



ЦЕНТЪР ЗА ОБУЧЕНИЕ – БАН

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Basic Information:

Course Title: *METHODS OF MINERAL IDENTIFICATION*

Lecturer: *Prof. Dr. Thomas Kerestedjian*

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Total Teaching Hours: 20

Annotation (up to 150 words)

The course is targeted on PhD students in Mineralogy, but can also be useful for all kinds of researchers from the solid state branch of the geological sciences: petrology, geochemistry, geo-ecology, lithology. Mineral identification is based on a complementary set of methods for determination of both chemical composition and crystal structure. Special attention will be paid to inherent inhomogeneity phenomena which need to be respected during identification. Taxonomic difficulties related to sector zoning, isomorphism, polytypism will be considered in respect to mineral identification methodology. The course will include a critical review of the classical mineral identification methods and will focus on modern analytical tools like EPMA, XRD, software for processing of raw analytical data and databases for mineral identification. The applicability field of each component method will be outlined, using proper examples.

Course content (brief description by topics or modules)

Topic / Module 1: Critical review of the classical methods.

Topic / Module 2: Modern analytical tools.

Topic / Module 3: Databases for mineral identification.

Teaching and assessment methods

Teaching: Individual work with the applicant. Directions for self-education. Directions for data sources. Syllabus on enumerated above topics. Discussions and further directions, depending on the results of the individual work.

Assessment: Exam based on a syllabus.

Competencies acquired as a result of training (3–5 points)

Ability to deliver defendable with solid analytical results and publishable mineral identification.

Literature:

Internet