

MAINTENANCE AND ENGINEERING | COURSE BROCHURE

Desalination Plant Operation

5 days | Classroom training | English

SMART HORIZON

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Course content

Why attend

Desalination supplies drinking water to many cities, especially in arid regions. This course covers desalination technologies including reverse osmosis and thermal processes, pretreatment, membrane performance and fouling, cleaning, energy recovery, post-treatment, brine management, monitoring and maintenance.

Efficient desalination operation lowers water cost and extends equipment life. You will learn the operational knowledge needed to run desalination plants.

Professional Problems This Course Is Designed to Solve

- Difficulty translating subject knowledge into practical workplace decisions.
- Inconsistent approaches to the activities covered in the course outline.
- Lack of a structured plan for applying and reviewing new skills.

Course methodology

Process explanations, performance calculation exercises, troubleshooting cases and maintenance planning.

Course objectives

By the end of this course, participants will be able to:
- Explain desalination technologies
- Operate pretreatment systems
- Monitor membrane performance and fouling
- Plan membrane cleaning
- Use energy recovery devices
- Manage post-treatment and brine discharge

Target audience

This course is suitable for:
- Desalination plant operators and engineers
- Water utility staff
- Maintenance technicians
- Process engineers
- Water quality professionals



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Target competencies

Participants will develop competencies in:

- Process operation
- Performance monitoring
- Fouling control
- Energy management
- Environmental compliance

Course outline

Day 1: Desalination Technologies

09:00–10:08	Reverse osmosis
10:08–11:00	Thermal desalination
11:00–11:30	**Coffee break**
11:30–11:45	Thermal desalination (continued)
11:45–12:53	Plant layout
12:53–14:00	Exercise

Day 2: Pretreatment

09:00–10:08	Intake and screening
10:08–11:00	Filtration
11:00–11:30	**Coffee break**
11:30–11:45	Filtration (continued)
11:45–12:53	Chemical dosing
12:53–14:00	Workshop

Day 3: Membranes

09:00–10:08	Membrane performance
10:08–11:00	Normalisation
11:00–11:30	**Coffee break**



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11:30–11:45	Normalisation (continued)
11:45–12:53	Fouling and scaling
12:53–14:00	Exercise

Day 4: Cleaning and Energy

09:00–10:08	Cleaning procedures
10:08–11:00	Energy recovery devices
11:00–11:30	**Coffee break**
11:30–11:45	Energy recovery devices (continued)
11:45–12:53	Efficiency
12:53–14:00	Case study

Day 5: Post-Treatment and Brine

09:00–10:08	Remineralisation
10:08–11:00	Brine management
11:00–11:30	**Coffee break**
11:30–11:45	Brine management (continued)
11:45–12:53	Monitoring
12:53–14:00	Action plan

The timings provided are estimates and may vary depending on the number of participants and the discussions taking place during the sessions. They are indicative only and do not constitute a binding commitment.



Course content

Dates, venues and fees

Current published course plans. Fees are per participant in EUR, excluding unconfirmed taxes.

Venue	Start date	End date	Fee (EUR)
Dubai Confirmed dates	9 Nov 2026	13 Nov 2026	**€6,300.-**
Online Confirmed dates	9 Nov 2026	13 Nov 2026	**€1,250.-**
Barcelona Confirmed dates	30 Nov 2026	4 Dec 2026	**€5,680.-**
Online Confirmed dates	30 Nov 2026	4 Dec 2026	**€1,250.-**
London Confirmed dates	4 Jan 2027	8 Jan 2027	**€4,900.-**
Online Confirmed dates	4 Jan 2027	8 Jan 2027	**€1,250.-**
Barcelona Confirmed dates	18 Jan 2027	22 Jan 2027	**€5,680.-**
Online Confirmed dates	18 Jan 2027	22 Jan 2027	**€1,250.-**
Rome Confirmed dates	8 Feb 2027	12 Feb 2027	**€4,900.-**



Course content

Dates, venues and fees (continued)

Venue	Start date	End date	Fee (EUR)
Online Confirmed dates	8 Feb 2027	12 Feb 2027	**€1,250.–**
Istanbul Confirmed dates	1 Mar 2027	5 Mar 2027	**€5,300.–**
Online Confirmed dates	1 Mar 2027	5 Mar 2027	**€1,250.–**
Cape Town Confirmed dates	22 Mar 2027	26 Mar 2027	**€3,780.–**
Online Confirmed dates	22 Mar 2027	26 Mar 2027	**€1,250.–**
Rome Confirmed dates	12 Apr 2027	16 Apr 2027	**€4,900.–**
Online Confirmed dates	12 Apr 2027	16 Apr 2027	**€1,250.–**
Kuala Lumpur Confirmed dates	26 Apr 2027	30 Apr 2027	**€2,900.–**
Online Confirmed dates	26 Apr 2027	30 Apr 2027	**€1,250.–**



Course content

Dates, venues and fees (continued)

Venue	Start date	End date	Fee (EUR)
Cape Town Confirmed dates	17 May 2027	21 May 2027	**€3,780.-**
Online Confirmed dates	17 May 2027	21 May 2027	**€1,250.-**
Paris Confirmed dates	7 Jun 2027	11 Jun 2027	**€5,720.-**
Online Confirmed dates	7 Jun 2027	11 Jun 2027	**€1,250.-**
Dubai Confirmed dates	28 Jun 2027	2 Jul 2027	**€6,300.-**
Online Confirmed dates	28 Jun 2027	2 Jul 2027	**€1,250.-**
London Confirmed dates	19 Jul 2027	23 Jul 2027	**€4,900.-**
Online Confirmed dates	19 Jul 2027	23 Jul 2027	**€1,250.-**
Vienna Confirmed dates	2 Aug 2027	6 Aug 2027	**€5,880.-**



Course content

Dates, venues and fees (continued)

Venue	Start date	End date	Fee (EUR)
Online Confirmed dates	2 Aug 2027	6 Aug 2027	**€1,250.-**
Amsterdam Confirmed dates	23 Aug 2027	27 Aug 2027	**€5,080.-**
Online Confirmed dates	23 Aug 2027	27 Aug 2027	**€1,250.-**
Vienna Confirmed dates	13 Sept 2027	17 Sept 2027	**€5,880.-**
Online Confirmed dates	13 Sept 2027	17 Sept 2027	**€1,250.-**
Frankfurt Confirmed dates	4 Oct 2027	8 Oct 2027	**€5,300.-**
Online Confirmed dates	4 Oct 2027	8 Oct 2027	**€1,250.-**
Rome Confirmed dates	25 Oct 2027	29 Oct 2027	**€4,900.-**
Online Confirmed dates	25 Oct 2027	29 Oct 2027	**€1,250.-**



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Dates, venues and fees (continued)

Venue	Start date	End date	Fee (EUR)
Dubai Confirmed dates	8 Nov 2027	12 Nov 2027	**€6,300.-**
Online Confirmed dates	8 Nov 2027	12 Nov 2027	**€1,250.-**
Cape Town Confirmed dates	29 Nov 2027	3 Dec 2027	**€3,780.-**
Online Confirmed dates	29 Nov 2027	3 Dec 2027	**€1,250.-**

Plan your next step

Dates, availability, exact venue, taxes, inclusions and payment terms require written confirmation. This brochure is not a quotation, registration, booking confirmation or visa invitation. Participants receive a Smart Horizon certificate of attendance; programmes are not externally accredited and do not award a professional qualification or designation. Confirm arrangements before booking travel.

For group or in-house training, contact our learning team to discuss your objectives and delivery arrangements.

Contact Smart Horizon

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View the latest course details online