



# Mass & Energy Balance: Advanced Level

## Process & Chemical Engineering

QGT-PRC-131 | Advanced | 5 or 10 days | Online, classroom, in-house

### Course overview

Mass & Energy Balance: Advanced Level is an advanced programme for experienced practitioners in Mass & Energy Balance. It covers the principles, the requirements of API, AIChE/CCPS guidelines and licensor practice, and the practical methods used on site, with case studies from operations in the Gulf, Africa and worldwide. Available online, in the classroom in 60 cities, or in-house.

### What participants will be able to do

- Explain the principles, terminology and scope of Mass & Energy Balance
- Apply the relevant requirements of API, AIChE/CCPS guidelines and licensor practice
- Apply advanced analysis methods to real operating data
- Recognise common problems, risks and root causes and choose the right corrective action
- Prepare an improvement plan for their own site or organisation

### Who should attend

Designed for process engineers, chemical engineers, operators and laboratory staff with at least three years of experience.

### Course outline (5 days)

#### Day 1: Core principles revisited

Fast review and recent changes in API, AIChE/CCPS guidelines and licensor practice

#### Day 2: Advanced analysis methods

Detailed techniques, data interpretation and calculations

#### Day 3: Design and performance optimisation

Improving reliability, efficiency and cost

#### Day 4: Troubleshooting complex cases

Diagnosing multi-cause problems from field data

#### Day 5: Risk, decisions and integration

Building a risk-based plan and presenting recommendations

### What the 10-day edition adds

Day 6: Applied project, part 1 – Apply the week-one methods to a case from your organisation

Day 7: Data and digital tools – Software, spreadsheets and digital tools used in practice

Day 8: Lessons from incidents and audits – What investigations and audit findings teach

Day 9: Applied project, part 2 – Complete, test and refine your solution

Day 10: Presentations and final assessment – Present to the group and complete the final assessment

## Fees (USD per participant)

| Duration | Live online | Classroom | In-house |
|----------|-------------|-----------|----------|
| 5 days   | \$3,000     | \$5,500   | On quote |
| 10 days  | \$5,500     | \$9,900   | On quote |

Fees include course material and certificate of completion; classroom fees include refreshments and lunch. In-house training is priced per group.

## Dates and cities 2027–2030

| Dates               | City          | Format        | Duration | Fee     |
|---------------------|---------------|---------------|----------|---------|
| 25 Jan – 5 Feb 2027 | Casablanca    | Classroom     | 10 days  | \$9,900 |
| 16–20 May 2027      | Dammam        | Classroom     | 5 days   | \$5,500 |
| 8–19 Aug 2027       | Salalah       | Classroom     | 10 days  | \$9,900 |
| 13–17 Sep 2027      | Istanbul      | Classroom     | 5 days   | \$5,500 |
| 6–17 Dec 2027       | Online (live) | Online (live) | 10 days  | \$5,500 |
| 29 May – 9 Jun 2028 | Dublin        | Classroom     | 10 days  | \$9,900 |
| 16–20 Jul 2028      | Erbil         | Classroom     | 5 days   | \$5,500 |
| 18–29 Sep 2028      | Edinburgh     | Classroom     | 10 days  | \$9,900 |
| 9–13 Oct 2028       | Copenhagen    | Classroom     | 5 days   | \$5,500 |
| 6–17 Nov 2028       | Online (live) | Online (live) | 10 days  | \$5,500 |
| 22 Jan – 2 Feb 2029 | Lagos         | Classroom     | 10 days  | \$9,900 |
| 21–25 May 2029      | Geneva        | Classroom     | 5 days   | \$5,500 |
| 18–29 Jun 2029      | Singapore     | Classroom     | 10 days  | \$9,900 |
| 30 Jul – 3 Aug 2029 | Zurich        | Classroom     | 5 days   | \$5,500 |
| 13–24 Aug 2029      | Online (live) | Online (live) | 10 days  | \$5,500 |
| 27 Jan – 7 Feb 2030 | Cairo         | Classroom     | 10 days  | \$9,900 |
| 22–26 Apr 2030      | Tbilisi       | Classroom     | 5 days   | \$5,500 |
| 15–26 Jul 2030      | Bangkok       | Classroom     | 10 days  | \$9,900 |
| 5–9 Aug 2030        | Copenhagen    | Classroom     | 5 days   | \$5,500 |
| 4–15 Nov 2030       | Online (live) | Online (live) | 10 days  | \$5,500 |

## How to register

### Register online or scan the code

<https://qimmatrainig.com/courses/mass-and-energy-balance-advanced-level/>

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