

Course Outline

Oxford Instruments HKL EBSD Applications - 2 day course

This course is run for a maximum of 6 delegates to allow sufficient time for 'hands-on' practice in EBSD data acquisition on the SEM.

Objectives

On this course you will learn how to:

- Understand the capabilities and limitations of the EBSD technique
- Use the hardware and software components of the system
- Set up samples in the SEM and suitable acquisition conditions
- Become confident in routine data acquisition and processing
- Explore some of the more advanced capabilities of the system

Pre-requisites

Delegates should have basic knowledge of crystallography. They should also have some experience of using the HKL CHANNEL5 software.

Course outline

EBSD Overview

Introduction to HKL software and hardware including fore-scatter detector

Preparing for EBSD analysis

Sample preparation and storage
Good operating practices

Data Acquisition

Imaging in CHANNEL5
Generating EBSP's
Routine calibration
Refining EBSP indexing and Indexing EBSP's

Foreshatter imaging
Interactive data acquisition
Phase identification and discrimination
Orientation mapping
Phase identification and simultaneous EBSD/EDS

Applications and Data Processing

Boundary, microstructure characterisation
Grain size and area fraction analysis
Recrystallisation and deformation analysis
Texture analysis
Pole figure, inverse pole figure and ODF plots