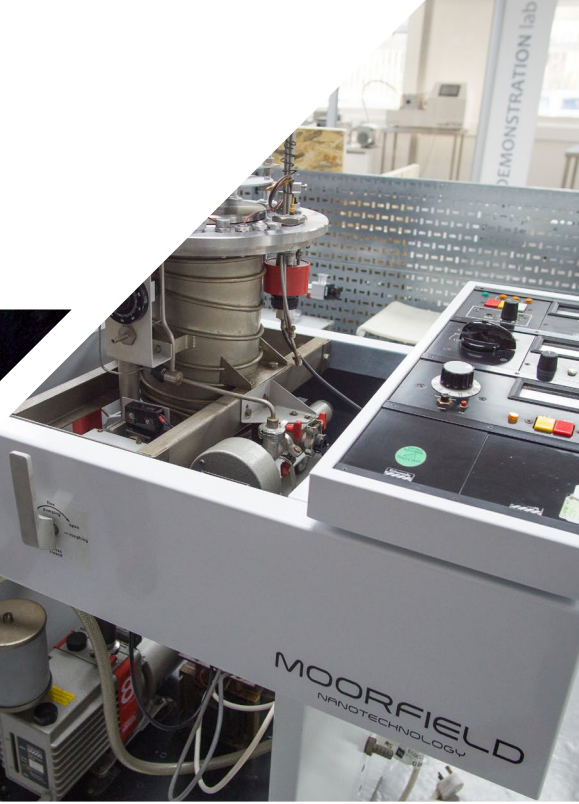


# Moorfield Training

## Vacuum Technology Courses



Moorfield has built its reputation on providing high quality PVD / CVD / RIE and vacuum technology support for over 20 years. During this time customers have requested education and training from beginner to expert level...

Our in-house team has an invaluable wealth of expertise spanning 135 years in the field of vacuum technology. We offer training courses to pass on skills and knowledge that can save companies thousands in consultation fees, service and repair costs to their equipment.

We have carefully developed a series of educational courses, covering the most requested areas of vacuum technology. Courses are designed with a unique mix of theory, reinforced with hands-on practical sessions with an expert. All courses include PPE, course materials, and a buffet lunch. For 2 day courses, delegates are invited to an evening meal with Team Moorfield.

### Introduction to General Vacuum

For new vacuum users such as new technicians or apprentices.

- Starting with the basics of vacuum technology
- Covers all types of low to high vacuum pumping techniques, vacuum gauges and vacuum practices
- A mixture of theory and 'hands-on', practical sessions
- Interactive demonstrations of the pumps, gauges, systems and applications involved
- Achieve a competent level of understanding of vacuum theory and major components
- Available from our Cheshire HQ or on the customer's premises

 DURATION: 1 DAY

This course is often run as the sequel to the Vacuum Pump Theory and Maintenance course

### Vacuum Pump Theory/Maintenance

For vacuum technicians, Post Docs, Fab Maintenance personnel.

- Starting with the basics of vacuum pump technology
- Covers all types of low to high vacuum pumping techniques, vacuum gauges, and vacuum practices
- A mixture of theory and 'hands-on', practical sessions
- Interactive demonstrations of some common vacuum pumps (can be geared to specific pump types if requested)
- Fault finding, strip and rebuild, testing
- Achieve a competent level of understanding of vacuum pump theory, fault finding and rebuild/test
- Available only at our Cheshire HQ

 DURATION: 1 DAY

This course is often run concurrent with the Introduction to General Vacuum course

## RG/QMS. Residual Gas Analyser Use/Applications

A technical course by our resident RGA expert, aimed at UHV/HV technicians, FAB maintenance personnel and skilled system users.

- Detailed instruction on the function of quadrupole mass spectrometer RGAs
- Recap on the theory of vacuum with respect to an RGA
- A practical look at the RGA with clear and precise explanation of its working components
- RGA controls - types of scan; analogue, histogram mode, time resolved data collection and logging, quantitative calibration and measurement. Leak detection, interpreting the data
- RGA errors - Fault finding, strip and rebuild, testing
- Achieve a competent level of understanding of RGA theory and practise
- Available from our Cheshire HQ or on the customer's premises

 DURATION: 1 DAY

## Edwards E306 Maintenance and User Thin Film Evaporation

Aimed at technicians and system users of the long-standing E306 coater.

- Recap on applicable vacuum theory
- System key subsystems and components: electrical circuits, water circuit, vacuum circuit, pumps, gauges, interlocks, upgrades, chamber parts
- 'Hands-on' practical of how to service an E306 (demonstrated on Moorfields in-house model)
- Fault finding: typical vacuum issues, electrical faults, component failures
- Thin film creation - substrate preparation, resistive source, thin film quartz crystal monitor, source materials, vapour pressures, filament/boat selection, pre-conditioning, soak and deposition stages in creating a layer. Multi-layers. All the fundamentals of basic PVD

 DURATION: 2 DAYS

## Helium Leak Detection

A technical course by our resident leak detection expert, aimed at UHV /HV technicians, FAB Maintenance personnel and system users.

- A combination of both theory and 'hands-on' practical
- Learn the theory of the process, with a clear explanation of the fundamentals of leak detection. Types of leak - virtual and actual. Gross and fine leaks. Calibration
- Various leak checking techniques including: atmospheric testing, helium bombing, bagging, small leaks
- Available from our Cheshire HQ or on the customer's premises

 DURATION: 1 DAY

Customised on site courses can be tailored to client requirements with practicals based on clients leak detector systems.

# Bespoke Training Courses Are Available

Talk to Us About Your Requirements

Courses are held at Moorfield's head office in Knutsford, Cheshire, and can also be adapted for on-site training (depending on attendance). Discounts are offered for group attendance.

**MOORFIELD**  
— NANOTECHNOLOGY —

CALL US FOR MORE INFORMATION

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