

MAINTENANCE AND ENGINEERING | COURSE BROCHURE

Hydraulic and Pneumatic Systems Maintenance

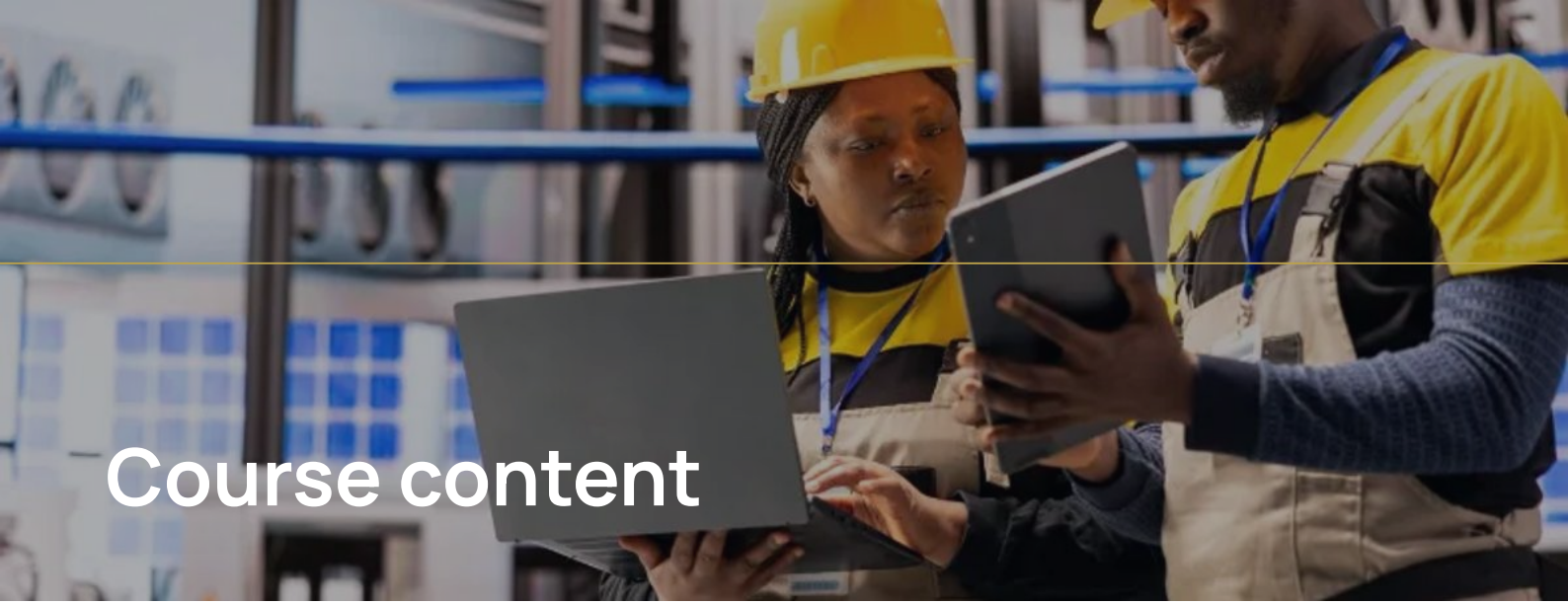
5 days | Classroom training | English

SMART HORIZON

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Amsterdam
The Netherlands

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Course content

Why attend

Hydraulic and pneumatic systems power many industrial machines. This course covers fluid power principles, components such as pumps, compressors, valves, cylinders and actuators, circuit reading, contamination control, maintenance practices, troubleshooting and safety.

Fluid power failures cause downtime and safety risks. This course gives technicians practical skills to maintain and troubleshoot these systems.

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

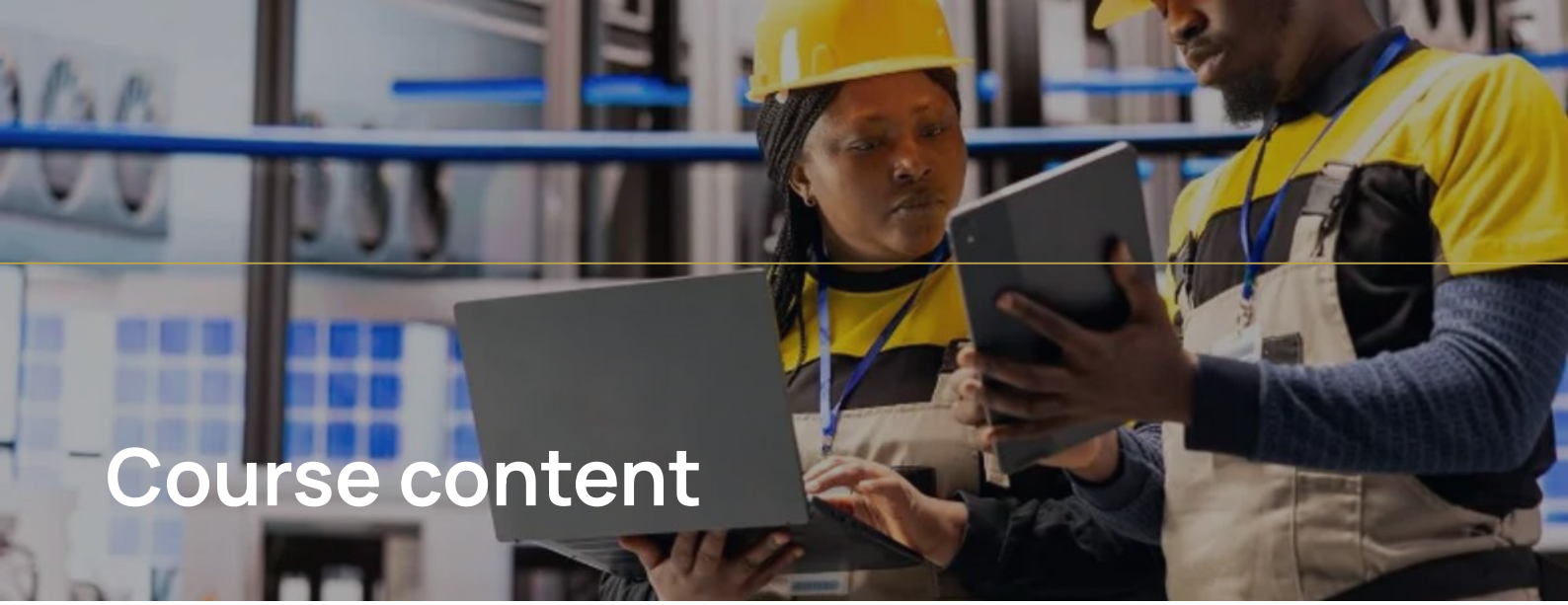
The course uses circuit diagrams, demonstrations, troubleshooting exercises and maintenance planning.

Course objectives

By the end of this course, participants will be able to:
• Explain hydraulic and pneumatic principles
• Identify system components and symbols
• Read and interpret circuit diagrams
• Control contamination and maintain fluids
• Perform preventive maintenance
• Troubleshoot hydraulic and pneumatic faults

Target audience

This course is suitable for:
• Maintenance technicians
• Mechanical engineers
• Production technicians
• Maintenance supervisors
• Plant engineers



Course content

Target competencies

Participants will develop competencies in:
- Fluid power principles
- Component knowledge
- Circuit reading
- Contamination control
- Preventive maintenance
- Troubleshooting

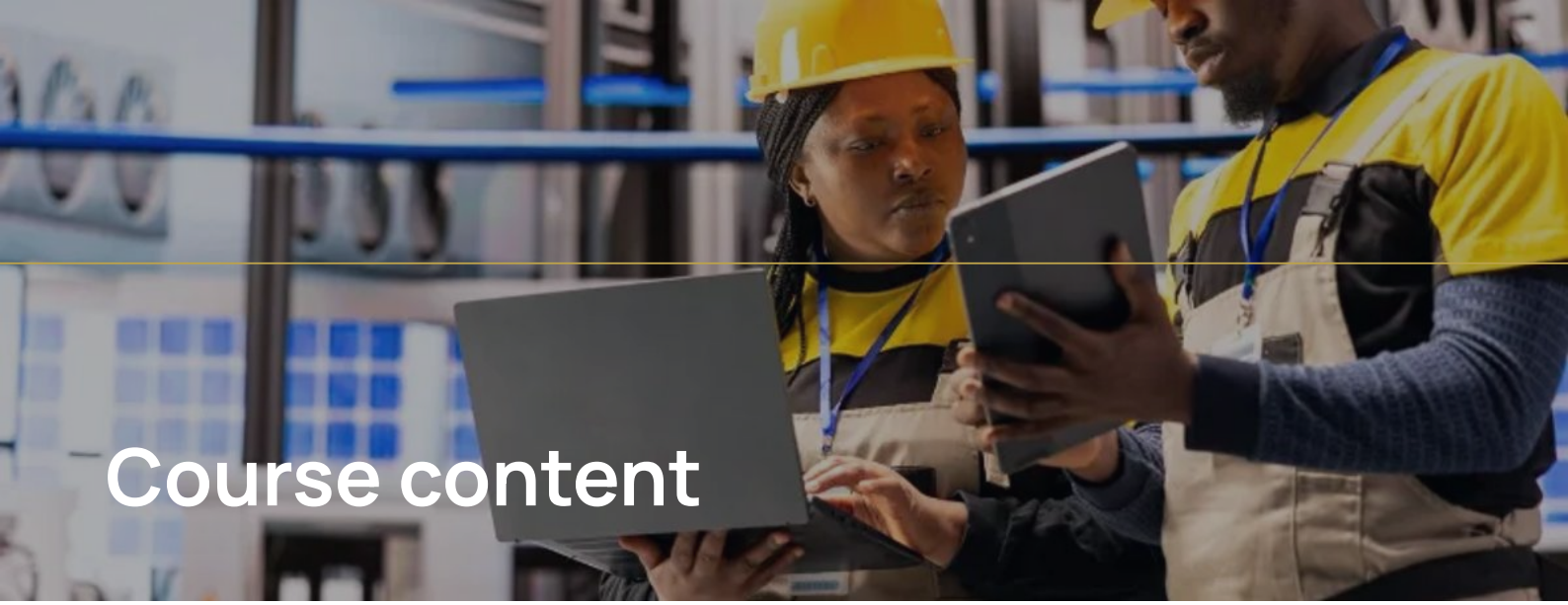
Course outline

Day 1: Fluid Power Principles

09:00–09:54	Pressure and flow
09:54–10:48	Hydraulics versus pneumatics
10:48–11:00	Energy and efficiency
11:00–11:30	**Coffee break**
11:30–12:12	Energy and efficiency (continued)
12:12–13:06	Safety
13:06–14:00	Exercise: System identification

Day 2: Components

09:00–09:54	Pumps and compressors
09:54–10:48	Valves
10:48–11:00	Cylinders and motors
11:00–11:30	**Coffee break**
11:30–12:12	Cylinders and motors (continued)
12:12–13:06	Accumulators and filters
13:06–14:00	Demonstration: Components



Course content

Day 3: Circuits

09:00–09:54	Symbols
09:54–10:48	Reading circuits
10:48–11:00	Common circuits
11:00–11:30	**Coffee break**
11:30–12:12	Common circuits (continued)
12:12–13:06	Control
13:06–14:00	Exercise: Circuit reading

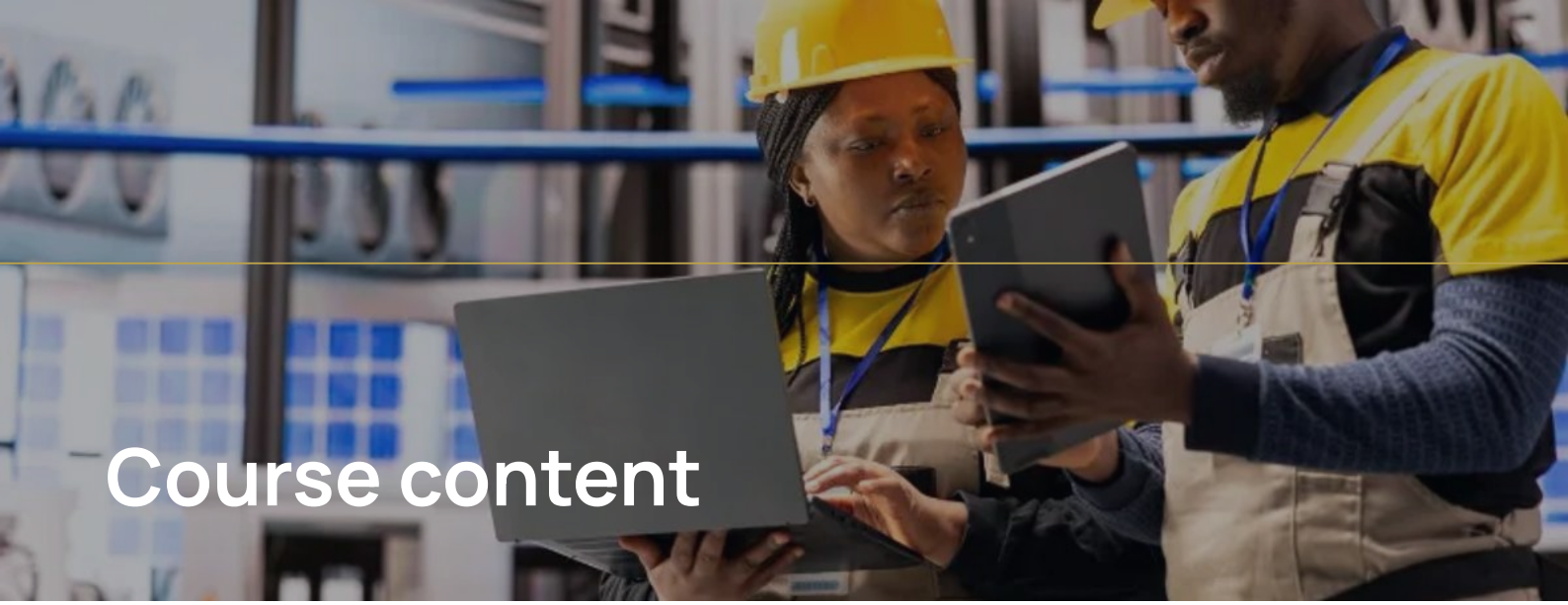
Day 4: Maintenance

09:00–09:54	Fluid care
09:54–10:48	Contamination control
10:48–11:00	Seals and hoses
11:00–11:30	**Coffee break**
11:30–12:12	Seals and hoses (continued)
12:12–13:06	Preventive maintenance
13:06–14:00	Case study: Hydraulic failure

Day 5: Troubleshooting

09:00–09:54	Systematic approach
09:54–10:48	Common faults
10:48–11:00	Testing
11:00–11:30	**Coffee break**
11:30–12:12	Testing (continued)
12:12–13:06	Documentation
13:06–14:00	Capstone: Troubleshooting exercise

The timings provided are estimates and may vary depending on the number of participants and the discussions taking place during the



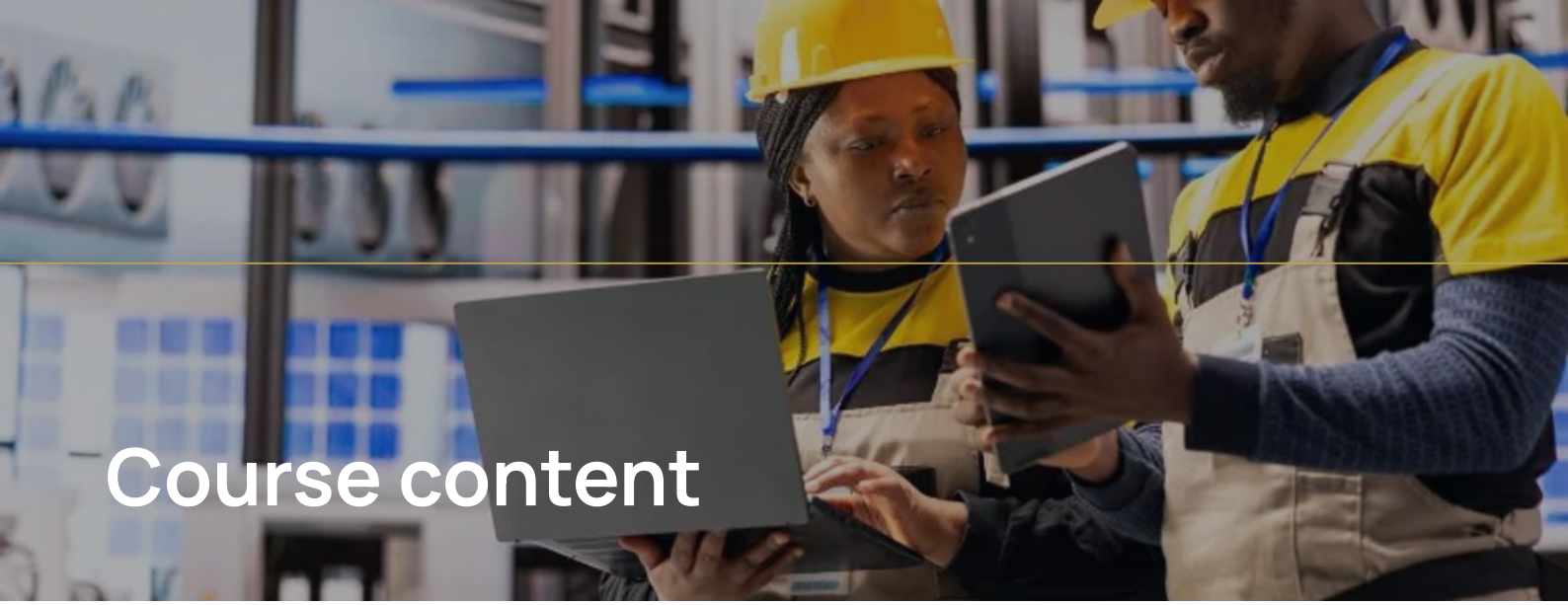
Course content

sessions. They are indicative only and do not constitute a binding commitment.

Dates, venues and fees

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

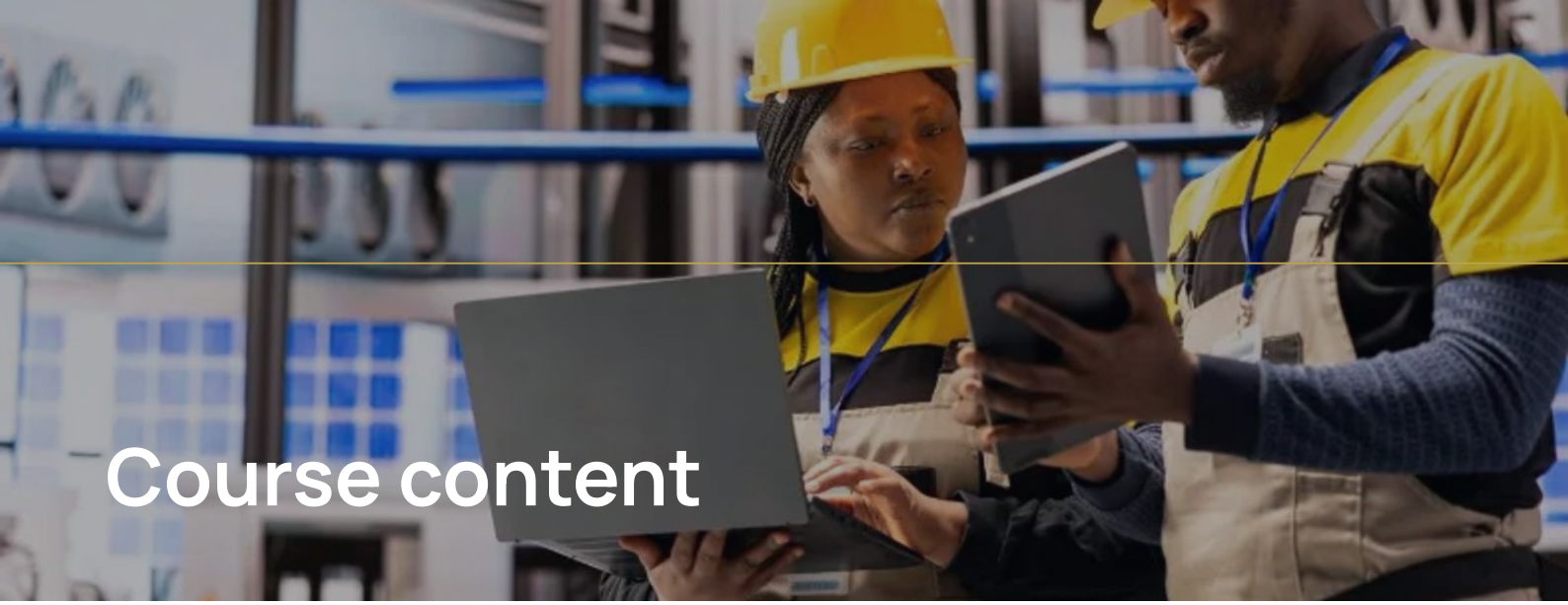
Venue	Start date	End date	Fee (EUR)
Istanbul Confirmed dates	9 Nov 2026	13 Nov 2026	**€5,300.-**
Online Confirmed dates	9 Nov 2026	13 Nov 2026	**€1,250.-**
Amsterdam Confirmed dates	23 Nov 2026	27 Nov 2026	**€5,080.-**
Online Confirmed dates	23 Nov 2026	27 Nov 2026	**€1,250.-**
Singapore Confirmed dates	7 Dec 2026	11 Dec 2026	**€5,640.-**
Online Confirmed dates	7 Dec 2026	11 Dec 2026	**€1,250.-**
London Confirmed dates	14 Dec 2026	18 Dec 2026	**€4,900.-**
Online Confirmed dates	14 Dec 2026	18 Dec 2026	**€1,250.-**



Course content

Dates, venues and fees (continued)

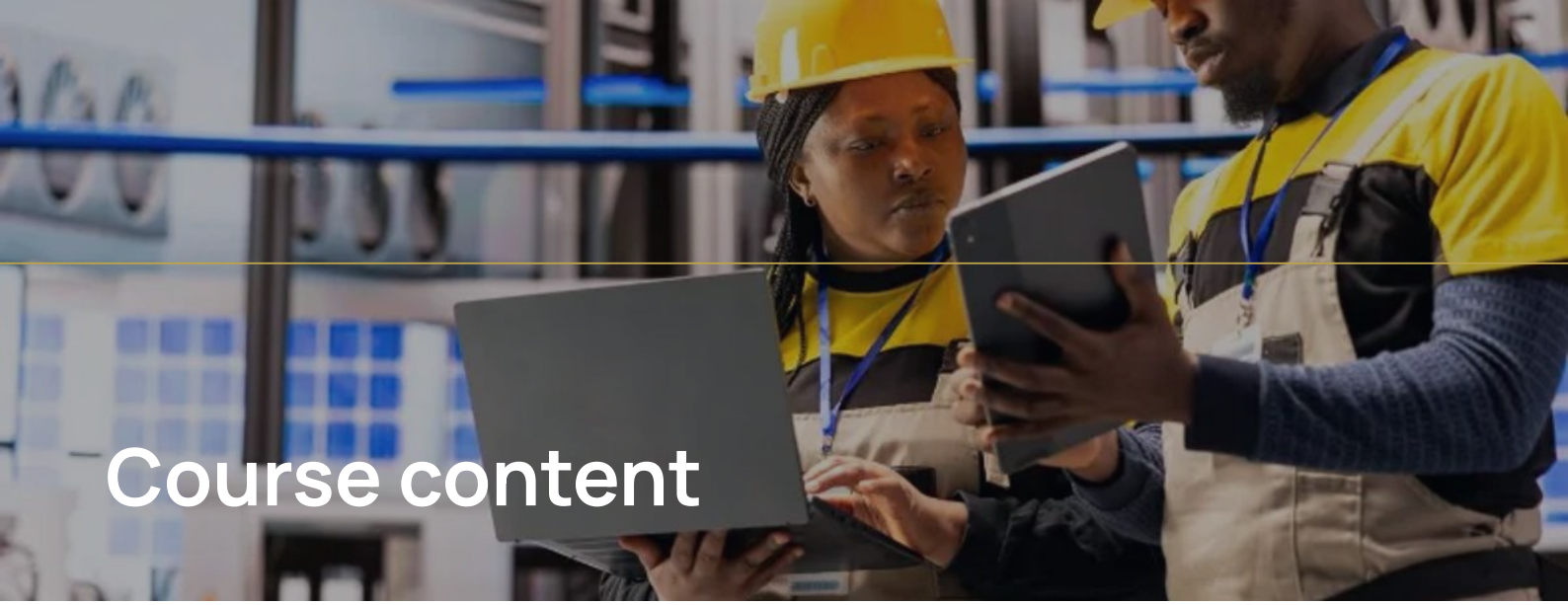
Venue	Start date	End date	Fee (EUR)
Cape Town Confirmed dates	4 Jan 2027	8 Jan 2027	**€3,780.–**
Online Confirmed dates	4 Jan 2027	8 Jan 2027	**€1,250.–**
Dubai Confirmed dates	11 Jan 2027	15 Jan 2027	**€6,300.–**
Online Confirmed dates	11 Jan 2027	15 Jan 2027	**€1,250.–**
Frankfurt Confirmed dates	25 Jan 2027	29 Jan 2027	**€5,300.–**
Online Confirmed dates	25 Jan 2027	29 Jan 2027	**€1,250.–**
Kuala Lumpur Confirmed dates	8 Feb 2027	12 Feb 2027	**€2,900.–**
Online Confirmed dates	8 Feb 2027	12 Feb 2027	**€1,250.–**
Paris Confirmed dates	22 Feb 2027	26 Feb 2027	**€5,720.–**



Course content

Dates, venues and fees (continued)

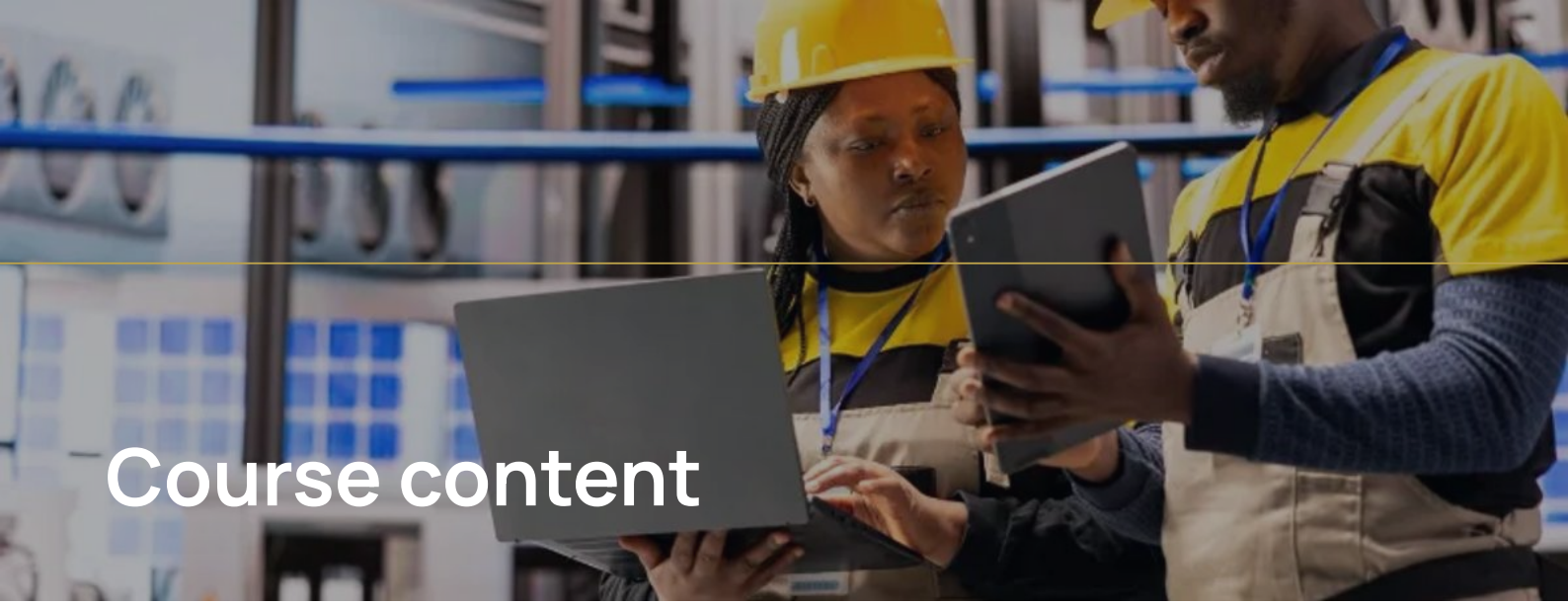
Venue	Start date	End date	Fee (EUR)
Online Confirmed dates	22 Feb 2027	26 Feb 2027	**€1,250.-**
Istanbul Confirmed dates	8 Mar 2027	12 Mar 2027	**€5,300.-**
Online Confirmed dates	8 Mar 2027	12 Mar 2027	**€1,250.-**
Rome Confirmed dates	15 Mar 2027	19 Mar 2027	**€4,900.-**
Online Confirmed dates	15 Mar 2027	19 Mar 2027	**€1,250.-**
Amsterdam Confirmed dates	22 Mar 2027	26 Mar 2027	**€5,080.-**
Online Confirmed dates	22 Mar 2027	26 Mar 2027	**€1,250.-**
Singapore Confirmed dates	12 Apr 2027	16 Apr 2027	**€5,640.-**
Online Confirmed dates	12 Apr 2027	16 Apr 2027	**€1,250.-**



Course content

Dates, venues and fees (continued)

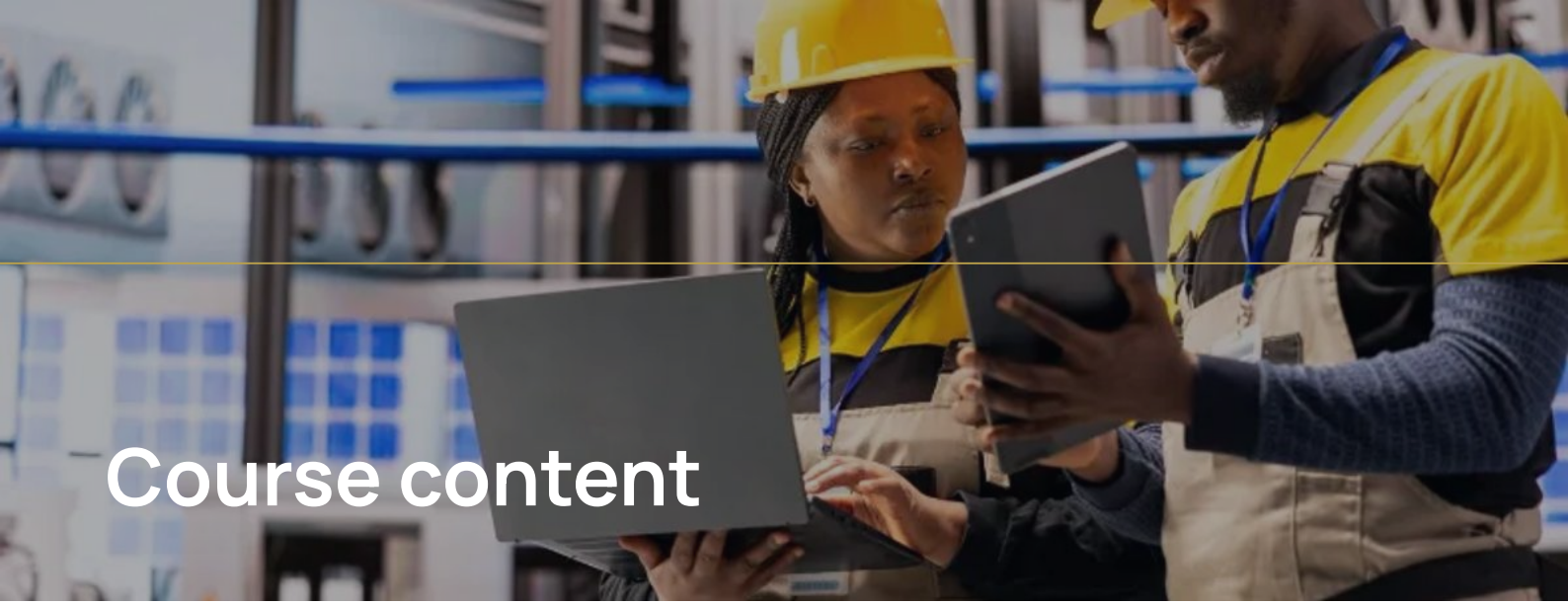
Venue	Start date	End date	Fee (EUR)
London Confirmed dates	26 Apr 2027	30 Apr 2027	**€4,900.-**
Online Confirmed dates	26 Apr 2027	30 Apr 2027	**€1,250.-**
Barcelona Confirmed dates	3 May 2027	7 May 2027	**€5,680.-**
Online Confirmed dates	3 May 2027	7 May 2027	**€1,250.-**
Dubai Confirmed dates	10 May 2027	14 May 2027	**€6,300.-**
Online Confirmed dates	10 May 2027	14 May 2027	**€1,250.-**
Frankfurt Confirmed dates	24 May 2027	28 May 2027	**€5,300.-**
Online Confirmed dates	24 May 2027	28 May 2027	**€1,250.-**
Kuala Lumpur Confirmed dates	14 Jun 2027	18 Jun 2027	**€2,900.-**



Course content

Dates, venues and fees (continued)

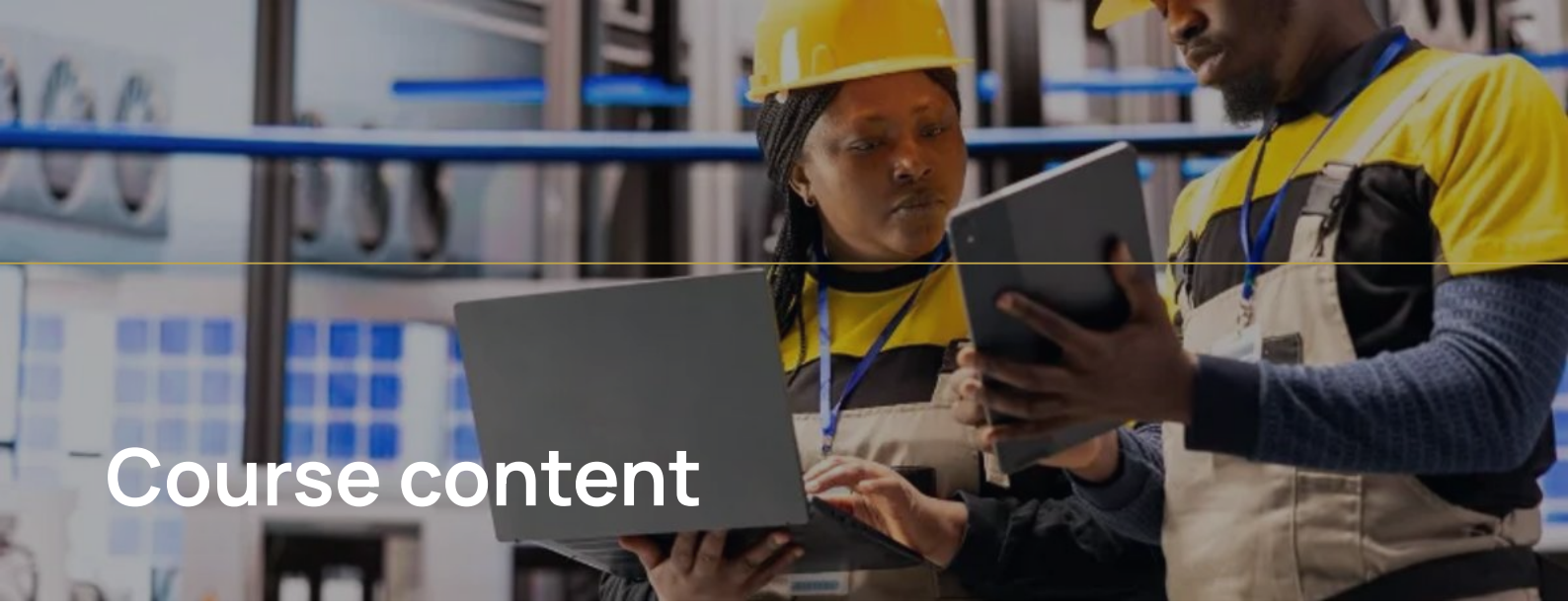
Venue	Start date	End date	Fee (EUR)
Online Confirmed dates	14 Jun 2027	18 Jun 2027	**€1,250.–**
Paris Confirmed dates	21 Jun 2027	25 Jun 2027	**€5,720.–**
Online Confirmed dates	21 Jun 2027	25 Jun 2027	**€1,250.–**
Vienna Confirmed dates	5 Jul 2027	9 Jul 2027	**€5,880.–**
Online Confirmed dates	5 Jul 2027	9 Jul 2027	**€1,250.–**
Istanbul Confirmed dates	12 Jul 2027	16 Jul 2027	**€5,300.–**
Online Confirmed dates	12 Jul 2027	16 Jul 2027	**€1,250.–**
Amsterdam Confirmed dates	26 Jul 2027	30 Jul 2027	**€5,080.–**
Online Confirmed dates	26 Jul 2027	30 Jul 2027	**€1,250.–**



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Dates, venues and fees (continued)

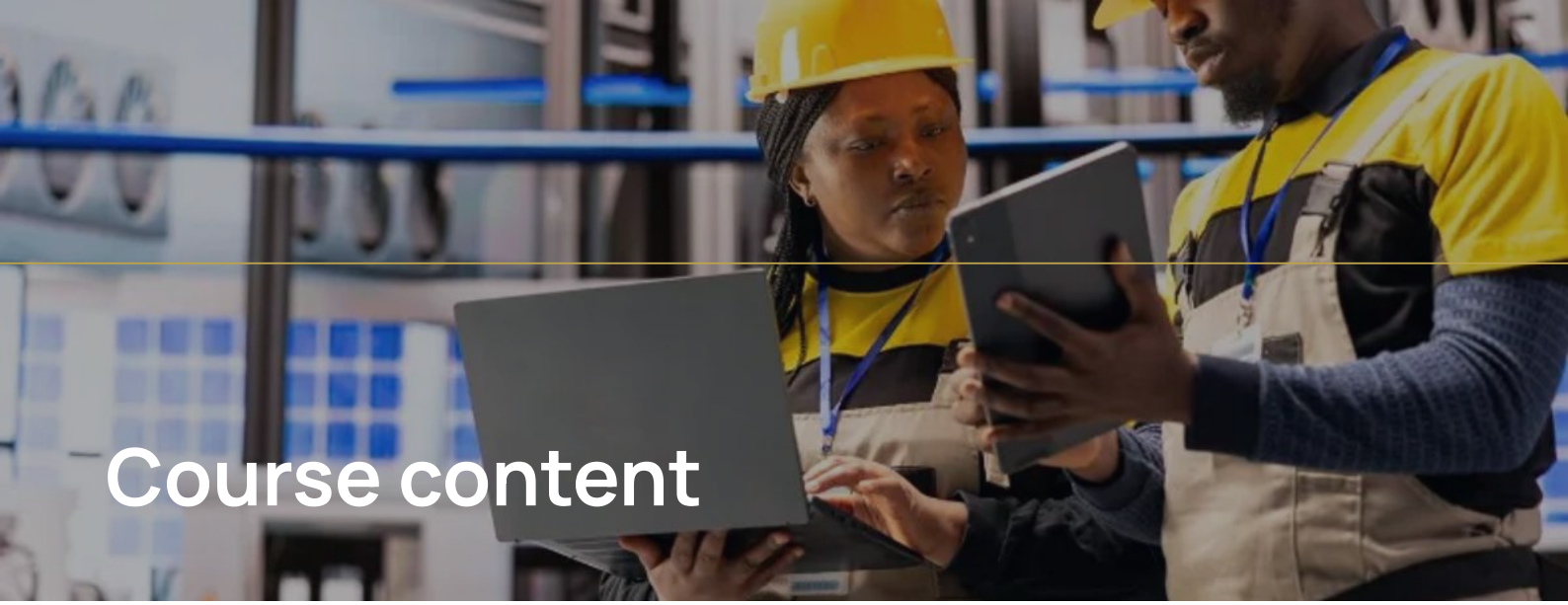
Venue	Start date	End date	Fee (EUR)
Singapore Confirmed dates	9 Aug 2027	13 Aug 2027	**€5,640.-**
Online Confirmed dates	9 Aug 2027	13 Aug 2027	**€1,250.-**
London Confirmed dates	23 Aug 2027	27 Aug 2027	**€4,900.-**
Online Confirmed dates	23 Aug 2027	27 Aug 2027	**€1,250.-**
Rome Confirmed dates	6 Sept 2027	10 Sept 2027	**€4,900.-**
Online Confirmed dates	6 Sept 2027	10 Sept 2027	**€1,250.-**
Dubai Confirmed dates	13 Sept 2027	17 Sept 2027	**€6,300.-**
Online Confirmed dates	13 Sept 2027	17 Sept 2027	**€1,250.-**
Frankfurt Confirmed dates	20 Sept 2027	24 Sept 2027	**€5,300.-**



Course content

Dates, venues and fees (continued)

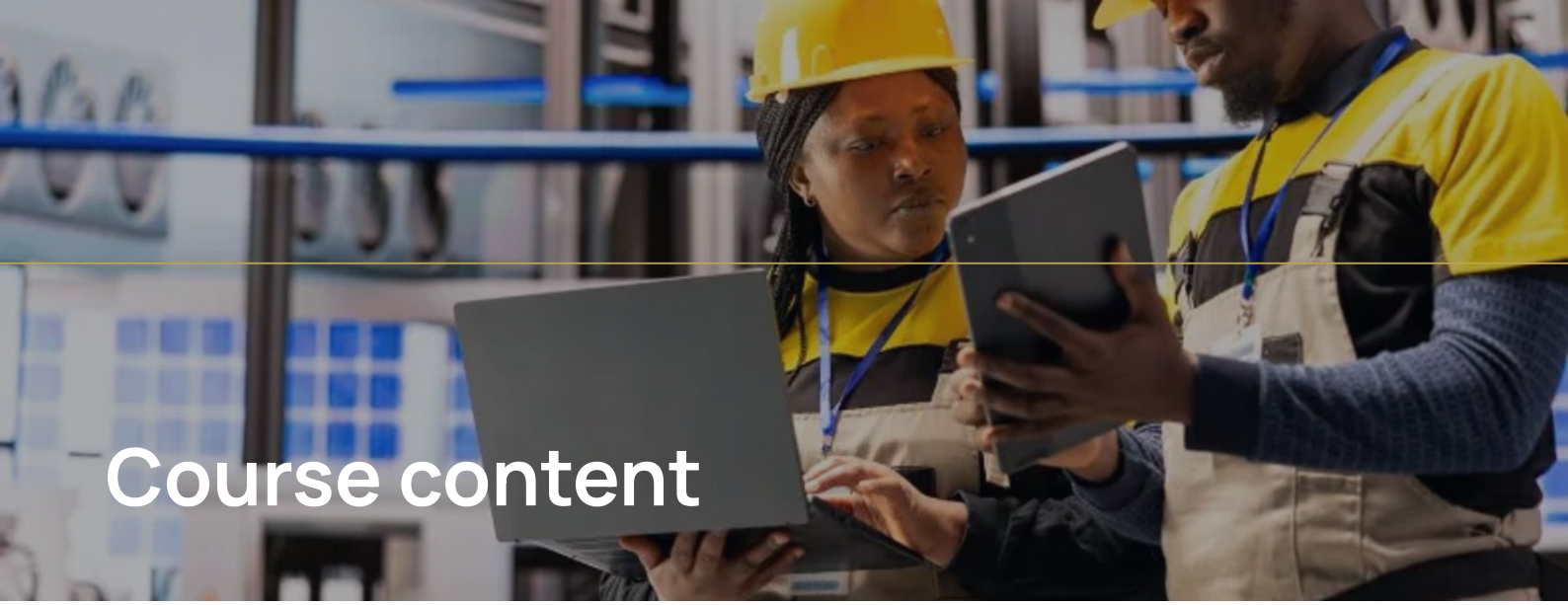
Venue	Start date	End date	Fee (EUR)
Online Confirmed dates	20 Sept 2027	24 Sept 2027	**€1,250.–**
Kuala Lumpur Confirmed dates	11 Oct 2027	15 Oct 2027	**€2,900.–**
Online Confirmed dates	11 Oct 2027	15 Oct 2027	**€1,250.–**
Paris Confirmed dates	25 Oct 2027	29 Oct 2027	**€5,720.–**
Online Confirmed dates	25 Oct 2027	29 Oct 2027	**€1,250.–**
Cape Town Confirmed dates	1 Nov 2027	5 Nov 2027	**€3,780.–**
Online Confirmed dates	1 Nov 2027	5 Nov 2027	**€1,250.–**
Istanbul Confirmed dates	8 Nov 2027	12 Nov 2027	**€5,300.–**
Online Confirmed dates	8 Nov 2027	12 Nov 2027	**€1,250.–**



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Dates, venues and fees (continued)

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Course content

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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