



Mechanical, Maintenance & Reliability

Piping Systems Design & Stress Analysis

تصميم أنظمة الأنابيب وتحليل الإجهادات

Duration

5 or 10 days

Language

English or Arabic

Formats

Classroom, online, in-house

Hours

35 / 70

Overview

Piping Systems Design & Stress Analysis is part of the Mechanical, Maintenance & Reliability track at Garnet Global Training Center. Keep equipment running longer, fail less and plan maintenance on evidence instead of habit. 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 Piping Systems Design & Stress Analysis.
- 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

Mechanical and maintenance engineers, reliability specialists, planners and workshop supervisors.

Key topics

- Failure modes and degradation mechanisms
- Condition monitoring techniques
- Maintenance strategy and planning
- Spare parts and work order discipline
- Reliability metrics: MTBF, MTTR, OEE
- CMMS data and continuous improvement

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 Piping Systems Design & Stress Analysis

- Scope, terminology and governing standards
- Failure modes and degradation mechanisms

Day 2 Methods and tools

- Condition monitoring techniques
- Maintenance strategy and planning

Day 3 Application and case studies

- Spare parts and work order discipline
- CMMS data and continuous improvement

Day 4 Performance, risk and compliance

- Reliability metrics: MTBF, MTTR, OEE
- 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 Piping Systems Design & Stress Analysis

- Scope, terminology and governing standards
- Failure modes and degradation mechanisms

Day 2 Methods and tools

- Condition monitoring techniques
- Maintenance strategy and planning

Day 3 Application and case studies

- Spare parts and work order discipline
- CMMS data and continuous improvement

Day 4 Performance, risk and compliance

- Reliability metrics: MTBF, MTTR, OEE
- 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)
8–19 Feb 2027	10-day online	Live online	Arabic	5,450
1–12 Mar 2027	10-day classroom	Dubai	English	8,950
12–16 Jul 2027	5-day classroom	London	English	4,750
20–24 Sep 2027	5-day online	Live online	English	2,950
11–15 Oct 2027	5-day classroom	Vienna	English	4,750
17–28 Jan 2028	10-day online	Live online	Arabic	5,450
1–5 May 2028	5-day classroom	Geneva	English	4,750
4–8 Sep 2028	5-day online	Live online	Arabic	2,950
1–12 Oct 2028	10-day classroom	Riyadh	Arabic	8,950

Dates	Format	City	Language	Fee (USD)
3–7 Dec 2028	5-day classroom	Muscat	Arabic	4,750
5–9 Feb 2029	5-day classroom	Istanbul	English	4,750
19–30 Mar 2029	10-day online	Live online	Arabic	5,450
2–13 Apr 2029	10-day classroom	Kuala Lumpur	English	8,950
4–8 Jun 2029	5-day classroom	Dubai	Arabic	4,750
12–16 Nov 2029	5-day online	Live online	Arabic	2,950
11–22 Feb 2030	10-day classroom	Dubai	English	8,950
1–12 Apr 2030	10-day online	Live online	English	5,450
8–12 Jul 2030	5-day classroom	Abu Dhabi	English	4,750
10–14 Nov 2030	5-day classroom	Jeddah	English	4,750
2–6 Dec 2030	5-day online	Live online	English	2,950

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