

GEOCHEMICAL REACTIONS RATES AND DIFFUSION
GEOL 456/556
COURSE OUTLINE

Objectives: To provide an in-depth examination of the principles of chemical kinetics as applied to geochemical properties. The emphasis will be on quantitative applications of kinetic theory.

Topics to be covered:

- I. Rate Laws of Chemical Reactions
- II. Transition State Theory
- III. Diffusion
- IV. Irreversible Thermodynamics
- V. Nucleation Theory
- VI. Theory of Crystal Growth and Dissolution

Text: Lasaga, A.C. (1998) Kinetic Theory in the Earth Sciences. Princeton University Press, Princeton, New Jersey, 811 p.