

Refresher course program on "Crystal optics and petro genic minerals" discipline

The microscopic method is the principal method for studying and determining minerals of rocks and ores that represent the main objects of specialists' research in "geology and exploration of mineral deposits."

The course aim is to teach students to effective work with a polarizing microscope and due to it determine rocks' mineral composition and structure.

Course program:

- Fundamentals of the crystal-optical method, natural and polarized light, microscope apparatus, the difference between polarizer and analyzer;
- Using the polarizing microscope in transmitted light;
- Diagnosis of minerals under a microscope, microstructures and microtexture, various rocks: igneous, sedimentary and metamorphic;
- The principles of constructing an optical indicatrix and learn how to construct optical indicatrices in accordance with minerals' crystal lattice of various syngonias;
- Determination of the optical properties of minerals in parallel and crossed nicols by conoscopic and immersion methods;
- Determination of petro genic minerals using a polarizing microscope;
- Due to the polarizing microscope to determine rocks' mineral composition and structure and to compile their petrographic description.