COURSE TITLE:

APPLIED PHYSICS, ENERGETICS, RADIATION

COURSE DESCRIPTION:

Aims: The Applied physics: Synthesis course gives teaching on overview the materials structure and mutual relations between the structural hierarchy levels. Introducing basic principles of separation and rebuilding, the principle of process-description by changes according to the stages observed. Hierarchy levels of disciplines are connected as systems considering various cross sections of Earth, biosphere, geological actors, chemistry structural levels and life-holding units. Connected hierarchy levels are studies in the soil, in the geological and bio-materials. Measurements are systematized in the frame of hierarchy levels. Material systematic uses material maps of phases and textures, technology material maps by cooling rate, effects of crystallization, tempering, alloying and various material assemblages. The course overviews the great steps in history of matter (evolution), together with the produced set, energetic and abundances corresponding to the hierarchy levels.

LITERATURE:

Michael E. McHenry (2012): Structure of Materials: An Introduction to Crystallography, Diffraction and Symmetry. Cambridge University Press; 2 edition (October 8, 2012)

TEACHER:

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