



Chemical & Process Engineering **New from 2028**

Bio-Based Chemicals & Biofuels

الكيمائيات الحيوية والوقود الحيوي

Duration

5 or 10 days

Language

English or Arabic

Formats

Classroom, online, in-house

Hours

35 / 70

Overview

Bio-Based Chemicals & Biofuels is part of the Chemical & Process Engineering track at Garnet Global Training Center. Process design, control and optimisation for chemical, petrochemical and fertiliser plants. The course is taught in English or Arabic as a 5-day or 10-day program, in classrooms in cities such as Dubai, Riyadh, Cairo, London and Istanbul, or live online, and it can be delivered in-house with examples and exercises built around your own operations.

What you will be able to do

- Explain the principles, terminology and standards that govern Bio-Based Chemicals & Biofuels.
- Apply proven methods and tools to real situations from your own workplace.
- Analyse performance gaps, risks and root causes, and choose the right response.
- Measure results with practical indicators and report them clearly to management.
- Leave with a personal action plan you can start using the following week.

Who should attend

Process and chemical engineers, plant operators and technical service teams.

Key topics

- Mass and energy balances
- Unit operations
- Process control
- Simulation and optimisation
- Catalysts and reactions
- Troubleshooting

Formats and fees

5-day classroom	USD 4,750
5-day online	USD 2,950
10-day classroom	USD 8,950
10-day online	USD 5,450
In-house	Quotation per group

Fees per participant, excluding VAT.

Register or ask

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Email: info@garnettrainings.com

Training: training@garnettrainings.com

Web: www.garnettrainings.com

Sharjah Publishing City Free Zone,
Sharjah, UAE

Certificate

Participants who attend at least 90% of sessions and complete the final assessment receive a certificate of completion stating 35 contact hours (5-day) or 70 contact hours (10-day).

5-day outline

Day 1 Foundations of Bio-Based Chemicals & Biofuels

- Scope, terminology and governing standards
- Mass and energy balances

Day 2 Methods and tools

- Unit operations
- Process control

Day 3 Application and case studies

- Simulation and optimisation
- Troubleshooting

Day 4 Performance, risk and compliance

- Catalysts and reactions
- Measurement and reporting

Day 5 Workshop, assessment and action plan

- Hands-on workshop on a workplace challenge
- Final assessment and personal action plan

10-day outline

Day 1 Foundations of Bio-Based Chemicals & Biofuels

- Scope, terminology and governing standards
- Mass and energy balances

Day 2 Methods and tools

- Unit operations
- Process control

Day 3 Application and case studies

- Simulation and optimisation
- Troubleshooting

Day 4 Performance, risk and compliance

- Catalysts and reactions
- Measurement and reporting

Day 5 Workshop, assessment and action plan

- Hands-on workshop on a workplace challenge
- Final assessment and personal action plan

Day 6 Advanced techniques and specialist practice

- Complex cases in depth
- Common mistakes and how to avoid them

Day 7 Digital tools, data and automation

- Analysis tools and software
- Using AI in this field

Day 8 Benchmarking against international practice

- Global performance benchmarks
- International case studies

Day 9 Capstone project

- Analyse a real challenge from your organisation
- Build the solution and implementation plan

Day 10 Presentations, final assessment and certificates

- Project presentations and review
- Final exam and certificate award

Schedule 2027–2030

Dates	Format	City	Language	Fee (USD)
18–22 Jun 2028	5-day classroom	Riyadh	English	4,750
17–28 Jul 2028	10-day online	Live online	English	5,450
4–15 Sep 2028	10-day classroom	Dubai	Arabic	8,950
9–13 Oct 2028	5-day classroom	Kuala Lumpur	English	4,750
11–15 Dec 2028	5-day online	Live online	English	2,950
8–12 Jan 2029	5-day classroom	Dubai	English	4,750
19 Feb – 2 Mar 2029	10-day classroom	Barcelona	English	8,950
14–18 May 2029	5-day online	Live online	Arabic	2,950
10–21 Sep 2029	10-day online	Live online	Arabic	5,450
17–21 Dec 2029	5-day classroom	London	English	4,750

Dates	Format	City	Language	Fee (USD)
21–25 Jan 2030	5-day online	Live online	Arabic	2,950
6–10 May 2030	5-day classroom	Barcelona	English	4,750
2–6 Jun 2030	5-day classroom	Riyadh	Arabic	4,750
10–21 Nov 2030	10-day classroom	Doha	English	8,950
16–27 Dec 2030	10-day online	Live online	Arabic	5,450

Customised and in-house versions of this course are available on request. www.garnettrainings.com/en/customise/