COMPUTATIONAL MATERIALS (CMPMT)

CMPMT 503: Kinetics Materials Processes

3 Credits

This course covers fundamentals of atomistic theories and phenomenological descriptions of kinetic processes in solids. It provides the foundation for the advanced understanding of materials processing, phase transformations, and microstructural evolution. Topics include atomistic mechanisms of diffusion, solutions to the phenomenological diffusion equation, diffusion along extended defects, gas-solid reactions, phase transformations, computer simulation of diffusional processes, and microstructure evolution.

Prerequisites: CHEM 450 or GEOSC 521 or MATSC 501
Cross-listed with: MATSE 503