

Course Outline

HKL EBSD Applications 2 day course

This course is run for a maximum of 6 delegates to allow sufficient 'hands-on' practice live 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.

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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 EBSPs
- Routine calibration
- Refining EBSP indexing
- Indexing EBSPs
- Fore-scatter imaging
- Interactive data acquisition
- Phase identification and discrimination
- Orientation mapping
- Phase identification and simultaneous EBSD/EDS

Applications and Data Processing:

- Boundary, microstructure characterization
- Grain size and area fraction analysis
- Recrystallization and deformation analysis
- Texture analysis
- Pole figure, inverse pole figure and ODF plots

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