Course Outline

HKL Channel 5 applications - 3 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 Channel 5 software, which would be gained from the initial training when the system was installed.

Course outline

Introduction
EBSD overview
Introduction to HKL software and hardware including forescatter detector

EBSD analysis
Sample preparation and storage
Good operating practices

Data acquisition
Imaging
Generating EBSPs
Indexing and routine calibration
Refining EBSP indexing
Forescatter 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

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