Garnet
Garnet Global Training Center

GGT-HV-101

HVAC, Refrigeration & Building Services

HVAC Fundamentals

أساسيات التكييف والتهوية

Duration	Language	Formats	Hours	Level
5 or 10 days	**English or Arabic**	**Classroom, online, in-house**	**35 / 70**	**Foundation**

Overview

HVAC Fundamentals gives newcomers and non-specialists a clear, practical grounding: the core concepts, the vocabulary used on the job and the first tools to apply them. Design, operate and maintain the cooling, ventilation and plumbing systems that keep buildings working. Choose 5 or 10 days, classroom or live online, English or Arabic; organisations can also run it in-house and adapt the examples to their own work.

What you will be able to do

- Explain the key concepts, terms and standards of HVAC Fundamentals.
- Plan the next steps in your own learning.
- Recognise the main hazards, errors and misconceptions newcomers face.
- Carry out basic tasks correctly using simple checklists and tools.
- Read and use the documents, forms and data common in this field.

Who should attend

MEP engineers, HVAC technicians, facility engineers and building services consultants. No prior experience is required; it also suits new hires, graduates and staff moving into this field.

Key topics

- Psychrometrics and load calculation
- Refrigeration cycles
- Air distribution and ventilation
- Controls and BMS
- Energy efficiency
- Commissioning and maintenance

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: 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 Introduction to HVAC Fundamentals
- Refrigeration cycles
- Hands-on workshop on a workplace challenge

Day 2 Core concepts and terminology
- Air distribution and ventilation
- Controls and BMS

Day 3 Basic methods and tools
- Energy efficiency
- Common mistakes and how to avoid them

Day 4 Working safely and correctly
- Commissioning and maintenance
- Regional and international case studies

Day 5 Practical exercises and review
- Psychrometrics and load calculation
- Checklists and templates to take away

10-day outline

Day 1 Introduction to HVAC Fundamentals
- Refrigeration cycles
- Hands-on workshop on a workplace challenge

Day 2 Core concepts and terminology
- Air distribution and ventilation
- Controls and BMS

Day 3 Basic methods and tools
- Energy efficiency
- Common mistakes and how to avoid them

Day 4 Working safely and correctly
- Commissioning and maintenance
- Regional and international case studies

Day 5 Practical exercises and review
- Psychrometrics and load calculation
- Checklists and templates to take away

Day 6 Advanced techniques and specialist practice
- Complex cases in depth
- Group discussion and peer review

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
- Measurement and reporting

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)
3–7 May 2027	5-day online	Live online	Arabic	2,950
6–17 Jun 2027	10-day classroom	Cairo	English	8,950
2–6 Aug 2027	5-day classroom	London	English	4,750
4–8 Oct 2027	5-day classroom	Istanbul	English	4,750
3–7 Jan 2028	5-day classroom	Dubai	English	4,750
10–21 Jul 2028	10-day classroom	Kuala Lumpur	English	8,950
17–21 Sep 2028	5-day classroom	Riyadh	Arabic	4,750
6–17 Nov 2028	10-day online	Live online	Arabic	5,450
1–12 Apr 2029	10-day classroom	Jeddah	English	8,950
17–21 Jun 2029	5-day classroom	Kuwait City	English	4,750

Dates	Format	City	Language	Fee (USD)
6–10 Aug 2029	5-day classroom	Barcelona	English	4,750
17–21 Dec 2029	5-day online	Live online	English	2,950
11–22 Feb 2030	10-day online	Live online	Arabic	5,450
14–18 Apr 2030	5-day classroom	Doha	Arabic	4,750
3–7 Jun 2030	5-day classroom	Vienna	English	4,750
6–17 Oct 2030	10-day classroom	Amman	English	8,950

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