


Data:	MINLI. BA.HPT.Nr / Examination number: 33208	Version: 14.07.2016 	Start Year: WiSe 2016
Module Name: (English):	Mineral Liberation Analysis (MLA) of Mineral Resources		
Responsible:	Schulz, Bernhard / Prof. Dr.		
Lecturer(s):			
Institute(s):	Institute of Mineralogy		
Duration:	1 Semester(s)		
Competencies:	<p>Bewertung von Erzen und Aufbereitungsprodukten aus der automatisierten Liberierungsanalyse (Mineral Liberation Analysis, MLA) mit Rasterelektronenmikroskop (REM). Aufsetzen und Spezifizierung von automatisierten Messungen mit REM. Numerische und graphische Auswertung von Datenbank-Files der automatisierten Analysen mit REM.</p> <p>Evaluation of metal ores and processed metal ores by automated mineral liberation analysis (MLA) by Scanning Electron Microscope (SEM). Set-up and speciation of automated measurements by SEM. Numerical and graphical assessment of databas files produced from automated SEM measurements.</p>		
Contents:	<p>Methodik der automatisierten REM-Analyse, Auswerte-Programme, Daten-Extraktion, Interpretation, Verfassen von Berichten an Aufbereitungsingenieure.</p> <p>Methods of automated SEM analysis, evaluation software, data extraction, interpretation, writing of reports for mineral processing engineers.</p>		
Literature:	<p>Gu, Y. (2003). Automated Scanning Electron Microscope Based Mineral Liberation Analysis. Journal of Minerals and Materials Characterization & Engineering, vol. 2, no. 1: 33-41.; Fandrich, R., Gu, Y., Burrows, D. & Moeller, K. (2007). Modern SEM-based mineral liberation analysis. International Journal of Mineral Processing, 84, 310-320.</p>		
Types of Teaching:	<p>S1 (WS): Mineral Liberation Analysis (MLA) of Mineral Resources - Präsentation von Verfahren der automatisierten Mineral Liberation Analysis (MLA) mit Rasterelektronenmikroskop. Teilnehmer bearbeiten Daten mit eigenen Laptops. Presentation of methods of Mineral Liberation Analysis (MLA) by Scanning Electron Microscope (SEM). Participants evaluate data by using their own Laptops. / Exercises (2 SWS)</p>		
Pre-requisites:	<p>Recommendations: Knowledge of analytical methods based on electron beam intruments</p>		
Frequency:	yearly in the winter semester		
Requirements for Credit Points:	<p>For the award of credit points it is necessary to pass the module exam. The module exam contains: AP: Report with protocol on the evaluation of a Mineral Liberation Analysis by Scanning Electron Microscope (SEM)</p>		
Credit Points:	3		
Grade:	<p>The Grade is generated from the examination result(s) with the following weights (w): AP: Report with protocol on the evaluation of a Mineral Liberation Analysis by Scanning Electron Microscope (SEM) [w: 1]</p>		
Workload:	<p>The workload is 90h. It is the result of 30h attendance and 60h self-studies. Der Zeitaufwand beträgt 60 h und setzt sich zusammen aus 30 h Präsenzzeit und 30 h Selbststudium. Letzteres umfasst die Anfertigung</p>		

des Berichts mit Protokoll. Expenditure of time is 60 hrs. This is composed of 30 hrs presence in class and 30 hrs homework, including preparation of report with protocol.