧 Desalination Plant Case Studies

Membrane Desalination: Challenges & Solutions (afternoon)

- 💧 Membrane Fouling: Causes and Solutions
- 💧 Algal Blooms & Oil Spills: Challenges and Mitigation,
- 💧 Energy Consumption Challenges and Space Limitations

Day 2 – July 13

Instructor: Nikolay Voutchkov, PE, BCEE, Water Globe Consultants, LLC, USA

Operation and Maintenance of RO Desalination Plants (full-day)

- 💧 Performance Targets of RO Desalination Projects
- 💧 Plant Commissioning, Acceptance Test and Operation
- 💧 Labor and Consumables Requirements of RO Desalination
- 💧 Maintenance and Troubleshooting of RO Plants
- 💧 Components and Optimization of the RO Plants O&M Costs

Day 3 – July 14

Instructor: Professor Tony Fane, Former Director Singapore Membrane Technology Centre, NTU, Emeritus Prof UNESCO Centre for Membranes, UNSW, Australia

The Desalination Plant of the Future (morning)

- 💧 Future Demand and Supply, Sustainability, Energy Trends.
- 💧 Seawater vs Wastewater, the One Water Approach.
- 💧 Process Developments - UF, NF, RO, ED, MD. Introducing FO, PRO and RED.
- 💧 Ultrapervious Membranes, Bioinspired membranes, Graphene and Nanotubes,
- 💧 Advanced Fouling Control and Towards Minimum Energy & Resource Recovery



Inspiring Innovation and Excellence

IDA Academy is offering a 2 ½ day course during Singapore International Water Week taught by renowned Master Teachers and experts in their field.

A visit to the Tuas Desalination Plant 3 (afternoon of Day 3) is included in the cost:
<https://hsl.com.sg/projects/tuas-desalination-plant-3/>

Location: PUB Waterhub - A
Centre for Water Excellence
80 Toh Guan Road East
Singapore 608575

Cost USD 1,250



IDA is your point of connection to the world's Desalination and water reuse industry – the people, ideas and information that help advance your career, expand your knowledge, and forge business-building relationships with colleagues around the Globe.

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