



OIL AND GAS | OG-059

Digital Oilfield and Industry 4.0 in Oil and Gas

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Course content

Why Attend

Digital technologies are transforming how oil and gas companies explore, produce, maintain and manage assets. Sensors, automation, remote operations, cloud platforms and analytics enable higher uptime, lower cost and safer operations.

This Aractech course explains digital oilfield concepts, real-time data and integrated operations, industrial IoT, digital twins, automation and robotics, cloud and edge computing, and cybersecurity for operational technology. Participants assess digital maturity and build a digital roadmap.

Course Methodology

- Technology overviews
- Industry case studies
- Maturity assessment
- Use-case workshops
- Roadmap development

Course Objectives

- Explain digital oilfield concepts and benefits
- Understand real-time data and integrated operations
- Apply IoT, digital twins and automation
- Use cloud and analytics platforms
- Manage operational technology cybersecurity
- Build a digital transformation roadmap

Target Audience

- Engineers and operations managers

Course content

- Digital transformation leaders
- IT and OT professionals
- Asset managers

Course outline

Detailed course outline

Day-by-day outline for Digital Oilfield and Industry 4.0 in Oil and Gas.

Day 1 - Digital Oilfield Concepts

- 09:00-09:39 | Evolution of the digital oilfield
- 09:39-10:18 | Value drivers
- 10:18-10:57 | Digital maturity
- 10:57-11:00 | Integrated operations
- 11:00-11:30 | Coffee break
- 11:30-12:05 | Integrated operations (continued)
- 12:05-12:43 | Barriers to adoption
- 12:43-14:00 | Exercise: Maturity assessment

Day 2 - Data and Connectivity

- 09:00-09:39 | Sensors and IoT
- 09:39-10:18 | Real-time data infrastructure
- 10:18-10:57 | Data platforms
- 10:57-11:00 | Data quality and governance
- 11:00-11:30 | Coffee break
- 11:30-12:05 | Data quality and governance (continued)
- 12:05-12:43 | Edge and cloud
- 12:43-14:00 | Workshop: Data architecture

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Day 3 - Digital Twins and Automation

- 09:00-09:39 | Digital twin concepts
- 09:39-10:18 | Process automation
- 10:18-10:57 | Robotics and drones
- 10:57-11:00 | Remote operations
- 11:00-11:30 | Coffee break
- 11:30-12:05 | Remote operations (continued)
- 12:05-12:43 | Predictive maintenance
- 12:43-14:00 | Case study: Digital twin deployment

Day 4 - Cybersecurity and Change

- 09:00-09:39 | OT cybersecurity
- 09:39-10:18 | Governance
- 10:18-10:57 | Skills and organisation
- 10:57-11:00 | Change management
- 11:00-11:30 | Coffee break
- 11:30-12:05 | Change management (continued)
- 12:05-12:43 | Vendor partnerships
- 12:43-14:00 | Exercise: Risk review

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Day 5 - Roadmap and Value

- 09:00-09:45 | Use-case prioritisation
- 09:45-10:30 | Business cases
- 10:30-11:00 | Scaling pilots
- 11:00-11:30 | Coffee break
- 11:30-11:45 | Scaling pilots (continued)
- 11:45-12:30 | KPIs
- 12:30-13:15 | Future trends
- 13:15-14:00 | Capstone: Digital roadmap

Seminar dates

Available seminar dates

Live dates and pricing for Digital Oilfield and Industry 4.0 in Oil and Gas generated from the course details page.

Date	Location	Format	Fee
9 - 13 November 2026	Paris	Classroom	€3,825
14 - 18 December 2026	Frankfurt	Classroom	€1,875
18 - 22 January 2027	Dubai	Classroom	€1,845
15 - 19 February 2027	London	Classroom	€2,315
15 - 19 March 2027	Istanbul	Classroom	€1,978
19 - 23 April 2027	Vienna	Classroom	€3,225
17 - 21 May 2027	Barcelona	Classroom	€2,815
21 - 25 June 2027	Paris	Classroom	€3,825
19 - 23 July 2027	Frankfurt	Classroom	€1,875
16 - 20 August 2027	Madrid	Classroom	€3,400

Seminar dates

Available seminar dates

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Date	Location	Format	Fee
20 - 24 September 2027	London	Classroom	€2,315
18 - 22 October 2027	Istanbul	Classroom	€1,978
15 - 19 November 2027	Cape Town	Classroom	€1,625
20 - 24 December 2027	Barcelona	Classroom	€2,815
9 - 13 November 2026	Online / Live	Online / Live	€1,815
14 - 18 December 2026	Online / Live	Online / Live	€1,815
18 - 22 January 2027	Online / Live	Online / Live	€1,815
15 - 19 February 2027	Online / Live	Online / Live	€1,815
15 - 19 March 2027	Online / Live	Online / Live	€1,815
19 - 23 April 2027	Online / Live	Online / Live	€1,815

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17 - 21 May 2027	Online / Live	Online / Live	€1,815
21 - 25 June 2027	Online / Live	Online / Live	€1,815
19 - 23 July 2027	Online / Live	Online / Live	€1,815
16 - 20 August 2027	Online / Live	Online / Live	€1,815
20 - 24 September 2027	Online / Live	Online / Live	€1,815
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