



Chemical & Process Engineering

Process Design & Equipment Sizing

تصميم العمليات وتحديد مقاسات المعدات

Duration

5 or 10 days

Language

English or Arabic

Formats

Classroom, online, in-house

Hours

35 / 70

Overview

Process Design & Equipment Sizing 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 Process Design & Equipment Sizing.
- 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 Process Design & Equipment Sizing

- 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 Process Design & Equipment Sizing

- 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)
11–15 Jan 2027	5-day online	Live online	Arabic	2,950
1–12 Feb 2027	10-day classroom	Istanbul	English	8,950
15–19 Aug 2027	5-day classroom	Jeddah	English	4,750
20–24 Sep 2027	5-day classroom	Kuala Lumpur	English	4,750
18–29 Oct 2027	10-day online	Live online	Arabic	5,450
15–19 May 2028	5-day classroom	Barcelona	English	4,750
19–30 Jun 2028	10-day classroom	Amsterdam	English	8,950
3–14 Jul 2028	10-day online	Live online	English	5,450
14–18 Aug 2028	5-day online	Live online	Arabic	2,950

Dates	Format	City	Language	Fee (USD)
2–6 Oct 2028	5-day classroom	London	English	4,750
8–19 Jan 2029	10-day online	Live online	English	5,450
2–6 Apr 2029	5-day classroom	Dubai	Arabic	4,750
9–20 Jul 2029	10-day classroom	Kuala Lumpur	English	8,950
7–11 Oct 2029	5-day classroom	Jeddah	Arabic	4,750
5–9 Nov 2029	5-day online	Live online	English	2,950
7–18 Jan 2030	10-day online	Live online	Arabic	5,450
10–14 Mar 2030	5-day classroom	Cairo	Arabic	4,750
13–17 May 2030	5-day online	Live online	English	2,950
10–14 Jun 2030	5-day classroom	Dubai	English	4,750
15–26 Jul 2030	10-day classroom	Amsterdam	English	8,950

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