

QUALITY & OPERATIONAL EXCELLENCE | COURSE BROCHURE

Hypothesis Testing for Process Improvement

5 days | Classroom training | English

SMART HORIZON

info@smarthorizon.uk
2 Kingdom Street, Paddington
London W2 6BD, United Kingdom

Explore current programmes

https://smarthorizon.uk



Course content

Why attend

Improvement decisions should be based on statistical evidence, not intuition. This course teaches hypothesis testing for process improvement: the logic of hypothesis tests, t-tests, ANOVA, chi-square tests, correlation and regression, sample size, interpreting p-values and confidence intervals and using statistical software.

Without statistics, teams may implement changes that do not really work. You will learn to test improvement ideas rigorously.

Professional Problems This Course Is Designed to Solve

• Difficulty translating subject knowledge into practical workplace decisions.
• Inconsistent approaches to the activities covered in the course outline.
• Lack of a structured plan for applying and reviewing new skills.

Course methodology

Statistical exercises with process data, software practice, interpretation workshops and case studies.

Course objectives

By the end of this course, participants will be able to:
• Explain hypothesis testing logic
• Choose appropriate statistical tests
• Perform t-tests, ANOVA and chi-square tests
• Analyse relationships with correlation and regression
• Interpret p-values and confidence intervals
• Communicate statistical findings

Target audience

This course is suitable for:
• Continuous improvement practitioners
• Quality engineers
• Process engineers
• Data analysts
• Six Sigma project leaders



Course content

Target competencies

Participants will develop competencies in:

- Test selection
- Statistical analysis
- Regression
- Interpretation
- Communication

Course outline

Day 1: Statistical Thinking

09:00–10:08	Variation and decisions
10:08–11:00	Hypothesis logic
11:00–11:30	**Coffee break**
11:30–11:45	Hypothesis logic (continued)
11:45–12:53	Errors
12:53–14:00	Exercise

Day 2: Comparing Means

09:00–10:08	t-tests
10:08–11:00	ANOVA
11:00–11:30	**Coffee break**
11:30–11:45	ANOVA (continued)
11:45–12:53	Assumptions
12:53–14:00	Software exercise

Day 3: Proportions and Counts

09:00–10:08	Chi-square tests
10:08–11:00	Proportion tests
11:00–11:30	**Coffee break**



Course content

11:30–11:45	Proportion tests (continued)
11:45–12:53	Exercise
12:53–14:00	Case study

Day 4: Relationships

09:00–10:08	Correlation
10:08–11:00	Regression
11:00–11:30	**Coffee break**
11:30–11:45	Regression (continued)
11:45–12:53	Interpretation
12:53–14:00	Exercise

Day 5: Applying Results

09:00–10:08	Sample size
10:08–11:00	Communicating results
11:00–11:30	**Coffee break**
11:30–11:45	Communicating results (continued)
11:45–12:53	Decision making
12:53–14:00	Action plan

The timings provided are estimates and may vary depending on the number of participants and the discussions taking place during the sessions. They are indicative only and do not constitute a binding commitment.



Course content

Dates, venues and fees

Current published course plans. Fees are per participant in GBP, excluding unconfirmed taxes.

Venue	Start date	End date	Fee (GBP)
Frankfurt Confirmed dates	9 Nov 2026	13 Nov 2026	**£2,650.–**
Online Confirmed dates	9 Nov 2026	13 Nov 2026	**£1,250.–**
Vienna Confirmed dates	30 Nov 2026	4 Dec 2026	**£2,940.–**
Online Confirmed dates	30 Nov 2026	4 Dec 2026	**£1,250.–**
Rome Confirmed dates	4 Jan 2027	8 Jan 2027	**£2,450.–**
Online Confirmed dates	4 Jan 2027	8 Jan 2027	**£1,250.–**
Cape Town Confirmed dates	18 Jan 2027	22 Jan 2027	**£1,890.–**
Online Confirmed dates	18 Jan 2027	22 Jan 2027	**£1,250.–**
Paris Confirmed dates	8 Feb 2027	12 Feb 2027	**£2,860.–**



Course content

Dates, venues and fees (continued)

Venue	Start date	End date	Fee (GBP)
Online Confirmed dates	8 Feb 2027	12 Feb 2027	**£1,250.–**
Cape Town Confirmed dates	1 Mar 2027	5 Mar 2027	**£1,890.–**
Online Confirmed dates	1 Mar 2027	5 Mar 2027	**£1,250.–**
Dubai Confirmed dates	22 Mar 2027	26 Mar 2027	**£3,150.–**
Online Confirmed dates	22 Mar 2027	26 Mar 2027	**£1,250.–**
Barcelona Confirmed dates	12 Apr 2027	16 Apr 2027	**£2,840.–**
Online Confirmed dates	12 Apr 2027	16 Apr 2027	**£1,250.–**
London Confirmed dates	26 Apr 2027	30 Apr 2027	**£2,450.–**
Online Confirmed dates	26 Apr 2027	30 Apr 2027	**£1,250.–**



Course content

Dates, venues and fees (continued)

Venue	Start date	End date	Fee (GBP)
Rome Confirmed dates	17 May 2027	21 May 2027	**£2,450.-**
Online Confirmed dates	17 May 2027	21 May 2027	**£1,250.-**
Vienna Confirmed dates	7 Jun 2027	11 Jun 2027	**£2,940.-**
Online Confirmed dates	7 Jun 2027	11 Jun 2027	**£1,250.-**
Dubai Confirmed dates	28 Jun 2027	2 Jul 2027	**£3,150.-**
Online Confirmed dates	28 Jun 2027	2 Jul 2027	**£1,250.-**
London Confirmed dates	19 Jul 2027	23 Jul 2027	**£2,450.-**
Online Confirmed dates	19 Jul 2027	23 Jul 2027	**£1,250.-**
Cape Town Confirmed dates	2 Aug 2027	6 Aug 2027	**£1,890.-**



Course content

Dates, venues and fees (continued)

Venue	Start date	End date	Fee (GBP)
Online Confirmed dates	2 Aug 2027	6 Aug 2027	**£1,250.-**
Dubai Confirmed dates	23 Aug 2027	27 Aug 2027	**£3,150.-**
Online Confirmed dates	23 Aug 2027	27 Aug 2027	**£1,250.-**
Amsterdam Confirmed dates	13 Sept 2027	17 Sept 2027	**£2,540.-**
Online Confirmed dates	13 Sept 2027	17 Sept 2027	**£1,250.-**
Rome Confirmed dates	4 Oct 2027	8 Oct 2027	**£2,450.-**
Online Confirmed dates	4 Oct 2027	8 Oct 2027	**£1,250.-**
Barcelona Confirmed dates	25 Oct 2027	29 Oct 2027	**£2,840.-**
Online Confirmed dates	25 Oct 2027	29 Oct 2027	**£1,250.-**



Course content

Dates, venues and fees (continued)

Venue	Start date	End date	Fee (GBP)
Istanbul Confirmed dates	8 Nov 2027	12 Nov 2027	**£2,650.-**
Online Confirmed dates	8 Nov 2027	12 Nov 2027	**£1,250.-**
Kuala Lumpur Confirmed dates	29 Nov 2027	3 Dec 2027	**£1,450.-**
Online Confirmed dates	29 Nov 2027	3 Dec 2027	**£1,250.-**

Plan your next step

Dates, availability, exact venue, taxes, inclusions and payment terms require written confirmation. This brochure is not a quotation, registration, booking confirmation or visa invitation. Participants receive a Smart Horizon UK certificate of attendance; programmes are not externally accredited and do not award a professional qualification or designation. Confirm arrangements before booking travel.

For group or in-house training, contact our learning team to discuss your objectives and delivery arrangements.

Contact Smart Horizon

info@smarthorizon.uk
2 Kingdom Street, Paddington
London W2 6BD, United Kingdom

View the latest course details online